

# **University of California**

## **Report on Financial Statements and Expenditures of Federal Awards in Accordance with the Uniform Guidance**

**For the Year Ended June 30, 2017**

<b><u>Location</u></b>	<b><u>EIN</u></b>
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<b>Riverside</b>	<b>95-6006142</b>
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<b>Santa Barbara</b>	<b>95-6006145</b>
<b>Santa Cruz</b>	<b>94-1539563</b>

# University of California

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## **Report of Independent Auditors**

To the Regents of the University of California

### ***Report on the Financial Statements***

We have audited the accompanying financial statements of the University of California (the "University"), a component unit of the State of California, its aggregate discretely presented component units, the University of California Retirement System and the University of California Retiree Health Benefit Trust, as of and for the years ended June 30, 2017 and 2016, and the related notes to the financial statements which collectively comprise the University's basic financial statements as listed in the table of contents.

### ***Management's Responsibility for the Financial Statements***

Management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

### ***Auditors' Responsibility***

Our responsibility is to express an opinion on the financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement. The financial statements of the University's discretely presented component units were not audited in accordance with *Government Auditing Standards*.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the University's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the University's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.



### ***Opinions***

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the University, its aggregate discretely presented component units, the University of California Retirement System and the University of California Retiree Health Benefit Trust as of June 30, 2017 and 2016 and the respective changes in financial position and, where applicable, cash flows thereof for the year then ended in accordance with accounting principles generally accepted in the United States of America.

### ***Emphasis of Matter***

As discussed under "Significant Accounting Policies" in the notes to the financial statements, the University changed the manner in which it accounts for Postemployment Benefit Plans Other Than Pension Plans. Our opinion is not modified with respect to this matter.

### ***Other Matters***

#### ***Required Supplementary Information***

Accounting principles generally accepted in the United States of America require that management's discussion and analysis on pages 4 through 23 and the required supplemental information on pages 98 through 105 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic or a context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audits of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

#### ***Other Information***

Our audit was conducted for the purpose of forming an opinion on the financial statements as a whole. The accompanying summary schedule of expenditures of federal awards and schedule of expenditures of federal awards for the year ended June 30, 2017 are presented for purposes of additional analysis as required by Title 2 U.S. Code of Federal Regulations Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (Uniform Guidance) and are not a required part of the financial statements. As described in Note 2 to the schedules of expenditures of federal awards, the accompanying summary schedule of expenditures of federal awards and schedule of expenditures of federal awards were prepared on the cash basis, which is a comprehensive basis of accounting other than accounting principles generally accepted in the United States of America. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the financial statements. The information has been subjected to the auditing procedures applied in the audit of the financial statements and certain additional procedures, including





comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the summary schedule of expenditures of federal awards and schedule of expenditures of federal awards are fairly stated, in all material respects, on the basis of accounting described in Note 2, in relation to the financial statements as a whole.

***Other Reporting Required by Government Auditing Standards***

In accordance with *Government Auditing Standards*, we have also issued our report dated October 12, 2017 on our consideration of University's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing and not to provide an opinion on the effectiveness of internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the University's internal control over financial reporting and compliance.

*PricewaterhouseCoopers LLP*

San Francisco, California  
October 12, 2017

# Management's Discussion and Analysis (Unaudited)

The objective of Management's Discussion and Analysis is to help readers of the University of California's financial statements better understand the financial position and operating activities for the year ended June 30, 2017, with selected comparative information for the years ended June 30, 2016 and 2015. This discussion has been prepared by management and should be read in conjunction with the financial statements and the notes to the financial statements. Unless otherwise indicated, years (2015, 2016, 2017 etc.) in this discussion refer to the fiscal years ended June 30.

The University of California's financial report communicates financial information for the University of California (the "University"), the University of California campus foundations ("campus foundations"), the University of California Retirement System ("UCRS") and the University of California Retiree Health Benefit Trust ("UCRHBT") through five primary financial statements and notes to the financial statements. Three of the primary statements, the statements of net position, the statements of revenues, expenses and changes in net position and the statements of cash flows, present the financial position, changes in financial position and cash flows for the University and the affiliated campus foundations. The financial statements for the campus foundations are presented discretely from the University. Two of the primary statements, the statements of plans' and trust's fiduciary net position and the statements of changes in plans' and trust's fiduciary net position, present the financial position and operating activities for UCRS and UCRHBT. The notes to the financial statements provide additional information that is essential to a full understanding of the financial statements.

## THE UNIVERSITY OF CALIFORNIA

The University of California, one of the largest and most acclaimed institutions of higher learning in the world, is dedicated to excellence in teaching, research, health care and public service. The University has annual resources of nearly \$33.4 billion and encompasses ten campuses, five medical centers, four law schools and a statewide Division of Agriculture and Natural Resources. The University is also involved in the operation and management of three national laboratories for the U.S. Department of Energy ("DOE").

*Campuses.* The ten campuses are located in Berkeley, Davis, Irvine, Los Angeles, Merced, Riverside, San Diego, San Francisco, Santa Barbara and Santa Cruz. All of the campuses, except San Francisco, offer undergraduate, graduate and professional education; the San Francisco campus is devoted exclusively to graduate and professional education in health sciences.

*Health sciences.* The University operates one of the nation's largest health science and medical training programs. The instructional program is conducted in 16 health professional schools on six campuses. Our health programs include five medical centers, two dental schools, three nursing schools, two public health schools and two pharmacy schools, in addition

to a school of optometry and a school of veterinary medicine. The University's medical schools play a leading role in the development of health services and advancement of medical science and research.

*Law schools.* The University has law schools at Berkeley, Davis, Irvine and Los Angeles. Also, the Hastings College of the Law in San Francisco is affiliated with the University, although not included in the financial reporting entity.

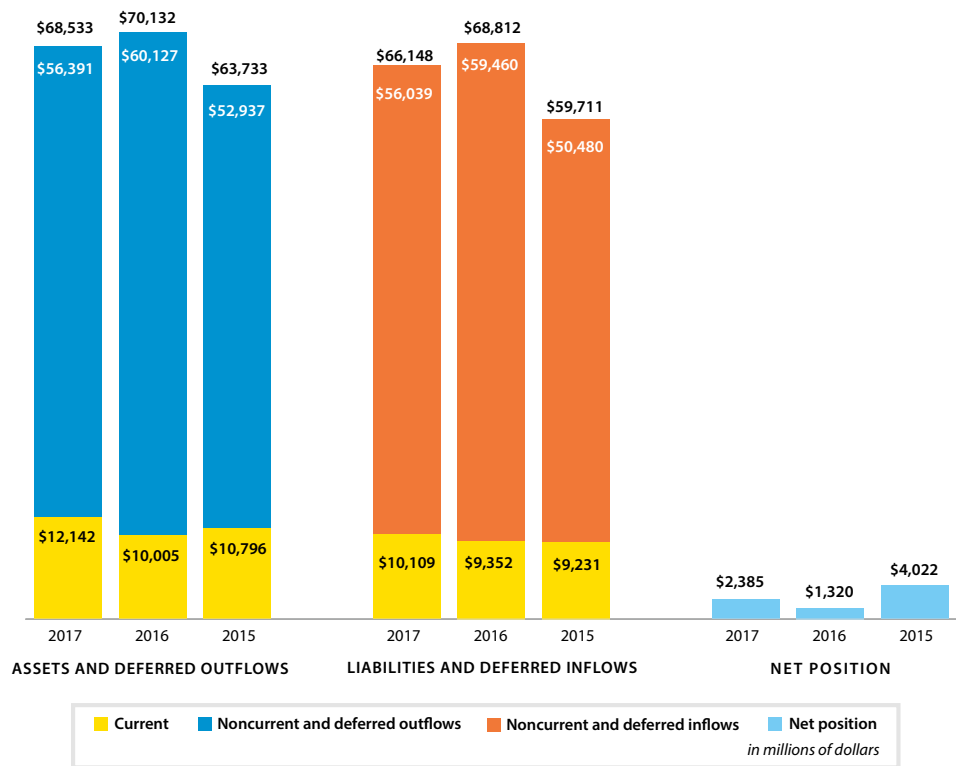
*Agriculture and Natural Resources.* The Division of Agriculture and Natural Resources is a statewide research and public service organization that serves a large and diverse agricultural community. The division collaborates on research with all campuses, and conducts studies at nine research and extension centers and on private land in cooperation with California producers. In addition, research and educational programs are conducted in each of the state's 58 counties.

*University Extension.* The foremost continuing education program of its kind in size, scope and quality of instruction, University Extension offers almost 20,000 self-supporting courses statewide and in several foreign countries.

*National laboratories.* Under contract with the DOE, the University operates and manages the Ernest Orlando Lawrence Berkeley National Laboratory (LBNL) in California. The University is also a member in two separate joint ventures, Los Alamos National Security, LLC (LANS) and Lawrence Livermore National Security, LLC (LLNS) that operate and manage the Los Alamos National Laboratory (LANL) and Lawrence Livermore National Laboratory (LLNL), respectively, under contracts directly with the DOE. The laboratories conduct broad and diverse basic and applied research in nuclear science, energy production, national defense and environmental and health areas.

## THE UNIVERSITY'S FINANCIAL POSITION

The University implemented new accounting policies for retiree health benefits. These changes in accounting policies are designed to improve transparency by requiring recognition of the net retiree health benefits liability in the financial statements. This standard requires recognition of retiree health benefit expense using a systematic method, designed to match the cost of retiree health benefits with service periods for eligible employees. Financial information for 2016 and 2015 have been restated to retroactively apply these new accounting policies.



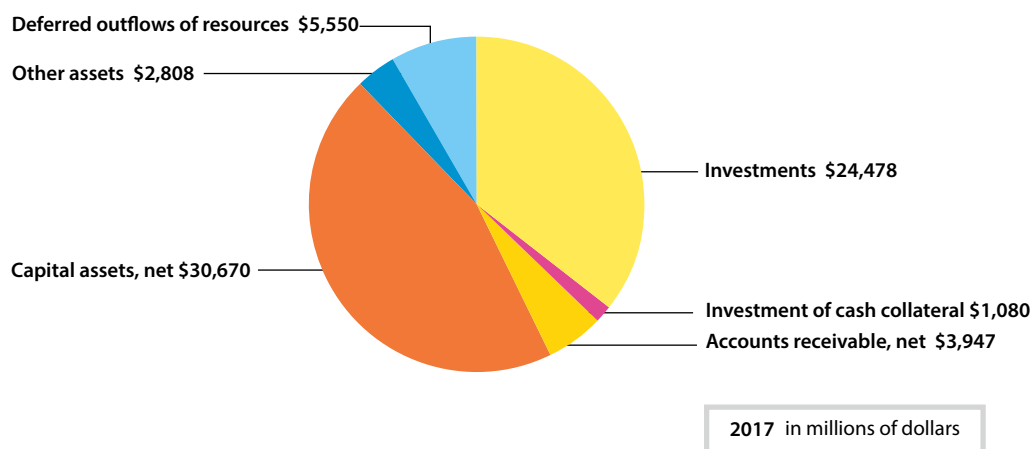
The statement of net position presents the financial position of the University at the end of each year. It displays all of the University's assets, deferred outflows, liabilities and deferred inflows. The difference between assets, deferred outflows, liabilities and deferred inflows is net position.

The major components of the assets, deferred outflows, liabilities, deferred inflows and net position as of June 30, 2017, 2016 and 2015 are as follows:

(in millions of dollars)

	2017	2016	2015
<b>ASSETS</b>			
Investments	\$24,478	\$22,209	\$22,493
Investment of cash collateral	1,080	825	775
Accounts receivable, net	3,947	3,320	3,281
Capital assets, net	30,670	29,689	28,643
Other assets	2,808	3,919	3,808
<b>Total assets</b>	<b>62,983</b>	<b>59,962</b>	<b>59,000</b>
<b>DEFERRED OUTFLOWS OF RESOURCES</b>	<b>5,550</b>	<b>10,170</b>	<b>4,732</b>
<b>LIABILITIES</b>			
Debt, including commercial paper	20,503	19,951	19,021
Securities lending collateral	1,079	825	775
Net pension liability	10,739	15,125	10,671
Net retiree health benefits liability	19,290	21,795	18,660
Other liabilities	8,253	7,648	7,426
<b>Total liabilities</b>	<b>59,864</b>	<b>65,344</b>	<b>56,553</b>
<b>DEFERRED INFLOWS OF RESOURCES</b>	<b>6,284</b>	<b>3,468</b>	<b>3,157</b>
<b>NET POSITION</b>			
Net investment in capital assets	13,343	12,816	12,138
Restricted:			
Nonexpendable	1,176	1,148	1,111
Expendable	7,163	6,546	7,206
Unrestricted	(19,297)	(19,190)	(16,433)
<b>Total net position</b>	<b>\$2,385</b>	<b>\$1,320</b>	<b>\$4,022</b>

### The University's Assets and Deferred Outflows



The University's total assets and deferred outflows of resources have decreased to \$68.5 billion in 2017, compared to \$70.1 billion in 2016 and \$63.7 billion in 2015. Capital assets have increased due to continued investments in facilities and investments changed due to financial market returns. Deferred outflows fluctuate due to changes in the University's net pension and retiree health benefits liabilities.



### *Investments*

Investments held by the University are principally carried in three investment pools: the Short Term Investment Pool (STIP), the Total Return Investment Pool (TRIP) and the General Endowment Pool (GEP). Cash for operations and bond proceeds for construction expenditures are invested in STIP. The University uses STIP to meet operational liquidity needs. TRIP provides the opportunity to maximize the return on long-term capital by taking advantage of the economies of scale of investing in a large pool across a broad range of asset classes. TRIP seeks to maximize to a total return objective and is intended to supplement STIP. The University maximizes its use of TRIP while still maintaining sufficient funds in STIP to meet operational and liquidity needs. The GEP is a balanced portfolio and the primary investment vehicle for individual endowments and funds functioning as endowments.

The Regents of the University of California (“The Regents”) utilize asset allocation strategies that are intended to optimize investment returns over time in accordance with investment objectives and at acceptable levels of risk. GEP had a positive return of 15.1 percent in 2017, a negative return of 3.5 percent in 2016 and a positive return of 6.1 percent in 2015. TRIP had positive returns of 7.7 percent, 0.3 percent and 2.6 percent in 2017, 2016 and 2015, respectively. STIP had positive returns of 1.3 percent, 1.3 percent and 1.4 percent in 2017, 2016 and 2015, respectively.

### *Investment of cash collateral*

The University participates in a securities lending program incorporating securities owned by both the University and UCRS as a means to augment income. Cash collateral fluctuates in response to changes in demand from borrowers and the availability of securities based upon the University’s asset allocation mix.

### *Accounts receivable, net*

Accounts receivable include amounts due from state and federal governments on contracts and grants, patient receivables for medical centers and professional fees, investment income, proceeds from security sales and amounts due for private grants and contracts. Receivables fluctuate based on the timing of collections and investment sales activity.

### *Capital assets, net*

The University’s enrollment growth requires new facilities, in addition to continuing needs for renewal, modernization and seismic correction of existing facilities. Capital spending continues at a brisk pace in order to provide the facilities necessary to support the University’s teaching, research and public service mission and for patient care. Capital spending includes constructing and renovating academic buildings, research laboratories, libraries, student services, housing facilities, medical centers and clinical facilities, parking structures and infrastructure projects at all ten campuses and five medical centers. The largest project in 2017 and 2016 was the Jacobs Medical Center in San Diego. Total additions of capital assets were \$3.0 billion in 2017 as compared to \$3.0 billion in 2016 and \$2.8 billion in 2015.

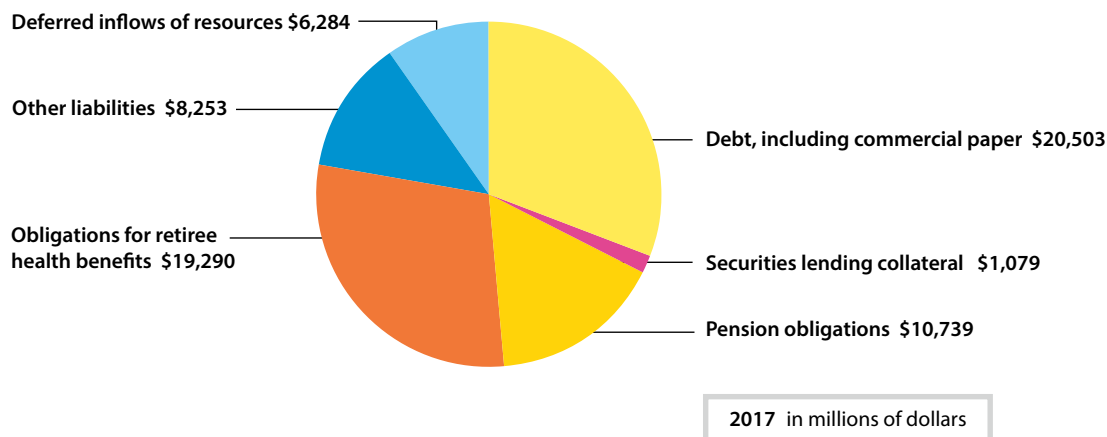
### *Other assets*

Other assets include cash, investments held by trustees, pledge receivables, note and mortgage receivables, inventories and receivables from the DOE. The noncurrent receivable from the DOE, which fluctuates with the net pension and retiree health benefits liabilities due to the DOE’s continuing responsibility to contribute for retired and terminated vested members of LLNS and LANL, decreased by \$337.8 million in 2017 as compared to 2016 and decreased by \$22.7 million in 2016 as compared to 2015. Investments held by trustees decreased by \$0.7 billion in 2017 due to the transfer of self-insurance reserves to the University’s wholly-owned captive insurance company. Since the captive insurance company is blended with the University, the captive’s investments are included with the University’s investments.

### *Deferred outflows of resources*

Changes in fair values of the University’s interest rate swaps that are determined to be hedging derivatives, losses on debt refundings and certain changes in the net pension and net retiree health benefits liabilities are reported as deferred outflows of resources. In 2017, deferred outflows decreased due to higher than expected investment returns in the University of California Retirement Plan (UCRP) portfolio. In 2016, deferred outflows increased due to lower than expected investment returns in the UCRP portfolio.

## The University's Liabilities and Deferred Inflows



The University's liabilities and deferred inflows of resources decreased to \$66.2 billion in 2017 as compared to \$68.8 billion in 2016 and \$59.7 billion in 2015. The changes in both 2017 and 2016 were primarily related to the issuance of additional debt to finance capital projects and the changes in the liabilities for pension and retiree health benefits.

### Debt, including commercial paper

Capital assets are financed from a variety of sources, including University equity contributions, federal and state support, revenue bonds, bank loans and leases or structures that involve separate legal entities. Commercial paper and bank loans provide interim financing for capital assets during the construction period.

Outstanding debt increased by \$551.6 million and \$931.0 million in 2017 and 2016, respectively. A summary of the activity follows:

(in millions of dollars)		
	2017	2016
<b>ADDITIONS TO OUTSTANDING DEBT</b>		
General Revenue Bonds	\$1,136	\$813
Medical Center Pooled Revenue Bonds	1,046	
Limited Project Revenue Bonds		532
Capital leases	55	67
Other borrowings	126	200
Blended Component Unit Revenue Bonds	54	283
Bond premium, net	223	195
<b>Additions to outstanding debt</b>	<b>2,640</b>	<b>2,090</b>
<b>REDUCTIONS TO OUTSTANDING DEBT</b>		
Refinancing and prepayments	(1,321)	(528)
Scheduled principal payments	(400)	(340)
Payments on other borrowings	(64)	(180)
Commercial paper, net	(225)	(47)
Amortization of bond premium	(78)	(64)
<b>Reductions to outstanding debt</b>	<b>(2,088)</b>	<b>(1,159)</b>
<b>Net increase in outstanding debt</b>	<b>\$552</b>	<b>\$931</b>

The University's debt, which is used to primarily finance capital assets, includes \$812.7 million, \$1.0 billion and \$1.1 billion of commercial paper outstanding at the end of 2017, 2016 and 2015, respectively. Total debt outstanding was \$20.5 billion at the end of 2017 compared to \$20.0 billion and \$19.0 billion at the end of 2016 and 2015, respectively.

In 2017, \$2.2 billion of debt was issued, including General Revenue Bonds totaling \$1.1 billion and Medical Center Pooled Revenue Bonds totaling \$1.0 billion to finance and refinance certain facilities and projects. Reductions to outstanding debt in 2017 were \$2.1 billion, including \$1.3 billion for one-time principal payments for the refinancing or refunding of previously outstanding debt. The refinancing and refunding of previously outstanding debt resulted in an economic gain of \$151.2 million.

In August 2016, the University entered into an agreement with a developer to design, construct, finance, operate and maintain certain auxiliary, administrative, academic and research facilities of one of its campuses, for which the University will finance \$600 million of the total costs. Other borrowings at June 30, 2017 include \$43.7 million for the present value of the payments expected to be made over the term of the agreement through 2055 for the repayment of the private debt incurred by the developer during the construction phase. In the event that the agreement with the developer were terminated, the outstanding portion of the private debt incurred by the developer from the construction phase would become an obligation of the University.

Subsequent to year-end, in August 2017, \$148.6 million of revenue bonds were issued through a conduit issuer to finance the construction of student housing facilities and the University issued \$860.4 million of Limited Project Revenue Bonds.

In 2016, \$1.6 billion of debt was issued. The University issued General Revenue Bonds totaling \$813.1 million and Limited Project Revenue Bonds totaling \$532.1 million to finance and refinance certain facilities and projects of the University. In addition, \$282.6 million of revenue bonds were issued through a conduit issuer to refund outstanding bonds which financed the construction of student housing facilities. Reductions to outstanding debt in 2016 were \$1.2 billion, including \$527.9 million for one-time principal payments for the refinancing or refunding of previously outstanding debt. The refinancing and refunding of previously outstanding debt resulted in an economic gain of \$31.5 million.

The University's General Revenue Bond ratings are currently affirmed at Aa2, AA and AA by Moody's Investors Service, Standard & Poor's and Fitch, respectively, all with stable outlooks. The University's Limited Project Revenue Bonds and Medical Center Pooled Revenue Bonds are currently affirmed at Aa3, AA- and AA- by Moody's Investors Service, Standard & Poor's and Fitch, respectively, all with stable outlooks.

Commercial paper borrowings decreased by \$225.2 million in 2017 as compared to 2016, and decreased by \$47.1 million in 2016 compared to 2015. Commercial paper is primarily used as interim financing for construction projects and equipment financing. Commercial paper fluctuates based upon the timing of refinancing construction projects with the issuance of long-term revenue bonds. The University has various revolving credit agreements totaling \$1.1 billion with major financial institutions for the purpose of providing additional liquidity for certain variable-rate demand bonds, commercial paper and for other liquidity needs.

#### *Securities lending collateral*

Under the securities lending program, the University records a liability to the borrower for cash collateral received and held by the University for securities on loan at the end of the year. All borrowers are required to provide additional collateral by the next business day if the value of the collateral falls to less than 100 percent of the fair value of the securities lent. The amount of the securities lending collateral liability fluctuates directly with securities lending opportunities and the investment of cash collateral.

#### *Net pension liability and retiree health benefits*

The University has a financial responsibility for pension benefits associated with its defined benefit plans and for retiree health benefits. The University's net pension liability was \$10.7 billion, \$15.1 billion and \$10.7 billion in 2017, 2016 and 2015, respectively. The change in net pension liability for 2017 was primarily driven by higher than expected investment returns on the UCRP investment portfolio. The change in net pension liability for 2016 was primarily driven by lower than expected investment returns on the UCRP investment portfolio. UCRP's total investment rate of return was positive 14.5 percent in 2017, negative 2.0 percent in 2016 and positive 4.5 percent in 2015. The discount rate used to estimate the net pension liability was 7.25 percent in 2017, 2016 and 2015.

LBNL participates in the University's defined benefit pension plan, although the DOE has an ongoing financial responsibility to reimburse the University for LBNL's share of the obligation to UCRP. In addition, under certain circumstances the University makes contributions to UCRP for LANL and LLNL retirees and, based upon contractual arrangements with the DOE, is reimbursed by the DOE. The University recorded receivables from the DOE of \$615.1 million, \$974.7 million and \$1.0 billion for 2017, 2016 and 2015, respectively, representing the DOE's share of the net pension liability.

The University's 2016 and 2015 financial statements have been restated as a result of adopting new accounting standards for retiree health benefits. The University's net retiree health benefits liability was \$19.3 billion, \$21.8 billion and \$18.7 billion, in 2017, 2016 and 2015, respectively. The University funds the retiree health benefits through UCRHBT based on a projection of benefits on a pay-as-you-go basis and the assets in the trust are not sufficient to fund retiree health benefits. Therefore, the Bond Buyer 20-year tax-exempt general obligations municipal bond index rate is used to discount the retiree health benefit liabilities. The changes in net retiree health benefits liability have been primarily driven by the changes in discount rates used to estimate the retiree health benefit liability. The discount rates as of June 30, 2017, 2016 and 2015 were 3.58 percent, 2.85 percent and 3.80 percent, respectively.

LBNL participates in the University's retiree health benefit plans and, based on contractual arrangements with the DOE, the University is reimbursed for retiree health benefit costs associated with retirees who previously worked at LBNL. The University recorded receivables from the DOE of \$642.8 million, \$621.1 million and \$577.4 million for 2017, 2016 and 2015, respectively, representing the DOE's share of the net retiree health benefits liability.

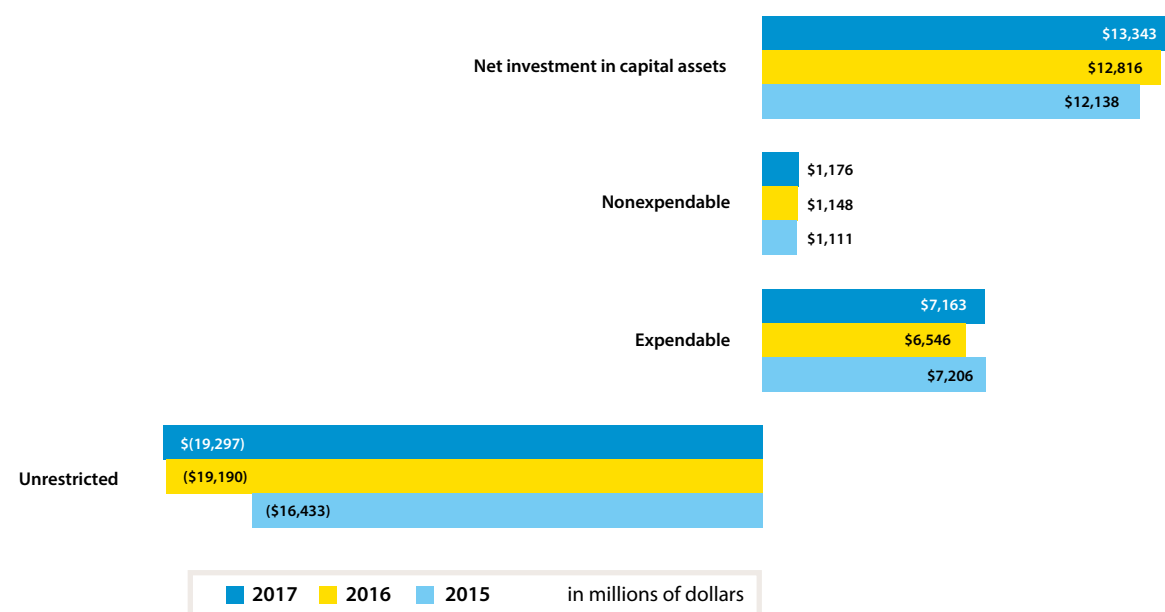
### Other liabilities

Other liabilities consist of accounts payable, accrued salaries, other employee benefits, unearned revenue, funds held for others, DOE laboratories' liabilities, federal refundable loans, self-insurance and obligations under life income agreements.

### Deferred inflows of resources

Deferred inflows of resources are related to the University's service concession arrangements, gains on debt refundings, sales of certain future patent royalty revenues and certain changes in the net pension and net retiree health benefits liabilities. Deferred inflows of resources increased in 2017 by \$2.8 billion due to the increase in the discount rate for estimating the net retiree health benefit liability. Deferred inflows of resources increased slightly in 2016 due to lower than expected investment returns on the UCRP portfolio offset by sales of certain future royalty revenues and the decrease in the discount rate for estimating the net retiree health benefit liability.

### The University's Net Position



Net position represents the residual interest in the University's assets and deferred outflows after all liabilities and deferred inflows are deducted. Net position was restated for 2016 and 2015 as a result of adopting new accounting rules. The University's net position was \$2.4 billion in 2017 compared to \$1.3 billion in 2016 and \$4.0 billion in 2015. Net position is reported in the following categories: net investment in capital assets; restricted, nonexpendable; restricted, expendable; and unrestricted.

### *Net investment in capital assets*

The portion of net position invested in capital assets, net of accumulated depreciation and the related outstanding debt used to finance the acquisition, construction or improvement of these capital assets, was \$13.4 billion in 2017 compared to \$12.8 billion and \$12.1 billion for the years ended June 30, 2016 and 2015, respectively. The University continues to invest in its physical facilities to support growth.

### *Restricted, nonexpendable*

Restricted, nonexpendable net position includes the corpus of the University's permanent endowments and the estimated fair value of certain planned giving arrangements. In 2017 and 2016, the increase in restricted nonexpendable net position was principally due to the receipt of new gifts.

### *Restricted, expendable*

Restricted, expendable net position is subject to externally imposed restrictions governing their use. Net position may be spent only in accordance with the restrictions placed upon them and may include endowment income and gains, subject to the University's spending policy; support received from gifts, appropriations or capital projects; trustee-held investments; or other third-party receipts. The increases or decreases in restricted, expendable funds are principally due to unrealized appreciation or depreciation respectively in the fair value of investments related to restricted gifts and funds functioning as endowments.

### *Unrestricted*

Under generally accepted accounting principles, net position that is not subject to externally imposed restrictions governing their use must be classified as unrestricted for financial reporting purposes. Unrestricted net position is negative due primarily to obligations for pension and retiree health benefits exceeding University assets available to pay such obligations. Although unrestricted net position is not subject to externally imposed restrictions, substantially all of the University's reserves are allocated for academic and research initiatives or programs and for capital and other purposes.



## THE UNIVERSITY'S RESULTS OF OPERATIONS

The statement of revenues, expenses and changes in net position is a presentation of the University's operating results, and indicates whether the financial condition has improved or deteriorated. In accordance with the Governmental Accounting Standards Board (GASB) requirements, certain significant revenues relied upon and budgeted for fundamental operational support of the core instructional mission of the University are required to be recorded as nonoperating revenues, including state educational appropriations, private gifts and investment income. Results of operations for 2016 and 2015 have been restated as a result of adopting new accounting policies for retiree health benefits. A summarized comparison of the operating results for 2017, 2016 and 2015, arranged in a format that matches the revenue supporting the core activities of the University with the expenses associated with core activities, is as follows:

(in millions of dollars)

	2017			2016			2015		
	OPERATING	NONOPERATING	TOTAL	OPERATING	NONOPERATING	TOTAL	OPERATING	NONOPERATING	TOTAL
<b>REVENUES</b>									
Student tuition and fees, net	\$4,477		\$4,477	\$4,132		\$4,132	\$3,784		\$3,784
State educational appropriations		\$3,278	3,278		\$3,048	3,048		\$2,792	2,792
Federal Pell Grants		382	382		376	376		376	376
Grants and contracts, net	5,441		5,441	5,273		5,273	5,205		5,205
Medical centers, net	11,241	13	11,255	10,236	15	10,251	9,477	22	9,499
Educational activities, net	3,333		3,333	2,973		2,973	2,740		2,740
Auxiliary enterprises, net	1,579		1,579	1,430		1,430	1,394		1,394
Department of Energy laboratories	1,147		1,147	1,278		1,278	1,241		1,241
Private gifts, net		1,167	1,167		1,092	1,092		971	971
Investment income, net		299	299		311	311		319	319
Other revenues	939	70	1,009	962	51	1,013	911	38	949
<b>Revenues supporting core activities</b>	<b>28,157</b>	<b>5,209</b>	<b>33,366</b>	<b>26,284</b>	<b>4,893</b>	<b>31,177</b>	<b>24,752</b>	<b>4,518</b>	<b>29,270</b>
<b>EXPENSES</b>									
Salaries and wages	15,160		15,160	14,021		14,021	13,109		13,109
Pension benefits	1,888		1,888	2,687		2,687	1,515		1,515
Retiree health benefits	1,576		1,576	1,875		1,875	1,528		1,528
Other employee benefits	2,938		2,938	2,837		2,837	2,666		2,666
Scholarships and fellowships	729		729	652		652	547		547
Utilities	292		292	283		283	273		273
Supplies and materials	3,240		3,240	3,109		3,109	2,876		2,876
Depreciation and amortization	1,910		1,910	1,804		1,804	1,698		1,698
Department of Energy laboratories	1,139		1,139	1,271		1,271	1,235		1,235
Interest expense		721	721		693	693		662	662
Other expenses	4,648	60	4,708	4,411	46	4,457	4,157	16	4,173
<b>Expenses associated with core activities</b>	<b>33,520</b>	<b>781</b>	<b>34,301</b>	<b>32,950</b>	<b>739</b>	<b>33,689</b>	<b>29,604</b>	<b>678</b>	<b>30,282</b>
<b>Income (loss) from core activities</b>	<b>\$(5,363)</b>	<b>\$4,428</b>	<b>\$(935)</b>	<b>\$(6,666)</b>	<b>\$4,154</b>	<b>\$(2,512)</b>	<b>\$(4,852)</b>	<b>\$3,840</b>	<b>\$(1,012)</b>
<b>OTHER NONOPERATING ACTIVITIES</b>									
Net appreciation (depreciation) in fair value of investments			1,722			(473)			544
<b>Income (loss) before other changes in net position</b>			787			(2,985)			(468)
<b>OTHER CHANGES IN NET POSITION</b>									
State capital appropriations			2			4			21
Capital gifts and grants, net			255			249			187
Permanent endowments			21			30			27
<b>Increase (decrease) in net position</b>			<b>1,065</b>			<b>(2,702)</b>			<b>(233)</b>
<b>NET POSITION</b>									
Beginning of year, as previously reported			1,320			4,022			11,282
Cumulative effect of accounting changes									(7,027)
Beginning of year, restated			1,320			4,022			4,255
<b>End of year</b>			<b>\$2,385</b>			<b>\$1,320</b>			<b>\$4,022</b>

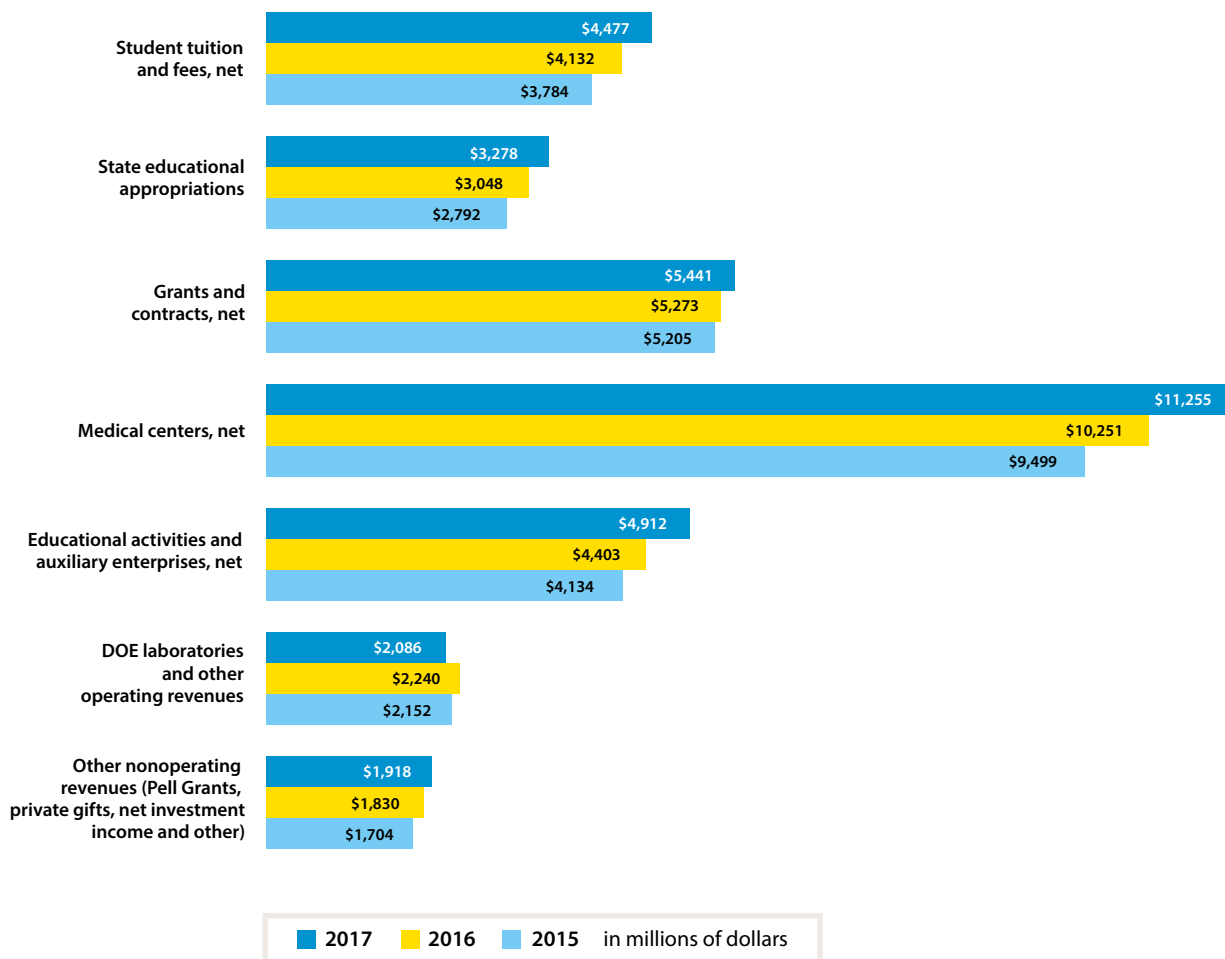
### Revenues supporting core activities

Revenues to support the University's core activities, including those classified as nonoperating revenues, were \$33.4 billion, \$31.2 billion and \$29.3 billion in 2017, 2016 and 2015, respectively. These diversified sources of revenue increased by \$2.2 billion in 2017 and \$1.9 billion in 2016.

The state of California's educational appropriations, in conjunction with student tuition and fees, are the core components that support the instructional mission of the University. Grants and contracts provide opportunities for undergraduate and graduate students to participate in basic research alongside some of the most prominent researchers in the country.

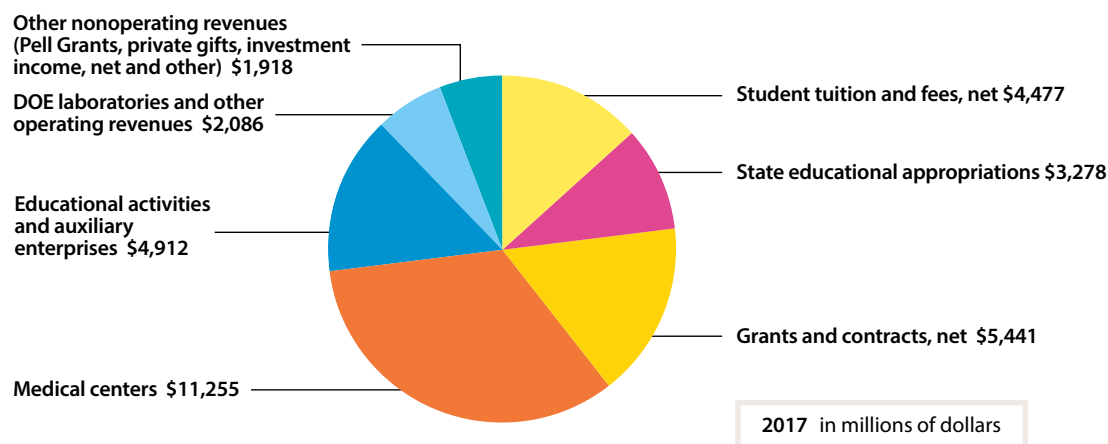
Gifts to the University allow crucial flexibility to faculty for support of their fundamental activities or new academic initiatives. Other significant revenues are from medical centers, educational activities and auxiliary enterprises such as student housing, food service operations and parking.

Revenues in the various categories have changed as follows:



A major financial strength of the University includes a diverse source of revenues, including those from student fees, federally sponsored grants and contracts, medical centers, the state of California, private support and self-supporting enterprises. The variety of fund sources has become increasingly important over the past several years.

Categories of both operating and nonoperating revenue that supported the University's core activities in 2017 are as follows:



### *Student tuition and fees, net*

Net student tuition and fees were \$4.5 billion, \$4.1 billion and \$3.8 billion in 2017, 2016 and 2015, respectively. Scholarship allowances, or financial aid, are the difference between the stated charge for tuition and fees and the amount that is paid by the student and third parties on behalf of the student and are reported as an offset to revenue. Scholarship allowances of \$0.9 billion and \$1.1 billion in 2017 and 2016, respectively, were netted against student tuition and fees. Student tuition and fees, net of scholarship allowances, increased by \$344.9 million and \$348.3 million in 2017 and 2016, respectively.

In 2017, enrollment grew by 4.9 percent and in 2016 enrollment grew by 2.1 percent. Mandatory tuition for resident undergraduates did not change in 2017 or 2016. Certain nonresident undergraduates and resident and nonresident graduate students experienced increases in mandatory tuition and fees. Professional degree supplemental tuition varies by discipline; certain increases were approved for 2017 and 2016.

### *State educational appropriations*

Educational appropriations from the state of California were \$3.3 billion, \$3.0 billion and \$2.8 billion in 2017, 2016 and 2015, respectively. State educational appropriations increased in 2017 and 2016 by \$229.4 million and \$256.7 million, respectively.

The budget framework agreed to in 2015 with the governor called for base budget adjustments of four percent annually over four years, through 2019. The framework also called for no tuition increases in 2017 and 2016, with tuition increases generally pegged to the rate of inflation beginning in 2018. The student service fee increased five percent in 2017 and 2016, with the customary one-third of the increase being directed to financial aid. The framework also acknowledged the University's plan to increase nonresident supplemental tuition by up to eight percent for 2017 and 2016 and five percent thereafter. The framework recognized the increases in professional degree supplemental tuition approved by The Regents in November 2014 for existing and new programs and called for no increases in law school tuition through 2019.

### *Grants and contracts, net*

Revenue from federal, state, private and local government grants and contracts — including an overall facilities and administration cost recovery of \$1.1 billion, \$1.0 billion and \$993.5 million in 2017, 2016 and 2015, respectively — were \$5.4 billion, \$5.3 billion and \$5.2 billion in 2017, 2016 and 2015, respectively.

In 2017, federal grants and contracts revenue increased \$14.0 million, or 0.4 percent, as compared to 2016. In 2016, federal grants and contracts revenue increased \$37.2 million, or 1.2 percent, as compared to 2015. Federal grants and contracts include federal facilities and administrative cost recovery of \$764.0 million, \$745.6 million and \$720.3 million in 2017, 2016 and 2015, respectively. Federal budget cuts have slowed the University's growth in federal grants and contracts. Grant and contract revenue is from a variety of federal agencies as indicated below:

*(in millions of dollars)*

	2017	2016	2015
Department of Health and Human Services	\$1,987	\$1,917	\$1,847
National Science Foundation	465	469	498
Department of Education	57	83	70
Department of Defense	275	258	259
National Aeronautics and Space Administration	95	135	137
Department of Energy (excluding national laboratories)	107	104	100
Other federal agencies	273	279	296
<b>Federal grants and contracts net revenue</b>	<b>\$3,259</b>	<b>\$3,245</b>	<b>\$3,207</b>

### *Medical centers, net*

Medical center revenues, including state hospital fee grants, net of allowances, increased \$1.0 billion, or 9.8 percent, in 2017 and increased \$752.2 million, or 7.9 percent, in 2016. Revenues increased in 2017 due to the opening of the new UCSD Jacobs Medical Center in November 2016, increases in supplemental revenues and higher inpatient and outpatient utilization at all of the medical centers. Revenues increased in 2016 due to the new UCSF Mission Bay facility, which opened in February 2015, and was open for all of 2016, contributing to a significant portion of the growth in revenues.

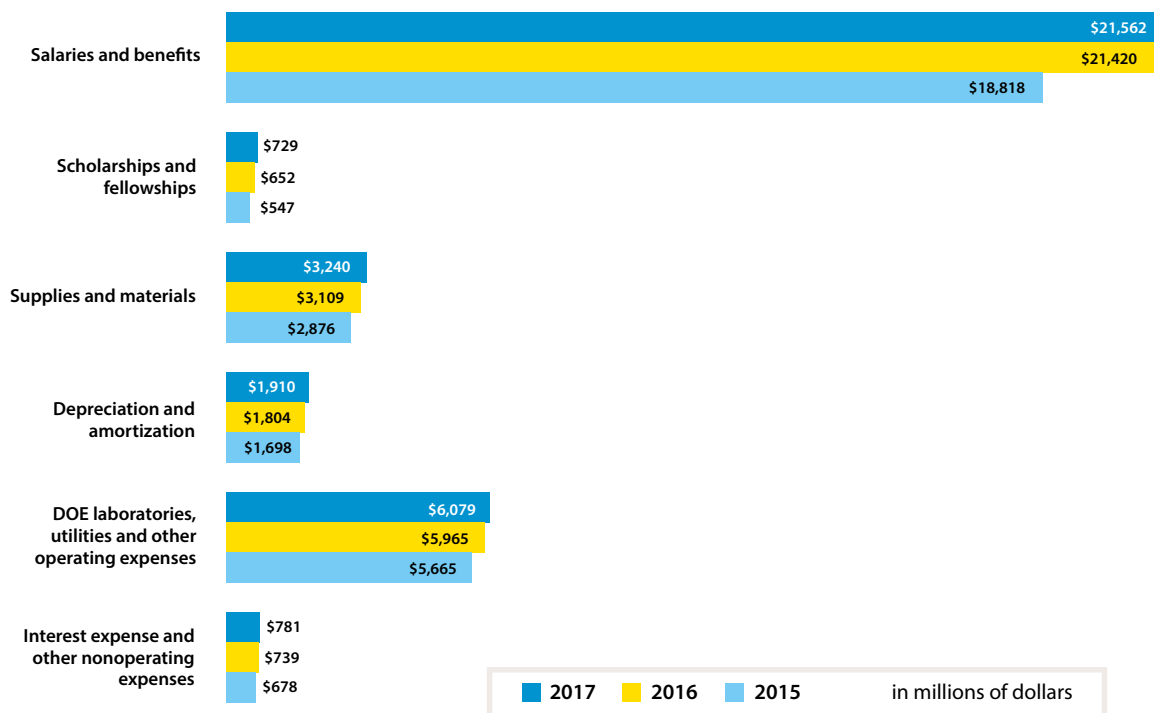
### *Educational activities and auxiliary enterprises, net*

Revenue from educational activities, primarily medical professional fees, net of allowances, grew by \$359.8 million, or 12.1 percent, in 2017 and \$232.6 million, or 8.5 percent, in 2016. The growth is generally associated with an expanded patient base and improved collections.

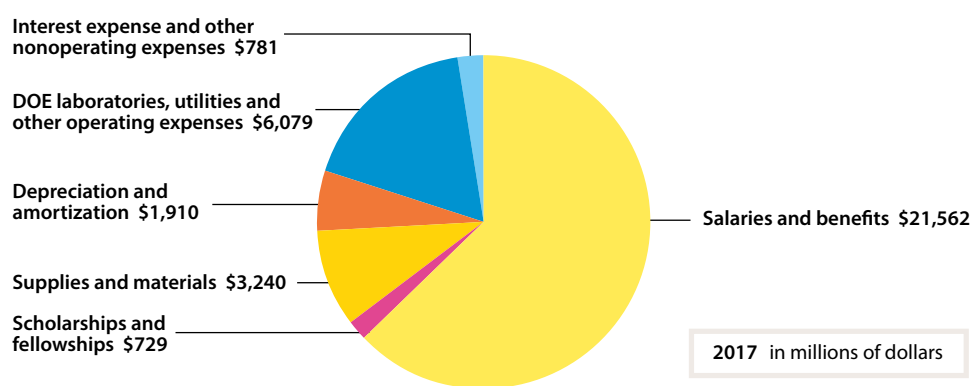
Auxiliary enterprises include housing, food service, parking, bookstores, student centers, unions and childcare centers. Auxiliary revenues have increased consistent with enrollment. Revenue from auxiliary enterprises, net of allowances, grew by \$149.2 million, or 10.4 percent, in 2017 and \$35.9 million, or 2.6 percent in 2016 which is consistent with changes in enrollment.

### Expenses associated with core activities

Expenses associated with the University's core activities, including those classified as nonoperating expenses, were \$34.3 billion, \$33.7 billion and \$30.3 billion in 2017, 2016 and 2015, respectively. Expenses increased in 2017 by \$0.6 billion and in 2016 by \$3.4 billion, primarily due to growth in the University's operations, principally at the medical centers. Pension expenses decreased in 2017 and increased in 2016 as a result of actual compared to expected earnings on the UCRP portfolio. Expenses in the various categories are as follows:



Categories of both operating and nonoperating expenses related to the University's core activities in 2017 are as follows:



### Salaries and benefits

Approximately 62.9 percent of the University's expenses were related to salaries and benefits. There were 154,500 full-time equivalent (FTE) employees in 2017, excluding employees who were associated with LBNL whose salaries and benefits were included as laboratory expenses, as compared to 149,300 FTEs in 2016.



Salaries and benefits increased by 0.7 percent in 2017. In 2017, salaries increased by 8.1 percent, 3.5 percent due to an increase in the number of FTEs and 4.5 percent due to an increase in the average salary per FTE. Employee benefits, excluding pension and post-retirement health care benefits, increased by \$100.5 million, or 3.5 percent, in 2017 due to higher health insurance costs. Pension expense decreased by \$0.8 billion, or 29.7 percent, due to better than expected investment returns. Retiree health expense decreased by \$298.8 million or 15.9 percent due to the higher discount rate in 2017.

Salaries and benefits increased by 13.0 percent in 2016 due to growth in the University's operations. In 2016, salaries increased by 7.0 percent, 3.1 percent due to an increase in the number of FTEs and 3.7 percent due to an increase in the average salary per FTE. Employee benefits, excluding pension and post-retirement health care benefits, increased by \$171.4 million, or 6.4 percent in 2016, due to higher health insurance costs. Pension expense increased by \$1.2 billion or 77.3 percent due to lower than expected investment returns. Retiree health expense increased by \$347.0 million or 22.7 percent due to the lower discount rate in 2016.

### *Scholarships and fellowships*

The University places a high priority on student financial aid as part of its commitment to affordability. Scholarship allowances, representing financial aid and fee waivers awarded by the University, were \$2.1 billion, \$2.0 billion and \$2.0 billion in 2017, 2016 and 2015, respectively. Scholarships and fellowships, representing payments of financial aid made directly to students and reported as an operating expense were \$728.6 million, \$651.6 million and \$547.1 million in 2017, 2016 and 2015, respectively. On a combined basis, as the University continues its commitment to provide financial support for needy students, financial aid in all forms increased by \$55.7 million, or 2.8 percent, in 2017 as compared to 2016, and by \$34.2 million, or 1.7 percent, in 2016 compared to 2015.

### *Supplies and materials*

During 2017 and 2016, supplies and materials costs increased by \$131.0 million, or 4.2 percent and \$232.5 million, or 8.1 percent, respectively. The largest increases occurred at the medical centers due to higher patient volumes. In recent years, there has been inflationary pressure on the costs for medical supplies and laboratory instruments and higher costs for general supplies necessary to support expanded medical patient volumes. The University continues to find opportunities to manage the costs of supplies and materials.

### *Other expenses*

Other expenses consist of a variety of expense categories, including travel, rent, insurance, legal settlements and repairs and maintenance, plus any gain or loss on disposals of capital assets and other nonoperating expenses.

### *Operating losses*

In accordance with the GASB's reporting standards, operating losses were \$5.4 billion, \$6.7 billion and \$4.9 billion in 2017, 2016 and 2015, respectively. The operating losses in 2017, 2016 and 2015 were partially offset by \$4.4 billion, \$4.1 billion and \$3.8 billion, respectively, of net nonoperating revenue that supports core operating activities of the University. Expenses associated with core activities in 2017, 2016 and 2015 exceeded revenue available to support core activities by \$0.9 billion, \$2.5 billion and \$1.0 billion, respectively.

### *Other nonoperating activities*

The University's other nonoperating activities, consisting of net appreciation or depreciation in the fair value of investments, are noncash transactions and, therefore, are not available to support operating expenses. In 2017, the University recognized net appreciation in the fair value of investments of \$1.7 billion, as compared to net depreciation of \$473.3 million during 2016 and net appreciation of \$543.6 million during 2015. The University's portfolio experienced positive returns in the equity markets in 2017. The University's portfolio experienced declines in 2016 principally due to declines in the equity markets.

### *Other changes in net position*

Similar to other nonoperating activities discussed above, other changes in net position are also not available to support the University's operating expenses in the current year. State capital appropriations and capital gifts and grants may only be used for the purchase or construction of the specified capital assets. Only income earned from gifts of permanent endowments is available in future years to support the specified program.

## THE UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS

Separate foundations at each individual campus provide valuable assistance in fundraising, public outreach and other support for the missions of the campus and the University. Although independent boards govern each of the foundations, they are affiliated with, and their assets are dedicated for, the benefit of the University of California.

### The Campus Foundations' Financial Position

The campus foundations' statement of net position presents their combined financial position at the end of the year. It displays all of the campus foundations' assets, liabilities, deferred inflows and net position. The difference between assets, liabilities and deferred inflows is net position, representing a measure of the current financial condition of the campus foundation.

The major components of the combined assets, liabilities and net position of the campus foundations at June 30, 2017, 2016 and 2015 are as follows:

<i>(in millions of dollars)</i>			
	2017	2016	2015
<b>ASSETS</b>			
Investments	\$8,207	\$7,115	\$7,085
Investment of cash collateral	43	42	37
Accounts receivable, net	40	33	79
Pledges receivable, net	866	842	823
Other assets	277	221	224
<b>Total assets</b>	<b>9,433</b>	<b>8,253</b>	<b>8,248</b>
<b>LIABILITIES</b>			
Accounts payable and other current liabilities	130	71	247
Securities lending collateral	43	42	37
Obligation under life income agreements and funds held for others	403	382	370
Other noncurrent liabilities	253	220	42
<b>Total liabilities</b>	<b>829</b>	<b>715</b>	<b>696</b>
<b>DEFERRED INFLOWS OF RESOURCES</b>	<b>2</b>	<b>1</b>	<b>2</b>
<b>NET POSITION</b>			
Restricted:			
Nonexpendable	4,046	3,700	3,422
Expendable	4,363	3,742	4,030
Unrestricted	193	95	98
<b>Total net position</b>	<b>\$8,602</b>	<b>\$7,537</b>	<b>\$7,550</b>

Investments increased in 2017 and were flat in 2016 due to the performance of the financial markets. The Board of Trustees for each campus foundation is responsible for its specific investment policy, although asset allocation guidelines are recommended to campus foundations by the Investments Subcommittee of The Regents. The Boards of Trustees may determine that all or a portion of their investments will be managed by the University's Chief Investment Officer. The Chief Investment Officer managed \$2.2 billion, \$1.6 billion and \$1.3 billion of the campus foundations' investments at the end of 2017, 2016 and 2015, respectively.

Restricted, nonexpendable net position includes the corpus of the campus foundations' permanent endowments and the estimated fair value of certain planned giving arrangements. Restricted, expendable net position is subject to externally imposed restrictions governing their use. Net position represents the residual interest in the assets after all liabilities and deferred inflows are deducted. It is only available in accordance with the restrictions placed upon them and may include endowment income and investment gains, subject to each individual campus foundation's spending policy; support received from gifts; trustee-held investments; or other third-party receipts. New gifts and changes in the fair value of investments were the primary reasons for the changes in value in 2017 and 2016.

## The Campus Foundations' Results of Operations

The campus foundations' combined statement of revenues, expenses and changes in net position is a presentation of their operating results for the year. It indicates whether their financial condition has improved or deteriorated during the year.

A summarized comparison of the operating results for 2017, 2016 and 2015 is as follows:

<i>(in millions of dollars)</i>			
	2017	2016	2015
<b>OPERATING REVENUES</b>			
Private gifts and other revenues	\$869	\$792	\$767
<b>Total operating revenues</b>	<b>869</b>	<b>792</b>	<b>767</b>
<b>OPERATING EXPENSES</b>			
Grants to campuses and other expenses	969	915	852
<b>Total operating expenses</b>	<b>969</b>	<b>915</b>	<b>852</b>
<b>Operating loss</b>	<b>(100)</b>	<b>(123)</b>	<b>(85)</b>
<b>NONOPERATING REVENUES (EXPENSES)</b>			
Investment income	73	53	65
Net appreciation (depreciation) in fair value of investments	799	(225)	207
Other nonoperating revenues (expenses)	5	4	(5)
<b>Income (loss) before other changes in net position</b>	<b>777</b>	<b>(291)</b>	<b>182</b>
<b>OTHER CHANGES IN NET POSITION</b>			
Permanent endowments	288	278	274
<b>Increase (decrease) in net position</b>	<b>1,065</b>	<b>(13)</b>	<b>456</b>
<b>NET POSITION</b>			
Beginning of year	7,537	7,550	7,094
<b>End of year</b>	<b>\$8,602</b>	<b>\$7,537</b>	<b>\$7,550</b>

Operating expenses generally consist of grants to University campuses, comprised of current-use gifts and endowment income and other expenses, including gift fees. Grants to campuses typically follow the pattern indicated by private gift revenue; however, the campuses' programmatic needs are also taken into consideration, subject to abiding by the restricted purposes of gifts to the endowment and the amounts available for grants in any particular year.

Grants to the campuses can only be made when the cash is received and, in addition, also include endowment investment income, classified as nonoperating income. Therefore, operating losses can occur when grants distributed to the campuses in any particular year exceed private gift revenue.

## THE UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM (UCRS)

UCRS is a valuable component of the comprehensive benefits package offered to employees of the University. UCRS consists of the University of California Retirement Plan (UCRP), a defined benefit plan for members; the University of California Retirement Savings Program (UCRSP) that includes four defined contribution plans (Defined Contribution Plan, Supplemental Defined Contribution Plan, 403(b) Plan and 457(b) Plan) to complement the defined benefit plan, with several investment portfolio options for participants' elective and non-elective contributions; and the California Public Employees Retirement System (PERS) Voluntary Early Retirement Incentive Plan (UC-VERIP) for certain University employees that were members of PERS who elected early retirement.

## UCRS' Financial Position and Result of Operations

The statement of plans' fiduciary net position presents the financial position of UCRS at the end of the fiscal year. It displays all of the retirement system's assets, liabilities and net position. The difference between assets and liabilities is the net position held in trust for pension benefits. These represent amounts available to provide pension benefits to members of UCRP and participants in the defined contribution plans and UC-VERIP. At June 30, 2017, UCRS' assets were \$94.0 billion, liabilities were \$9.3 billion and net position held in trust for pension benefits were \$84.7 billion, an increase of \$10.1 billion from 2016. At June 30, 2016, UCRS' assets were \$83.3 billion, liabilities were \$8.7 billion and net assets held in trust for pension benefits were \$74.6 billion, a decrease of \$831.7 million from 2015.

The major components of the assets, liabilities and net position available for pension benefits for 2017, 2016 and 2015 are as follows:

<i>(in millions of dollars)</i>			
	2017	2016	2015
<b>ASSETS</b>			
Investments	\$82,574	\$73,197	\$71,596
Participants' interests in mutual funds	3,351	2,768	4,948
Investment of cash collateral	6,842	6,751	5,177
Other assets	1,203	571	516
<b>Total assets</b>	<b>93,970</b>	<b>83,287</b>	<b>82,237</b>
<b>LIABILITIES</b>			
Securities lending collateral	6,838	6,750	5,178
Other liabilities	2,470	1,955	1,645
<b>Total liabilities</b>	<b>9,308</b>	<b>8,705</b>	<b>6,823</b>
<b>NET POSITION HELD IN TRUST FOR PENSION BENEFITS</b>			
Members' defined benefit plan benefits	62,179	54,225	55,123
Participants' defined contribution plan benefits	22,483	20,357	20,291
<b>Total net position held in trust for pension benefits</b>	<b>\$84,662</b>	<b>\$74,582</b>	<b>\$75,414</b>

The statements of changes in the plans' fiduciary net position is a presentation of UCRS' operating results. It indicates whether the financial condition has improved or deteriorated during the year. A summarized comparison of the operating results for 2017, 2016 and 2015 is as follows:

<i>(in millions of dollars)</i>			
	2017	2016	2015
<b>ADDITIONS</b>			
Contributions	\$4,779	\$4,551	\$4,459
Net appreciation (depreciation) in fair value of investments	8,617	(2,300)	1,320
Investment and other income, net	1,437	1,318	1,326
<b>Total additions</b>	<b>14,833</b>	<b>3,569</b>	<b>7,105</b>
<b>DEDUCTIONS</b>			
Benefit payments and participant withdrawals	4,700	4,342	4,534
Plan expenses	53	59	55
<b>Total deductions</b>	<b>4,753</b>	<b>4,401</b>	<b>4,589</b>
<b>Increase (decrease) in net position held in trust for pension benefits</b>	<b>\$10,080</b>	<b>\$(832)</b>	<b>\$2,516</b>

The Regents' asset allocation strategies are intended to generate investment returns over time in accordance with investment objectives and at acceptable levels of risk. The overall investment result based upon unit values for UCRP was positive 14.5 percent in 2017 as compared to investment losses of 2.0 percent in 2016 and gains of 4.5 percent in 2015.

The participants' interests in mutual funds, representing defined contribution plan contributions to certain mutual funds on a custodial plan basis, fluctuate based upon market performance of the mutual funds and participant investment elections.

UCRS participates in the University's securities lending program as a means to augment income. All borrowers are required to provide collateral and the University records a liability to the borrower for cash collateral received and held by the University for securities on loan at the end of the year. Investments in cash collateral and the securities lending collateral liability fluctuate in response to changes in demand from borrowers and the availability of securities based upon the UCRS asset allocation mix.

Contributions to UCRP in 2017, 2016 and 2015 were \$3.4 billion, \$3.4 billion and \$3.3 billion, respectively. In 2017 and 2016, contributions include \$171.0 million and \$96.0 million, respectively, received from the state of California under the budget agreement. Contributions include additional deposits of \$481.0 million, \$563.6 million and \$700.0 million made by the University to UCRP in 2017, 2016 and 2015, respectively. University contribution rates to UCRP were 14.0 percent of covered payroll in 2017, 2016 and 2015. Employee contribution rates ranged between 7.0 percent and 9.0 percent in 2017, 2016 and 2015. In July 2017, The Regents approved increasing the University's contribution rate to UCRP to 15.0 percent effective July 1, 2018.

Benefit payments and participant withdrawals were \$358.2 million more in 2017 than in 2016 and \$192.1 million less in 2016 than in 2015. Payments from UCRP increase each year due to a growing number of retirees receiving payments and cost-of-living adjustments (COLAs). Benefit payments from UCRSP fluctuate based upon member withdrawals. Participant withdrawals increased by \$143.0 million, or 11.6 percent, in 2017 as compared to 2016, and decreased by \$320.6 million, or 20.7 percent, in 2016 as compared to 2015. As of June 30, 2017, there were 73,000 retirees and beneficiaries receiving payments from UCRS as compared to 70,000 as of June 30, 2016 and 67,300 as of June 30, 2015.

The net pension liability for UCRP was \$10.7 billion in 2017, \$15.1 billion in 2016 and \$10.6 billion in 2015. The decrease in net pension liability for 2017 of \$4.4 billion was due to higher than expected investment returns on the UCRP portfolio. The increase in net pension liability for 2016 of \$4.5 billion was due to lower than expected investment returns on the UCRP portfolio. The ratio of plan net position to total pension liability was 85.3 percent in 2017, 78.2 percent in 2016 and 83.8 percent in 2015.

Additional information on the retirement plans can be obtained from the 2017 annual reports of the University of California Retirement System by writing to the University of California, Office of the President, Human Resources and Benefits, Post Office Box 24570, Oakland, California 94623.

## THE UNIVERSITY OF CALIFORNIA RETIREE HEALTH BENEFIT TRUST (UCRHBT)

The UCRHBT was established on July 1, 2007 to allow certain University locations — primarily campuses and medical centers — that share the risks, rewards and costs of providing for retiree health benefits the opportunity to fund such benefits on a cost-sharing basis and accumulate funds on a tax-exempt basis under an arrangement segregated from University assets. The University contributes toward retiree medical and dental benefits, although it does not contribute toward the cost of other benefits available to retirees. The DOE laboratories do not participate in the UCRHBT, therefore the DOE has no interest in the trust's assets.

### UCRHBT's Financial Position and Result of Operations

The statement of trust's fiduciary net position presents the financial position of the UCRHBT at the end of the fiscal year. It displays the UCRHBT's assets, liabilities and net position. The difference between assets and liabilities is the net position held in trust for retiree health benefits. This represents amounts available to provide retiree health benefits to participants.

The major components of the assets, liabilities and net position available for retiree health benefits for 2017, 2016 and 2015 are as follows:

(in millions of dollars)

	2017	2016	2015
<b>ASSETS</b>			
Investments	\$98	\$54	\$24
Other assets	26	34	39
<b>Total assets</b>	<b>124</b>	<b>88</b>	<b>63</b>
<b>LIABILITIES</b>			
<b>Total liabilities</b>	<b>17</b>	<b>15</b>	<b>12</b>
<b>NET POSITION HELD IN TRUST FOR RETIREE HEALTH BENEFITS</b>			
<b>Total net position held in trust for retiree health benefits</b>	<b>\$107</b>	<b>\$73</b>	<b>\$51</b>



The statement of changes in the trust's fiduciary net position is a presentation of the UCRHBT's operating results, and indicates whether the financial condition has improved or deteriorated during the year. Summarized operating results for 2017, 2016 and 2015 are as follows:

<i>(in millions of dollars)</i>			
	2017	2016	2015
<b>ADDITIONS</b>			
Contributions	\$328	\$310	\$316
<b>Total additions</b>	<b>328</b>	<b>310</b>	<b>316</b>
<b>DEDUCTIONS</b>			
Insurance premiums and payments	290	284	327
Plan expenses	4	4	3
<b>Total deductions</b>	<b>294</b>	<b>288</b>	<b>330</b>
<b>Increase (decrease) in net position held in trust for retiree health benefits</b>	<b>\$34</b>	<b>\$22</b>	<b>\$(14)</b>

Contributions for retiree health benefits are made by the campuses and medical centers based upon projected pay-as-you-go financing. The University acts as a third-party administrative agent on behalf of the UCRHBT to pay health care insurers and administrators amounts currently due.

The retiree health benefits provided under the University's plan and any liabilities related to the future funding requirements for the retiree health benefits are reported by the University. The net retiree health liability for UCRHBT was \$18.7 billion, \$21.1 billion and \$18.0 billion in 2017, 2016 and 2015, respectively.

## LOOKING FORWARD

The University of California is a world center of learning, known for generating a steady stream of talent, knowledge and social benefits, and has always been at the center of California's capacity to innovate. The excellence of its programs attracts the best students, leverages hundreds of millions of dollars in state, federal and private funding and promotes discovery of new knowledge that fuels economic growth.

The budget framework agreed to with the governor provided the University with base budget adjustments of four percent annually from 2016 through 2019. The framework also called for no tuition increases in 2016 and 2017, with tuition increases generally pegged to the rate of inflation beginning in 2018. The Student Services Fee increased five percent in 2016 and each year thereafter with the customary one-third of the increase being directed to financial aid. Fifty percent of the remaining revenue generated from the increase will be used to enhance student mental health services and the remaining 50.0 percent will be distributed to support other student services programs. The framework also acknowledged the University's plan to increase nonresident supplemental tuition by up to eight percent in 2016 and 2017 and five percent thereafter. The framework also recognized the increases in professional degree supplemental tuition approved by The Regents in November 2014 for existing and new programs and calls for no increases in law school tuition through 2019. In addition to these funding elements, the budget framework includes a number of performance-related provisions. The state budget for 2018 also includes one-time funds of \$169.0 million for UCRP.

The University remains highly competitive in attracting federal grants and contracts revenue, with fluctuations in the awards received closely paralleling trends in the budgets of federal research granting agencies. Over two-thirds of the University's federal research revenue comes from two agencies, the Department of Health and Human Services, primarily through the National Institutes of Health, and the National Science Foundation. Other agencies that figure prominently in the University's awards are the Department of Education, Department of Defense, the National Aeronautics and Space Administration and the Department of Energy. The University is a unique national resource for helping the nation address competitiveness and economic initiatives.

In July 2017, The Regents approved increasing the University contribution rate for UCRP to 15 percent (from 14 percent) effective July 1, 2018. The University funds retiree health benefits on a pay-as-you-go basis.

The University's medical centers have positive operating margins, although they continue to face financial and competitive challenges in their regional markets, along with the added costs and responsibilities related to their function as academic institutions. The demand for health care services and the cost of providing them continue to increase significantly. In addition to the rising costs of salaries, benefits and medical supplies faced by hospitals across the state, along with the costs of maintaining and upgrading facilities, the University's medical centers also face additional costs associated with new technologies, biomedical research, the education and training of health care professionals and the care for a disproportionate

share of the medically underserved in California. Other than Medicare and Medi-Cal (California's Medicaid program), health insurance payments do not recognize the added cost of teaching in their payment to academic medical centers. The growth in costs of the publicly funded programs and health care reform will likely continue to reduce rates or limit payment growth, placing downward pressure on operating results for the medical centers.

The University must have a balanced array of many categories of facilities to meet its education, research and public service goals and continues to assess its long-term capital requirements. Support for the University's capital program is expected to be provided from a combination of sources, including the state of California, external financing, gifts and other sources.

Additional budget information can be found at <http://universityofcalifornia.edu/news/budget/welcome.html>. Additional information concerning state budget matters and the state's financial condition may be found on the website of the California Department of Finance at <http://www.dof.ca.gov>.

#### **CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS**

Certain information provided by the University, including written as outlined above or oral statements made by its representatives, may contain forward-looking statements as defined in the Private Securities Litigation Reform Act of 1995. All statements, other than statements of historical facts, which address activities, events or developments that the University expects or anticipates will or may occur in the future contain forward-looking information.

In reviewing such information, it should be kept in mind that actual results may differ materially from those projected or suggested in such forward-looking information. This forward-looking information is based upon various factors and was derived using various assumptions. The University does not undertake to update forward-looking information contained in this report or elsewhere to reflect actual results, changes in assumptions or changes in other factors affecting such forward-looking information.

**STATEMENTS OF NET POSITION**

	UNIVERSITY OF CALIFORNIA		CAMPUS FOUNDATIONS	
	2017	2016	2017	2016
<i>At June 30, 2017 and 2016 (in thousands of dollars)</i>				
<b>ASSETS</b>				
Cash and cash equivalents	\$203,370	\$266,565	\$254,100	\$194,912
Short-term investments	6,249,657	4,944,611	674,868	479,410
Investment of cash collateral	947,353	680,838	37,357	34,641
Investments held by trustees	32,516	85,467		
Accounts receivable, net	3,946,891	3,319,518	40,012	32,562
Pledges receivable, net	23,181	17,056	192,484	217,971
Notes and mortgages receivable, net	50,137	52,672	6	6
Inventories	226,995	214,680		
Department of Energy receivable	123,896	94,307		
Other current assets	338,041	328,932	4,748	5,945
<b>Current assets</b>	<b>12,142,037</b>	<b>10,004,646</b>	<b>1,203,575</b>	<b>965,447</b>
Investments	18,228,705	17,264,156	7,532,122	6,635,868
Investment of cash collateral	132,476	144,093	5,224	7,332
Investments held by trustees	66,509	765,417		
Pledges receivable, net	33,031	30,050	673,495	624,452
Notes and mortgages receivable, net	314,018	327,169	427	1,014
Department of Energy receivable	1,257,926	1,595,767		
Capital assets, net	30,669,753	29,688,815		
Other noncurrent assets	138,927	141,505	17,760	19,471
<b>Noncurrent assets</b>	<b>50,841,345</b>	<b>49,956,972</b>	<b>8,229,028</b>	<b>7,288,137</b>
<b>Total assets</b>	<b>62,983,382</b>	<b>59,961,618</b>	<b>9,432,603</b>	<b>8,253,584</b>
<b>DEFERRED OUTFLOWS OF RESOURCES</b>	<b>5,549,644</b>	<b>10,170,090</b>		
<b>LIABILITIES</b>				
Accounts payable	2,394,554	1,623,237	21,762	18,485
Accrued salaries	644,500	995,235		
Employee benefits	394,673	440,270		
Unearned revenue	1,200,545	1,172,308	62,750	921
Collateral held for securities lending	1,079,318	824,677	42,581	41,973
Commercial paper	812,673	1,037,857		
Current portion of long-term debt	1,519,005	1,413,265		
Funds held for others	362,621	327,429	265,159	251,472
Department of Energy laboratories' liabilities	107,514	78,862		
Other current liabilities	1,593,297	1,438,527	45,470	51,875
<b>Current liabilities</b>	<b>10,108,700</b>	<b>9,351,667</b>	<b>437,722</b>	<b>364,726</b>
Federal refundable loans	246,131	243,913		
Self-insurance	584,232	558,158		
Obligations under life income agreements	34,479	32,021	137,713	130,314
Long-term debt	18,171,198	17,500,165		
Net pension liability	10,739,355	15,124,690		
Net retiree health benefits liability	19,290,424	21,795,448		
Other noncurrent liabilities	688,802	737,355	253,288	220,234
<b>Noncurrent liabilities</b>	<b>49,754,621</b>	<b>55,991,750</b>	<b>391,001</b>	<b>350,548</b>
<b>Total liabilities</b>	<b>59,863,321</b>	<b>65,343,417</b>	<b>828,723</b>	<b>715,274</b>
<b>DEFERRED INFLOWS OF RESOURCES</b>	<b>6,284,371</b>	<b>3,468,333</b>	<b>1,723</b>	<b>1,460</b>
<b>NET POSITION</b>				
Net investment in capital assets	13,342,824	12,816,190		
Restricted:				
Nonexpendable: Endowments and gifts	1,143,067	1,111,083	4,045,925	3,700,049
Nonexpendable: Minority interests	33,507	36,766		
Expendable: Endowments and gifts	6,881,101	6,084,997	4,363,100	3,741,932
Expendable: Other, including debt service, loans, capital projects and appropriations	281,627	461,402		
Unrestricted	(19,296,792)	(19,190,480)	193,132	94,869
<b>Total net position</b>	<b>\$2,385,334</b>	<b>\$1,319,958</b>	<b>\$8,602,157</b>	<b>\$7,536,850</b>

See accompanying Notes to Financial Statements.

**STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION**

	UNIVERSITY OF CALIFORNIA		CAMPUS FOUNDATIONS	
	2017	2016	2017	2016
<i>Years ended June 30, 2017 and 2016 (in thousands of dollars)</i>				
<b>OPERATING REVENUES</b>				
Student tuition and fees, net	\$4,477,213	\$4,132,352		
Grants and contracts, net:				
Federal	3,258,526	3,244,529		
State	454,207	443,194		
Private	1,421,752	1,284,753		
Local	306,492	300,119		
Medical centers, net	11,241,269	10,235,900		
Educational activities, net	3,332,671	2,972,830		
Auxiliary enterprises, net	1,579,152	1,429,985		
Department of Energy laboratories	1,147,233	1,278,186		
Campus foundation private gifts			\$866,190	\$780,983
Other operating revenues, net	938,678	962,394	3,099	11,492
<b>Total operating revenues</b>	<b>28,157,193</b>	<b>26,284,242</b>	<b>869,289</b>	<b>792,475</b>
<b>OPERATING EXPENSES</b>				
Salaries and wages	15,159,736	14,021,131		
Pension benefits	1,887,570	2,686,688		
Retiree health benefits	1,575,663	1,874,504		
Other employee benefits	2,938,133	2,837,680		
Supplies and materials	3,239,587	3,108,907		
Depreciation and amortization	1,909,870	1,804,046		
Department of Energy laboratories	1,139,232	1,271,260		
Scholarships and fellowships	728,594	651,565		
Utilities	292,447	282,692		
Campus foundation grants			939,784	889,278
Other operating expenses	4,648,395	4,410,718	29,731	25,890
<b>Total operating expenses</b>	<b>33,519,227</b>	<b>32,949,191</b>	<b>969,515</b>	<b>915,168</b>
<b>Operating loss</b>	<b>(5,362,034)</b>	<b>(6,664,949)</b>	<b>(100,226)</b>	<b>(122,693)</b>
<b>NONOPERATING REVENUES (EXPENSES)</b>				
State educational appropriations	3,277,808	3,048,384		
State hospital fee grants	13,303	15,137		
Build America Bonds federal interest subsidies	58,424	58,550		
Federal Pell Grants	381,650	376,264		
Private gifts, net	1,167,395	1,091,519		
Investment income:				
Short Term Investment Pool and other, net	204,840	233,232		
Endowment, net	85,540	71,761		
Securities lending, net	8,504	6,282	419	415
Campus foundations			72,690	52,826
Net appreciation (depreciation) in fair value of investments	1,721,798	(473,308)	799,242	(225,237)
Interest expense	(721,243)	(693,027)	(85)	(35)
Loss on disposal of capital assets	(59,567)	(47,070)		
Other nonoperating revenues (expenses)	10,856	(7,406)	5,082	3,168
<b>Net nonoperating revenues (expense)</b>	<b>6,149,308</b>	<b>3,680,318</b>	<b>877,348</b>	<b>(168,863)</b>
<b>Income (loss) before other changes in net position</b>	<b>787,274</b>	<b>(2,984,631)</b>	<b>777,122</b>	<b>(291,556)</b>
<b>OTHER CHANGES IN NET POSITION</b>				
Capital gifts and grants, net	255,559	248,705		
State capital appropriations	1,712	4,156		
Permanent endowments	20,831	30,008	288,185	278,077
<b>Increase (decrease) in net position</b>	<b>1,065,376</b>	<b>(2,701,762)</b>	<b>1,065,307</b>	<b>(13,479)</b>
<b>NET POSITION</b>				
Beginning of year, as previously reported	1,319,958	11,733,067	7,536,850	7,550,329
Cumulative effect of accounting changes		(7,711,347)		
Beginning of year, restated	1,319,958	4,021,720	7,536,850	7,550,329
<b>End of year</b>	<b>\$2,385,334</b>	<b>\$1,319,958</b>	<b>\$8,602,157</b>	<b>\$7,536,850</b>

See accompanying Notes to Financial Statements.

**STATEMENTS OF CASH FLOWS**

	UNIVERSITY OF CALIFORNIA		CAMPUS FOUNDATIONS	
	2017	2016	2017	2016
<i>Years ended June 30, 2017 and 2016 (in thousands of dollars)</i>				
<b>CASH FLOWS FROM OPERATING ACTIVITIES</b>				
Student tuition and fees	\$4,466,850	\$4,131,891		
Grants and contracts	4,808,226	5,822,944		
Medical centers	11,173,461	10,227,768		
Educational activities	3,306,961	3,018,794		
Auxiliary enterprises	1,578,093	1,432,083		
Collection of loans from students and employees	80,393	73,285		
Campus foundation private gifts			\$700,024	\$679,092
Payments to employees	(15,492,680)	(14,048,211)		
Payments to suppliers and utilities	(7,691,984)	(7,552,418)		
Payments for pension benefits	(1,881,289)	(2,609,177)		
Payments for retiree health benefits	(333,928)	(325,493)		
Payments for other employee benefits	(2,829,325)	(2,837,415)		
Payments for scholarships and fellowships	(728,428)	(651,600)		
Loans issued to students and employees	(63,972)	(69,701)		
Payments to campuses and beneficiaries			(983,250)	(918,027)
Other receipts	1,209,221	696,852	58,490	17,955
<b>Net cash used by operating activities</b>	<b>(2,398,401)</b>	<b>(2,690,398)</b>	<b>(224,736)</b>	<b>(220,980)</b>
<b>CASH FLOWS FROM NONCAPITAL FINANCING ACTIVITIES</b>				
State educational appropriations	3,277,402	3,051,306		
Federal Pell Grants	380,364	375,675		
State hospital fee grants	13,303	15,137		
Gifts received for other than capital purposes:				
Private gifts for endowment purposes	22,789	31,395	228,003	234,005
Other private gifts	1,129,424	1,065,909		
Receipt of retiree health contributions from UCRP	64,386	60,769		
Payment of retiree health contributions to UCRHBT	(58,198)	(60,123)		
Receipts from UCRHBT	348,291	336,708		
Payments for retiree health benefits made on behalf of UCRHBT	(360,210)	(345,613)		
Student direct lending receipts	772,234	762,127		
Student direct lending payments	(772,216)	(762,103)		
Proceeds from debt issuance	500,000			
Refinancing or prepayment of outstanding debt	(500,000)			
Commercial paper financing:				
Proceeds from issuance	23,497	12,300		
Payments of principal	(15,323)	(20,670)		
Interest paid on debt	(13,966)	(9,546)		
Other receipts (payments)	48,626	538,160	24,111	(6,909)
<b>Net cash provided by noncapital financing activities</b>	<b>4,860,403</b>	<b>5,051,431</b>	<b>252,114</b>	<b>227,096</b>
<b>CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES</b>				
Commercial paper financing:				
Proceeds from issuance	711,453	676,700		
Payments of principal	(944,811)	(715,395)	(192)	(970)
Interest paid	(4,825)	(3,457)		
State capital appropriations	9,602	5,319		
State financing appropriations		445		
Build America Bonds federal interest subsidies	58,421	58,438		
Capital gifts and grants	130,397	131,012		
Proceeds from debt issuance	2,088,512	2,045,061		
Proceeds from the sale of capital assets	17,720	46,037		
Purchase of capital assets	(2,679,314)	(2,669,898)		
Refinancing or prepayment of outstanding debt	(820,739)	(527,882)		
Scheduled principal paid on debt and capital leases	(461,183)	(518,713)		
Interest paid on debt and capital leases	(787,307)	(811,520)		
<b>Net cash used by capital and related financing activities</b>	<b>\$(2,682,074)</b>	<b>\$(2,283,853)</b>	<b>\$(192)</b>	<b>\$(970)</b>

See accompanying Notes to Financial Statements.



**STATEMENTS OF CASH FLOWS** *continued*

	UNIVERSITY OF CALIFORNIA		CAMPUS FOUNDATIONS	
	2017	2016	2017	2016
<i>Years ended June 30, 2017 and 2016 (in thousands of dollars)</i>				
<b>CASH FLOWS FROM INVESTING ACTIVITIES</b>				
Proceeds from sales and maturities of investments	\$86,593,485	\$104,492,954	\$1,366,988	\$1,706,275
Purchase of investments	(86,745,271)	(104,786,465)	(1,398,236)	(1,763,467)
Investment income, net of investment expenses	308,663	323,973	63,250	48,682
<b>Net cash provided (used) by investing activities</b>	<b>156,877</b>	<b>30,462</b>	<b>32,002</b>	<b>(8,510)</b>
<b>Net increase (decrease) in cash and cash equivalents</b>	<b>(63,195)</b>	<b>107,642</b>	<b>59,188</b>	<b>(3,364)</b>
Cash and cash equivalents, beginning of year	266,565	158,923	194,912	198,276
<b>Cash and cash equivalents, end of year</b>	<b>\$203,370</b>	<b>\$266,565</b>	<b>\$254,100</b>	<b>\$194,912</b>
<b>RECONCILIATION OF OPERATING LOSS TO NET CASH USED BY OPERATING ACTIVITIES</b>				
Operating loss	\$(5,362,034)	\$(6,664,949)	\$(100,226)	\$(122,693)
<i>Adjustments to reconcile operating loss to net cash used by operating activities:</i>				
Depreciation and amortization expense	1,909,870	1,804,046		
Noncash gifts			(147,742)	(83,350)
Allowance for uncollectible accounts	266,431	268,673	19,245	6,591
Loss on impairment of capital assets	7,354	10,127		
<i>Change in assets and liabilities:</i>				
Investments held by trustees	737,280	(10,247)	2,094	
Accounts receivable	(960,355)	(319,228)	(931)	754
Pledges receivable			(45,460)	(32,875)
Inventories	(12,315)	(7,223)		
Other assets	(2,584)	(100,322)	2,544	(681)
Accounts payable	121,451	132,482	2,413	5,681
Accrued salaries	(350,735)	(78,293)		
Employee benefits	(52,110)	(25,244)		
Unearned revenue	26,000	107,436	64,259	1,219
Department of Energy	337,841	66,348		
Self-insurance	73,802	76,621		
Obligations under life income agreements			(6,150)	(8,533)
Net pension liability	(730,435)	506,299		
Net retiree health benefits liability	1,509,674	1,506,853		
Other liabilities	82,464	36,223	(14,782)	12,907
<b>Net cash used by operating activities</b>	<b>\$(2,398,401)</b>	<b>\$(2,690,398)</b>	<b>\$(224,736)</b>	<b>\$(220,980)</b>
<b>SUPPLEMENTAL NONCASH ACTIVITIES INFORMATION</b>				
Capital assets acquired through capital leases	\$55,360	\$67,030		
Capital assets acquired with a liability at year-end	98,916	66,386		
Change in fair value of interest rate swaps classified as hedging derivatives	61,891	(61,030)		
Gifts of capital assets	122,913	111,836		
Other noncash gifts	33,194	31,132	\$199,500	\$131,084
Interest added to principal			2,934	

See accompanying Notes to Financial Statements.

UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM AND RETIREE HEALTH BENEFIT TRUST  
**STATEMENTS OF PLANS' AND TRUST'S FIDUCIARY NET POSITION**

	UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM (UCRS)		UNIVERSITY OF CALIFORNIA RETIREE HEALTH BENEFIT TRUST (UCRHBT)		TOTAL UCRS AND UCRHBT	
<i>At June 30, 2017 and 2016 (in thousands of dollars)</i>	2017	2016	2017	2016	2017	2016
<b>ASSETS</b>						
Investments	\$82,574,019	\$73,196,935	\$97,801	\$53,604	\$82,671,820	\$73,250,539
Participants' interests in mutual funds	3,351,454	2,767,673			3,351,454	2,767,673
Investment of cash collateral	6,841,530	6,751,492			6,841,530	6,751,492
Participant 403(b) loans	180,511	178,664			180,511	178,664
Accounts receivable:						
Contributions from University and affiliates	57,552	118,246	9,656	19,297	67,208	137,543
Investment income	80,593	95,610			80,593	95,610
Securities sales and other	884,657	178,454	147	24	884,804	178,478
Prepaid insurance premiums			16,125	15,277	16,125	15,277
<b>Total assets</b>	<b>93,970,316</b>	<b>83,287,074</b>	<b>123,729</b>	<b>88,202</b>	<b>94,094,045</b>	<b>83,375,276</b>
<b>LIABILITIES</b>						
Payable to University			17,015	15,661	17,015	15,661
Payable for securities purchased	2,380,442	1,658,231			2,380,442	1,658,231
Member withdrawals, refunds and other payables	89,590	297,089			89,590	297,089
Collateral held for securities lending	6,838,416	6,749,519			6,838,416	6,749,519
<b>Total liabilities</b>	<b>9,308,448</b>	<b>8,704,839</b>	<b>17,015</b>	<b>15,661</b>	<b>9,325,463</b>	<b>8,720,500</b>
<b>NET POSITION HELD IN TRUST</b>						
Members' defined benefit plan benefits	62,179,236	54,225,589			62,179,236	54,225,589
Participants' defined contribution plan benefits	22,482,632	20,356,646			22,482,632	20,356,646
Retiree health benefits			106,714	72,541	106,714	72,541
<b>Total net position held in trust</b>	<b>\$84,661,868</b>	<b>\$74,582,235</b>	<b>\$106,714</b>	<b>\$72,541</b>	<b>\$84,768,582</b>	<b>\$74,654,776</b>

See accompanying Notes to Financial Statements.

**STATEMENTS OF CHANGES IN PLANS' AND TRUST'S FIDUCIARY NET POSITION**

	UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM (UCRS)		UNIVERSITY OF CALIFORNIA RETIREE HEALTH BENEFIT TRUST (UCRHBT)		TOTAL UCRS AND UCRHBT	
<i>Years ended June 30, 2017 and 2016</i> <i>(in thousands of dollars)</i>	2017	2016	2017	2016	2017	2016
<b>ADDITIONS (REDUCTIONS)</b>						
<i>Contributions:</i>						
Members and employees	\$2,206,455	\$2,020,972			\$2,206,455	\$2,020,972
State	171,000	96,000			171,000	96,000
University	2,402,009	2,434,180	\$328,057	\$310,320	2,730,066	2,744,500
<b>Total contributions</b>	<b>4,779,464</b>	<b>4,551,152</b>	<b>328,057</b>	<b>310,320</b>	<b>5,107,521</b>	<b>4,861,472</b>
<i>Investment income (expense), net:</i>						
Net appreciation/depreciation in fair value of investments	8,616,400	(2,300,033)			8,616,400	(2,300,033)
Interest, dividends and other investment income	1,386,834	1,272,141	606	155	1,387,440	1,272,296
Securities lending income	89,075	60,415			89,075	60,415
Securities lending fees and rebates	(40,610)	(16,440)			(40,610)	(16,440)
<b>Total investment income (loss), net</b>	<b>10,051,699</b>	<b>(983,917)</b>	<b>606</b>	<b>155</b>	<b>10,052,305</b>	<b>(983,762)</b>
Interest income from contributions receivable	1,472	1,771			1,472	1,771
<b>Total additions</b>	<b>14,832,635</b>	<b>3,569,006</b>	<b>328,663</b>	<b>310,475</b>	<b>15,161,298</b>	<b>3,879,481</b>
<b>DEDUCTIONS</b>						
<i>Benefit payments:</i>						
Retirement payments	2,330,361	2,170,775			2,330,361	2,170,775
Member withdrawals	140,666	136,249			140,666	136,249
Cost-of-living adjustments	474,815	430,795			474,815	430,795
Lump sum cash outs	292,270	285,780			292,270	285,780
Preretirement survivor payments	47,778	46,835			47,778	46,835
Disability payments	30,470	30,769			30,470	30,769
Death payments	9,368	9,377			9,368	9,377
Participant withdrawals	1,374,324	1,231,279			1,374,324	1,231,279
<b>Total benefit payments</b>	<b>4,700,052</b>	<b>4,341,859</b>			<b>4,700,052</b>	<b>4,341,859</b>
<i>Insurance premiums:</i>						
Insured plans			161,142	173,635	161,142	173,635
Self-insured plans			119,667	101,477	119,667	101,477
Medicare Part B reimbursements			9,425	9,724	9,425	9,724
<b>Total insurance premiums, net</b>			<b>290,234</b>	<b>284,836</b>	<b>290,234</b>	<b>284,836</b>
<i>Other deductions:</i>						
Plan administration	39,823	48,381	4,256	3,743	44,079	52,124
Other	13,127	10,434			13,127	10,434
<b>Total other deductions</b>	<b>52,950</b>	<b>58,815</b>	<b>4,256</b>	<b>3,743</b>	<b>57,206</b>	<b>62,558</b>
<b>Total deductions</b>	<b>4,753,002</b>	<b>4,400,674</b>	<b>294,490</b>	<b>288,579</b>	<b>5,047,492</b>	<b>4,689,253</b>
<b>Increase (decrease) in net position held in trust</b>	<b>10,079,633</b>	<b>(831,668)</b>	<b>34,173</b>	<b>21,896</b>	<b>10,113,806</b>	<b>(809,772)</b>
<b>NET POSITION HELD IN TRUST</b>						
Beginning of year	74,582,235	75,413,903	72,541	50,645	74,654,776	75,464,548
<b>End of year</b>	<b>\$84,661,868</b>	<b>\$74,582,235</b>	<b>\$106,714</b>	<b>\$72,541</b>	<b>\$84,768,582</b>	<b>\$74,654,776</b>

See accompanying Notes to Financial Statements.

# Notes to Financial Statements

*Years ended June 30, 2017 and 2016*

## ORGANIZATION

The University of California (“the University”) was founded in 1868 as a public, state-supported institution. The California State Constitution provides that the University shall be a public trust administered by the corporation, “The Regents of the University of California,” which is vested with full powers of organization and government, subject only to such legislative control necessary to ensure the security of its funds and compliance with certain statutory and administrative requirements. The majority of the 26-member independent governing board (“The Regents”) is appointed by the governor and approved by the state Senate. Various University programs and capital outlay projects are funded through appropriations from the state’s annual Budget Act. The University’s financial statements are discretely presented in the state’s basic financial statements as a component unit.

## FINANCIAL REPORTING ENTITY AND SIGNIFICANT ACCOUNTING POLICIES

### Financial Reporting Entity

The University’s financial statements include the accounts of ten campuses, five medical centers, a statewide agricultural extension program and the operations of most student government or associated student organizations as part of the primary financial reporting entity because The Regents has certain oversight responsibilities for these organizations. In addition, the financial position and operating results of certain other legally separate organizations are included in the University’s financial reporting entity on a blended basis if The Regents is determined to be financially accountable for the organization. Organizations that are not significant or for which the University is not financially accountable, such as booster and alumni organizations, are not included in the reporting entity. However, cash invested with the University by these organizations, along with the related liability, is included in the statement of net position. The statement of revenues, expenses and changes in net position excludes the activities associated with these organizations.

Fiat Lux Risk and Insurance Company (“Fiat Lux”), the University’s wholly owned captive insurance company, is a blended component unit of the University. The Regents are the sole corporate and voting member of Children’s Hospital & Research Center Oakland (“CHRCO”), a private, not-for-profit 501(c)(3) corporation. Children’s Hospital & Research Center Foundation, a nonprofit public benefit corporation, is organized and operated for the purpose of supporting CHRCO. CHRCO, combined with its foundation, is a blended component unit of the University.

The University has eleven legally separate, tax-exempt, affiliated campus foundations, one for each campus and the Lawrence Berkeley National Laboratory (LBNL). The economic resources received or held by the foundations are entirely for the benefit of the campuses. Because of the nature and significance of their relationship with the University, including their ongoing financial support, the campus foundations are reported under Governmental Accounting Standards Board (GASB) requirements as discretely presented component units of the University.

Specific assets and liabilities and all revenues and expenses associated with the LBNL, a major United States Department of Energy (DOE) national laboratory operated and managed by the University under contract directly with the DOE, are included in the accompanying financial statements.

The Regents has fiduciary responsibility for the University of California Retirement System (UCRS) which includes two defined benefit plans, the University of California Retirement Plan (UCRP) and the University of California Voluntary Early Retirement Incentive Plan (UC-VERIP), and four defined contribution plans in the University of California Retirement Savings Program (UCRSP), consisting of the Defined Contribution Plan (DC Plan), the Supplemental Defined Contribution Plan (SDC Plan), the Tax-Deferred 403(b) Plan (403(b) Plan) and the 457(b) Deferred Compensation Plan (457(b) Plan). As a result, the UCRS statements of plans' fiduciary net position and changes in plans' fiduciary net position are shown as a fiduciary fund in the University's financial statements.

The Regents also has fiduciary responsibility for the University of California Retiree Health Benefit Trust (UCRHBT). As a result, UCRHBT's statements of trust's fiduciary net position and changes in trust's fiduciary net position are shown as a fiduciary fund in the University's financial statements. UCRHBT allows certain University locations and affiliates, primarily campuses and medical centers that share the risks, rewards and costs of providing for retiree health benefits, the opportunity to fund such benefits on a cost-sharing basis and accumulate funds on a tax-exempt basis under an arrangement segregated from University assets. The Regents serves as Trustee of UCRHBT and has the authority to amend or terminate the trust.

### **Significant Accounting Policies**

The financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America, using the economic resources measurement focus and the accrual basis of accounting. The University follows accounting principles issued by the GASB.

GASB Statement No. 74, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans*, was implemented by the University as of July 1, 2016. This Statement establishes financial reporting standards for retiree health benefit plans that are administered through trusts that meet specified criteria. The Statement follows the framework for financial reporting of the retiree health benefit plans in existing guidance by requiring a statement of fiduciary net position and a statement of changes in fiduciary net position. The Statement revises note disclosures and required supplementary information (RSI) related to the measurement of the retiree health benefits liabilities for which assets have been accumulated, including information about the annual money-weighted rates of return on plan investments. Implementation of Statement No. 74 resulted in additional disclosures for UCRHBT.

GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*, was implemented by the University as of July 1, 2016. This Statement revises existing standards for measuring and reporting retiree health benefits provided by the University to its employees. This Statement requires recognition of a liability equal to the net retiree health benefit liability, which is measured as the total retiree health benefits liability, less the amount of the UCRHBT's fiduciary net position. The total retiree health benefits liability is determined based upon discounting projected benefit payments based on claims costs, the benefit terms and legal agreements existing at the UCRHBT's fiscal year end. Projected benefit payments are required to be discounted using a single rate that reflects the expected rate of return on investments, to the extent that plan assets are available to pay benefits, and a tax-exempt, high-quality municipal bond rate when plan assets are not available.

The Statement requires that most changes in the net retiree health benefits liability be included in retiree health benefits expense in the period of change. The effects of reporting Statement No. 75 in the University's financial statements for the year ended June 30, 2016, were as follows:

(in thousands of dollars)

UNIVERSITY OF CALIFORNIA AS OF AND FOR THE YEAR ENDED JUNE 30, 2016			
	AS PREVIOUSLY REPORTED	EFFECT OF ADOPTION OF STATEMENT NO. 75	AS RESTATED
<b>STATEMENT OF NET POSITION</b>			
Department of Energy receivable	\$1,268,771	\$326,996	\$1,595,767
Total assets	59,634,622	326,996	59,961,618
Deferred outflows of resources	5,573,864	4,596,226	10,170,090
Net retiree health benefit liability	10,456,840	11,338,608	21,795,448
Total liabilities	54,004,809	11,338,608	65,343,417
Deferred inflows of resources	1,732,279	1,736,054	3,468,333
Unrestricted net position	(11,039,040)	(8,151,440)	(19,190,480)
Total net position	9,471,398	(8,151,440)	1,319,958
<b>STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION</b>			
Department of Energy laboratories - operating revenues	\$1,259,768	\$18,418	\$1,278,186
Total operating revenues	26,265,824	18,418	26,284,242
Retiree health benefit expense	1,448,105	426,399	1,874,504
Other employee benefits	2,823,986	13,694	2,837,680
Department of Energy laboratories - operating expenses	1,252,842	18,418	1,271,260
Total operating expenses	32,490,680	458,511	32,949,191
Loss from operations	(6,224,856)	(440,093)	(6,664,949)
Loss before other changes in net position	(2,544,538)	(440,093)	(2,984,631)
Change in net position	(2,261,669)	(440,093)	(2,701,762)

In December 2015, the GASB issued Statement No. 78, *Pensions Provided Through Certain Multiple-Employer Defined Benefit Pension Plans*, effective for the University's fiscal year beginning July 1, 2016. This Statement amends the scope and applicability of Statement No. 68, *Accounting and Financial Reporting for Pensions — an Amendment of GASB Statement No. 27*, to exclude pensions provided to employees of state or local governmental employers through cost-sharing, multiple-employer defined benefit pension plans that are not state or local governmental pension plans. This Statement establishes requirements for recognition and measurement of pension expense, expenditures and liabilities; note disclosures; and required supplementary information. Implementation of Statement No. 78 had no impact on the financial statements.

The adoption of Statements No. 74, 75 and 78 did not result in any adjustments to the financial statements of the campus foundations or UCRS.

The significant accounting policies of the University are as follows:

**Cash and cash equivalents.** The University and campus foundations consider all balances in demand deposit accounts to be cash. The University classifies all other highly liquid cash equivalents with original maturities less than one year as short-term investments. Certain campus foundations classify their deposits in the University's Short Term Investment Pool as a cash equivalent.

**Investments.** Investments are measured and recorded at fair value. Securities are generally valued at the last sale price on the last business day of the fiscal year, as quoted on a recognized exchange or by utilizing an industry standard pricing service, when available. Securities for which no sale was reported as of the close of the last business day of the fiscal year are valued at the quoted bid price of a dealer who regularly trades in the security being valued. Investment in non-exchange traded debt and equity investments are valued using inputs provided by independent pricing services or by broker/dealers who actively trade in these markets. Certain securities may be valued on a basis of a price provided by a single source.

Investments also include private equities, absolute return funds, real estate, real asset and certain corporate asset-backed securities. Private equities include venture capital partnerships, buyout and international funds. Fair values for interests in

private equity, absolute return partnerships and real estate partnerships are based on valuations provided by the general partners of the respective partnerships. The valuations are primarily based on the most recent net asset value (NAV) of the underlying investments. The NAV is reported by the external investment managers, including general partners, in accordance with their policies as described in their respective financial statements and offering memoranda. The most recent NAV is adjusted for capital calls, distributions and significant known valuation changes, if any, of its related portfolio through June 30, 2017 and 2016.

Interests in certain direct investments in real estate are estimated based upon independent appraisals. Because the private equity, real estate and absolute return partnerships, along with direct investments in real estate, are not readily marketable, their estimated value is subject to uncertainty and, therefore, may differ significantly from the value that would be used had a ready market for such investments existed. These investments are generally less liquid than other investments, and the value reported may differ from the values that would have been reported had a ready market for these investments existed.

For other investments, the University considers various factors to estimate fair value, such as the timing of the transaction, the market in which the company operates, comparable transactions, company performance and projections as well as discounted cash flow analysis. The selection of an appropriate technique may be affected by the availability and general reliability of relevant inputs. In some cases, one valuation technique may provide the best indication of fair value while in other circumstances, multiple valuation techniques may be appropriate. Furthermore, the University may review the investment's underlying portfolio as well as engage external appraisers, depending on the nature of the investment.

The University exercises due diligence in assessing the external managers' use of and adherence to fair value principles. In conjunction with these procedures, estimated fair value is determined by consideration of a wide range of factors, including market conditions, redemption terms and restrictions and risks inherent to the inputs of the external investment managers' valuation. In situations where the information provided by the external manager is deemed to not be representative of the fair value as of the measurement date, management evaluates specific features of the investment and utilizes supplemental fair value information provided by the external manager along with any relevant market data to measure the investment's fair value.

Investments in registered investment companies are valued based upon the reported net asset value of those companies. Mortgage loans, held as investments, are valued on the basis of their future principal and interest payments, and are discounted at prevailing interest rates for similar instruments. Insurance contracts are valued at contract value, plus reinvested interest, which approximates fair value. Estimates of the fair value of interests in externally held irrevocable trusts where the University is the beneficiary of either the income or the remainder that will not become a permanent endowment upon distribution to the University are based upon the present value of the expected future income or, if available, the University's proportional interest in the fair value of the trust assets.

Investments denominated in foreign currencies are translated into U.S. dollar equivalents using year-end spot foreign currency exchange rates. Purchases and sales of investments and their related income are translated at the rate of exchange on the respective transaction dates. Realized and unrealized gains and losses resulting from foreign currency changes are included in the University's statement of revenues, expenses and changes in net position.

Investment transactions are recorded on the date the securities are purchased or sold (trade date). Realized gains or losses are recorded as the difference between the proceeds from the sale and the average cost of the investment sold. Dividend income is recorded on the ex-dividend date and interest income is accrued as earned. Gifts of securities are recorded based on fair value at the date of donation.

Campus foundations may invest all or a portion of their investments in University-managed investment pools. Certain securities in these investment pools are included in the University's security lending program. Accordingly, the campus foundations' investments in University-managed investment pools and their allocated share of the securities lending activities have been excluded from the University's financial statements and included in the Campus Foundations' column.

**Funds held by trustees.** The University and campus foundations have been named the irrevocable beneficiary for charitable remainder trusts for which the University and campus foundations are not the trustee. Upon maturity of each trust, the remainder of the trust corpus will be transferred to the University or the respective campus foundation. These funds cannot be sold, disbursed or consumed until a specified number of years have passed or a specific event has occurred. The University and campus foundations are also an income beneficiary of certain trusts where the assets are invested and administered by outside trustees.



Consistent with the University's and campus foundations' recognition policy for pledges of endowments, receivables and contribution revenue associated with these trusts are not reflected in the accompanying financial statements. The University and campus foundations recognize contribution revenue when all eligibility requirements have been met.

**Derivative financial instruments.** Derivative instruments are recorded at fair value. Futures contracts, foreign currency exchange contracts, stock rights and warrants, options and swaptions are valued at the settlement price on the last day of the fiscal year, as quoted on a recognized exchange or by utilizing an industry standard pricing service, when available. Financial institutions or independent advisors have estimated the fair value of the interest rate swaps and total return swaps using quoted market prices when available or discounted expected future net cash flows.

The University has entered into interest rate swap agreements to limit the exposure of its variable-rate debt to changes in market interest rates. Interest rate swap agreements involve the exchange with a counterparty of fixed- and variable-rate interest payments periodically over the life of the agreement without exchange of the underlying notional principal amounts. The net differential to be paid or received is recognized over the life of the agreements as an adjustment to interest expense. The University's counterparties are major financial institutions.

Derivatives are recorded at estimated fair value as either assets or liabilities in the statement of net position. Certain derivatives are determined to be hedging derivatives and designated as either a fair value or cash flow hedge. Under hedge accounting, changes in the fair value of hedging derivatives are considered to be deferred inflows (for hedging derivatives with positive fair values or deferred outflows (for hedging derivatives with negative fair values).

Changes in the fair value of derivatives that are not hedging derivatives are recorded as net appreciation or depreciation of investments in the statement of revenues, expenses and changes in net position.

**Participants' interests in mutual funds.** Participants in the University's defined contribution retirement plans may invest their account balances in funds managed by the University's Chief Investment Officer or in certain mutual funds.

**Accounts receivable, net.** Accounts receivable, net of allowance for uncollectible amounts, include reimbursements due from state and federal sponsors of externally funded research, patient billings, accrued income on investments and other receivables. Other receivables include local government and private grants and contracts, educational activities and amounts due from students, employees and faculty.

**Pledges receivable, net.** Unconditional pledges of private gifts to the University or campus foundations, net of allowance for uncollectible amounts, are recorded as pledges receivable and revenue in the year promised at the net present value of expected cash flows. Conditional pledges, including all pledges of endowments and intentions to pledge, are recognized as receivables and revenues when the specified conditions are met. Receivables and contribution revenue associated with externally held investment trusts are not reflected in the accompanying financial statements. The University recognizes contribution revenue and the related pledges receivable when all eligibility requirements have been met.

**Notes and mortgages receivable, net.** Loans to students, net of allowance for uncollectible amounts, are provided from federal student loan programs and from other University sources. Home mortgage loans, primarily to faculty, are provided from the University's Short Term Investment Pool and from other University sources. Mortgage loans provided by the Short Term Investment Pool are classified as investments and loans provided by other sources are classified as mortgages receivable in the statements of net position.

**Inventories.** Inventories for the campuses, consisting primarily of supplies and merchandise for resale, are valued at cost, typically determined under the weighted average method, which is not in excess of estimated net realizable value. Inventories for the medical centers consist primarily of pharmaceuticals and medical supplies which are stated on a first-in, first-out basis at the lower of cost or market.

**DOE national laboratories.** The University operates and manages LBNL under a contract directly with the DOE. Specific assets and liabilities and all revenues and expenses associated with LBNL are included in the financial statements. Other assets, such as cash, property and equipment and other liabilities of LBNL are owned by the United States government rather than the University and, therefore, are not included in the statement of net position. The statement of cash flows excludes the cash flows associated with LBNL other than reimbursements, primarily related to pension and health benefits, since all other cash transactions are recorded in bank accounts owned by the DOE.

The University is a member in two separate joint ventures, Los Alamos National Security, LLC (LANS), and Lawrence Livermore National Security, LLC (LLNS), that operate and manage two other DOE laboratories, Los Alamos National Laboratory (LANL) and Lawrence Livermore National Laboratory (LLNL), respectively, under contracts directly with the DOE.

The University’s investment in LANS and LLNS is accounted for using the equity method. Accordingly, the University’s statement of net position includes its equity interest in LANS and LLNS, adjusted for the equity in undistributed earnings or losses and the statement of revenues, expenses and changes in net position includes its equity in the current earnings or losses of LANS and LLNS.

The DOE is financially responsible for substantially all of the current and future costs incurred at any of the national laboratories, including pension and retiree health benefit costs. Accordingly, to the extent there is a liability on the University’s statement of net position for pension or retiree health obligations related to these laboratories, the University records a receivable from the DOE.

**Capital assets, net.** Land, infrastructure, buildings and improvements, intangible assets, equipment, libraries, collections and special collections are recorded at cost at the date of acquisition, or estimated acquisition value at the date of donation in the case of gifts. Estimates of acquisition value involve assumptions and estimation methods that are uncertain and, therefore, the estimates could differ from actual value. Intangible assets include easements, land rights, trademarks, patents and other similar arrangements. Capital leases are recorded at the estimated present value of future minimum lease payments. Significant additions, replacements, major repairs and renovations to infrastructure and buildings are generally capitalized if the cost exceeds \$35,000 and if they have a useful life of more than one year. Minor renovations are charged to operations. Equipment with a cost in excess of \$5,000 and a useful life of more than one year is capitalized. Incremental costs, including salaries and employee benefits, directly related to the acquisition, development and installation of major software projects are included in the cost of the capital assets. All costs of land, library collections and special collections are capitalized.

Depreciation is calculated using the straight-line method over the estimated economic life of the asset. Equipment under capital leases is amortized over the estimated useful life of the equipment. Leasehold improvements are amortized using the straight-line method over the shorter of the life of the applicable lease or the economic life of the asset.

Estimated economic lives are generally as follows:

	YEARS
Infrastructure	25
Buildings and improvements	15–33
Equipment	2–20
Computer software	3–7
Intangible assets	2 – indefinite
Library books and collections	15

Capital assets acquired through federal grants and contracts where the federal government retains a reversionary interest are also capitalized and depreciated.

Inexhaustible capital assets, such as land or special collections that are protected, preserved and held for public exhibition, education or research, including art, museum, scientific and rare book collections are not depreciated.

Interest on borrowings to finance facilities is capitalized during construction, net of any investment income earned on tax-exempt borrowings during the temporary investment of project-related borrowings.

**Service concession arrangements.** The University has entered into service concession arrangements with third parties for student housing and certain other faculty and student services. Under these arrangements, the University enters into ground leases with third parties at minimal or no cost, and gives the third party the right to construct, operate and maintain a facility, primarily for the benefit of students and faculty at competitive rates. Rate increases for use of the facilities are subject to certain constraints and ownership of the facilities reverts to the University upon expiration of the ground lease. The facilities are reported as capital assets by the University when placed in service, and a corresponding deferred inflow of resources is reported. The University has not provided guarantees on financing obtained by the third parties under these arrangements.

**Unearned revenue.** Unearned revenue primarily includes amounts received from grant and contract sponsors that have not been earned under the terms of the agreement and other revenue billed in advance of the event, such as student tuition and fees for housing and dining services.

**Funds held for others.** Funds held for others result from the University or the campus foundations acting as an agent, or fiduciary, on behalf of organizations that are not significant or financially accountable to the University or campus foundations.

**Federal refundable loans.** Certain loans to students are administered by the University with funding primarily supported by the federal government. The University's statement of net position includes both the notes receivable and the related federal refundable loan liability representing federal capital contributions owed upon termination of the program.

**Bond premium.** The premium received in the issuance of long-term debt is amortized as a reduction to interest expense over the term of the related long-term debt.

**Self-insurance programs.** The University is self-insured or insured through a wholly owned captive insurance company for medical malpractice, workers' compensation, employee health care and general liability claims. These risks are subject to various claim and aggregate limits, with excess liability coverage provided by an independent insurer. Liabilities are recorded when it is probable a loss has occurred and the amount of the loss can be reasonably estimated. These losses include an estimate for claims that have been incurred, but not reported. The estimated liabilities are based upon an independent actuarial determination of the present value of the anticipated future payments. Settlements did not exceed self-insured or supplementally insured coverage for each program in any of the past three fiscal years.

**Obligations under life income agreements.** Obligations under life income agreements represent trusts with living income beneficiaries where the University has a residual interest. The investments associated with these agreements are recorded at fair value. The discounted present value of any income beneficiary interest is reported as a liability in the statement of net position. Gifts subject to such agreements are recorded as revenue, net of the income beneficiary share, at the date of the gift. Actuarial gains and losses are included in other nonoperating income (expense) in the statement of revenues, expenses and changes in net position. Resources that are expendable upon maturity are classified as restricted, expendable net position; all others are classified as restricted, nonexpendable net position.

**Pollution remediation obligations.** Upon an obligating event, the University estimates the components of any expected pollution remediation costs and recoveries from third parties. The costs, estimated using the expected cash flow technique, are accrued as a liability. Pollution remediation liabilities generally involve groundwater, soil and sediment contamination at certain sites where state and other regulatory agencies have indicated that the University is among the responsible parties. The liabilities are reviewed annually and may increase or decrease the cost of recovery from third parties, if any, as a result of additional information that refines the estimates, or from payments made from revenue sources that support the activity. There were no expected recoveries at June 30, 2017 and 2016 reducing the pollution remediation liability.

**Deferred outflows of resources and deferred inflows of resources.** Deferred outflows of resources and deferred inflows of resources represent a consumption and acquisition of net position that apply to a future period, respectively. The University classifies gains on refunding of debt as deferred inflows of resources and losses as deferred outflows of resources and amortizes such amounts as a component of interest expense over the shorter of the remaining life of the old or new debt.

The University classifies an increase in the fair value of the hedging derivatives as deferred inflows of resources, and a decrease as deferred outflows of resources. Payments received or to be received by the University from service concession arrangements are reported as deferred inflows of resources.

Changes in net pension liability and net retiree health benefit liability not included in pension expense and retiree health benefits expense, respectively, are reported as deferred outflows of resources or deferred inflows of resources. Employer contributions subsequent to the measurement date of the net pension and retiree health liabilities are reported as deferred outflows of resources.

**Net position.** Net position is required to be classified for accounting and reporting purposes into the following categories:

*Net investment in capital assets.* This category includes all of the University's capital assets, net of accumulated depreciation, reduced by outstanding debt attributable to the acquisition, construction or improvement of those assets.

*Restricted.* The University and campus foundations classify the net position resulting from transactions with purpose restrictions as restricted net position until the specific resources are used for the required purpose or for as long as the provider requires the resources to remain intact.

*Nonexpendable.* The net position subject to externally imposed restrictions, which must be retained in perpetuity by the University or campus foundations, is classified as nonexpendable net position. This includes the University and campus foundation permanent endowment funds.

Also included in nonexpendable net position are minority interests, which include the net position of legally separate organizations attributable to other participants.

*Expendable.* The net position whose use by the University or campus foundations is subject to externally imposed restrictions that can be fulfilled by actions of the University or campus foundations pursuant to those restrictions or that expire by the passage of time is classified as expendable net position.

*Unrestricted.* The net position that is not subject to externally imposed restrictions governing its use is classified as unrestricted net position. The University's unrestricted net position may be designated for specific purposes by management or The Regents. The campus foundations' unrestricted net position may be designated for specific purposes by their Boards of Trustees. Substantially, all of the University's unrestricted net position is allocated for academic and research initiatives or programs, for capital programs or for other purposes.

Restricted or unrestricted resources are spent based upon a variety of factors, including funding restrictions, consideration of prior and future revenue sources, the type of expense incurred, the University's budgetary policies surrounding the various revenue sources or whether the expense is a recurring cost. Unrestricted net position is negative due primarily to liabilities for pension and retiree health benefits exceeding University assets available to pay such obligations.

**Revenues and expenses.** Operating revenues of the University include receipts from student tuition and fees, grants and contracts for specific operating activities and sales and services from medical centers, educational activities and auxiliary enterprises. Operating expenses incurred in conducting the programs and services of the University are presented in the statement of revenues, expenses and changes in net position as operating activities. The University's equity in current earnings or losses of LANS and LLNS is also an operating transaction.

Certain significant revenues relied upon and budgeted for fundamental operational support of the core instructional mission of the University are mandated by the GASB to be recorded as nonoperating revenues, including state educational appropriations, certain federal grants for student financial aid, private gifts and investment income, since the GASB does not consider them to be related to the principal operating activities of the University.

Campus foundations are established to financially support the University. Private gifts to campus foundations are recognized as operating revenues since, in contrast to the University, such contributions are fundamental to the core mission of the campus foundations. Foundation grants to the University are recognized as operating expenses by the foundations. Private gift or capital gift revenues associated with campus foundation grants to the University are recorded by the University as gifts when the foundations transfer the gifts to the University.

Nonoperating revenues and expenses include state educational appropriations, state financing appropriations, state hospital fee grants, Build America Bonds federal interest subsidies, Federal Pell Grants, private gifts for other than capital purposes, investment income, net appreciation (or depreciation) in the fair value of investments, interest expense and the loss on the disposal of capital assets.

State capital appropriations, capital gifts and grants and gifts for endowment purposes are classified as other changes in net position.

**Student tuition and fees.** Substantially all student tuition and fees provide for the current operations of the University. A small portion of the student fees, reported as capital gifts and grants, is required for debt service associated with student union and recreational centers.

The University recognizes scholarship allowances as the difference between the stated charge for tuition and fees, housing and dining charges, recreational center and other fees, and the amount that is paid by the student and third parties on behalf of the student. Payments of financial aid made directly to students are classified as scholarship and fellowship expenses.

Scholarship allowances are netted against student tuition and fees in the statement of revenues, expenses and changes in net position for the years ended June 30 as follows:

<i>(in thousands of dollars)</i>	<b>2017</b>	<b>2016</b>
Student tuition and fees	\$1,129,720	\$1,124,296
Auxiliary enterprises	185,038	215,049
Other operating revenues	29,654	26,408
<b>Scholarship allowances</b>	<b>\$1,344,412</b>	<b>\$1,365,753</b>

**State appropriations.** The state of California provides appropriations to the University on an annual basis. State educational appropriations are recognized as nonoperating revenue; however, the related expenses for educational, retirement or other specific operating purposes are reported as operating expenses. State appropriations for capital projects are recorded as revenue under other changes in net position when the related expenditures are incurred. Special state appropriations for AIDS, tobacco and breast cancer research are reported as grant operating revenue.

**Grant and contract revenue.** The University receives grant and contract revenue from governmental and private sources. The University recognizes revenue associated with the direct costs of sponsored programs as the related expenditures are incurred. Recovery of facilities and administrative costs of federally sponsored programs is at cost reimbursement rates negotiated with the University's federal cognizant agency, the U.S. Department of Health and Human Services. For the year ended June 30, 2017, the facilities and administrative cost recovery totaled \$1.1 billion, which consisted of \$764.0 million from federally sponsored programs and \$312.3 million from other sponsors. For the year ended June 30, 2016, the facilities and administrative cost recovery totaled \$1.0 billion, which consisted of \$745.6 million from federally sponsored programs and \$279.4 million from other sponsors.

**Medical center revenue.** Medical center revenue is reported at the estimated net realizable amounts from patients and third-party payors, including Medicare, Medi-Cal and others, for services rendered, as well as estimated retroactive adjustments under reimbursement agreements with third-party payors. Laws and regulations governing Medicare and Medi-Cal are complex and subject to interpretation. Retroactive adjustments are accrued on an estimated basis in the period the related services are rendered and adjusted in future periods as final settlements are determined. It is reasonably possible that estimated amounts accrued could change significantly based upon settlement, or as additional information becomes available.

**Net pension liability.** The University records net pension liability equal to the net pension liability for its defined benefit plans. The net pension liability is measured as the total pension liability, less the amount of the pension plans' fiduciary net positions. The fiduciary net position and changes in net position of the defined benefit plans has been measured consistent with the accounting policies used by the plans. The total pension liability is determined based upon discounting projected benefit payments based on the benefit terms and legal agreements existing at the pension plan's fiscal year end. Projected benefit payments are discounted using a single rate that reflects the expected rate of return on investments, to the extent that plan assets are available to pay benefits, and a tax-exempt, high-quality municipal bond rate when plan assets are not available.

Pension expense is recognized for benefits earned during the period, interest on the unfunded liability and changes in benefit terms. The differences between expected and actual experience and changes in assumptions about future economic or demographic factors are reported as deferred inflows or outflows and are recognized over the average expected remaining service period for employees eligible for pension benefits. The differences between expected and actual returns are reported as deferred inflows or outflows and are recognized over five years.

Both current employees and retirees at LBNL participate in UCRP. The University makes contributions to UCRP for LBNL employees based upon rates authorized by The Regents and is reimbursed by the DOE. The University also makes contributions to UCRP for LANL and LLNL retirees and terminated vested members, whose benefits were retained in UCRP at the time the joint ventures were formed. The University records a receivable for the net pension liability that is expected to be collected from the DOE. The University deposits funds in UCRP when the DOE makes payments for these contributions. The contributions from the DOE and deposits into UCRP on behalf of DOE are included as DOE laboratory revenue in the statement of revenues, expenses and changes in net position.

**Retiree health benefits and liability.** The University's net retiree health benefits liability is measured as the total retiree health benefits liability, less the amount of the University of California Retiree Health Benefit Trust (UCRHBT) fiduciary net position. The fiduciary net position and changes in net position of UCRHBT has been measured consistent with the accounting policies used by the trust. The total retiree health benefits liability is determined based upon discounting projected benefit payments based on the benefit terms and legal agreements existing at the health benefit trust's fiscal year end. Projected benefit payments are discounted using a single rate that reflects the expected rate of return on investments, to the extent that plan assets are available to pay benefits, and a tax-exempt, high-quality municipal bond rate when plan assets are not available.

Expense for retiree health benefits is recognized for benefits earned during the period, interest on the unfunded liability and changes in benefit terms. The differences between expected and actual experience and changes in assumptions about future economic or demographic factors are reported as deferred inflows or outflows and are recognized over the average expected remaining service period for employees eligible for retiree health benefits. The differences between expected and actual returns are reported as deferred inflows or outflows and are recognized over five years.

LBNL participates in the University's retiree health plans. The net retiree health benefits liability for LBNL is determined independently from the University's campuses and medical centers. Retiree health benefits expense for LBNL is included with the DOE laboratory expense in the statement of revenues, expenses and changes in net position. The contributions from the DOE are included as DOE laboratory revenue in the statement of revenues, expenses and changes in net position.

The University records a receivable from the DOE for the DOE's portion of the University's net retiree health benefits liability attributable to LBNL. The University does not have any retiree health benefits liability for LANL or LLNL retiree health benefit costs since they do not participate in the University's retiree health plans.

Campus and medical center contributions toward retiree health costs made to UCRHBT, the University's LBNL-related payments made directly to health care insurers and administrators and the corresponding reimbursements from the DOE, are shown as operating activities in the statement of cash flows. Cash flows resulting from retiree health contributions from retirees are shown as noncapital financing activities in the statement of cash flows.

**University of California Retiree Health Benefit Trust.** UCRHBT receives the University's contributions toward retiree health benefits from campuses, medical centers and University affiliates. The University receives retiree health contributions from University affiliates and campus and medical center retirees that are deducted from their UCRP benefit payments. The University also remits these retiree contributions to UCRHBT.

The University acts as a third-party administrator on behalf of UCRHBT and pays health care insurers and administrators amounts currently due under the University's retiree health benefit plans for retirees. UCRHBT reimburses the University for these amounts.

LBNL does not participate in UCRHBT; therefore, the DOE has no interest in the Trust's assets.

**Compensated absences.** The University accrues annual leave, including employer-related costs, for employees at rates based upon length of service and job classification and compensatory time based upon job classification and hours worked.

**Endowment spending.** Under provisions of California law, the Uniform Prudent Management of Institutional Funds Act allows for investment income, as well as a portion of realized and unrealized gains, to be expended for the operational requirements of University programs.

**Tax exemption.** The University is recognized as a tax-exempt organization under Section 501(c)(3) of the Internal Revenue Code (IRC). Because the University is a state institution, related income received by the University is also exempt from federal tax under IRC Section 115(a). In addition, the University is exempt from state income taxes imposed under the California Revenue and Taxation Code. UCRS plans are qualified under IRC Section 401(a) and the related trusts are tax-exempt under Section 501(c)(3). The campus foundations are exempt under IRC Section 501(c)(3). CHRCO and its component unit, the Children's Hospital and Research Center Foundation, are exempt under IRC Section 501(c)(3). Income received by UCRHBT is tax-exempt under IRC Section 115(a).

**Use of estimates.** The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenditures during the reporting period. Although management believes the estimates and assumptions are reasonable, they are based upon information available at the time the estimate or judgment is made and actual amounts could differ from those estimates.

**New accounting pronouncements.** In March 2016, the GASB issued Statement No. 81, *Irrevocable Split-Interest Agreements*, effective for the University's fiscal year beginning July 1, 2017. This statement addresses when Irrevocable Split-Interest Agreements constitute an asset for accounting and financial reporting purposes when the resources are administered by a third party. The Statement also provides expanded guidance for circumstances in which the government holds the assets. The University is evaluating the effect that Statement No. 81 will have on its financial statements.

In December 2016, the GASB issued Statement No. 83, *Certain Asset Retirement Obligations*, effective for the University's fiscal year beginning July 1, 2018. This Statement establishes guidance for determining the timing and pattern of recognition for liabilities and corresponding deferred outflow of resources related to asset retirement obligations. The Statement requires the measurement of an asset retirement obligation to be based on the best estimate of the current value of outlays expected to be incurred. The deferred outflow of resources associated with an asset retirement obligation will be measured at the amount of the corresponding liability upon initial measurement and generally recognized as an expense during the reporting periods that the asset provides service. Disclosure requirements include a general description of the asset retirement obligation and

associated tangible capital assets, the source of the obligation to retire the assets, the methods and assumptions used to measure the liability, and other relevant information. The University is evaluating the effect that Statement No. 83 will have on its financial statements.

In January 2017, the GASB issued Statement No. 84, *Fiduciary Activities*, effective for the University's fiscal year beginning July 1, 2019. This Statement establishes criteria for identifying fiduciary activities of all state and local governments. Governments with activities meeting the criteria should present a statement of fiduciary net position and a statement of changes in fiduciary net position. This Statement describes four fiduciary funds that should be reported, if applicable: (1) pension (and other employee benefit) trust funds, (2) investment trust funds, (3) private-purpose trust funds and (4) custodial funds. Custodial funds generally should report fiduciary activities that are not held in a trust or equivalent arrangement that meets specific criteria. The University is evaluating the effect that Statement No. 84 will have on its financial statements.

In March 2017, the GASB issued Statement No. 85, *Omnibus 2017*, effective for the University's fiscal year beginning July 1, 2017. The Statement addresses practice issues that have been identified during implementation and application of certain GASB Statements including issues related to blending component units, goodwill, fair value measurement and application and post-employment benefits. The University is evaluating the effect Statement No. 85 will have on its financial statements.

In May 2017, the GASB issued Statement No. 86, *Certain Debt Extinguishment Issues*, effective for the University's fiscal year beginning July 1, 2017. This Statement establishes standards of accounting and financial reporting for in-substance defeasance transactions in which cash and other monetary assets acquired with resources other than the proceeds of the refunding debt are placed in an irrevocable trust for the sole purpose of extinguishing debt. In addition, this Statement revises existing standards for prepaid insurance associated with extinguished debt. The University is evaluating the effect Statement No. 86 will have on its financial statements.

In June 2017, the GASB issued Statement No. 87, *Leases*, effective for the University's fiscal year beginning July 1, 2020. This Statement establishes a single approach to accounting for and reporting leases based on the principle that leases are financings of the right to use an underlying asset. Under this Statement, a lessee is required to recognize a lease liability and an intangible right-to-use lease asset, and a lessor is required to recognize a lease receivable and a deferred inflow of resources. Limited exceptions to the single-approach guidance are provided for short-term leases, defined as lasting a maximum of twelve months at inception, including any options to extend, financed purchases, leases of assets that are investments and certain regulated leases. The University is evaluating the effect Statement No. 87 will have on its financial statements.

## 1. CASH AND CASH EQUIVALENTS

The University maintains centralized management for substantially all of its cash and cash equivalents. Cash in demand deposit accounts is minimized by sweeping available cash balances into investment accounts on a daily basis.

Under University policy, deposits are only held at financial institutions that maintain an issuer rating on long-term debt of A3 or higher by Moody's, A- or higher by Standard & Poor's or an Asset Peer Group rating of 65 or higher as defined by Sheshunoff Bank Rating Reports. Ratings for one of the University's banks are below these thresholds. This institution has deposited funds in excess of the bank balances as of June 30, 2017 as collateral for the University's deposits in the state of California agency pool. At June 30, 2017 and 2016, the carrying amount of the University's demand deposits, generally held in five nationally recognized banking institutions, was \$203.4 million and \$266.6 million, respectively, compared to bank balances of \$159.7 million and \$230.5 million, respectively. Deposits in transit and cash awaiting investment are the primary differences. The University's deposits are uninsured and uncollateralized.

The University does not have significant exposure to foreign currency risk in demand deposit accounts. Accounts held in foreign countries maintain minimum operating balances with the intent to reduce potential foreign exchange risk while providing an adequate level of liquidity to meet the obligations of the academic programs established abroad. The equivalent U.S. dollar balances required to support research groups and education abroad programs in foreign countries was \$6.7 million at June 30, 2017 and \$5.1 million at June 30, 2016.

The carrying amount of the campus foundations' cash and cash equivalents at June 30, 2017 and 2016 was \$254.1 million and \$194.9 million, respectively, compared to bank balances of \$94.3 million and \$162.9 million, respectively. Deposits in transit and cash awaiting investment are the primary differences. Included in bank balances are deposits in the University's Short Term



Investment Pool of \$157.6 million at June 30, 2017 and \$29.9 million at June 30, 2016, with the remaining uncollateralized bank balances insured by the Federal Deposit Insurance Corporation (FDIC). Uncollateralized bank balances include \$6.5 million and \$6.7 million in excess of the FDIC limits at June 30, 2017 and 2016, respectively. The campus foundations do not have exposure to foreign currency risk in their cash and cash equivalents.

## 2. INVESTMENTS

The Regents, as the governing Board, is responsible for the oversight of the University's, UCRS' and UCRHBT's investments and establishes an investment policy, which is carried out by the Chief Investment Officer. These investments are associated with the Short Term Investment Pool (STIP), Total Return Investment Pool (TRIP), General Endowment Pool (GEP), UCRS, UCRHBT and other investment pools managed by the Chief Investment Officer, or are separately invested. Pursuant to The Regents' policies on campus foundations, the Board of Trustees for each campus foundation may determine that all or a portion of their investments will be managed by the Chief Investment Officer. Asset allocation guidelines are provided to the campus foundations by the Investments Subcommittee of The Regents.

STIP allows participants to maximize the returns on their short-term cash balances by taking advantage of the economies of scale of investing in a large pool with a broad range of maturities and is managed to maximize current earned income. Cash to provide for payroll, construction expenditures and other operating expenses for campuses and medical centers is invested in STIP. The available cash in UCRS or endowment investment pools awaiting investment, or cash for administrative expenses, is also invested in STIP.

Investments authorized by The Regents for STIP include fixed-income securities with a maximum maturity of five and one-half years. In addition, for STIP, The Regents has also authorized loans, primarily to faculty members residing in California, under the University's Mortgage Origination Program with terms of up to 40 years.

TRIP allows participants the opportunity to maximize the return on their long-term working capital by taking advantage of the economies of scale of investing in a large pool across a broad range of asset classes. TRIP is managed to a total return objective and is intended to supplement STIP. Investments authorized by The Regents for TRIP include a diversified portfolio of equity, fixed income and alternative investments.

GEP is an investment pool in which a large number of individual endowments participate in order to benefit from diversification and economies of scale. GEP is a balanced portfolio and the primary investment vehicle for endowed gift funds. Where donor agreements place constraints on allowable investments, assets associated with endowments are invested in accordance with the terms of the agreements.

Other investment pools primarily facilitate annuity and life income arrangements. Separate investments are those that cannot be pooled due to investment restrictions or income requirements.

Investments authorized by The Regents for GEP, UCRS, other investment pools and separate investments include equity securities, fixed-income securities and certain other asset classes. The equity portion of the investment portfolios include both domestic and foreign common and preferred stocks which may be included in actively or passively managed strategies, along with exposure to private equities. The University's investment portfolios may include foreign currency-denominated equity securities. The fixed-income portion of the investment portfolios may include both domestic and foreign securities, along with certain securitized investments, including mortgage-backed and asset-backed securities. Fixed-income investment guidelines permit the use of futures and options on fixed-income instruments in the ongoing management of the portfolios. Real estate investments are authorized for all pools except for STIP. Absolute return strategies, which may incorporate short sales, plus derivative positions to implement or hedge an investment position, are also authorized for all pools except for STIP.

Derivative instruments, including futures, forward contracts, options and swap contracts are authorized for portfolio rebalancing in accordance with The Regents' asset allocation policy and as substitutes for physical securities. Derivatives are not used for speculative purposes.

The Regents has also authorized certain employee account balances in defined contribution plans included as part of UCRS' investments to be invested in mutual funds. The participants' interests in mutual funds are not managed by the Chief Investment Officer and totaled \$3.4 billion and \$2.8 billion at June 30, 2017 and 2016, respectively.

Investments authorized by The Regents for the UCRHBT are restricted to a portfolio of high-quality money market instruments in a commingled fund that is managed externally. The average credit quality of the portfolio is A-1/P-1 with an average maturity of 26 days and 28 days at June 30, 2017 and 2016, respectively. The fair values of UCRHBT's investment in this portfolio were \$97.8 million and \$53.6 million at June 30, 2017 and 2016, respectively. These are measured at net asset value as of June 30, 2017 and 2016, respectively.

The composition of investments, by investment type at June 30 is as follows:

(in thousands of dollars)

	UNIVERSITY OF CALIFORNIA		UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS		UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM	
	2017	2016	2017	2016	2017	2016
<i>Equity securities:</i>						
Domestic	\$2,641,778	\$1,979,452	\$224,555	\$294,314	\$19,308,688	\$15,490,564
Foreign	2,322,774	1,306,340	26,056	24,487	10,124,433	7,855,227
<b>Equity securities</b>	<b>4,964,552</b>	<b>3,285,792</b>	<b>250,611</b>	<b>318,801</b>	<b>29,433,121</b>	<b>23,345,791</b>
<i>Fixed- or variable-income securities:</i>						
U.S. government-guaranteed:						
U.S. Treasury bills, notes and bonds	1,342,026	443,380	380,834	299,286	1,819,707	1,886,713
U.S. Treasury strips	370,436	292,098	215	235	900,066	568,605
U.S. TIPS	379,808	315,226			2,422,599	2,655,968
U.S. government-backed securities			24	42		
U.S. government-backed - asset-backed securities	13,695	20,749	991	1,240	10,146	8,253
<b>U.S. government-guaranteed</b>	<b>2,105,965</b>	<b>1,071,453</b>	<b>382,064</b>	<b>300,803</b>	<b>5,152,518</b>	<b>5,119,539</b>
Other U.S. dollar-denominated:						
Corporate bonds	7,945,898	4,659,480	28,301	27,170	4,750,525	4,155,499
Commercial paper	63,553	2,812,619			918,088	143,139
U.S. agencies	1,408,734	1,946,581		300	4,155,225	4,256,013
U.S. agencies - asset-backed securities	671,434	532,609	48,264	55,592	3,323,667	2,814,309
Corporate - asset-backed securities	504,652	386,261	49,518	52,182	1,607,426	1,636,572
Supranational/foreign	1,026,235	1,301,968	5,492	7,755	2,544,718	1,961,695
Other	120,314	66,731	1,478	814	26,996	28,382
<b>Other U.S. dollar-denominated</b>	<b>11,740,820</b>	<b>11,706,249</b>	<b>133,053</b>	<b>143,813</b>	<b>17,326,645</b>	<b>14,995,609</b>
Foreign currency-denominated:						
Corporate						3,890
<b>Foreign currency-denominated</b>						<b>3,890</b>
<i>Commingled funds:</i>						
Absolute return funds	3,962,553	3,168,124	2,177,012	1,878,461	4,987,355	4,626,070
Non-U.S. equity funds	2,077,584	2,883,950	991,267	838,113	9,264,782	7,502,378
Private equity	1,388,163	1,180,827	708,680	621,712	2,939,524	2,822,693
Money market funds	814,888	505,489	935,429	754,942	5,020,007	4,589,358
U.S. equity funds	145,967	507,587	664,627	574,231	2,341,302	3,281,925
Real estate investment trusts	460,025	9,439	150,846	95,519	1,633,123	515,960
Real assets	206,076	182,861			866,245	960,923
U.S. bond funds	218,839	32,747	131,541	109,386	1,055,611	1,677,872
Non-U.S. bond funds	132,608	44,720	16,433	29,452	15	
Balanced funds	212,079	182,516	1,222,549	1,051,146		
<b>Commingled funds</b>	<b>9,618,782</b>	<b>8,698,260</b>	<b>6,998,384</b>	<b>5,952,962</b>	<b>28,107,964</b>	<b>25,977,179</b>
Investment derivatives	(241)	8,227	1,995	2,776	(3,002)	25,921
Publicly traded real estate investment trusts	152,636	100,606			722,541	750,056
Mortgage loans	358,890	319,038				
Real estate	354,597	937,421	119,516	116,536	1,834,232	2,978,950
Other investments	12,390	13,786	321,367	279,587		
Campus foundations' investments with the University	(2,151,497)	(1,604,216)				
UCRS investment in the STIP	(2,678,532)	(2,327,849)				
<b>Total investments</b>	<b>24,478,362</b>	<b>22,208,767</b>	<b>8,206,990</b>	<b>7,115,278</b>	<b>\$82,574,019</b>	<b>\$73,196,935</b>
Less: Current portion	(6,249,657)	(4,944,611)	(674,868)	(479,410)		
<b>Noncurrent portion</b>	<b>\$18,228,705</b>	<b>\$17,264,156</b>	<b>\$7,532,122</b>	<b>\$6,635,868</b>		

## Investment Risk Factors

There are many factors that can affect the value of investments. Some, such as custodial credit risk, concentration of credit risk and foreign currency risk, may affect both equity and fixed-income securities. Equity securities respond to such factors as economic conditions, individual company earnings performance and market liquidity, while fixed-income securities are particularly sensitive to credit risks and changes in interest rates. Alternative investment strategies and their underlying assets and rights are subject to an array of economic and market vagaries that can limit or erode value.

### **Credit Risk**

Fixed-income securities are subject to credit risk, which is the chance that a bond issuer will fail to pay interest or principal in a timely manner, or the possibility that negative perceptions of the issuer's ability to make these payments will cause security prices to decline. These circumstances may arise due to a variety of factors such as financial weakness, bankruptcy, litigation and/or adverse political developments.

A bond's credit quality is an assessment of the issuer's ability to pay interest on the bond and, ultimately, to pay the principal. Credit quality is evaluated by one of the independent bond rating agencies, for example Moody's Investors Service (Moody's) or Standard and Poor's (S&P). The lower the rating, the greater the chance, in the rating agency's opinion, that the bond issuer will default, or fail to meet its payment obligations. Generally, the lower a bond's credit rating, the higher its yield should be to compensate for the additional risk.

Certain fixed-income securities, primarily obligations of the U.S. government or those explicitly guaranteed by the U.S. government, are considered to have minimal credit risk.

Asset-backed securities are debt obligations that represent claims to the cash flows from pools of commercial, mortgage, credit card or student loans. Mortgage-backed securities issued by Ginnie Mae are backed by the full faith and credit of the U.S. government.

The investment guidelines for STIP recognize that a limited amount of credit risk, properly managed and monitored, is prudent and provides incremental risk adjusted return over its benchmark (the benchmark for STIP is the two-year Treasury). No more than 5 percent of the total market value of the STIP portfolio may be invested in securities rated below investment grade (BB, Ba or lower). The average credit quality of STIP must be A or better and commercial paper must be rated at least A-1, P-1 or F-1.

The University recognizes that credit risk is appropriate in balanced investment pools such as TRIP, UCRS and GEP by virtue of the benchmarks chosen for the fixed-income portion of those pools.

The core fixed-income benchmark for UCRS, GEP and TRIP is the Barclays Capital US Aggregate Bond Index, comprised of 25.3 percent corporate bonds and 30.5 percent mortgage/asset-backed bonds, all of which carry some degree of credit risk. The remaining 44.2 percent is government issued bonds.

Credit risk in TRIP, UCRS and GEP is managed primarily by diversifying across issuers. In addition, portfolio guidelines for UCRS and GEP mandate that no more than 15 percent of the market value of fixed-income securities may be invested in issues with credit ratings below investment grade. Further, the weighted average credit rating must be A or higher.

In addition, the investment policy for both UCRP and GEP allows for dedicated allocations to non-investment grade and emerging market bonds, an investment which entails credit, default and/or sovereign risk.

The credit risk profile for fixed- or variable-income securities at June 30 is as follows:

(in thousands of dollars)

	UNIVERSITY OF CALIFORNIA		UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS		UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM	
	2017	2016	2017	2016	2017	2016
<i>Fixed- or variable-income securities:</i>						
U.S. government-guaranteed	\$2,105,965	\$1,071,453	\$382,064	\$300,803	\$5,152,518	\$5,119,539
<i>Other U.S. dollar-denominated:</i>						
AAA	394,656	293,301	12,538	14,341	1,465,322	1,176,010
AA	1,284,954	930,816	37,676	39,837	3,390,694	3,419,468
A	1,294,567	1,894,608	3,781	5,289	1,243,993	1,040,084
BBB	2,068,030	2,737,919	23,963	20,048	2,946,777	2,606,436
BB	450,708	562,163	2,095	3,259	1,242,851	1,192,376
B	296,788	254,948	3,088	4,945	1,057,297	872,055
CCC or below	42,151	55,117	19,898	24,023	192,950	358,512
A-1 / P-1 / F-1		12,536				1,949
Not rated	5,908,966	4,964,841	30,014	32,071	5,786,761	4,328,719
<i>Foreign currency-denominated:</i>						
Not rated						3,890
<i>Commingled funds:</i>						
U.S. bond funds: Not rated	218,839	32,747	131,541	109,386	1,055,611	1,677,872
Non-U.S. bond funds: Not rated	132,608	44,720	16,433	29,452	15	
Money market funds: Not rated	814,888	505,489	935,429	754,942	5,020,007	4,589,358
<i>Mortgage loans: Not rated</i>	358,890	319,038				

### **Custodial Credit Risk**

Custodial credit risk is the risk that in the event of the failure of the custodian, the investments may not be returned.

Substantially, all of the University's, campus foundations' and UCRS' securities are registered in the University's name by the custodial bank as an agent for the University. Other types of investments represent ownership interests that do not exist in physical or book-entry form. As a result, custodial credit risk for such investments is remote.

### **Concentration of Credit Risk**

Concentration of credit risk is the risk associated with a lack of diversification, such as having substantial investments in a few individual issuers, thereby exposing the organization to greater risks resulting from adverse economic, political, regulatory, geographic or credit developments.

The U.S. and non-U.S. equity portions of the University and UCRS portfolios may be managed either passively or actively. For the portions managed passively, the concentration of individual securities is similar to their concentration in the benchmark. While some securities have a larger representation in the benchmark than others, the University considers that passive management results in an absence of concentration of credit risk. For the portions managed actively, asset class guidelines do not specifically address concentration risk, but do state that the U.S. equity asset class, in the aggregate, will be appropriately diversified to control overall risk and will exhibit portfolio characteristics similar to the asset class benchmark (including concentration of credit risk). Concentration risk for individual portfolios is monitored relative to their individual benchmarks and agreed-upon risk parameters in their guidelines.

Investment guidelines addressing concentration of credit risk related to the investment grade fixed-income portion of the University and UCRS portfolios include a limit of no more than 3 percent of each portfolio's market value to be invested in any single issuer (except for securities issued by the U.S. government or its agencies). These same guidelines apply to STIP. For high-yield and emerging market debt, the corresponding limit is 5 percent.

Each campus foundation may have its own individual investment policy designed to limit exposure to a concentration of credit risk. Securities issued or explicitly guaranteed by the U.S. government, mutual funds, external investment pools, other investment pools or investments that are invested by the University for the campus foundations are not subject to concentration of credit risk. Most of the campus foundations that hold other types of investments have policies to limit the exposure to an individual issuer.

Investments in issuers other than U.S. government-guaranteed securities that represent 5 percent or more of investments held by the respective foundation at June 30 are as follows:

*(in thousands of dollars)*

	UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS	
	2017	2016
Bayside Partners, LP	\$88,257	\$91,295

### Interest Rate Risk

Interest rate risk is the risk that the value of fixed-income securities will decline because of changing interest rates. The prices of fixed-income securities with a longer time to maturity, measured by effective duration, tend to be more sensitive to changes in interest rates and, therefore, more volatile than those with shorter durations. Effective duration is the approximate change in price of a security resulting from a 100-basis-point (1-percentage-point) change in the level of interest rates. It is not a measure of time.

Interest rate risk for STIP is managed by constraining the maturity of all individual securities to be less than five and one-half years. There is no restriction on weighted average maturity of the portfolio as it is managed relative to the liquidity demands of the investors. The nature and maturity of individual securities in STIP allow for the use of weighted average maturity as an effective risk management tool, rather than the more complex measure, effective duration.

Portfolio guidelines for the fixed-income portion of TRIP, UCRS and GEP limit weighted average effective duration to the effective duration of the benchmarks (Barclays Capital US Aggregate Index), plus or minus 20 percent. These portfolio guidelines constrain the potential price movement due to interest rate changes of the portfolio being similar to that of the benchmark. There are similar restrictions for the high-yield and emerging market debt portfolios relative to their benchmarks.

The effective durations for fixed- or variable-income securities at June 30 are as follows:

	UNIVERSITY OF CALIFORNIA		UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS		UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM	
	2017	2016	2017	2016	2017	2016
<i>Fixed- or variable-income securities:</i>						
U.S. government-guaranteed:						
U.S. Treasury bills, notes and bonds	3.1	1.2	2.8	3.0	2.9	1.7
U.S. Treasury strips	11.7	7.5	18.1	19.3	10.6	7.8
U.S. TIPS	2.9	4.7			3.8	4.7
U.S. government-backed securities			1.8	0.7		
U.S. government-backed - asset-backed securities	2.3	1.5	10.1	4.2	3.1	1.9
<i>Other U.S. dollar-denominated:</i>						
Corporate bonds	2.8	2.9	2.4	2.8	6.1	6.1
U.S. agencies	2.6	2.1		7.3	2.1	1.7
U.S. agencies - asset-backed securities	3.9	2.9	4.2	3.8	3.7	2.5
Corporate - asset-backed securities	4.2	4.5	2.1	0.4	2.5	2.5
Supranational/foreign	3.2	2.9	3.8	2.7	5.8	5.8
Other	16.9	17.4	1.8	2.8	15.7	16.2
<i>Foreign currency-denominated:</i>						
Corporate		7.8				4.3
<i>Commingled funds:</i>						
U.S. bond funds*	2.5	4.1	4.8	4.8	1.9	3.7
Non-U.S. bond funds	3.2	7.2	6.9	6.0	7.0	
Money market funds**			1.5	1.3		

\*The University considers the modified durations for commingled funds.

\*\*Foundation and UCRS investment in STIP.

The University considers the effective durations for commercial paper, mortgage loans, insurance contracts and money market funds to be zero. The terms of the mortgage loans include variable interest rates. Insurance contracts can be liquidated without loss of principal and money market funds consist of underlying securities that are of a short-term, liquid nature.

Investments also include various mortgage-backed securities, collateralized mortgage obligations, structured notes, variable-rate securities and callable bonds that may be considered to be highly sensitive to changes in interest rates due to the existence of prepayment or conversion features, although the effective durations of these securities may be low.

At June 30, the fair values of such investments are as follows:

(in thousands of dollars)

	UNIVERSITY OF CALIFORNIA		UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS		UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM	
	2017	2016	2017	2016	2017	2016
Mortgage-backed securities	\$581,019	\$635,961	\$62,552	\$50,366	\$3,094,839	\$3,076,953
Collateralized mortgage obligations	142,379	173,385	17,079	32,583	308,119	507,526
Other asset-backed securities	147,305	92,843	14,889	21,758	928,928	718,940
Variable-rate securities	401,499	59,738			1,674,974	69,273
Callable bonds	2,773,741	1,892,892			8,281,157	5,882,116
Convertible bonds	317				2,529	
<b>Total</b>	<b>\$4,046,260</b>	<b>\$2,854,819</b>	<b>\$94,520</b>	<b>\$104,707</b>	<b>\$14,290,546</b>	<b>\$10,254,808</b>

**Mortgage-Backed Securities.** These securities are issued primarily by Fannie Mae, Ginnie Mae and Freddie Mac, and various commercial entities and include short embedded prepayment options. Unanticipated prepayments by the obligees of the underlying asset reduce the total expected rate of return.

**Collateralized Mortgage Obligations.** Collateralized mortgage obligations (CMOs) generate a return based upon either the payment of interest or principal on mortgages in an underlying pool. The relationship between interest rates and prepayments makes the fair value highly sensitive to changes in interest rates. In falling interest rate environments, the underlying mortgages are subject to a higher propensity of prepayments. In rising interest rate environments, the opposite is true.

**Other Asset-Backed Securities.** Other asset-backed securities also generate a return based upon either the payment of interest or principal on obligations in an underlying pool, generally associated with auto loans or credit cards. As with CMOs, the relationship between interest rates and prepayments makes the fair value highly sensitive to changes in interest rates.

**Variable-Rate Securities.** These securities are investments with terms that provide for the adjustment of their interest rates on set dates and are expected to have fair values that will be relatively unaffected by interest rate changes. Variable-rate securities may have limits on how high or low the interest rate may change. These constraints may affect the market value of the security.

**Callable Bonds.** Although bonds are issued with clearly defined maturities, an issuer may be able to redeem, or call, a bond earlier than its maturity date. The University must then replace the called bond with a bond that may have a lower yield than the original. The call feature causes the fair value to be highly sensitive to changes in interest rates.

At June 30, the effective durations for these securities are as follows:

	UNIVERSITY OF CALIFORNIA		UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS		UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM	
	2017	2016	2017	2016	2017	2016
Mortgage-backed securities	4.0	4.0	4.5	3.8	3.8	2.8
Collateralized mortgage obligations	2.7	2.4	12.5	1.1	2.7	2.2
Other asset-backed securities	1.5	2.2	5.1	(0.4)	1.0	1.4
Variable-rate securities	1.9	1.8			1.1	3.0
Callable bonds	3.4	3.7			4.0	3.8
Convertible bonds	2.6				2.5	

### Foreign Currency Risk

The University's strategic asset allocation policy for TRIP, UCRS and GEP includes allocations to non-U.S. equities and non-dollar-denominated bonds. The benchmarks for these investments are not hedged; therefore foreign currency risk is an essential part of the investment strategies. Portfolio guidelines for U.S. investment-grade fixed-income securities also allow exposure to non-U.S. dollar-denominated bonds up to 10 percent of the total portfolio market value. Exposure to foreign currency risk from these securities is permitted and it may be fully or partially hedged using forward foreign currency exchange contracts. Under the University's investment policies, such instruments are not permitted for speculative use or to create leverage. Similar limits on foreign exchange exposure apply to the high-yield debt and emerging market debt portfolios (10 percent and 20 percent, respectively).

At June 30, the foreign currency risk expressed in U.S. dollars, organized by currency denomination and investment type, are as follows:

(in thousands of dollars)

	UNIVERSITY OF CALIFORNIA		UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS		UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM	
	2017	2016	2017	2016	2017	2016
<i>Equity securities:</i>						
Euro	\$759,929	\$361,718	\$769		\$2,986,605	\$2,175,068
British Pound	262,100	244,974	1,474	\$1,388	1,499,151	1,473,068
Japanese Yen	369,665	215,890			1,550,471	1,298,182
Canadian Dollar	144,272	77,602	6,248	7,556	633,561	466,630
Swiss Franc	124,593	96,146	531		663,977	578,144
Australian Dollar	103,068	57,003	569	46	430,715	342,768
Hong Kong Dollar	128,176	27,517			307,976	165,462
Swedish Krona	69,605	33,033			263,079	198,633
Singapore Dollar	19,405	10,836			81,366	65,158
Danish Krone	23,677	14,184			142,740	85,287
Norwegian Krone	11,842	8,340			57,344	50,152
South Korean Won	84,359	48,976	16,356	14,140	473,711	294,499
Brazilian Real	25,154				29,725	
Indian Rupee		25,057			256,239	150,671
New Taiwan Dollar	69,843	20,720			204,806	124,590
South African Rand	31,699				147,473	
Thailand Baht	10,014				115,393	
Other	85,373	64,344	109	1,357	280,101	386,915
<b>Subtotal</b>	<b>2,322,774</b>	<b>1,306,340</b>	<b>26,056</b>	<b>24,487</b>	<b>10,124,433</b>	<b>7,855,227</b>
<i>Fixed-income securities:</i>						
Euro						1,779
Other						2,111
<b>Subtotal</b>						<b>3,890</b>
<i>Commingled funds (various currency denominations):</i>						
Absolute return funds			706,875			
Non-U.S. equity funds	2,077,584	2,883,950	919,576	547,487	9,264,782	7,502,378
Private equity	1,029		64,435	53,542	114,400	115,477
Real estate investment trusts			80,769	17,103		
Real assets	14,304	9,145	49,514		81,055	51,820
Non U.S. bond funds	132,608	44,720	16,434	3,229	15	
Balanced funds			129,917	238,192		
<b>Subtotal</b>	<b>2,225,525</b>	<b>2,937,815</b>	<b>1,967,520</b>	<b>859,553</b>	<b>9,460,252</b>	<b>7,669,675</b>
<i>Investment derivatives:</i>						
Australian Dollar	5	1,439			(10)	64
Canadian Dollar	(3)	33			(40)	266
British Pound	(10)	2,263			(244)	17,058
Japanese Yen	(52)	(893)			(584)	64
Hong Kong Dollar		(2,142)			(7)	203
Other	85	259			(103)	1,219
<b>Subtotal</b>	<b>25</b>	<b>959</b>			<b>(988)</b>	<b>18,874</b>
<i>Publicly traded real estate investment trusts:</i>						
Australian Dollar	10,092	6,562			44,367	44,160
Euro	9,243	5,851			42,055	39,377
British Pound	7,163	4,106			30,546	27,632
Japanese Yen	9,295	4,388			29,856	29,527
South African Rand	2,578	1,097			10,100	7,381
Singapore Dollar	4,139	810			12,441	5,454
Canadian Dollar	1,724	881			6,342	5,927
Mexican Peso	952	446			3,047	3,004
Other	2,386	559			5,913	3,764
<b>Subtotal</b>	<b>47,572</b>	<b>24,700</b>			<b>184,667</b>	<b>281,703</b>
<b>Total exposure to foreign currency risk</b>	<b>\$4,595,896</b>	<b>\$4,269,814</b>	<b>\$1,993,576</b>	<b>\$884,040</b>	<b>\$19,768,364</b>	<b>\$15,713,892</b>



## Liquidity Risks

Alternative investments are subject to liquidity risk. Alternative investments include hedge funds, limited partnerships, private equity, venture capital funds, real estate and real assets funds. Additionally, certain asset-backed securities are thinly traded and subject to liquidity risk.

Alternative investments include ownership interests in a wide variety of vehicles including partnerships and corporations that may be domiciled in the United States or offshore. Generally, there is little or no regulation of these investment vehicles by the Securities and Exchange Commission or the applicable state agencies. Managers of these investments employ a wide variety of strategies and have areas of concentration including absolute return, venture capital or early stage investing, private equity or later stage investing and the underlying investments may be leveraged to enhance the total investment return. Each asset class has guidelines and policies regarding the use of leverage. Such underlying investments may include financial assets such as marketable securities, non-marketable securities, derivatives and other synthetic and structured investments as well as tangible and intangible assets.

Alternative investments do not have a ready market and ownership interests in these investment vehicles may not be traded without the approval of the general partner or fund management. These investments are subject to the risks generally associated with equities and fixed-income instruments with additional risks due to leverage and the lack of a ready market for acquisition or disposition of ownership interests.

The University's portfolio includes the following investments subject to liquidity risk as of June 30:

(in thousands of dollars)

	UNIVERSITY OF CALIFORNIA		UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS		UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM	
	2017	2016	2017	2016	2017	2016
Absolute return funds	\$3,962,553	\$3,168,124	\$2,177,012	\$1,878,461	\$4,987,355	\$4,626,070
Private equity funds	1,388,163	1,180,827	708,680	621,712	2,939,524	2,822,693
Real estate funds	354,597	937,421	119,516	116,536	1,834,232	2,978,950
Real estate investment trusts	460,025	9,439	150,846	95,519	1,633,123	515,960
Real assets funds	206,076	182,861			866,245	960,923
<b>Total</b>	<b>\$6,371,414</b>	<b>\$5,478,672</b>	<b>\$3,156,054</b>	<b>\$2,712,228</b>	<b>\$12,260,479</b>	<b>\$11,904,596</b>

## The University's Investment Pools

The composition of the University's investments at June 30, 2017, by investment pool, are as follows:

(in thousands of dollars)

	UNIVERSITY OF CALIFORNIA				
	STIP	TRIP	GEP	OTHER	TOTAL
<i>Equity securities:</i>					
Domestic		\$1,650,101	\$877,439	\$114,238	\$2,641,778
Foreign		1,399,551	880,977	42,246	2,322,774
<i>Fixed- or variable-income securities:</i>					
U.S. government-guaranteed	\$969,940	637,044	491,287	7,694	2,105,965
Other U.S. dollar-denominated	7,667,967	3,390,550	660,701	21,602	11,740,820
Commingled funds	68,175	1,711,540	6,605,800	1,233,267	9,618,782
Investment derivatives		(162)	(73)	(6)	(241)
Publicly traded real estate investment trusts		103,542	44,677	4,417	152,636
Mortgage loans	358,890				358,890
Real estate		137,615	177,927	39,055	354,597
Other investments				12,390	12,390
<b>Subtotal</b>	<b>9,064,972</b>	<b>9,029,781</b>	<b>9,738,735</b>	<b>1,474,903</b>	<b>29,308,391</b>
Campus foundations' investments with the University	(1,048,911)	(26,701)	(918,008)	(157,877)	(2,151,497)
UCRS investment in the STIP	(2,678,532)				(2,678,532)
<b>Total investments</b>	<b>\$5,337,529</b>	<b>\$9,003,080</b>	<b>\$8,820,727</b>	<b>\$1,317,026</b>	<b>\$24,478,362</b>

The composition of the University's investments at June 30, 2016, by investment pool, are as follows:

(in thousands of dollars)

	UNIVERSITY OF CALIFORNIA				
	STIP	TRIP	GEP	OTHER	TOTAL
<i>Equity securities:</i>					
Domestic		\$1,146,426	\$727,457	\$105,569	\$1,979,452
Foreign		545,738	725,650	34,952	1,306,340
<i>Fixed- or variable-income securities:</i>					
U.S. government-guaranteed	\$186,557	478,848	397,424	8,624	1,071,453
Other U.S. dollar-denominated	7,701,979	3,472,313	508,083	23,874	11,706,249
Commingled funds	94,408	2,590,458	5,775,631	237,763	8,698,260
Investment derivatives		28	8,176	23	8,227
Publicly traded real estate investment trusts		50,082	45,861	4,663	100,606
Mortgage loans	319,038				319,038
Real estate		373,354	528,850	35,217	937,421
Other investments				13,786	13,786
<b>Subtotal</b>	<b>8,301,982</b>	<b>8,657,247</b>	<b>8,717,132</b>	<b>464,471</b>	<b>26,140,832</b>
Campus foundations' investments with the University	(693,159)	(19,398)	(785,515)	(106,144)	(1,604,216)
UCRS investment in the STIP	(2,327,849)				(2,327,849)
<b>Total investments</b>	<b>\$5,280,974</b>	<b>\$8,637,849</b>	<b>\$7,931,617</b>	<b>\$358,327</b>	<b>\$22,208,767</b>

The total investment returns based upon unit values, representing the combined income plus net appreciation or depreciation in the fair value of investments, for the years ended June 30, 2017 and 2016, were 7.7 and 0.3 percent, respectively for TRIP, 15.1 and (3.5) percent, respectively for GEP and 14.5 and (2.0) percent, respectively for UCRS. The investment return for STIP distributed to participants, representing combined income and realized gains or losses, during the same periods, was 1.3 percent. Other investments consist of numerous, small portfolios of investment or individual securities, each with its own individual rate of return.

### Related Party Relationships with the University

UCRS and campus foundations may invest available cash in STIP. Shares are purchased or redeemed in STIP at a constant value of \$1 per share. Actual income earned, including any realized gains or losses on the sale of STIP investments, is allocated to UCRS and campus foundations based upon the number of shares held. Unrealized gains and losses associated with the fluctuation in the fair value of investments included in STIP are recorded by the University as the manager of the pool. The net asset value for STIP is held at a constant value of \$1 and is not adjusted for unrealized gains and losses associated with the fluctuation in the fair value of investments included in STIP.

The campus foundations may also purchase or redeem shares in GEP, TRIP or other investment pools at the unitized value of the portfolio at the time of purchase or redemption. Actual income earned is allocated to the campus foundations based upon the number of shares held.

### Campus Foundations

The campus foundations' cash and cash equivalents and investments that are invested with the University and managed by the Chief Investment Officer are excluded from the University's statement of net position and included in the campus foundations' statement of net position. Under the accounting policies elected by each campus foundation, certain component units classify all or a portion of their investment in STIP and TRIP as cash and cash equivalents, rather than investments. Substantially, all of the campus foundations' investments managed by the Chief Investment Officer are categorized as commingled funds or commingled money market funds by the campus foundations in the composition of investments.

The fair value of the campus foundations' cash and cash equivalents and investments that are invested with the University, by investment pool, at June 30 are as follows:

<i>(in thousands of dollars)</i>	<b>2017</b>	<b>2016</b>
STIP	\$1,048,910	\$693,159
TRIP	26,701	19,398
GEP	918,008	785,515
Other investment pools	157,878	106,144
<b>Campus foundations' investments with the University</b>	<b>2,151,497</b>	<b>1,604,216</b>
Classified as cash and cash equivalents by campus foundations	(154,662)	(28,183)
<b>Classified as investments by campus foundations</b>	<b>\$1,996,835</b>	<b>\$1,576,033</b>

Investment income in the University's statement of revenues, expenses and changes in net position is net of income earned by, and distributed to, the campus foundations totaling \$21.9 million and \$18.3 million for the years ended June 30, 2017 and 2016, respectively.

## UCRS

UCRS had \$2.7 billion and \$2.3 billion invested in STIP at June 30, 2017 and 2016, respectively. These investments are excluded from the University's statement of net position and are included in UCRS' statement of plans' fiduciary net position. They are categorized as commingled money market funds in the composition of investments for UCRS. STIP investment income in the University's statement of revenues, expenses and changes in net position is net of income earned by, and distributed to, UCRS totaling \$31.2 million and \$30.1 million for the years ended June 30, 2017 and 2016, respectively.

## Agency Relationships with the University

STIP and GEP are external investment pools and include investments on behalf of external organizations that are associated with the University, although not financially accountable to the University. These organizations are not required to invest in these pools. Participants purchase or redeem shares in STIP at a constant value of \$1 per share and purchase or redeem shares in GEP at the unitized value of the portfolio at the time of purchase or redemption. Actual income earned is allocated to participants based upon the number of shares held.

The fair value of these investments in each investment pool and the related liability associated with these organizations that are included in the University's statement of net position at June 30 are as follows:

<i>(in thousands of dollars)</i>	<b>2017</b>	<b>2016</b>
<i>Short-term investments:</i>		
STIP	\$103,291	\$86,176
GEP	259,330	224,821
Other investment pools		16,432
<b>Total agency assets</b>	<b>\$362,621</b>	<b>\$327,429</b>
<b>Funds held for others</b>	<b>\$362,621</b>	<b>\$327,429</b>

The composition of the net position at June 30 for STIP and GEP are as follows:

<i>(in thousands of dollars)</i>	<b>STIP</b>		<b>GEP</b>	
	<b>2017</b>	<b>2016</b>	<b>2017</b>	<b>2016</b>
Investments	\$9,064,972	\$8,301,982	\$9,738,735	\$8,717,132
Investment of cash collateral	44,176	38,760	342,833	356,794
Securities lending collateral	(44,155)	(38,748)	(342,677)	(356,764)
Other assets, net	2,437,063	2,428,681	850,451	211,974
<b>Net position</b>	<b>\$11,502,056</b>	<b>\$10,730,675</b>	<b>\$10,589,342</b>	<b>\$8,929,136</b>

Other assets include amounts receivable for pension benefits from the campuses and medical centers of \$2.7 billion and \$2.3 billion at June 30, 2017 and 2016, respectively.

The changes in net position for STIP and GEP for the year ending June 30 are as follows:

<i>(in thousands of dollars)</i>	STIP		GEP	
	2017	2016	2017	2016
Net position, beginning of year	\$10,730,675	\$12,258,256	\$8,929,136	\$8,921,362
Investment income	159,038	141,298	92,781	77,911
Net appreciation (depreciation) in fair value of investments	(28,695)	3,724	1,309,458	(382,996)
Transfer to TRIP	(60,000)	(1,768,504)		
Participant contributions (withdrawals), net	701,038	95,901	257,967	312,859
<b>Net position, end of year</b>	<b>\$11,502,056</b>	<b>\$10,730,675</b>	<b>\$10,589,342</b>	<b>\$8,929,136</b>

### 3. SECURITIES LENDING

The University and UCRS jointly participate in a securities lending program as a means to augment income. The campus foundations' investments that are invested with the University and managed by the Chief Investment Officer are included in the University's investment pools that participate in the securities lending program.

The campus foundations' allocated share of the program's cash collateral received, investment of cash collateral and collateral held for securities lending is determined based upon their equity in the investment pools. The Board of Trustees for each campus foundation may also authorize participation in a direct securities lending program.

Securities are lent to selected brokerage firms for which collateral received equals or exceeds the fair value of such investments lent during the period of the loan. Securities loans immediately terminate upon notice by either the University or the borrower. Collateral may be cash or securities issued by the U.S. government or its agencies, or the sovereign or provincial debt of foreign countries. Securities collateral cannot be pledged or sold by the University unless the borrower defaults.

Loans of domestic equities and all fixed-income securities are initially collateralized at 102 percent of the fair value of securities lent. Loans of foreign equities are initially collateralized at 105 percent. All borrowers are required to provide additional collateral by the next business day if the value of the collateral falls to less than 100 percent of the fair value of securities lent.

Cash collateral received from the borrower is invested by lending agents, as agents for the University, in investment pools in the name of the University, with guidelines approved by the University. These investments are shown as investment of cash collateral in the statement of net position. At June 30, 2017 and 2016, the securities in these pools had a weighted average maturity of 20 days and 34 days, respectively. The University records a liability for the return of the cash collateral shown as collateral held for securities lending in the statement of net position. Securities collateral received from the borrower is held in investment pools by the University's custodial bank.

At June 30, 2017 and 2016, the University had insignificant exposure to borrowers because the amounts the University owed the borrowers were substantially the same as the amounts the borrowers owed the University. The University is indemnified by its lending agents against any losses incurred as a result of borrower default.

The composition of the securities lending programs at June 30 are as follows:

(in thousands of dollars)	UNIVERSITY OF CALIFORNIA		UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS		UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM	
	2017	2016	2017	2016	2017	2016
<b>SECURITIES LENT</b>						
<i>For cash collateral:</i>						
Equity securities:						
Domestic	\$522,489	\$428,032			\$2,789,711	\$3,910,177
Foreign	40,881	35,420			129,824	124,796
Fixed-income securities:						
U.S. government-guaranteed	73,204	120,898			803,431	990,162
Other U.S. dollar-denominated	449,910	270,848			2,856,772	1,639,228
Foreign currency-denominated	11,173				109,797	
Foundations' share	(42,581)	(41,973)	\$42,581	\$41,973		
<b>Lent for cash collateral</b>	<b>1,055,076</b>	<b>813,225</b>	<b>42,581</b>	<b>41,973</b>	<b>6,689,535</b>	<b>6,664,363</b>
<i>For securities collateral:</i>						
Equity securities:						
Domestic	444,681	215,992			3,025,219	1,823,980
Foreign	271,071	148,851			826,781	667,413
Fixed-income securities:						
U.S. government-guaranteed	164,400	111,328			2,132,793	2,526,750
Other U.S. dollar-denominated	77,881	134,092			505,610	510,090
Foreign currency-denominated	1,959				15,081	
<b>Lent for securities collateral</b>	<b>959,992</b>	<b>610,263</b>			<b>6,505,484</b>	<b>5,528,233</b>
<b>Total securities lent</b>	<b>\$2,015,068</b>	<b>\$1,423,488</b>	<b>\$42,581</b>	<b>\$41,973</b>	<b>\$13,195,019</b>	<b>\$12,192,596</b>
<b>COLLATERAL RECEIVED</b>						
Cash	\$1,121,899	\$866,650			\$6,838,416	\$6,749,519
Foundations' share	(42,581)	(41,973)	\$42,581	\$41,973		
<b>Total cash collateral received</b>	<b>1,079,318</b>	<b>824,677</b>	<b>\$42,581</b>	<b>41,973</b>	<b>6,838,416</b>	<b>6,749,519</b>
Securities	1,032,497	655,859			6,992,564	5,941,271
<b>Total collateral received</b>	<b>\$2,111,815</b>	<b>\$1,480,536</b>	<b>\$42,581</b>	<b>\$41,973</b>	<b>\$13,830,980</b>	<b>\$12,690,790</b>
<b>INVESTMENT OF CASH COLLATERAL</b>						
<i>Fixed-income securities:</i>						
Other U.S. dollar-denominated:						
Corporate bonds	\$105,460	\$105,385			\$642,818	\$820,737
Commercial paper	77,753				473,932	
Repurchase agreements	309,356	194,582			1,885,644	1,515,418
Corporate - asset-backed securities	28,855	71,220			175,884	554,664
Certificates of deposit/time deposits	542,834	459,963			3,308,794	3,582,215
Supranational/foreign	58,751	35,716			358,112	278,161
Other assets (liabilities), net*	(599)	38			(3,654)	297
Foundations' share	(42,581)	(41,973)	\$42,581	\$41,973		
<b>Investment of cash collateral</b>	<b>1,079,829</b>	<b>824,931</b>	<b>\$42,581</b>	<b>41,973</b>	<b>\$6,841,530</b>	<b>\$6,751,492</b>
Less: Current portion	(947,353)	(680,838)	(37,357)	(34,641)		
<b>Noncurrent portion</b>	<b>\$132,476</b>	<b>\$144,093</b>	<b>\$5,224</b>	<b>\$7,332</b>		

\* Other assets (liabilities), net is comprised of pending settlements of cash collateral investments.

The University earns interest and dividends on the collateral held during the loan period, as well as a fee from the brokerage firm, and is obligated to pay a fee and rebate to the borrower. The University receives the net investment income. The securities lending income and fees and rebates for the year ended June 30 are as follows:

	UNIVERSITY OF CALIFORNIA		UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS		UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM	
	2017	2016	2017	2016	2017	2016
Securities lending income	\$15,628	\$8,840	\$771	\$581	\$89,075	\$60,415
Securities lending fees and rebates	(7,124)	(2,558)	(352)	(166)	(40,610)	(16,440)
<b>Securities lending investment income, net</b>	<b>\$8,504</b>	<b>\$6,282</b>	<b>\$419</b>	<b>\$415</b>	<b>\$48,465</b>	<b>\$43,975</b>

## Investment Risk Factors

There are a variety of potential risk factors involved in a securities lending program. Risks associated with the investment of cash collateral may include the credit risk from fixed-income securities, concentration of credit risk, interest rate risk and foreign currency risk. In addition, there may be custodial credit risk associated with both cash and securities received as collateral for securities lent.

The University's and UCRS' investment policies and other information related to each of these risks are summarized below. Campus foundations that participate in a securities lending program may have their own individual investment policies designed to limit the same risks.

### Credit Risk

The University's and UCRS' investment policies for the investment of cash collateral maintained in separately managed collateral pools restrict the credit rating of issuers at the time of purchase to no less than A-1, P-1 or F-1 for short-term securities and no less than A2/A for long-term securities. Asset-backed securities must have a rating of AAA at the time of purchase.

The credit risk profile for fixed- or variable-income securities associated with the investment of cash collateral at June 30 are as follows:

	UNIVERSITY OF CALIFORNIA		UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS		UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM	
	2017	2016	2017	2016	2017	2016
<i>Fixed- or variable-income securities:</i>						
Other U.S. dollar-denominated:						
AAA	\$84,224	\$89,504			\$513,378	\$697,065
AA+		19,936				155,262
AA-	146,141	104,931			890,788	817,206
A+	130,473	145,590			795,284	1,133,866
A	123,225	61,267			751,104	477,147
A-	50,772	37,911			309,473	295,251
A-1 / A-2 / P-1 / F-1	278,819	213,144			1,699,513	1,659,981
Not rated						
Other assets (liabilities) net*: Not rated	(599)	38			(3,654)	297
Campus foundations' share	(42,581)	(41,973)	42,581	41,973		

\* Other assets (liabilities), net is comprised of pending settlements of cash collateral investments.

### Custodial Credit Risk

Cash collateral received for securities lent is invested in pools by the University's lending agents. The University's and UCRS' securities related to the investment of cash collateral are registered in the University's name by the lending agents. Securities collateral received for securities lent are held in investment pools by the University's lending agents. As a result, custodial credit risk is remote.

## Concentration of Credit Risk

The University's and UCRS' investment policy with respect to the concentration of credit risk associated with the investment of cash collateral in the separately managed collateral pools restricts investments in any single issuer of corporate debt securities, time deposits, certificates of deposit, bankers acceptances and money market funds to no more than 5 percent of the portfolio value at the time of purchase. Campus foundations that directly participate in a securities lending program do not have specific investment policies related to concentration of credit risk, although the lending agreements with the agents establish restrictions for the type of investments and minimum credit ratings.

Investments in issuers other than U.S. government-guaranteed securities that represent 5 percent or more of the total investment of cash collateral held by individual component units at June 30 are as follows:

	UNIVERSITY OF CALIFORNIA		UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM	
	2017	2016	2017	2016
Goldman Sachs & Company	\$63,421		\$386,579	
Svenska Handelsbanken AB		\$56,331		\$438,705
Morgan Stanley & Co LLC	84,562		515,438	

## Interest Rate Risk

The nature of individual securities in the collateral pools allows for the use of weighted average maturity as an effective risk management measure. The University's and UCRS' investment policy with respect to the interest rate risk associated with the investment of cash collateral in the separately managed collateral pools requires the weighted average maturity of the entire collateral pool to be less than 120 days. The maturity of securities issued by the U.S. government and asset-backed securities must be less than five years, corporate debt obligations must be less than two years and time deposits must be less than 190 days. Floating rate debt may be used, but it is limited to 65 percent of the market value of the portfolio.

The weighted average maturity expressed in days for fixed- or variable-income securities associated with the investment of cash collateral at June 30 are as follows:

	UNIVERSITY OF CALIFORNIA		UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM	
	2017	2016	2017	2016
<i>Fixed- or variable-income securities:</i>				
Other U.S. dollar-denominated:				
Corporate bonds	38	44	38	44
Commercial paper	19		19	
Repurchase agreements	9	8	9	8
Corporate-asset-backed securities	97	18	97	18
Certificates of deposit/time deposits	19	46	19	46
Supranational/foreign	17	26	17	26

Investment of cash collateral may include various asset-backed securities, structured notes and variable-rate securities that may be considered to be highly sensitive to changes in interest rates due to the existence of prepayment or conversion features, although the weighted average maturity may be short.

At June 30 the fair value of investments that are considered to be highly sensitive to changes in interest rates are as follows:

	UNIVERSITY OF CALIFORNIA		UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS		UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM	
	2017	2016	2017	2016	2017	2016
Other asset-backed securities	\$87,606	\$89,504			\$533,996	\$697,064
Variable-rate investments	802,491	536,906			4,891,500	4,181,454
Campus foundations' share	(33,767)	(31,125)	\$33,767	\$31,125		
<b>Total</b>	<b>\$856,330</b>	<b>\$595,285</b>	<b>\$33,767</b>	<b>\$31,125</b>	<b>\$5,425,496</b>	<b>\$4,878,518</b>

At June 30, 2017 and 2016, the weighted average maturity expressed in days for asset-backed securities was 43 days and 18 days, respectively and for variable-rate investments was 19 days and 23 days, respectively.



### ***Foreign Currency Risk***

The University's and UCRS' investment policy with respect to the foreign currency risk associated with the investment of cash collateral maintained in separate collateral pools restricts investments to U.S. dollar-denominated securities. Therefore, there is no foreign currency risk.

## **4. DERIVATIVE FINANCIAL INSTRUMENTS**

The University may use derivatives including futures, forward contracts, options and interest rate swap contracts as a substitute for investment in equity and fixed-income securities, to reduce the effect of fluctuating foreign currencies on foreign currency-denominated investments, or to limit its exposure of variable-rate bonds to changes in market interest rates. The Board of Trustees for each campus foundation may also authorize derivatives in its investment policy.

The University enters into futures contracts for the purpose of acting as a substitute for investment in equity and fixed-income securities. A futures contract is an agreement between two parties to buy and sell a security or financial index, interest rate or foreign currency at a set price on a future date. They are standardized contracts that can be easily bought and sold and are exchange-traded. Upon entering into such a contract, the University is required to pledge to the broker an amount of cash or securities equal to the minimum initial margin requirements of the exchange on which the contract is traded. Pursuant to the contract, the University agrees to receive from, or pay to, the counterparty an amount of cash equal to the daily fluctuation in the value of the contract. These contracts are settled on a daily basis, with the resulting realized gain or loss included in the statement of revenues, expenses and changes in net position. The settlement amount at the end of each day for each of the contracts, or variation margin, is included in investments and represents the fair value of the contracts.

Forward contracts are similar to futures contracts, although they are not exchange-traded. Foreign currency exchange contracts are forward contracts used to hedge against foreign currency exchange rate risks on non-U.S. dollar-denominated investment securities and to increase or decrease exposure to various foreign currencies.

An option contract gives the University the right, but not the obligation, to buy or sell a specified security or index at a fixed price during a specified period for a nonrefundable fee (the "premium"). The maximum loss to the University is limited to the premium originally paid for covered options. The University initially records premiums paid for the purchase of these options in the statement of net position as an investment which is subsequently adjusted to reflect the fair value of the options, with unrealized gains and losses included in the statement of revenues, expenses and changes in net position.

Rights and warrants provide the holder with the right, but not the obligation, to buy a stock at a predetermined price for a finite period of time. Warrants usually have a longer time period to expiration. The holder of a right or warrant is permitted to buy at a price that may be below the actual market price for that stock. Warrants and rights cease to exist and become worthless if not used by their expiration date.

An interest rate swap is a contractual agreement entered into between the University and a counterparty under which each agrees to exchange periodic fixed or variable payments for an agreed period of time based upon a notional amount of principal or value of the underlying contract. The payments correspond to an equity index, an interest rate or to currency. A credit default swap is an agreement whereby the seller will compensate the buyer in the event of a loan default. A swaption is an option granting its owner the right but not the obligation to enter into an underlying swap. The University considers its futures, forward contracts, options, credit default swaps, swaptions, rights, warrants and certain interest rate swaps to be investment derivatives.

As a means to lower the University's borrowing costs, when compared against fixed-rate bonds at the time of issuance, the University entered into interest rate swap agreements in connection with certain of its variable-rate Medical Center Pooled Revenue Bonds and General Revenue Bonds. The University determined that certain of its interest rate swaps are derivative instruments that meet the criteria for an effective hedge. Certain of the interest rate swaps are considered hybrid instruments since, at the time of execution, the fixed rate on each of the swaps was off-market and the University received an up-front payment. As such, these swaps are comprised of a derivative instrument, an at-the-market swap that is an effective hedge, and a companion instrument, a borrowing represented by the up-front payment. The unamortized amount of the borrowing under the companion instruments was \$79.0 million and \$40.0 million at June 30, 2017 and 2016, respectively.

In August 2016, the University replaced the counterparty for certain of its interest rate swap agreements and discontinued hedge accounting on interest rate swaps with a notional value of \$174.8 million. The University recognized a decrease in net position upon hedge termination of \$41.2 million on the statement of revenues, expenses and changes in net position. The University determined that the interest rate swap agreements with the new counterparty are derivative instruments that meet the criteria for an effective hedge. These interest rate swaps are considered hybrid instruments since, at the time of execution, the University received an up-front payment of \$82.5 million. As such, the swaps consist of an at-the-market swap derivative instrument and a borrowing, represented by the up-front payment.

The fair value balances and notional amounts of derivative instruments outstanding at June 30, categorized by type, and the changes in fair value of such derivatives are as follows:

## University of California

(in thousands of dollars)

CATEGORY	NOTIONAL AMOUNT		FAIR VALUE-POSITIVE (NEGATIVE)			CHANGES IN FAIR VALUE		
	2017	2016	CLASSIFICATION	2017	2016	CLASSIFICATION	2017	2016
<b>INVESTMENT DERIVATIVES</b>								
<i>Futures contracts:</i>								
Domestic equity futures:								
Long positions	\$21	\$267	Investments	\$(360)	\$7,256	Net appreciation (depreciation)	\$(361)	\$24,093
Short positions			Investments			Net appreciation (depreciation)		(2)
Foreign futures:								
Long positions	78	82	Investments	(47)	714	Net appreciation (depreciation)	7,998	(7,560)
Short positions		(13,377)	Investments		7,982	Net appreciation (depreciation)	(17,090)	12,942
<b>Futures contracts, net</b>				<b>(407)</b>	<b>15,952</b>		<b>(9,453)</b>	<b>29,473</b>
<i>Foreign currency exchange contracts, net*:</i>								
Long positions	217,069	242,859	Investments	(46)	742	Net appreciation (depreciation)	6,800	2,430
Short positions		(18,428,479)	Investments		(8,576)	Net appreciation (depreciation)	15,053	(10,835)
<b>Futures currency exchange contracts, net</b>				<b>(46)</b>	<b>(7,834)</b>		<b>21,853</b>	<b>(8,405)</b>
<i>Swaps:</i>								
Credit default swaps			Investments			Net appreciation (depreciation)		(2)
Fixed interest rate swaps			Investments			Net appreciation (depreciation)		10
<b>Swaps, net</b>								<b>8</b>
<i>Other:</i>								
Stock rights/warrants	680	710	Investments	212	109	Net appreciation (depreciation)	22	248
<b>Other, net</b>				<b>212</b>	<b>109</b>		<b>22</b>	<b>248</b>
<b>Total investment derivatives</b>				<b>\$(241)</b>	<b>\$8,227</b>		<b>\$12,422</b>	<b>\$21,324</b>
<b>CASH FLOW HEDGES</b>								
<i>Effective interest rate swaps:</i>								
Pay fixed, receive variable	\$842,315	\$845,655	Other assets (liabilities)	\$(90,232)	\$(152,123)	Deferred (inflows) outflows	\$61,891	\$(61,030)

\*Notional amount reported in local currency.

## University of California Campus Foundations

(in thousands of dollars)

CATEGORY	NOTIONAL AMOUNT		FAIR VALUE-POSITIVE (NEGATIVE)			CHANGES IN FAIR VALUE		
	2017	2016	CLASSIFICATION	2017	2016	CLASSIFICATION	2017	2016
<b>INVESTMENT DERIVATIVES</b>								
Options/swaptions		\$6,902	Investments	\$7	\$247	Net appreciation (depreciation)		\$247
Swaps	\$226,752	179,812		1,988	2,529		\$32,340	2,529
<b>Total investment derivatives</b>				<b>\$1,995</b>	<b>\$2,776</b>		<b>\$32,340</b>	<b>\$2,776</b>

## University of California Retirement System

(in thousands of dollars)

CATEGORY	NOTIONAL AMOUNT		FAIR VALUE-POSITIVE (NEGATIVE)			CHANGES IN FAIR VALUE		
	2017	2016	CLASSIFICATION	2017	2016	CLASSIFICATION	2017	2016
<b>INVESTMENT DERIVATIVES</b>								
<i>Futures contracts:</i>								
<i>Domestic equity futures:</i>								
Long positions	\$8,687	\$195	Investments	\$(2,323)	\$6,886	Net appreciation (depreciation)	\$(2,323)	\$50,218
Short positions	(17,400)	(8,312)	Investments	(19)	133	Net appreciation (depreciation)	(19)	229
<i>Foreign equity futures:</i>								
Long positions	1,236	25,039	Investments	(1,060)	(15,237)	Net appreciation (depreciation)	126,127	(43,302)
Short positions			Investments			Net appreciation (depreciation)	(10,495)	(328)
<b>Futures contracts, net</b>				<b>(3,402)</b>	<b>(8,218)</b>		<b>113,290</b>	<b>6,817</b>
<i>Foreign currency exchange contracts, net*:</i>								
Long positions	2,482,250	34,426,314	Investments	(528)	16,277	Net appreciation (depreciation)	26,347	(19,710)
Short positions	(1,611)	(4,500,715)	Investments	(26)	17,189	Net appreciation (depreciation)	55,504	127,570
<b>Foreign currency exchange contracts, net</b>				<b>(554)</b>	<b>33,466</b>		<b>81,851</b>	<b>107,860</b>
<i>Swaps:</i>								
Credit default swaps			Investments			Net appreciation (depreciation)		(37)
<b>Swaps, net</b>								<b>(37)</b>
<i>Other:</i>								
Stock rights/warrants	1,583	4,704	Investments	954	673	Net appreciation (depreciation)	(33)	284
Options/swaptions			Investments			Net appreciation (depreciation)		1
<b>Other, net</b>				<b>954</b>	<b>673</b>		<b>(33)</b>	<b>285</b>
<b>Total investment derivatives</b>				<b>\$(3,002)</b>	<b>\$25,921</b>		<b>\$195,108</b>	<b>\$114,925</b>

\*Notional amount reported in local currency.

## Objectives and Terms of Hedging Derivative Instruments

The objectives and terms of the hedging derivative instruments outstanding at June 30, along with the credit rating of the associated counterparty, are as follows:

(in thousands of dollars)

TYPE	OBJECTIVE	NOTIONAL AMOUNT		EFFECTIVE DATE	MATURITY DATE	CASH PAID OR RECEIVED	TERMS	COUNTERPARTY CREDIT RATING	FAIR VALUE	
		2017	2016						2017	2016
UNIVERSITY OF CALIFORNIA										
Pay fixed, receive variable interest rate swap	Hedge of changes in cash flows on variable-rate Medical Center Pooled Revenue Bonds	\$67,540	\$70,880	2007	2032	None	Pay fixed 3.5897%; receive 58% of 1-Month LIBOR* plus 0.48%	A1/A+	\$(9,423)	\$(14,188)
Pay fixed, receive variable interest rate swap	Hedge of changes in cash flows on variable-rate Medical Center Pooled Revenue Bonds	124,775	124,775	2008	2030 through 2043	None	Pay fixed 4.6359%; receive 67% of 3-Month LIBOR* plus 0.69%**	Aa2/AA-	(40,420)	(57,603)
Pay fixed, receive variable interest rate swap	Hedge of changes in cash flows on variable-rate General Revenue Bonds	400,000	400,000	2013	2023	None	Pay fixed 1.8982%; receive 70% of 1-Month LIBOR*	Aa2/AA-	(12,552)	(32,588)
Pay fixed, receive variable interest rate swap	Hedge of changes in cash flows on variable-rate General Revenue Bonds	100,000	100,000	2013	2023	None	Pay fixed 1.9057%; receive 70% of 1-Month LIBOR*	Aa2/AA-	(3,182)	(8,199)
Pay fixed, receive variable interest rate swap	Hedge of changes in cash flows on variable-rate General Revenue Bonds	100,000	100,000	2013	2023	None	Pay fixed 1.8980%; receive 70% of 1-Month LIBOR*	Aa2/AA-	(3,137)	(8,146)
Pay fixed, receive variable interest rate swap	Hedge of changes in cash flows on variable-rate Medical Center Pooled Revenue Bonds	24,250	24,250	2013	2045	None	Pay fixed 4.741%; receive 67% of 3-Month LIBOR +0.79%	Aa2/AA-	(10,252)	(14,901)
Pay fixed, receive variable interest rate swap	Hedge of changes in cash flows on variable-rate Medical Center Pooled Revenue Bonds	25,750	25,750	2013	2047	None	Pay fixed 4.741%; receive 67% of 3-Month LIBOR +0.79%	Aa2/AA-	(11,266)	(16,498)
Interest rate swaps, net		\$842,315	\$845,655						\$(90,232)	\$(152,123)

\* London Interbank Offered Rate (LIBOR).

\*\*Weighted average spread.

## Hedging Derivative Instrument Risk Factors

### Credit Risk

The University could be exposed to credit risk if the interest rate swap counterparties to the contracts are unable to meet the terms of the contracts. Contracts with positive fair values are exposed to credit risk. The University faces a maximum possible loss equivalent to the amount of the derivative's fair value, less any collateral held by the University provided by the counterparty. Contracts with negative fair values are not exposed to credit risk.

Although the University has entered into the interest rate swaps with creditworthy financial institutions to hedge its variable-rate debt, there is credit risk for losses in the event of non-performance by counterparties or unfavorable interest rate movements.

There are no collateral requirements related to the interest rate swap with the \$67.5 million notional amount. Depending on the fair value and the counterparty credit rating for the swaps related to the Medical Center Pooled Revenue Bonds with the counterparty that is currently rated Aa2/AA- with a combined notional amount of \$174.8 million, the University may be entitled to receive collateral to the extent the positive fair value exceeds \$30.0 million. At June 30, 2017 and 2016, there was no collateral required.

Depending on the fair value and the counterparty credit rating for the swaps related to the General Revenue Bonds with the two counterparties that are currently rated Aa2/AA- with a combined notional amount of \$600.0 million, the University may be entitled to receive collateral to the extent the positive fair value with each counterparty exceeds \$30.0 million. At June 30, 2017 and 2016, there was no collateral required.

### ***Interest Rate Risk***

There is a risk that the value of the interest rate swaps will decline because of changing interest rates. The values of the interest rate swaps with longer maturities tend to be more sensitive to changing interest rates and, therefore, more volatile than those with shorter maturities.

### ***Basis Risk***

There is a risk that the basis for the variable payment received on interest rate swaps will not match the variable payment on the bonds. This exposes the University to basis risk whenever the interest rates on the bonds are reset. The interest rate on the bonds is a tax-exempt interest rate, while the basis of the variable receipt on the interest rate swaps is taxable. Tax-exempt interest rates can change without a corresponding change in the LIBOR rate due to factors affecting the tax-exempt market which do not have a similar effect on the taxable market. However, there is no basis or tax risk related to the swap with the \$149.0 million notional amount since the variable rate the University pays to the bondholders matches the variable-rate payments received from the swap counterparty and the interest rates are reset at the same intervals.

### ***Termination Risk***

There is termination risk for interest rate swaps associated with variable-rate bonds in the event of non-performance by counterparties in an adverse market resulting in cancellation of the synthetic interest rate and returning the interest rate payments to the variable interest rates on the bonds. In addition, depending on the agreement, certain interest rate swaps may be terminated if a counterparty's credit quality rating, as issued by Moody's or Standard & Poor's, falls below certain thresholds. For the interest rate swap with the \$67.5 million notional amount, the termination threshold is reached when the credit quality rating for either the underlying Medical Center Pooled Revenue Bonds or swap counterparty falls below Baa2 or BBB. For the swaps with the combined \$174.8 million notional amount, the termination threshold is reached when the credit quality rating for the underlying Medical Center Pooled Revenue Bonds falls below Baa3/BBB-, or the interest rate swap counterparty's rating falls below Baa2 or BBB.

For the swaps with notional amounts of \$400.0 million and \$100.0 million with a counterparty that is currently rated Aa2/AA-, the termination threshold is reached when the credit quality rating for the underlying General Revenue Bonds falls below Baa2 or BBB, or the swap counterparty's rating falls below A3 or A-. For the swap with a notional amount of \$100.0 million with a counterparty that is currently rated Aa2/AA-, the termination threshold is reached when the credit quality rating for the underlying General Revenue Bonds falls below Baa2 or BBB, or the swap counterparty's rating falls below A3 or A-. Upon termination, the University may also owe a termination payment if there is a realized loss based on the fair value of each interest rate swap.

### ***Rollover Risk***

The University is exposed to rollover risk on hedging derivative instruments that are hedges of debt that mature or may be terminated prior to the maturity of the hedged debt. When these hedging derivative instruments terminate, the University will be re-exposed to the risks being hedged by the hedging derivative instruments. The University is exposed to rollover risk on the interest rate swaps that mature in October 2023 because the hedged debt is scheduled to mature in May 2048.

## **5. FAIR VALUE**

Fair value is defined in the accounting standards as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Assets and liabilities reported at fair value are organized into a hierarchy based on the levels of inputs observable in the marketplace that are used to measure fair value. Inputs are used in applying the various valuation techniques and take into account the assumptions that market participants use to make valuation decisions. Inputs may include price information, credit data, liquidity statistics and other factors specific to the financial instrument. Observable inputs reflect market data obtained from independent sources. In contrast, unobservable inputs reflect the entity's assumptions about how market participants would value the financial instrument.

A financial instrument's level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. The following describes the hierarchy of inputs used to measure fair value and the primary valuation methodologies used for financial instruments measured at fair value on a recurring basis:

**Level 1** – Prices based on unadjusted quoted prices in active markets that are accessible for identical assets or liabilities are classified as Level 1. Level 1 investments include equity securities and other publicly traded securities.

**Level 2** – Quoted prices in markets that are not considered to be active, dealer quotations or alternative pricing sources for similar assets or liabilities for which all significant inputs are observable, either directly or indirectly, are classified as Level 2. Level 2 investments include fixed- or variable-income securities, commingled funds, certain derivatives and other assets that are valued using market information.

**Level 3** – Investments classified as Level 3 have significant unobservable inputs, as they trade infrequently or not at all. The inputs into the determination of fair value of these investments are based upon the best information in the circumstance and may require significant management judgment. Level 3 investments include private equity investments, real estate and split interest agreements.

**Net Asset Value (NAV)** – Investments whose fair value is measured at NAV are excluded from the fair value hierarchy. Investments in non-governmental entities that do not have a readily determinable fair value may be valued at NAV. Investments measured at NAV include hedge funds, private equity investments and commingled funds.

**Not Leveled** – Cash and cash equivalents are not measured at fair value and, thus, are not subject to the fair value disclosure requirements.

The following tables summarize the investments and other assets reported at fair value within the fair value hierarchy as of June 30, 2017:

	UNIVERSITY OF CALIFORNIA					
	Total	Quoted Prices in Active Markets	Other Observable Inputs	Unobservable Inputs	Net Asset Value	Not Leveled
		(Level 1)	(Level 2)	(Level 3)	(NAV)	
Equity securities	\$4,964,552	\$4,875,376		\$22,941	\$66,235	
Fixed- or variable-income securities:						
U.S. government-guaranteed	2,105,965		\$2,105,965			
Other U.S. dollar-denominated	11,740,820		11,617,785	123,035		
Commingled funds	9,618,782	981,669	106	393,441	8,242,947	\$619
Investment derivatives	(241)	(195)	(46)			
Publicly traded real estate investment trusts	152,636	152,636				
Mortgage loans	358,890			358,890		
Real estate	354,597			42,817	311,780	
Other investments	12,390			12,390		
Campus foundations' investments with the University	(2,151,497)					(2,151,497)
UCRS investment in STIP	(2,678,532)					(2,678,532)
<b>Total investments</b>	<b>\$24,478,362</b>	<b>\$6,009,486</b>	<b>\$13,723,810</b>	<b>\$953,514</b>	<b>\$8,620,962</b>	<b>\$(4,829,410)</b>
<b>Securities lending investments of cash collateral</b>	<b>\$1,079,829</b>		<b>\$1,080,405</b>			<b>\$(576)</b>
<b>Investments held by trustees</b>	<b>\$99,025</b>				<b>\$60,194</b>	<b>\$38,831</b>

(in thousands of dollars)

	CAMPUS FOUNDATIONS					
	Total	Quoted Prices in Active Markets	Other Observable Inputs	Unobservable Inputs	Net Asset Value	Not Leveled
		(Level 1)	(Level 2)	(Level 3)	(NAV)	
Equity securities	\$250,611	\$235,916	\$4,103	\$10,575	\$17	
Fixed- or variable-income securities:						
U.S. government-guaranteed	382,064		382,064			
Other U.S. dollar-denominated	133,053	654	132,344	55		
Commingled funds	6,998,384	650,644	389	1,330	6,322,655	\$23,366
Investment derivatives	1,995		1,995			
Real estate	119,516		3,819	49,569	66,128	
Other investments	321,367	7,151		158,326	153,702	2,188
<b>Total investments</b>	<b>\$8,206,990</b>	<b>\$894,365</b>	<b>\$524,714</b>	<b>\$219,855</b>	<b>\$6,542,502</b>	<b>\$25,554</b>
<b>Securities lending investments of cash collateral</b>	<b>\$42,581</b>		<b>\$39,280</b>	<b>\$3,324</b>		<b>(\$23)</b>

(in thousands of dollars)

	UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM					
	Total	Quoted Prices in Active Markets	Other Observable Inputs	Unobservable Inputs	Net Asset Value	Not Leveled
		(Level 1)	(Level 2)	(Level 3)	(NAV)	
Equity securities	\$29,433,121	\$28,589,132		\$1,181	\$842,808	
Fixed- or variable-income securities:						
U.S. government-guaranteed	5,152,518		\$5,152,518			
Other U.S. dollar-denominated	17,326,645		17,275,601	51,044		
Foreign currency-denominated						
Commingled funds	28,107,964	3,676,570	1,898	275,890	24,153,119	\$487
Investment derivatives	(3,002)	(2,448)	(554)			
Publicly traded real estate investment trusts	722,541	722,541				
Real estate	1,834,232			10,096	1,824,136	
<b>Total investments</b>	<b>\$82,574,019</b>	<b>\$32,985,795</b>	<b>\$22,429,463</b>	<b>\$338,211</b>	<b>\$26,820,063</b>	<b>\$487</b>
<b>Securities lending investments of cash collateral</b>	<b>\$6,841,530</b>		<b>\$6,845,184</b>			<b>\$(3,654)</b>

The following tables summarize the investments and other assets reported at fair value within the fair value hierarchy as of June 30, 2016:

(in thousands of dollars)

	UNIVERSITY OF CALIFORNIA					
	Total	Quoted Prices in Active Markets	Other Observable Inputs	Unobservable Inputs	Net Asset Value	Not Leveled
		(Level 1)	(Level 2)	(Level 3)	(NAV)	
Equity securities	\$3,285,792	\$3,274,412		\$11,380		
Fixed- or variable-income securities:						
U.S. government-guaranteed	1,071,453		\$1,071,453			
Other U.S. dollar-denominated	11,706,249		11,637,569	68,680		
Commingled funds	8,698,260	562,933	21,572	93,043	\$8,020,610	\$102
Investment derivatives	8,227	16,060	(7,833)			
Publicly traded real estate investment trusts	100,606	100,606				
Mortgage loans	319,038			319,038		
Real estate	937,421			406,144	531,277	
Other investments	13,786			13,786		
Campus foundations' investments with the University	(1,604,216)					(1,604,216)
UCRS investment in STIP	(2,327,849)					(2,327,849)
<b>Total investments</b>	<b>\$22,208,767</b>	<b>\$3,954,011</b>	<b>\$12,722,761</b>	<b>\$912,071</b>	<b>\$8,551,887</b>	<b>\$(3,931,963)</b>
<b>Securities lending investments of cash collateral</b>	<b>\$824,931</b>		<b>\$739,724</b>	<b>\$85,171</b>		<b>\$36</b>
<b>Investments held by trustees</b>	<b>\$850,884</b>	<b>\$54,769</b>		<b>\$5,642</b>	<b>\$752,618</b>	<b>\$37,855</b>

(in thousands of dollars)

CAMPUS FOUNDATIONS						
	Total	Quoted Prices in Active Markets (Level 1)	Other Observable Inputs (Level 2)	Unobservable Inputs (Level 3)	Net Asset Value (NAV)	Not Levelled
Equity securities	\$318,801	\$305,930	\$4,389	\$7,848	\$36	\$598
Fixed- or variable-income securities:						
U.S. government-guaranteed	300,803	18	300,785			
Other U.S. dollar-denominated	143,813	571	143,218	24		
Commingled funds	5,952,962	575,831	386	995	5,312,341	63,409
Investment derivatives	2,776		2,776			
Real estate	116,536		3,750	48,707	64,079	
Other investments	279,587	4,854		162,396	110,109	2,228
<b>Total investments</b>	<b>\$7,115,278</b>	<b>\$887,204</b>	<b>\$455,304</b>	<b>\$219,970</b>	<b>\$5,486,565</b>	<b>\$66,235</b>
<b>Securities lending investments of cash collateral</b>	<b>\$41,973</b>		<b>\$37,638</b>	<b>\$4,333</b>		<b>\$2</b>

(in thousands of dollars)

UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM						
	Total	Quoted Prices in Active Markets (Level 1)	Other Observable Inputs (Level 2)	Unobservable Inputs (Level 3)	Net Asset Value (NAV)	Not Levelled
Equity securities	\$23,345,791	\$23,344,616		\$1,175		
Fixed- or variable-income securities:						
U.S. government-guaranteed	5,119,539		\$5,119,539			
Other U.S. dollar-denominated	14,995,609		14,945,410	50,199		
Foreign currency-denominated	3,890		3,890			
Commingled funds	25,977,179	3,320,189	106,834	638,169	\$21,874,071	\$37,916
Investment derivatives	25,921	(7,545)	33,466			
Publicly traded real estate investment trusts	750,056	750,056				
Real estate	2,978,950			1,600,803	1,378,147	
<b>Total investments</b>	<b>\$73,196,935</b>	<b>\$27,407,316</b>	<b>\$20,209,139</b>	<b>\$2,290,346</b>	<b>\$23,252,218</b>	<b>\$37,916</b>
<b>Securities lending investments of cash collateral</b>	<b>\$6,751,492</b>		<b>\$6,054,131</b>	<b>\$697,064</b>		<b>\$297</b>

The following table presents significant terms of certain investments at June 30, 2017:

(in thousands of dollars)

UNIVERSITY OF CALIFORNIA				
Investment Type	Fair Value	Unfunded Commitments	Remaining Life (Years)	Redemption Terms and Restrictions
Absolute return	\$3,962,553	\$254,289	0 to 5	Generally, lock up provisions ranging from 0 to 3 years. After initial lock-up expires, redemptions are available on a rolling basis and require 5 to 95 days' prior notification.
Private equities	1,388,163	519,934	0 to 15	Not eligible for redemption.
Real assets	206,073	181,955	0 to 15	Not eligible for redemption.
Real estate and real estate investment trusts	814,622	126,867	0 to 6	Not eligible for redemption.
Fixed Income - Other	120,314	6,867	1 to 7	Not eligible for redemption.

(in thousands of dollars)

CAMPUS FOUNDATIONS				
Investment Type	Fair Value	Unfunded Commitments	Remaining Life (Years)	Redemption Terms and Restrictions
Absolute return	\$1,618,201	\$47,804	0 to 5	Generally, lock up provisions ranging from 0 to 5 years. After initial lock-up expires, redemptions are available on a rolling basis and require 30 to 180 days' prior notification.
Private equities	704,267	451,642	0 to 15	Generally, lock up provisions ranging from 0 to 14 years. After initial lock-up expires, redemptions are available on a rolling basis and require 30 to 180 days' prior notification.
Real assets	152,973	35,386	9	Not eligible for redemption.
Real estate and real estate investment trusts	132,043	83,055	0 to 11	Not eligible for redemption.



(in thousands of dollars)

UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM				
Investment Type	Fair Value	Unfunded Commitments	Remaining Life (Years)	Redemption Terms and Restrictions
Absolute return	\$4,987,355	\$395,672	0 to 5	Generally, lock up provisions ranging from 0 to 3 years. After initial lock-up expires, redemptions are available on a rolling basis and require 5 to 95 days' prior notification.
Private equities	2,939,524	1,152,374	0 to 15	Not eligible for redemption.
Real assets	866,245	389,735	0 to 15	Not eligible for redemption.
Real estate and real estate investment trusts	3,467,355	355,043	1 to 7	Not eligible for redemption.

The following table presents significant terms of certain investments at June 30, 2016:

(in thousands of dollars)

UNIVERSITY OF CALIFORNIA				
Investment Type	Fair Value	Unfunded Commitments	Remaining Life (Years)	Redemption Terms and Restrictions
Absolute return	\$3,168,124	\$1,953	0 to 5	Generally, lock up provisions ranging from 0 to 3 years. After initial lock-up expires, redemptions are available on a rolling basis and require 5 to 95 days' prior notification.
Private equities	1,180,827	431,059	0 to 15	Not eligible for redemption.
Real assets	182,861	79,207	0 to 15	Not eligible for redemption.
Real estate and real estate investment trusts	937,421	124,673	0 to 6	Not eligible for redemption.
Fixed Income - Other	66,731	49,739	1 to 7	Not eligible for redemption.

(in thousands of dollars)

CAMPUS FOUNDATIONS				
Investment Type	Fair Value	Unfunded Commitments	Remaining Life (Years)	Redemption Terms and Restrictions
Absolute return	\$1,779,453		0 to 5	Generally, lock-up provisions range from 0 to 5 years. After initial lock-up expires, redemptions are available and require 30 to 180 days' prior notification. Certain securities can only be sold to a Goldman Sachs approved bidder.
Private equities	621,280	\$337,583	0 to 15	Generally, lock-up provisions range from 0 to 14 years. After initial lock-up expires, redemptions are available and require 30 days' prior notification. Certain securities can only be sold to a Goldman Sachs approved bidder.
Real assets	109,389	12,900	9	Not eligible for redemption.
Real estate and real estate investment trusts	121,510	76,332	0 to 11	Not eligible for redemption.

(in thousands of dollars)

UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM				
Investment Type	Fair Value	Unfunded Commitments	Remaining Life (Years)	Redemption Terms and Restrictions
Absolute return	\$4,626,070	\$3,051	0 to 5	Generally, lock up provisions ranging from 0 to 3 years. After initial lock-up expires, redemptions are available on a rolling basis and require 5 to 95 days' prior notification.
Private equities	2,822,693	821,064	0 to 15	Not eligible for redemption.
Real assets	960,923	296,041	0 to 15	Not eligible for redemption.
Real estate and real estate investment trusts	2,978,950	189,259	0 to 6	Not eligible for redemption.

## 6. INVESTMENTS HELD BY TRUSTEES

The University has entered into agreements with trustees to maintain trusts for the University's self-insurance programs, long-term debt requirements, capital projects and certain other requirements. In addition, the state of California retained on deposit certain proceeds from the sale of lease-revenue bonds to be used for capital projects.

### Self-Insurance Programs

At June 30, 2017, investments of \$23.0 million were held by trustees for self-insurance programs included bank accounts for the workers' compensation, general liability and professional medical and hospital liability programs. Cash was held by the trustee in the name of the University.

At June 30, 2016, investments of \$758.3 million were held by trustees for self-insurance programs included separate trusts for the workers' compensation and professional medical and hospital liability programs. Securities were held by the trustees in the name of the University. In July 2016, the University liquidated investments held by trustees for self-insurance programs and transferred the funds to the captive insurance company.

### Long-Term Debt

Investments held by trustees for future payment of principal and interest in accordance with various indenture and other long-term debt requirements totaled \$6.7 million and \$22.8 million at June 30, 2017 and 2016, respectively. Securities held by trustees are held in the name of the University and these trust agreements permit trustees to invest in U.S. and state government or agency obligations, commercial paper or other corporate obligations meeting certain credit rating requirements.

### Capital Projects

Proceeds from the sale of the state of California's lease revenue bonds to be used for financing certain University capital projects were deposited in a commingled U.S. bond fund managed by the state of California Treasurer's Office, as trustee, and distributed to the University as the projects are constructed. The fair value of these deposits was \$5.0 million and \$8.5 million at June 30, 2017 and 2016, respectively.

In addition, proceeds from the sale of bonds and certain University funds are held by trustees to be used for financing and operating third-party capital projects. The fair value of these investments was \$63.1 million and \$58.1 million at June 30, 2017 and 2016, respectively. Substantially, all of these investments are of a highly liquid, short-term nature.

## 7. ACCOUNTS RECEIVABLE

Accounts receivable and the allowance for uncollectible accounts are as follows:

(in thousands of dollars)

	UNIVERSITY OF CALIFORNIA							UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS
	STATE AND FEDERAL GOVERNMENT	MEDICAL CENTERS	INVESTMENT INCOME	PRIVATE GRANTS AND CONTRACTS	MEDICAL PROFESSIONAL FEES	OTHER	TOTAL	
<i>At June 30, 2017</i>								
Accounts receivable	\$693,453	\$1,931,470	\$47,138	\$318,964	\$345,098	\$990,061	\$4,326,184	\$40,012
Allowance for uncollectible accounts	(2,658)	(223,461)		(26,219)	(95,163)	(31,792)	(379,293)	
<b>Accounts receivable, net</b>	<b>\$690,795</b>	<b>\$1,708,009</b>	<b>\$47,138</b>	<b>\$292,745</b>	<b>\$249,935</b>	<b>\$958,269</b>	<b>\$3,946,891</b>	<b>\$40,012</b>
<i>At June 30, 2016</i>								
Accounts receivable	\$589,875	\$1,859,862	\$53,426	\$372,664	\$268,573	\$488,019	\$3,632,419	\$32,562
Allowance for uncollectible accounts	(1,355)	(225,524)		(15,648)	(44,347)	(26,027)	(312,901)	
<b>Accounts receivable, net</b>	<b>\$588,520</b>	<b>\$1,634,338</b>	<b>\$53,426</b>	<b>\$357,016</b>	<b>\$224,226</b>	<b>\$461,992</b>	<b>\$3,319,518</b>	<b>\$32,562</b>

The University's other accounts receivable are primarily related to investment sales, tuition and fees, auxiliary enterprises, insurance rebates and legal settlements.

The campus foundations' accounts receivable are primarily related to investment income.

Uncollectible accounts have increased (decreased) the following revenues for the years ended June 30:

*(in thousands of dollars)*

	2017	2016
Student tuition and fees	\$(6,528)	\$(1,748)
Grants and contracts:		
Federal	(1,509)	928
State	25	329
Private	(11,515)	(11,519)
Local	32	144
Medical centers	(221,508)	(235,526)
Educational activities	(22,630)	(21,516)
Auxiliary enterprises	(1,441)	(796)
Other operating revenues	(1,357)	1,031
<b>Expense for uncollectible accounts</b>	<b>\$(266,431)</b>	<b>\$(268,673)</b>

## Retirement System Contribution

The state of California agreed to make contributions related to certain prior years to the University for UCRP in annual installments over 30 years. During each of the years ended June 30, 2017 and 2016, under the terms of these agreements, the state of California contributed \$5.3 million, including interest at 8.5 percent. At June 30, 2017 and 2016, the remaining amount owed to UCRP by the state was \$13.6 million and \$17.4 million, respectively. These amounts are recorded in the University's statement of net position as a receivable from the state of California and as a liability owed to UCRP.

## 8. PLEDGES RECEIVABLE

The composition of pledges receivable at June 30 is summarized as follows:

*(in thousands of dollars)*

	UNIVERSITY OF CALIFORNIA		UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS	
	2017	2016	2017	2016
Total pledges receivable outstanding	\$72,315	\$64,846	\$1,064,512	\$1,060,609
Less: Unamortized discount to present value	(896)	(1,384)	(137,406)	(145,318)
Allowance for uncollectible pledges	(15,207)	(16,356)	(61,127)	(72,868)
<b>Total pledges receivable, net</b>	<b>56,212</b>	<b>47,106</b>	<b>865,979</b>	<b>842,423</b>
Less: Current portion of pledges receivable	(23,181)	(17,056)	(192,484)	(217,971)
<b>Noncurrent portion of pledges receivable</b>	<b>\$33,031</b>	<b>\$30,050</b>	<b>\$673,495</b>	<b>\$624,452</b>

Future receipts under pledge agreements for each of the five fiscal years subsequent to June 30, 2017 and thereafter are as follows:

*(in thousands of dollars)*

	UNIVERSITY OF CALIFORNIA	UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS
<i>Year Ending June 30</i>		
2018	\$36,938	\$207,584
2019	14,057	152,818
2020	8,991	96,704
2021	8,709	87,958
2022	1,670	54,919
2023-2027	1,450	231,132
Beyond 2027	500	233,397
<b>Total payments on pledges receivable</b>	<b>\$72,315</b>	<b>\$1,064,512</b>

Adjustments to the allowance for uncollectible pledges for the University have increased (decreased) the following revenues for the years ended June 30, 2017 and 2016:

*(in thousands of dollars)*

	2017	2016
Private gifts	(863)	\$1,359
Capital gifts and grants	(25)	

## 9. NOTES AND MORTGAGES RECEIVABLE

Notes and mortgages receivable at June 30, 2017 and 2016 along with the allowance for uncollectible amounts, are as follows:

*(in thousands of dollars)*

	UNIVERSITY OF CALIFORNIA				UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS		
	CURRENT	NOTES	MORTGAGES	TOTAL	CURRENT	NONCURRENT	TOTAL
<i>At June 30, 2017</i>							
Notes and mortgages receivable	\$58,338	\$309,459	\$22,301	\$331,760	\$6	\$427	\$433
Allowance for uncollectible amounts	(8,201)	(17,621)	(121)	(17,742)			
<b>Notes and mortgages receivable, net</b>	<b>\$50,137</b>	<b>\$291,838</b>	<b>\$22,180</b>	<b>\$314,018</b>	<b>\$6</b>	<b>\$427</b>	<b>\$433</b>
<i>At June 30, 2016</i>							
Notes and mortgages receivable	\$60,931	\$320,523	\$24,411	\$344,934	\$6	\$1,014	\$1,020
Allowance for uncollectible amounts	(8,259)	(17,636)	(129)	(17,765)			
<b>Notes and mortgages receivable, net</b>	<b>\$52,672</b>	<b>\$302,887</b>	<b>\$24,282</b>	<b>\$327,169</b>	<b>\$6</b>	<b>\$1,014</b>	<b>\$1,020</b>

## 10. DOE NATIONAL LABORATORY CONTRACTS

### Los Alamos National Security, LLC (LANS)

LANS operates and manages the DOE's LANL. LANS' current earnings or losses are dependent on the percentage of base and incentive fees earned under the terms of the contract, offset by any unallowable or disallowed costs. While the University has a 50-percent membership interest in LANS, its equity in the current earnings or losses is subject to certain limitations and special allocations of both the fees and costs. As a result, the University's equity in the current earnings or losses may range from 17.0 to 50.0 percent. For the years ended June 30, 2017 and 2016, the University recorded \$13.5 million and \$11.8 million, respectively, as its equity in the current earnings of LANS and received \$17.6 million and \$10.5 million, respectively, in cash distributions.

### Lawrence Livermore National Security, LLC (LLNS)

LLNS manages and operates the DOE's LLNL. LLNS' current earnings or losses are dependent on the percentage of base and incentive fees earned under the terms of the contract, offset by any unallowable or disallowed costs. While the University has a 50-percent membership interest in LLNS, its equity in the current earnings or losses is 36.3 percent and 36.3 percent as of June 30, 2017 and 2016, respectively. For the years ended June 30, 2017 and 2016, the University recorded \$11.5 million and \$12.2 million, respectively, as its equity in the current earnings of LLNS and received \$11.1 million and \$11.6 million, respectively, in cash distributions.

## 11. CAPITAL ASSETS

The University's capital asset activity for the years ended June 30 is as follows:

(in thousands of dollars)

	2015	ADDITIONS	DISPOSALS	2016	ADDITIONS	DISPOSALS	2017
<b>ORIGINAL COST</b>							
Land	\$972,954	\$191,276	\$(1,135)	\$1,163,095	\$9,551	\$(9,735)	\$1,162,911
Infrastructure	647,114	16,759		663,873	30,987		694,860
Buildings and improvements	33,751,460	1,732,566	(55,433)	35,428,593	2,604,022	(7,292)	38,025,323
Equipment, software and intangibles	6,963,627	574,325	(366,460)	7,171,492	696,869	(259,278)	7,609,083
Libraries and collections	3,931,840	152,265	(23,996)	4,060,109	154,873	(62,294)	4,152,688
Special collections	384,221	50,687	(170)	434,738	25,254	(36)	459,956
Construction in progress	2,826,673	238,356		3,065,029	(544,879)		2,520,150
<b>Capital assets, at original cost</b>	<b>\$49,477,889</b>	<b>\$2,956,234</b>	<b>\$(447,194)</b>	<b>\$51,986,929</b>	<b>\$2,976,677</b>	<b>\$(338,635)</b>	<b>\$54,624,971</b>
	2015	DEPRECIATION AND AMORTIZATION	DISPOSALS	2016	DEPRECIATION AND AMORTIZATION	DISPOSALS	2017
<b>ACCUMULATED DEPRECIATION AND AMORTIZATION</b>							
Infrastructure	\$326,367	\$22,238		\$348,605	\$23,093		\$371,698
Buildings and improvements	13,101,858	1,083,003	\$(27,410)	14,157,451	1,167,408	\$(5,998)	15,318,861
Equipment, software and intangibles	4,527,627	567,743	(294,867)	4,800,503	588,597	(224,314)	5,164,786
Libraries and collections	2,879,258	131,062	(18,765)	2,991,555	130,772	(22,454)	3,099,873
<b>Accumulated depreciation and amortization</b>	<b>20,835,110</b>	<b>\$1,804,046</b>	<b>\$(341,042)</b>	<b>22,298,114</b>	<b>\$1,909,870</b>	<b>\$(252,766)</b>	<b>23,955,218</b>
<b>Capital assets, net</b>	<b>\$28,642,779</b>			<b>\$29,688,815</b>			<b>\$30,669,753</b>

Service concession arrangements, reported as buildings and improvements, are \$118.2 million of original cost and \$22.5 million of accumulated depreciation at June 30, 2017. Service concession arrangements, reported as buildings and improvements, are \$91.1 million of original cost and \$20.2 million of accumulated depreciation at June 30, 2016.

## 12. SELF-INSURANCE, OBLIGATIONS UNDER LIFE INCOME AGREEMENTS AND OTHER LIABILITIES

The University's self-insurance, obligations under life income agreements and other liabilities at June 30, 2017 and 2016 are as follows:

(in thousands of dollars)

	UNIVERSITY OF CALIFORNIA				UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS			
	2017		2016		2017		2016	
	CURRENT	NONCURRENT	CURRENT	NONCURRENT	CURRENT	NONCURRENT	CURRENT	NONCURRENT
Self-insurance programs	\$276,480	<u>\$584,232</u>	\$228,751	<u>\$558,158</u>				
Obligations under life income agreements	1,601	<u>\$34,479</u>	1,346	<u>\$32,021</u>	\$17,428	<u>\$137,713</u>	\$16,718	<u>\$130,314</u>
Other liabilities:								
Compensated absences	578,012	\$340,353	567,736	\$294,842				
UCRP*	4,157	9,400	3,833	13,558				
Accrued interest	107,672		95,860					
Fair value of interest rate swaps		90,232		152,123				
Other	625,375	248,817	541,001	276,832	28,042	\$253,288	35,157	\$220,234
<b>Total</b>	<b>\$1,593,297</b>	<b>\$688,802</b>	<b>\$1,438,527</b>	<b>\$737,355</b>	<b>\$45,470</b>	<b>\$253,288</b>	<b>\$51,875</b>	<b>\$220,234</b>

\* UCRP has an equivalent amount recorded as a contribution receivable from the University in its statement of fiduciary net position.

## Self-Insurance Programs

Self-insured liabilities changed for self-insured as follows for the years ended June 30:

(in thousands of dollars)

	MEDICAL MALPRACTICE	WORKERS' COMPENSATION	EMPLOYEE & STUDENT HEALTH CARE	GENERAL LIABILITY AND OTHER	TOTAL
<i>Year Ended June 30, 2017</i>					
Liabilities at June 30, 2016	\$198,440	\$391,440	\$88,510	\$108,519	\$786,909
Claims incurred and changes in estimates	51,074	104,089	811,137	99,538	1,065,838
Claim payments	(56,359)	(86,522)	(809,469)	(39,685)	(992,035)
<b>Liabilities at June 30, 2017</b>	<b>\$193,155</b>	<b>\$409,007</b>	<b>\$90,178</b>	<b>\$168,372</b>	<b>\$860,712</b>
<b>Discount rate</b>	<b>2.6% to 4.7%</b>	<b>2.6% to 4.7%</b>	<b>Undiscounted</b>	<b>2.6% to 4.7%</b>	
<i>Year Ended June 30, 2016</i>					
Liabilities at June 30, 2015	\$187,236	\$353,138	\$75,433	\$94,481	\$710,288
Claims incurred and changes in estimates	73,520	119,972	666,442	41,190	901,124
Claim payments	(62,316)	(81,670)	(653,365)	(27,152)	(824,503)
<b>Liabilities at June 30, 2016</b>	<b>\$198,440</b>	<b>\$391,440</b>	<b>\$88,510</b>	<b>\$108,519</b>	<b>\$786,909</b>
<b>Discount rate</b>	<b>5.0%</b>	<b>5.0%</b>	<b>Undiscounted</b>	<b>2.0%</b>	
<i>Year Ended June 30, 2015</i>					
Liabilities at June 30, 2014	\$181,324	\$321,055	\$70,513	\$87,777	\$660,669
Claims incurred and changes in estimates	48,075	111,485	542,995	49,146	751,701
Claim payments	(42,163)	(79,402)	(538,075)	(42,442)	(702,082)
<b>Liabilities at June 30, 2015</b>	<b>\$187,236</b>	<b>\$353,138</b>	<b>\$75,433</b>	<b>\$94,481</b>	<b>\$710,288</b>
<b>Discount rate</b>	<b>5.0%</b>	<b>5.0%</b>	<b>Undiscounted</b>	<b>2.0%</b>	

## Obligations Under Life Income Agreements

Changes in current and noncurrent obligations under life income agreements for the years ended June 30 are as follows:

(in thousands of dollars)

	UNIVERSITY OF CALIFORNIA		UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS	
	ANNUITIES	LIFE BENEFICIARIES	ANNUITIES	LIFE BENEFICIARIES
<i>Year Ended June 30, 2017</i>				
Balance at June 30, 2016	\$15,588	\$17,779	\$48,898	\$98,134
New obligations to beneficiaries and changes in liability, net	3,353	2,961	7,921	15,733
Payments to beneficiaries	(2,206)	(1,395)	(5,976)	(9,569)
<b>Obligations under life income agreements at June 30, 2017</b>	<b>16,735</b>	<b>19,345</b>	<b>50,843</b>	<b>104,298</b>
Less: Current portion	(763)	(838)	(6,166)	(11,262)
<b>Noncurrent portion at June 30, 2017</b>	<b>\$15,972</b>	<b>\$18,507</b>	<b>\$44,677</b>	<b>\$93,036</b>
<i>Year Ended June 30, 2016</i>				
Balance at June 30, 2015	\$14,878	\$17,699	\$49,779	\$103,268
New obligations to beneficiaries and changes in liability, net	1,926	1,128	5,241	5,082
Payments to beneficiaries	(1,216)	(1,048)	(6,122)	(10,216)
<b>Obligations under life income agreements at June 30, 2016</b>	<b>15,588</b>	<b>17,779</b>	<b>48,898</b>	<b>98,134</b>
Less: Current portion	(763)	(583)	(5,902)	(10,816)
<b>Noncurrent portion at June 30, 2016</b>	<b>\$14,825</b>	<b>\$17,196</b>	<b>\$42,996</b>	<b>\$87,318</b>

### 13. DEBT

The University directly finances the construction, renovation and acquisition of facilities and equipment, or for such other purposes as are authorized by The Regents through the issuance of debt obligations or indirectly through structures that involve legally separate entities reported as blended component units. Commercial paper and bank loans provide interim financing. Long-term financing includes revenue bonds, capital lease obligations and other borrowings.

The University's outstanding debt at June 30 is as follows:

(in thousands of dollars)

	WEIGHTED AVERAGE INTEREST RATE	INTEREST RATE RANGE	MATURITY YEARS	2017	2016
<b>INTERIM FINANCING:</b>					
Commercial paper		0.9 - 1.3%	2017	\$812,673	\$1,037,857
<b>LONG-TERM FINANCING:</b>					
University of California General Revenue Bonds					
Fixed Rate	4.7%	1.0 - 7.6%	2018-2115	9,959,700	9,033,015
Variable Rate	0.9%	0.9 - 1.1%	2037-2048	750,000	1,250,000
University of California Limited Project Revenue Bonds	4.8%	1.0 - 6.3%	2018-2051	3,702,630	3,783,230
University of California Medical Center Pooled Revenue Bonds					
Fixed Rate	5.5%	0.9 - 6.6%	2018-2049	2,763,295	2,445,435
Variable Rate	1.3%	0.6 - 1.6%	2018-2047	247,865	251,205
University of California Medical Center Revenue Bonds					42,560
Unamortized bond premium				1,020,465	881,814
<b>University of California revenue bonds</b>	<b>4.4%</b>			<b>18,443,955</b>	<b>17,687,259</b>
Capital lease obligations		0.5%-10.0%	2017-2042	195,022	176,753
Other University borrowings		Various	2018-2056	378,659	356,847
Blended component unit revenue bonds, net	5.6%	4.0 - 6.5%	2018-2049	672,567	692,571
<b>Total outstanding debt</b>				<b>20,502,876</b>	<b>19,951,287</b>
Less: Commercial paper				(812,673)	(1,037,857)
Current portion of outstanding debt				(1,519,005)	(1,413,265)
<b>Noncurrent portion of outstanding debt</b>				<b>\$18,171,198</b>	<b>\$17,500,165</b>

Interest expense associated with financing projects during construction, net of any investment income earned on tax-exempt bond proceeds during construction, is capitalized. Total interest expense during the years ended June 30, 2017 and 2016 was \$782.0 million and \$747.8 million, respectively. Interest expense, net of investment income, totaling \$60.8 million and \$54.8 million was capitalized during the years ended June 30, 2017 and 2016, respectively. The remaining \$721.2 million and \$693.0 million in 2017 and 2016 is reported as interest expense in the statement of revenues, expenses and changes in net position.

## Outstanding Debt Activity

The activity with respect to the University's current and noncurrent debt, including the revenue bonds associated with blended component units, for the years ended June 30 is as follows:

(in thousands of dollars)

	UNIVERSITY REVENUE BONDS	FINANCING OBLIGATIONS	OTHER UNIVERSITY BORROWINGS	BLENDED COMPONENT UNIT REVENUE BONDS	TOTAL
<i>Year Ended June 30, 2017</i>					
Long-term debt and financing obligations at June 30, 2016	\$17,687,259	\$176,753	\$356,847	\$692,571	\$18,913,430
New obligations	2,181,755	55,360	126,105	54,280	2,417,500
Bond premium	213,621			9,107	222,728
Refinancing or prepayment of outstanding debt	(1,224,530)		(39,999)	(56,210)	(1,320,739)
Scheduled principal payments	(339,180)	(37,091)	(64,294)	(24,026)	(464,591)
Amortization of bond premium	(74,970)			(3,155)	(78,125)
<b>Long-term debt and financing obligations at June 30, 2017</b>	<b>18,443,955</b>	<b>195,022</b>	<b>378,659</b>	<b>672,567</b>	<b>19,690,203</b>
Less: Current portion	(1,263,157)	(34,351)	(206,567)	(14,930)	(1,519,005)
<b>Noncurrent portion at June 30, 2017</b>	<b>\$17,180,798</b>	<b>\$160,671</b>	<b>\$172,092</b>	<b>\$657,637</b>	<b>\$18,171,198</b>
<i>Year Ended June 30, 2016</i>					
Long-term debt and financing obligations at June 30, 2015	\$16,777,164	\$131,278	\$337,169	\$690,222	\$17,935,833
New obligations	1,345,155	67,031	200,000	282,555	1,894,741
Bond premium	155,026			40,353	195,379
Refinancing or prepayment of outstanding debt	(214,255)		(52)	(313,575)	(527,882)
Scheduled principal payments	(314,305)	(21,556)	(180,270)	(3,663)	(519,794)
Amortization of bond premium	(61,526)			(3,321)	(64,847)
<b>Long-term debt and financing obligations at June 30, 2016</b>	<b>17,687,259</b>	<b>176,753</b>	<b>356,847</b>	<b>692,571</b>	<b>18,913,430</b>
Less: Current portion	(1,245,038)	(29,008)	(111,904)	(27,315)	(1,413,265)
<b>Noncurrent portion at June 30, 2016</b>	<b>\$16,442,221</b>	<b>\$147,745</b>	<b>\$244,943</b>	<b>\$665,256</b>	<b>\$17,500,165</b>

## Commercial Paper

The University has available a \$2.0 billion commercial paper program, issued in two series, with tax-exempt and taxable components. Commercial paper may be issued for interim/permanent financing for capital projects, interim financing of equipment, financing of working capital for the medical centers, standby or interim financing for gift financed projects and working capital for the University.

The program's liquidity is primarily supported by available investments in STIP and TRIP. Commercial paper is collateralized by a pledge of the revenues derived from the ownership or operation of the projects financed and constitute limited obligations of the University. There is no encumbrance, mortgage or other pledge of property securing commercial paper and the paper does not constitute general obligations of the University.

Commercial paper outstanding, including interest rates, at June 30 is as follows:

(in thousands of dollars)

	2017		2016	
	INTEREST RATES	OUTSTANDING	INTEREST RATES	OUTSTANDING
Taxable	0.93 - 1.26%	\$812,673	0.39-0.60%	\$1,037,857
<b>Total outstanding</b>		<b>\$812,673</b>		<b>\$1,037,857</b>

The expectation is that the University will continue to utilize available investments for liquidity support for the commercial paper program. Alternatively, the University may utilize lines of credit from external banks for the purpose of providing additional liquidity support for the commercial paper program. As of June 30, 2017, the University has two revolving credit agreements totaling \$700.0 million. There were no borrowings against the revolving credit lines as of June 30, 2017.



## University of California Revenue Bonds

Revenue bonds have financed various auxiliary, administrative, academic, medical center and research facilities of the University. They generally have annual principal and semiannual or monthly interest payments, serial and term maturities, contain sinking fund requirements and may have optional redemption provisions. Revenue bonds are not collateralized by any encumbrance, mortgage or other pledge of property, except pledged revenues, and do not constitute general obligations of The Regents. Revenue Bond Indentures require the University to use the facilities in a way which will not cause the interest on the tax-exempt bonds to be included in the gross income of the bondholders for federal tax purposes.

General Revenue Bonds are collateralized solely by General Revenues as defined in the General Revenue Bond Indenture. General Revenues are certain operating and nonoperating revenues of the University consisting of gross student tuition and fees; facilities and administrative cost recovery from contracts and grants; revenues from educational, auxiliary and other activities; and other revenues, including unrestricted investment income. The General Revenue Bond Indenture requires the University to set rates, charges and fees each year sufficient for General Revenues to pay for the annual principal and interest on the bonds and certain other financial covenants. General Revenues, as defined in the Indenture, have been amended to include certain state appropriations as to secure payment of the General Revenue Bonds. General Revenues for the years ended June 30, 2017 and 2016 were \$16.2 billion and \$15.3 billion, respectively. The pledge of General Revenues for interest rate swap agreements is on a parity basis with the University's General Revenue Bonds.

Limited Project Revenue Bonds are issued to finance auxiliary enterprises and are collateralized by a pledge consisting of the sum of the gross revenues of the specific projects. The Limited Project Revenue Bond Indenture requires the University to achieve the sum of gross project revenues equal to 1.1 times debt service and maintain certain other financial covenants. Pledged revenues for the years ended June 30, 2017 and 2016 were \$1.4 billion and \$1.3 billion, respectively.

Medical Center Pooled Revenue Bonds are issued to finance the University's medical center facilities and are collateralized by a joint and several pledges of the gross revenues of all five of the University's medical centers. Medical center gross revenues are excluded from General Revenues. The Medical Center Pooled Revenue Bond Indenture requires the medical centers to set rates, charges and fees each year sufficient for the Medical Centers' total operating and nonoperating revenues to pay for the annual principal and interest on the bonds and certain other financial covenants. Pledged revenues of the medical centers for the years ended June 30, 2017 and 2016 were \$11.4 billion and \$10.4 billion, respectively.

Medical Center Revenue Bonds have also financed certain facilities of one medical center and are collateralized by a pledge of the specific gross revenues associated with the medical center. That Medical Center Revenue Bond Indenture required that medical center to achieve debt service coverage of 1.1 times, set limitations on encumbrances, indebtedness, disposition of assets and transfer services, as well as maintain certain other financial covenants.

The pledge of revenues for Limited Project Revenue Bonds is subordinate to the pledge of revenues for General Revenue Bonds, but senior to pledges for commercial paper notes.

Medical center gross revenues are pledged under the Indenture for the Medical Center Pooled Revenue Bonds and certain interest rate swap agreements.

The pledge of medical center revenues for interest rate swap agreements may be at parity with, or subordinate to, Medical Center Pooled Revenue Bonds.

All Indentures permit the University to issue additional bonds as long as certain conditions are met.

### **2017 Activity**

In August 2016, Medical Center Pooled Revenue Bonds totaling \$1.0 billion, including \$872.8 million of tax-exempt bonds and \$173.4 million taxable bonds, were issued to finance and refinance certain facilities and projects of the Medical Centers. Proceeds, including a net bond premium of \$155.8 million, were used to pay for project construction, issuance costs and refund \$724.5 million of outstanding Medical Center Pooled Revenue Bonds and all of the outstanding Medical Center Revenue Bonds. The bonds mature at various dates through 2047. Simultaneously, a bank standby bond purchase agreement for certain of the University's variable-rate demand bonds was terminated. The University will provide its own liquidity in connection with mandatory and optional tenders and remarketing of these bonds and does not plan to provide any third-party liquidity facility to support this obligation. The interest rates on the variable-rate demand bonds reset daily and an interest rate swap is being used to limit exposure to changes in market interest rates. In the event of a failed remarketing, the variable-rate demand bonds can be put back to The Regents for tender. The tax-exempt and taxable bonds have a stated weighted average interest rate of 4.5 percent and 3.0 percent, respectively. The refunding of the outstanding Medical Center Pooled Revenue

Bonds and Medical Center Revenue Bonds resulted in a loss of \$8.0 million, recorded as a deferred outflow of resources, that will be amortized as interest expense over the term of the refunded bonds. The deferred premium will be amortized as a reduction to interest expense over the term of the bonds. The refinancing and refunding of previously outstanding Medical Center Revenue Bonds resulted in cash flow savings of \$193.5 million and an economic gain of \$151.2 million.

Medical center gross revenues continue to be pledged under the Indenture for the Medical Center Pooled Revenue Bonds and certain interest rate swap agreements. The pledge of medical center revenues for interest rate swap agreements may be at parity with, or subordinate to, specific Medical Center Pooled Revenue Bonds.

In April 2017, General Revenue Bonds totaling \$1.1 billion, including \$449.7 million in tax-exempt bonds, \$185.9 million in taxable bonds and \$500.0 million of taxable fixed rate notes, were issued to finance or refinance certain projects and working capital purposes of the University. The bonds mature at various dates through 2049 and the taxable fixed rate notes mature in 2025. Proceeds, including a bond premium of \$68.0 million, were used to pay for project construction and issuance costs and to refund \$500.0 million of outstanding General Revenue Bonds. The tax-exempt bonds have a stated weighted average interest rate of 4.8 percent. The taxable bonds have a stated weighted average interest rate of 3.8 percent. The taxable fixed rate notes have a stated interest rate of 3.1 percent. The deferred premium will be amortized as a reduction to interest expense over the term of the bonds.

### **2016 Activity**

In April 2016, General Revenue Bonds totaling \$813.1 million, including \$410.3 million in tax-exempt bonds, \$182.3 million in taxable bonds, \$132.3 million in tax-exempt put bonds and \$88.2 million of taxable fixed rate notes were issued to finance or refinance certain facilities and projects of the University. The bonds mature at various dates through 2046 and the taxable fixed rate notes mature in 2021. The put bonds will be subject to mandatory tender for purchase in 2021. Proceeds, including a bond premium of \$90.0 million, were used to pay for project construction and issuance costs and to refund \$73.4 million of outstanding General Revenue Bonds. The refunding of the outstanding General Revenue Bonds resulted in a loss of \$7.1 million, recorded as a deferred outflow of resources, that will be amortized as interest expense over the remaining life of the refunded bonds. The refinancing and refunding of previously outstanding General Revenue Bonds resulted in cash flow savings of \$17.7 million and an economic gain of \$11.3 million. The taxable bonds have a stated weighted average interest rate of 3.0 percent. The tax-exempt bonds have a stated weighted average interest rate of 5.0 percent. The tax-exempt put bonds have an initial term rate of 1.4 percent. The taxable fixed rate notes have a stated interest rate of 1.9 percent. The deferred premium will be amortized as a reduction to interest expense over the term of the bonds.

In June 2016, Limited Project Revenue Bonds totaling \$532.1 million, including \$434.2 million tax-exempt bonds and \$97.9 million taxable bonds, were issued to finance or refinance the acquisition, construction, improvement and renovation of certain athletic, parking, recreational and dining facilities, as well as, student and faculty housing of the University. The bonds mature at various dates through 2051. Proceeds, including a bond premium of \$69.9 million, were used to pay for project construction and issuance costs and to refund \$140.9 million of outstanding General Revenue Bonds. The refunding of the outstanding General Revenue Bonds resulted in a loss of \$13.9 million, recorded as a deferred outflow of resources, that will be amortized as interest expense over the remaining life of the refunded bonds. The refinancing and refunding of previously outstanding General Revenue Bonds resulted in cash flow savings of \$28.2 million and an economic gain of \$20.2 million. The taxable bonds have a stated weighted average interest rate of 3.1 percent. The tax-exempt bonds have a stated weighted average interest rate of 4.3 percent. The deferred premium will be amortized as a reduction to interest expense over the term of the bonds.

### **Subsequent Events**

In September 2017, Limited Project Revenue Bonds totaling \$860.4 million, including \$733.5 million tax-exempt bonds and \$126.9 million taxable bonds, were issued to finance or refinance the acquisition, construction, improvement and renovation of certain facilities of the University. The bonds mature at various dates through 2052. Proceeds, including a bond premium of \$124.2 million, were used to pay for project construction and issuance costs. The taxable bonds have a stated weighted average rate of 2.9 percent. The tax-exempt bonds have a stated weighted average interest rate of 4.9 percent. The deferred premium will be amortized as a reduction to interest expense over the term of the bonds.

### **Capital Leases**

Capital leases entered into with other lessors, typically for equipment, totaled \$55.4 million and \$67.0 million for the years ended June 30, 2017 and 2016, respectively.

## Other University Borrowings

Other University borrowings consist of contractual obligations resulting from the acquisition of land or buildings and the construction and renovation of certain facilities, along with the borrowing component associated with a hybrid derivative instrument.

The University may use uncollateralized revolving lines of credit with commercial banks for general corporate purposes and to provide interim financing for buildings and equipment. Lines of credit commitments for general corporate purposes, with various expiration dates through February 14, 2020, totaled \$415.0 million at June 30, 2017 and 2016. Outstanding borrowings under these bank lines totaled \$250.0 million and \$300.0 million at June 30, 2017 and 2016, respectively.

Certain of the interest rate swaps are considered hybrid instruments. As such, the interest rate swaps are comprised of a derivative instrument and a companion instrument recorded as a borrowing. The unamortized amount of the borrowing was \$79.0 million and \$40.0 million at June 30, 2017 and 2016, respectively.

In August 2016, the University entered into an agreement with a developer to design, construct, finance, operate and maintain certain auxiliary, administrative, academic and research facilities of one of its campuses, for which the University will finance \$600.0 million of the total costs. Of this amount, \$585.0 million will be paid to the developer over a 48-month period through a series of monthly progress payments. The remainder will cover invoiced costs for infrastructure improvements and equipment. Upon completion of the design-build phase of the project, the University will enter into an ongoing Operations and Maintenance Agreement with the developer through 2055. Payments under this agreement will have two components: the first component of the agreement is related to the operations and maintenance of the facilities, the second component is to service the private debt incurred by the developer during the construction phase. The operations and maintenance component of the payment will be expensed as incurred. The payments for the private debt are being treated as capital leases and are recorded as other borrowings by the University. In the event that the operations and maintenance agreement with the developer is terminated, the outstanding portion of the private debt incurred by the developer would become an obligation of the University.

As of June 30, 2017, CHRCO had no amounts outstanding under its revolving credit facility for \$25.0 million. The interest rate on the credit facility is 2.3 percent as of June 30, 2017 and the facility expires on August 31, 2018.

## Blended Component Unit Revenue Bonds

### *Student Housing*

The University has entered into ground leases with a legally separate, nonprofit corporation that develops and owns student housing projects and related amenities and improvements on a University campus through the use of a single-project limited liability corporation (LLC). The LLC manages the premises. The University's reversionary interest in the land is not subordinated. All costs associated with the ownership, operation and management of the improvements are the obligation of the LLC. Student rental rates are established in order to provide for operating expenses and maintain the required debt service coverage ratios. The University is not responsible for any payments related to the ownership, operation or financing of the student housing. However, under accounting requirements, the financial position and operating results of this legally separate organization are blended into the University's financial reporting entity.

The LLC, through its conduit issuer, has outstanding Student Housing LLC Revenue Bonds to finance the construction of the student housing facilities. The bonds generally have annual principal and semiannual interest payments, serial and term maturities, certain sinking fund requirements and optional redemption provisions. They are not collateralized by any encumbrance, mortgage or other pledge of property, except pledged revenues of the student housing projects, and do not constitute general obligations of The Regents.

In March 2016, the LLC, through its conduit issuer, issued additional Student Housing LLC Revenue Bonds totaling \$282.6 million. Proceeds, including a bond premium of \$40.5 million, were used to pay for issuance costs and to refund \$313.6 million of outstanding Student Housing LLC Revenue bonds. The refunding of the outstanding Student Housing LLC Revenue Bonds resulted in a loss of \$26.4 million, recorded as a deferred outflow of resources, that will be amortized as interest expense over the life of the refunded bonds. The refinancing and refunding of previously outstanding Student Housing LLC Revenue Bonds resulted in cash flow savings of \$71.5 million and an economic gain of \$35.4 million. The deferred premium will be amortized as a reduction to interest expense over the term of the bonds. The Student Housing LLC Revenue Bonds have annual principal and semiannual interest payments, serial and term maturities, certain sinking fund requirements and optional redemption provisions. They are not collateralized by any encumbrance, mortgage or other pledge of property except pledged revenues of the student housing project, and do not constitute general obligations of The Regents.

At June 30, 2017 and 2016, the LLC, through its conduit issuer, has outstanding Student Housing LLC Revenue Bonds totaling \$362.2 million and \$370.9 million, respectively. The bonds mature at various dates through 2040 and have a weighted average interest rate of 5.1 percent.

### ***Subsequent Events***

In August 2017, the LLC, through its conduit issuer, issued additional Student Housing LLC Revenue Bonds totaling \$148.6 million. The bonds mature at various dates through 2050 and have a stated weighted average interest rate of 5.0 percent. Proceeds, including a bond premium of \$24.2 million, were used to pay for project construction and issuance costs. The deferred premium will be amortized as a reduction to interest expense over the term of the bonds.

### ***Research Facilities***

The University has a public/private partnership, for the purpose of developing, constructing and managing a neuroscience research laboratory building with a legally separate, nonprofit corporation. In connection with the research laboratory building, the University entered into a ground lease with the corporation. The corporation has entered into a sub-ground lease with a developer to construct, own and manage the building. The University agreed to lease all of the space in the building from the developer. The University's base rent payments are equal to the principal and interest payments on the bonds issued by the corporation to finance the construction of the building. As security on the bonds, the developer has assigned all payments received from the University for the space lease to the bond trustee.

All of the board members of the nonprofit corporation are appointed by the University and the University has the authority to determine the budget for the corporation. Under accounting requirements, the financial position and operating results of this legally separate organization are blended into the University's financial reporting entity.

The corporation, through a conduit issuer, has outstanding tax-exempt revenue bonds totaling \$19.7 million and taxable revenue bonds totaling \$188.0 million. The tax-exempt revenue bonds mature at various dates from 2021 through 2025 and have a weighted average interest rate of 5.0 percent. They generally have annual serial maturities, semi-annual interest payments and optional redemption provisions. The taxable bonds mature in 2049 and have an interest rate of 6.5 percent. The taxable bonds were issued as Build America Bonds, under which the U.S. Treasury is expected to send the nonprofit corporation 35.0 percent of the semi-annual interest cost on the taxable bonds, making the net interest rate 4.2 percent post-subsidy. The bonds have a term maturity with various certain annual sinking fund requirements, semi-annual interest payments and optional redemption provisions.

In addition, the University entered into a ground lease with another legally separate, nonprofit corporation (the Consortium). The Consortium entered into an agreement with a developer to develop and own a research laboratory facility designed to expand collaborative work in stem cell research and facilitate its translation into tools and techniques to diagnose and treat degenerative diseases and other ailments. The developer constructed the research laboratory facility. All costs associated with the ownership, operation and management of the laboratory research facility are the obligation of the Consortium. The University, along with the other collaborative research partners, will lease space in the building. Under accounting requirements, the financial position and operating results of this legally separate organization are blended into the University's financial reporting entity.

The Consortium, through its conduit issuer, has outstanding revenue bonds totaling \$53.3 million. The bonds mature at various dates through 2040 and have a weighted average interest rate of 4.5 percent. The bonds generally have annual principal and semiannual interest payments, serial and term maturities, certain sinking fund requirements and optional redemption provisions. Lease payments from the occupants of the building are pledged as collateral on the bonds. To the extent the lease payments are not sufficient to pay the debt service, the University is obligated to pay the shortfall.

## Future Debt Service and Hedging Derivative Interest Rate Swaps

Future debt service payments for the University's fixed- and variable-rate debt and net receipts or payments on associated hedging derivative instruments for each of the five fiscal years subsequent to June 30, 2017, and thereafter are as presented below. Although not a prediction by the University of the future interest cost of the variable-rate bonds or the impact of the hedging derivative interest rate swaps, these amounts assume that current interest rates on variable-rate bonds and the current reference rates of the hedging derivative interest rate swaps will remain the same. As these rates vary, variable-rate bond interest payments and net hedging derivative interest rate swap payments will vary.

(in thousands of dollars)

	COMMERCIAL PAPER	MEDICAL CENTER REVENUE BONDS	UNIVERSITY REVENUE BONDS	CAPITAL LEASES	OTHER UNIVERSITY BORROWINGS	BLENDED COMPONENT UNIT REVENUE BONDS	TOTAL PAYMENTS	PRINCIPAL	INTEREST
<i>Year Ending June 30</i>									
2018	\$814,394	\$198,359	\$929,307	\$40,278	\$206,770	\$44,206	\$2,233,314	\$1,406,786	\$826,528
2019		198,810	941,581	38,308	56,314	44,211	1,279,224	461,936	817,288
2020		204,509	1,227,121	36,345	5,118	44,207	1,517,300	717,829	799,471
2021		214,349	1,156,955	31,238	4,872	47,775	1,455,189	674,582	780,607
2022		213,327	919,695	8,699	4,882	47,775	1,194,378	435,901	758,477
2023-2027		1,083,942	4,990,072	23,341	23,634	239,067	6,360,056	2,974,050	3,386,006
2028-2032		1,005,028	4,199,049	27,769	21,630	237,234	5,490,710	2,799,908	2,690,802
2033-2037		980,534	3,823,590	33,787	19,159	234,021	5,091,091	3,115,398	1,975,693
2038-2042		956,971	3,041,240	37,772	15,717	140,878	4,192,578	2,978,575	1,214,003
2043-2047		868,729	1,800,270		9,550	69,308	2,747,857	2,100,645	647,212
2048-2052		127,598	597,588		11,315	26,023	762,524	408,615	353,909
2053-2115			5,368,333				5,368,333	1,360,000	4,008,333
<b>Total future debt service</b>	<b>814,394</b>	<b>6,052,156</b>	<b>28,994,801</b>	<b>277,537</b>	<b>378,961</b>	<b>1,174,705</b>	<b>37,692,554</b>	<b>\$19,434,225</b>	<b>\$18,258,329</b>
Less: Interest component of future payments	(1,721)	(3,040,996)	(14,582,471)	(81,349)	(302)	(551,490)	(18,258,329)		
<b>Principal portion of future payments</b>	<b>812,673</b>	<b>3,011,160</b>	<b>14,412,330</b>	<b>196,188</b>	<b>378,659</b>	<b>623,215</b>	<b>19,434,225</b>		
Adjusted by:									
Unamortized bond premium		154,449	866,016			49,352	1,069,817		
Present value of net minimum leases included in long-term debt				(1,166)			(1,166)		
<b>Total debt</b>	<b>\$812,673</b>	<b>\$3,165,609</b>	<b>\$15,278,346</b>	<b>\$195,022</b>	<b>\$378,659</b>	<b>\$672,567</b>	<b>\$20,502,876</b>		

Long-term debt does not include \$2.0 billion of defeased liabilities at June 30, 2017. Investments that have maturities and interest rates sufficient to fund retirement of these liabilities are being held in irrevocable trusts for the debt service payments. Neither the assets of the trusts nor the outstanding obligations are included in the University's statement of net position.

General Revenue Bonds of \$750.0 million are variable-rate demand bonds which reset weekly and, in the event of a failed remarketing, can be put back to The Regents for tender. The University has classified \$750.0 million of these bonds as current liabilities as of June 30, 2017.

Medical Center Pooled Revenue Bonds of \$98.8 million are variable-rate demand bonds which give the debt holders the ability to tender the bonds back to the University upon demand. The University has classified these bonds as current liabilities as of June 30, 2017.



Condensed financial information related to each plan in UCRS and the changes in pension liability for UCRP, UC-VERIP and the CHRCO Pension Plan for the year ended June 30, 2017 is as follows:

(in thousands of dollars)

	UNIVERSITY OF CALIFORNIA					
	UNIVERSITY OF CALIFORNIA RETIREMENT PLAN	UNIVERSITY OF CALIFORNIA UC-VERIP	SUBTOTAL	UNIVERSITY OF CALIFORNIA RETIREMENT SAVINGS PROGRAM	TOTAL	CHILDREN'S HOSPITAL & RESEARCH CENTER AT OAKLAND PENSION PLAN
<b>CONDENSED STATEMENT OF PLAN FIDUCIARY NET POSITION</b>						
Investments at fair value	\$63,004,945	\$65,809	\$63,070,754	\$19,503,265	\$82,574,019	\$409,008
Participants' interests in mutual funds				3,351,454	3,351,454	
Investment of cash collateral	3,820,399	4,013	3,824,412	3,017,118	6,841,530	
Other assets	936,331	1,068	937,399	265,914	1,203,313	
<b>Total assets</b>	<b>67,761,675</b>	<b>70,890</b>	<b>67,832,565</b>	<b>26,137,751</b>	<b>93,970,316</b>	<b>409,008</b>
Collateral held for securities lending	3,818,660	4,012	3,822,672	3,015,744	6,838,416	
Other liabilities	1,828,757	1,900	1,830,657	639,375	2,470,032	
<b>Total liabilities</b>	<b>5,647,417</b>	<b>5,912</b>	<b>5,653,329</b>	<b>3,655,119</b>	<b>9,308,448</b>	
<b>Net position held in trust</b>	<b>\$62,114,258</b>	<b>\$64,978</b>	<b>\$62,179,236</b>	<b>\$22,482,632</b>	<b>\$84,661,868</b>	<b>\$409,008</b>
<b>CONDENSED STATEMENT OF CHANGES IN PLANS' FIDUCIARY NET POSITION</b>						
Contributions	\$3,448,563		\$3,448,563	\$1,330,901	\$4,779,464	\$28,800
Net appreciation (depreciation) in fair value of investments	6,906,968	\$7,474	6,914,442	1,701,958	8,616,400	
Investment and other income, net	959,313	1,192	960,505	476,266	1,436,771	41,256
<b>Total additions</b>	<b>11,314,844</b>	<b>8,666</b>	<b>11,323,510</b>	<b>3,509,125</b>	<b>14,832,635</b>	<b>70,056</b>
Benefit payment and participant withdrawals	3,320,990	4,738	3,325,728	1,374,324	4,700,052	11,767
Other deductions	44,128	6	44,134	8,816	52,950	2,727
<b>Total deductions</b>	<b>3,365,118</b>	<b>4,744</b>	<b>3,369,862</b>	<b>1,383,140</b>	<b>4,753,002</b>	<b>14,494</b>
<b>Increase in net position held in trust</b>	<b>7,949,726</b>	<b>3,922</b>	<b>7,953,648</b>	<b>2,125,985</b>	<b>10,079,633</b>	<b>55,562</b>
<b>Net position held in trust</b>						
Beginning of year	54,164,532	61,056	54,225,588	20,356,647	74,582,235	353,446
<b>End of year</b>	<b>\$62,114,258</b>	<b>\$64,978</b>	<b>\$62,179,236</b>	<b>\$22,482,632</b>	<b>\$84,661,868</b>	<b>\$409,008</b>
<b>CHANGES IN TOTAL PENSION LIABILITY</b>						
Service cost	\$1,807,143		\$1,807,143			\$9,910
Interest	5,035,267	\$2,463	5,037,730			29,672
Difference between expected and actual experience	74,664	(189)	74,475			33
Changes of benefit terms						2,442
Changes of assumptions or other inputs						
Benefits paid, including refunds of employee contributions	(3,320,990)	(4,738)	(3,325,728)			(11,767)
<b>Net change in total pension liability</b>	<b>3,596,084</b>	<b>(2,464)</b>	<b>3,593,620</b>			<b>30,290</b>
<b>Total pension liability</b>						
Beginning of year	69,230,762	35,008	69,265,770			419,862
<b>End of year</b>	<b>\$72,826,846</b>	<b>\$32,544</b>	<b>\$72,859,390</b>			<b>\$450,152</b>
<b>Net pension liability (asset), end of year</b>	<b>\$10,712,588</b>	<b>\$(32,434)</b>	<b>\$10,680,154</b>			<b>\$41,144</b>

Additional information on the retirement plans can be obtained from the 2016-2017 annual reports of the University of California Retirement System which can be obtained at <http://reportingtransparency.universityofcalifornia.edu/>.

## University of California Retirement Plan

UCRP provides lifetime retirement income, disability protection, death benefits, and post-retirement and pre-retirement survivor benefits to eligible employees of the University, and its affiliates. Membership is required in UCRP for all employees appointed to work at least 50 percent time for one year or more or for an indefinite period or for a definite period of a year or more. An employee may also become eligible by completing 1,000 hours within a 12-month period. Generally, five years of service are required for entitlement to plan benefits. The amount of pension benefit is determined under the basic formula of covered compensation times age factor times years of service credit. The maximum monthly benefit cannot exceed 100 percent of the employee's highest average plan compensation over a 36-month period, subject to certain limits imposed under the Internal Revenue Code or plan provisions. Annual cost-of-living adjustments are made to monthly benefits according to a specified formula based on the Consumer Price Index. Ad hoc COLAs may be granted subject to funding availability.

The University's membership in UCRP consisted of the following at June 30, 2017:

	CAMPUSES AND MEDICAL CENTERS	DOE NATIONAL LABORATORIES	UNIVERSITY OF CALIFORNIA
Retirees and beneficiaries receiving benefits	59,806	13,189	72,995
Inactive members entitled to, but not receiving benefits	76,735	10,317	87,052
Active members:			
Vested	74,397	1,667	76,064
Nonvested	52,472	846	53,318
<b>Total active members</b>	<b>126,869</b>	<b>2,513</b>	<b>129,382</b>
<b>Total membership</b>	<b>263,410</b>	<b>26,019</b>	<b>289,429</b>

### Contributions

Contributions to UCRP are based upon rates determined by The Regents. The Regents' funding policy provides for contributions at rates to maintain UCRP on an actuarially sound basis. While the University's independent actuary annually determines the total funding policy contributions, the University is not required to contribute an amount equal to the total funding contribution. The actual contributions and the contribution rates of the University and employees are based on numerous factors, including the availability of funds to the University, the impact of employee contributions on the competitiveness of the University's total remuneration package, and collective bargaining agreements.

The Regents determines the portion of the total contribution to be made by the employer and by the employees, and employee contribution rates for represented employees are subject to collective bargaining. Effective July 1, 2014, employee member contributions range from 7.0 percent to 9.0 percent. The University pays a uniform contribution rate of 14.0 percent of covered payroll on behalf of all UCRP members.

Employee contributions to UCRP are accounted for separately and currently accrue interest at 6.0 percent annually. Upon termination, members may elect a refund of their contributions plus accumulated interest; vested terminated members who are eligible to retire may also elect monthly retirement income or a lump sum equal to the present value of their accrued benefits. Both current employees and retirees at LBNL participate in UCRP. The University makes contributions to UCRP for LBNL employees based upon rates authorized by The Regents and is reimbursed by the DOE. The University also makes contributions to UCRP for LANL and LLNL retirees and terminated vested members whose benefits were retained in UCRP at the time the joint ventures were formed. The contributions for the LANL and LLNL are actuarially determined based upon a contractual arrangement with the DOE that incorporates a formula targeted to maintain the LANL and LLNL segments within UCRP at a 100-percent funded level. The University is reimbursed by the DOE for these contributions. To the extent the University has recorded a net pension liability (and related deferred inflows and outflows of resources) that will be reimbursed under DOE contracts, a receivable from the DOE is recorded. As of June 30, 2017 and 2016, the University reported \$615.1 million and \$974.7 million, respectively, as other noncurrent Department of Energy receivables for pension liabilities. Contributions of \$367.7 million and \$413.9 million were reported as DOE laboratory revenue and expense in the statement of revenues, expenses and changes in net position, and were deposited into UCRP on behalf of the DOE for the years ended June 30, 2017 and 2016, respectively.



## Net Pension Liability

All UCRP assets are available to pay any member's benefit. However, assets and liabilities for the campus and medical center segment of UCRP are internally tracked separately from the DOE national laboratory segments of UCRP. The net pension liability for UCRP was as follows:

<i>(in thousands of dollars)</i>	CAMPUSES AND MEDICAL CENTERS	DOE NATIONAL LABORATORIES	UNIVERSITY OF CALIFORNIA
<i>At June 30, 2017</i>			
UCRP net position	\$53,251,580	\$8,862,678	\$62,114,258
Total pension liability	63,355,934	9,470,912	72,826,846
<b>Net pension liability</b>	<b>\$10,104,354</b>	<b>\$608,234</b>	<b>\$10,712,588</b>
<i>At June 30, 2016</i>			
UCRP net position	\$46,127,486	\$8,037,046	\$54,164,532
Total pension liability	59,779,748	9,451,014	69,230,762
<b>Net pension liability</b>	<b>\$13,652,262</b>	<b>\$1,413,968</b>	<b>\$15,066,230</b>

The University's net pension liability was measured as of June 30 and was calculated using the plan net position valued as of the measurement date and total pension liability determined based upon rolling forward the total pension liability from the results of the actuarial valuations as of July 1 one year prior to the measurement date. Actuarial valuations represent a long-term perspective and involve estimates of the value of reported benefits and assumptions about the probability of occurrence of events far into the future. The University's net pension liability was calculated using the following methods and assumptions:

	2017	2016
Inflation	3.0%	3.0%
Investment rate of return	7.25	7.25
Projected salary increases	3.8 - 6.2	3.8 - 6.2
Cost-of-living adjustments	2.0	2.0

Actuarial assumptions are subject to periodic revisions as actual results are compared with past expectations and new estimates are made about the future. The actuarial assumptions used in 2017 were based upon the results of an experience study conducted for the period of July 1, 2010 through June 30, 2014. For active members, inactive members and healthy retirees, the RP-2014 White Collar Mortality Tables are used (separate tables for males and females), projected with the two-dimensional MP-2014 projection scale to 2029, and with ages then set forward one year. For disabled members, rates are based on the RP-2014 Disabled Retiree Mortality Table, projected with the two-dimensional MP-2014 projection scale to 2029, and with ages then set back one year for males and set forward five years for females.

The long-term expected investment rate of return assumption for UCRP was determined in 2015 based on a building-block method in which expected future real rates of return (expected returns, net of inflation) are developed for each major asset class. These returns are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage, adding expected inflation and subtracting expected investment expenses

and a risk margin. The target allocation and projected arithmetic real rates of return for each major asset class, after deducting inflation, but before deducting investment expenses, used in the derivation of the long-term expected investment rate of return assumption are summarized in the following table:

	TARGET ALLOCATION	LONG-TERM EXPECTED REAL RATE OF RETURN
Asset class		
U.S. Equity	28.5%	6.1%
Developed International Equity	18.5	7.0
Emerging Market Equity	8.0	8.6
Core Fixed Income	12.5	0.8
High Yield Bonds	2.5	3.0
Emerging Market Debt	2.5	3.9
TIPS	4.5	0.4
Real Estate	5.5	4.8
Private Equity	8.0	11.2
Absolute Return	6.5	4.2
Real Assets	3.0	4.4
<b>Total</b>	<b>100.0%</b>	<b>5.6%</b>

### ***Discount Rate***

The discount rate used to estimate the net pension liability as of June 30, 2017 and 2016 was 7.25 percent. To calculate the discount rate, cash flows into and out of UCRP were projected in order to determine whether UCRS has sufficient cash in future periods for projected benefit payments for current members. For this purpose, University, state and member contributions that are intended to fund benefits of current plan members and their beneficiaries are included. Projected University and member contributions that are intended to fund the service costs of future plan members and their beneficiaries, as well as projected contributions of future plan members, are not included. UCRP was projected to have assets sufficient to make projected benefit payments for current members for all future years as of June 30, 2017 and 2016.

### ***Sensitivity of the Net Pension Liability to the Discount Rate Assumption***

The following presents the June 30, 2017 net pension liability of the University calculated using the June 30, 2017 discount rate assumption of 7.25 percent, as well as what the net pension liability would be if it were calculated using a discount rate different than the current assumption:

<i>(in thousands of dollars)</i>	1% DECREASE (6.25%)	CURRENT DISCOUNT (7.25%)	1% INCREASE (8.25%)
UCRP	\$19,885,642	\$10,712,588	\$3,125,799
UC-VERIP	(30,667)	(32,434)	(33,952)

## Deferred Outflows of Resources and Deferred Inflows of Resources

Deferred outflows of resources and deferred inflows of resources for pensions were related to the following sources:

<i>(in thousands of dollars)</i>	CAMPUSES AND MEDICAL CENTERS	DOE NATIONAL LABORATORIES	TOTAL UCRP	UC-VERIP	TOTAL
<i>At June 30, 2017</i>					
<b>DEFERRED OUTFLOWS OF RESOURCES</b>					
Difference between expected and actual experience	\$179,399		\$179,399		\$179,399
Changes of assumptions or other inputs	785,741		785,741		785,741
Net difference between projected and actual earnings on pension plan investments		\$7,275	7,275		7,275
<b>Total</b>	<b>\$965,140</b>	<b>\$7,275</b>	<b>\$972,415</b>		<b>\$972,415</b>
<b>DEFERRED INFLOWS OF RESOURCES</b>					
Difference between expected and actual experience	\$151,067	\$7,410	\$158,477		\$158,477
Changes of assumptions or other inputs	378,815		378,815		378,815
Net difference between projected and actual earnings on pension plan investments	244,430		244,430		244,430
<b>Total</b>	<b>\$774,312</b>	<b>\$7,410</b>	<b>\$781,722</b>		<b>\$781,722</b>

<i>(in thousands of dollars)</i>	CAMPUSES AND MEDICAL CENTERS	DOE NATIONAL LABORATORIES	TOTAL UCRP	UC-VERIP	TOTAL
<i>At June 30, 2016</i>					
<b>DEFERRED OUTFLOWS OF RESOURCES</b>					
Difference between expected and actual experience	\$133,315		\$133,315		\$133,315
Changes of assumptions or other inputs	1,790,043		1,790,043		1,790,043
Net difference between projected and actual earnings on pension plan investments	2,610,352	\$450,700	3,061,052	\$3,299	3,064,351
<b>Total</b>	<b>\$4,533,710</b>	<b>\$450,700</b>	<b>\$4,984,410</b>	<b>\$3,299</b>	<b>\$4,987,709</b>
<b>DEFERRED INFLOWS OF RESOURCES</b>					
Difference between expected and actual experience	\$270,482	\$11,422	\$281,904		\$281,904
Changes of assumptions or other inputs	877,254		877,254		877,254
<b>Total</b>	<b>\$1,147,736</b>	<b>\$11,422</b>	<b>\$1,159,158</b>		<b>\$1,159,158</b>

The net amount of deferred outflows of resources and deferred inflows of resources as of June 30, 2017 related to pensions that will be recognized in pension expense during the next five years are as follows:

<i>(in thousands of dollars)</i>	CAMPUSES AND MEDICAL CENTERS	DOE NATIONAL LABORATORIES	TOTAL UCRP	UC-VERIP	TOTAL
2018	\$(400,667)	\$(45,287)	\$(445,954)	\$(403)	\$(446,357)
2019	849,391	107,064	956,455	877	957,332
2020	366,735	45,075	411,810	376	412,186
2021	(633,819)	(106,987)	(740,806)	(850)	(741,656)
2022	9,188		9,188		9,188
<b>Total</b>	<b>\$190,828</b>	<b>\$(135)</b>	<b>\$190,693</b>		<b>\$190,693</b>

## **Defined Contribution Plan**

Effective July 1, 2016, newly hired (or becoming eligible) employees can elect a defined contribution option instead of participating in UCRP. For employees who elect this option, both the University and the participants make mandatory contributions, on a pretax basis, on eligible pay up to the IRS compensation limit. The participant contributes 7.0 percent and the University contributes 8.0 percent. University contributions are fully vested after one year of service. For certain newly hired (or becoming eligible) employees who elect to participate in UCRP, the University and the participants make mandatory contributions to the DC Plan on eligible pay up to the IRS limit. Participants contribute 7.0 percent on eligible pay and the University contributes 5.0 percent for designated faculty and 3.0 percent for staff. University contributions fully vest after five years service.

The University makes DC Plan retirement contributions on the summer or equivalent term salaries of eligible academic employees who teach, conduct research or provide administrative service during the summer session or an equivalent term. To be eligible, employees must hold academic year appointments and be active members of UCRP or another defined benefit plan to which the University contributes. The contribution rate is 7.0 percent of eligible salary, of which 3.5 percent is University-paid and 3.5 percent is employee-paid, both on a pretax basis. The University may also contribute on behalf of eligible senior managers. Employer contributions to the DC Plan were \$13.2 million and \$4.9 million for the years ended June 30, 2017 and 2016, respectively.

The DC Plan Pretax Account also includes mandatory contributions from part-time, seasonal and temporary employees at the University who are not currently participating in UCRP or another defined benefit plan to which the University contributes (Safe Harbor participants). Safe Harbor participation includes certain University student employees and resident aliens with F-1 and J-1 visa status. Safe Harbor participants contribute 7.5 percent of their gross salary (up to the Social Security wage base) to the Plan in lieu of deductions for Social Security taxes.

All University employees, except students who normally work fewer than 20 hours per week, are eligible to make voluntary contributions to the DC Plan After-Tax Account and defer taxation on the earnings until the accumulations are withdrawn. The maximum amount participants may contribute annually to the After-Tax Account is determined by the IRC §415(c) limit. The University may also make DC Plan contributions on behalf of eligible senior managers.

The Supplemental Defined Contribution Plan (SDC Plan) accepts employer contributions in behalf of certain designated employees. Employer contributions are fully vested and there is no provision for employee contributions. There were no assets or employer contributions to the SDC Plan for the years ended June 30, 2017 and 2016.

## **Tax Deferred 403(b) Plan**

The University's Tax-Deferred 403(b) Plan (403(b) Plan) accepts pretax employee contributions. The University may also make contributions in behalf of certain members of management. Employer contributions to the 403(b) Plan were \$3.2 million and \$1.5 million for the years ended June 30, 2017 and 2016.

## **457(b) Deferred Compensation Plan**

The University's 457(b) Deferred Compensation Plan (457(b) Plan) accepts pretax employee contributions. The University may also make contributions in behalf of certain members of management. There were no employer contributions to the 457(b) Plan for the years ended June 30, 2017 and 2016.

Participants in the DC Plan, the SDC Plan, the 403(b) Plan and the 457(b) Plan may direct their elective and nonelective contributions to investment funds managed by the Chief Investment Officer. They may also invest account balances in certain mutual funds. The participants' interests in mutual funds is shown separately in the statement of plans' fiduciary net position.

## **University of California Voluntary Early Retirement Incentive Program (UC-PERS)**

UC-PERS is a defined benefit pension plan providing lifetime supplemental retirement income and survivor benefits to UC-PERS members who elected early retirement under provisions of the Plan. The University contributed to PERS on behalf of these UC-PERS members. As of July 1, 2017, there are 522 retirees or beneficiaries receiving benefits under this voluntary early retirement program.

The University and the DOE laboratories previously made contributions to the Plan sufficient to maintain the promised benefits. The actuarially determined contributions are zero for the years ended June 30, 2017 and 2016.

## Children's Hospital and Research Center at Oakland Pension Plan

CHRCO has a noncontributory defined benefit plan subject to the single employer defined benefit under ERISA rules that covers active and retired employees. The CHRCO Pension Plan was amended effective January 1, 2012 to exclude unrepresented employees hired or rehired on or after January 1, 2012. The CHRCO Pension Plan provides retirement, disability and death benefits to plan participants. Benefits are based on a participant's length of service, age at retirement and average compensation as defined by the CHRCO Pension Plan.

The net pension liability for the Plan was calculated based upon the following assumptions as of June 30, 2017 and 2016: 3.0 percent inflation, 7.0 percent investment rate of return, 5.0 percent projected salary increases through 2017, 4.0 percent afterward and no cost-of-living adjustments. CHRCO recognized pension expense of \$20.0 million and \$21.4 million for the years ended June 30, 2017 and 2016, respectively.

Mortality rates were based on the RP-2016 mortality with fully generational projected mortality improvements using modified scale MP-2016. The MP-2016 projection scale was modified for this valuation to utilize the Social Security administration intermediate cost projection scale and a 15-year convergence period.

Additional information on the CHRCO Pension Plan can be found in the annual reports, which can be obtained by contacting CHRCO.

Membership in the CHRCO Plan consisted of the following at June 30, 2017:

Retirees and beneficiaries receiving benefits	883
Inactive members entitled to, but not yet receiving benefits	1,095
Active members	1,926
<b>Total membership</b>	<b>3,904</b>

## Contributions

Employer contributions are determined under IRC Section 430. Employees are not required or permitted to contribute to the Plan.

## Net Pension Liability

The net pension liability for CHRCO was measured as of June 30, 2017 and 2016, and the total pension liability was determined by an actuarial valuation as of January 1, 2017 and 2016 rolled forward to June 30, 2017 and 2016, respectively. The actuarial assumptions used in the June 30, 2017 and 2016 valuation were based on the results of an experience review conducted during 2015. The target allocation and projected arithmetic real rates of return, after deducting inflation, but before investment expenses, used in the derivation of the long-term expected investment rate of return assumption for each major asset class are as follows:

	PORTFOLIO PERCENTAGE	LONG-TERM EXPECTED REAL RATE OF RETURN
Asset class		
U.S. Equity	51.3%	5.2%
Developed International Equity	10.6	5.7
Emerging Market Equity	2.0	9.2
Core Fixed Income	36.1	0.8
<b>Total</b>	<b>100.0%</b>	

## Discount Rate

The discount rate used to measure the total pension liability was 7.0 percent for June 30, 2017 and 2016. The projection of cash flows used to determine the discount rate assumes that CHRCO will make contributions to the Plan under IRC Section 430's minimum requirements for a period of eight years, and that all future assumptions are met. Based on these assumptions, the pension Plan's fiduciary net position is projected to be available to make all projected future benefit payments for current active and inactive employees.

### ***Sensitivity of the Net Pension Liability to the Discount Rate Assumption***

The following presents the June 30, 2017 net pension liability calculated using the June 30, 2017 discount rate assumption of 7.0 percent, as well as what the net pension liability would be if it were calculated using a discount rate different than the current assumption:

<i>(in thousands of dollars)</i>	<b>1% DECREASE (6.0%)</b>	<b>CURRENT DISCOUNT (7.0%)</b>	<b>1% INCREASE (8.0%)</b>
Net pension liability	\$105,079	\$41,144	\$(11,643)

### ***Deferred Outflows of Resources and Deferred Inflows of Resources***

As of June 30, deferred outflows of resources and deferred inflows of resources were as follows:

<i>(in thousands of dollars)</i>	<b>2017</b>	<b>2016</b>
<b>Deferred Outflows of Resources</b>		
Difference between expected and actual experience	\$4,356	\$3,528
Changes of benefit terms	195	254
Changes of assumptions	21,768	27,877
Net difference between projected and actual earnings on pension plan investments	1,354	13,103
<b>Total</b>	<b>\$27,673</b>	<b>\$44,762</b>
<b>Deferred Inflows of Resources</b>		
Net difference between projected and actual earnings on pension plan investments	\$2,370	\$3,030
<b>Total</b>	<b>\$2,370</b>	<b>\$3,030</b>

The net amount of deferred outflows of resources and deferred inflows of resources related to pensions that will be recognized in pension expense during the next five years is as follows:

<i>(in thousands of dollars)</i>	
<i>Year Ending June 30</i>	
2018	\$5,459
2019	10,772
2020	8,411
2021	328
2022	333
<b>Total</b>	<b>\$25,303</b>

### **Orange County Employees Retirement System**

Orange County Employees Retirement System (OCERS) administers a cost-sharing, multi-employer defined benefit pension plan for the County of Orange, City of San Juan Capistrano and thirteen special districts. Certain employees of one of the University's medical centers were eligible to continue to participate in OCERS at the time the county hospital was acquired by the University.

OCERS provides retirement, disability and death benefits. Plan retirement benefits are tiered based upon date of OCERS membership. Participation in the Plan by the University's employees is closed to new members. The University's share of net pension liability, deferred inflows of resources, deferred outflows of resources and pension expense have been determined based upon its specific actuarial accrued liability and a share of assets allocated in accordance with a formula set forth in OCERS' policy. The fiduciary net position and changes in net position have been measured consistent with the accounting policies used by the OCERS Plan.

Membership in the OCERS Plan consisted of the following at December 31, 2016: 16,369 retired members and beneficiaries, 5,370 inactive members and 21,746 active members.

## Contributions

Contribution rates are set by the OCERS Board of Trustees.

## Net Pension Liability

The University's proportionate share of the net pension liability on June 30, 2017 and 2016 was \$18.1 million, or 0.3 percent. The net pension liability for OCERS was measured as of June 30, 2017 and 2016, and the total pension liability was determined by an actuarial valuation as of December 31, 2016 and 2015 rolled forward to June 30, 2017 and 2016, respectively. The actuarial assumptions used in the 2017 and 2016 valuation were based on the results of an experience study for the period from January 1, 2011 through December 31, 2013.

The net pension liability for the Plan was calculated based upon the following assumptions as of June 30, 2017 and 2016: 3.0 percent inflation, 7.25 percent investment rate of return, 4.25-13.5 percent projected salary increases and 3.0 percent cost-of-living adjustments. Additional information on OCERS can be obtained from the 2016-2017 annual reports of the Orange County Employees Retirement System at <http://www.ocers.org>.

The target allocation and projected arithmetic real rates of return, after deducting inflation, but before investment expenses, used in the derivation of the long-term expected investment rate of return assumption for each major asset class for the OCERS Plan are as follows:

	ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM	
	TARGET ALLOCATION	LONG-TERM EXPECTED REAL RATE OF RETURN
<b>Asset class</b>		
Large Cap U.S. Equity	14.9%	5.9%
Small/Mid Cap U.S. Equity	2.7	6.5
Developed International Equity	10.9	6.9
Emerging International Equity	6.5	8.3
Core Bonds	10.0	0.7
Global Bonds	2.0	0.3
Emerging Market Debt	3.0	4.0
Real Estate	10.0	5.0
Diversified Credit (U.S. Credit)	8.0	5.0
Diversified Credit (Non-U.S. Credit)	2.0	6.8
Hedge Funds	7.0	4.1
GTAA	7.0	4.2
Real Return	10.0	5.9
Private Equity	6.0	9.6
<b>Total</b>	<b>100.00%</b>	

## Discount Rate

The discount rate used to measure the total pension liability was 7.25 percent for June 30, 2017 and 2016. The projection of cash flows used to determine the discount rate assumed plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the actuarially determined contribution rate. For this purpose, only employer contributions will be made at rates equal to the actuarially determined contribution rates.

## Sensitivity of the Net Pension Liability to the Discount Rate Assumption

The following presents the current-period net pension liability calculated using the June 30, 2017 discount rate assumption of 7.25 percent, as well as what the net pension liability would be if it were calculated using a discount rate different than the current assumption:

	ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM		
	1% DECREASE (6.25%)	CURRENT DISCOUNT RATE (7.25%)	1% INCREASE (8.25%)
Net pension liability	\$26,065	\$18,057	\$11,466

(in thousands of dollars)

## Deferred Outflow of Resources and Deferred Inflows of Resources

As of June 30, deferred outflow of resources and deferred inflows of resources were as follows:

<i>(in thousands of dollars)</i>	<b>2017</b>	<b>2016</b>
<b>Deferred Outflows of Resources</b>		
Difference between expected and actual experience	\$491	\$499
Net difference between projected and actual earnings on pension plan investments	586	1,549
<b>Total</b>	<b>\$1,077</b>	<b>\$2,048</b>
<b>Deferred Inflows of Resources</b>		
Difference between expected and actual experience	\$443	\$582
Changes in assumptions	703	925
<b>Total</b>	<b>\$1,146</b>	<b>\$1,507</b>

The net amount of deferred outflows of resources and deferred inflows of resources related to pensions that will be recognized in pension expense during the next five years and thereafter is as follows:

<i>(in thousands of dollars)</i>	
<i>Year Ending June 30</i>	
2018	\$(105)
2019	(106)
2020	232
2021	(113)
2022	23
<b>Total</b>	<b>\$(69)</b>

## 16. RETIREE HEALTH BENEFIT COSTS AND OBLIGATIONS

The University administers single-employer health and welfare plans to provide health and welfare benefits, primarily medical, dental and vision, to eligible retirees (and their eligible family members) of the University of California and its affiliates through the University of California Retiree Health Benefit Trust (UCRHBT). The Regents has the authority to establish and amend the plan.

Campus and medical center contributions toward retiree health benefits, at rates determined by the University, are made to UCRHBT. The University receives retiree health contributions from retirees that are deducted from their UCRP benefit payments. The University acts as a third-party administrator on behalf of UCRHBT and pays health care insurers and administrators amounts currently due under the University's retiree health benefit plans for retirees. UCRHBT reimburses the University for these amounts.

LBNL participates in the University's retiree health plans. LBNL does not participate in UCRHBT; therefore, the DOE has no interest in the Trust's assets. The University directly pays health care insurers and administrators amounts currently due under the University's retiree health benefit plans for retirees who previously worked at LBNL, and is reimbursed by the DOE.



Condensed financial information for the changes in retiree health benefits liability for the year ended June 30, 2017 is as follows:

<i>(in thousands of dollars)</i>	CAMPUSES AND MEDICAL CENTERS	LBNL	UNIVERSITY OF CALIFORNIA
Contributions	\$485,427	\$20,242	\$505,669
Investment income, net	606		606
<b>Total additions</b>	<b>486,033</b>	<b>20,242</b>	<b>506,275</b>
Insurance premiums, net	(447,604)	(20,242)	(467,846)
Other deductions	(4,256)		(4,256)
<b>Total deductions</b>	<b>(451,860)</b>	<b>\$(20,242)</b>	<b>(472,102)</b>
<b>Increase in net position held in UCRHBT</b>	<b>34,173</b>		<b>34,173</b>
Net position held in UCRHBT, beginning of year	72,541		72,541
<b>Net position held in UCRHBT, end of year</b>	<b>\$106,714</b>		<b>\$106,714</b>

<i>(in thousands of dollars)</i>	CAMPUSES AND MEDICAL CENTERS	LBNL	UNIVERSITY OF CALIFORNIA
<b>CHANGES IN TOTAL RETIREE HEALTH BENEFITS LIABILITY</b>			
Service cost	\$981,745	\$22,899	\$1,004,644
Interest	625,947	20,332	646,279
Difference between expected and actual experience	95,254	6,026	101,280
Changes of assumptions and other inputs	(3,707,921)	(120,003)	(3,827,924)
Retiree contributions	69,968	2,748	72,716
Benefits paid	(447,604)	(20,242)	(467,846)
<b>Net change in total retiree health benefits liability</b>	<b>(2,382,611)</b>	<b>(88,240)</b>	<b>(2,470,851)</b>
<b>Total retiree health benefits liability</b>			
Beginning of year	21,168,812	699,177	21,867,989
<b>End of year</b>	<b>\$18,786,201</b>	<b>\$610,937</b>	<b>\$19,397,138</b>
<b>Net retiree health benefit liability, end of year</b>	<b>\$18,679,487</b>	<b>\$610,937</b>	<b>\$19,290,424</b>

## Benefits

Retirees are eligible for medical and dental benefits. The costs of the medical and dental benefits are shared between the University and the retiree. The University does not contribute toward the cost of other benefits available to retirees. Retirees who are employed by the University after July 1, 2013, and retire at the age of 56 or older, become eligible for a percentage of the University's contribution based on age and years of service. Retirees are eligible for the maximum University contribution at age 65 with 20 or more years of service. Retirees employed by the University prior to 1990 and not rehired after that date are eligible for the University's maximum contribution if they retire before age 55 and have at least 10 years of service, or if they retire at age 55 or later and have at least 5 years of service. Retirees employed by the University after 1989 are subject to graduated eligibility provisions that generally require 10 years of service before becoming eligible for 50 percent of the maximum University contribution, increasing to 100 percent after 20 years of service. Retirees pay the excess, if any, of the premium over the applicable portion of the University's contribution.

Membership in UCRP is required to become eligible for retiree health benefits. Participation in the retiree health benefit plans consisted of the following at June 30, 2017:

	CAMPUSES AND MEDICAL CENTERS	LBNL	UNIVERSITY OF CALIFORNIA
Retirees and beneficiaries receiving benefits	41,157	1,817	42,974
Active members entitled to, but not yet receiving benefits	122,932	2,578	125,510
<b>Total membership</b>	<b>164,089</b>	<b>4,395</b>	<b>168,484</b>

## Contributions

The University does not pre-fund retiree health benefits and instead provides for benefits based upon projected pay-as-you-go financing. University and retiree contributions toward premiums made under purchased plan arrangements are determined by applying the health plan contract rates across the number of participants in the respective plans. Premium rates for the self-insured plan contributions are set by the University based upon a trend analysis of the historic cost, utilization, demographics and administrative expenses to provide for the claims incurred and the actuarially determined level of incurred but not reported liability. The assessment rates were \$2.93 and \$2.98 per \$100 of UCRP covered payroll effective July 1, 2016 and 2015, respectively.

In addition to the explicit University contribution provided to retirees, there is an “implicit subsidy.” The gross premiums for members that are not currently eligible for Medicare benefits are the same for active employees and retirees, based on a blend of their health costs. Retirees, on average, are expected to have higher health care costs than active employees. This is primarily due to the older average age of retirees. Since the same gross premiums apply to both groups, the premiums paid for active employees by the University are subsidizing the premiums for retirees. This effect is called the implicit subsidy. The implicit subsidy associated with retiree health costs paid during the past year is also considered to be a contribution from the University.

## Net Retiree Health Benefits Liability

The University’s net retiree health benefits liability was measured as of June 30 based on rolling forward the results of the actuarial valuations as of July 1. Actuarial valuations represent a long-term perspective and involve estimates of the value of reported benefits and assumptions about the probability of occurrence of events far into the future. Significant actuarial methods and assumptions used to calculate the University’s net retiree health benefits liability were:

<i>(shown as percentage)</i>	<b>2017</b>	<b>2016</b>
Discount rate	3.6%	2.9%
Inflation	3.0	3.0
Investment rate of return	3.0	3.0
Health care cost trend rates	Initially ranges from 5.0 to 9.5 decreasing to an ultimate rate of 5.0 for 2032 and later years.	Initially ranges from 6.3 to 9.0 decreasing to an ultimate rate of 5.0 for 2031 and later years.

The actuarial assumptions are based upon the results of an experience study conducted for the period of July 1, 2010 through June 30, 2014. For active members and healthy retirees, the RP-2014 White Collar Mortality Tables are used (separate tables for males and females), projected with the two-dimensional MP-2014 projection scale to 2029, and with ages then set forward one year. For disabled members, rates are based on the RP-2014 Disabled Retiree Mortality Table, projected with the two-dimensional MP-2014 projection scale to 2029 and with ages then set back one year for males and set forward five years for females.

## Sensitivity of Net Retiree Health Benefits Liability to the Health Care Cost Trend Rate

The following presents the June 30, 2017 net retiree health benefits liability of the University calculated using the June 30, 2017 health care cost trend rate assumption with initial trend ranging from 5.0 percent to 9.5 percent grading down to an ultimate trend of 5.0 percent over 15 years, as well as what the net retiree health benefits liability would be if it were calculated using a health care cost trend rate different than the current assumption:

<i>(in thousands of dollars)</i>	<b>1% DECREASE</b> (4.0% TO 8.5% DECREASING TO 4.0%)	<b>CURRENT DISCOUNT</b> (5.0% TO 9.5% DECREASING TO 5.0%)	<b>1% INCREASE</b> (6.0% - 10.5% INCREASING TO 6.0%)
Net retiree health benefits liability	\$16,401,133	\$19,290,424	\$23,275,729

## Discount Rate

The discount rate used to estimate the net retiree health benefits liability as of June 30, 2017 and 2016 was 3.58 percent and 2.85 percent, respectively. The discount rate was based on the Bond Buyer 20-year tax-exempt general obligations municipal bond index rate since UCHRBT plan assets are projected not sufficient to make benefit payments.

### ***Sensitivity of Net Retiree Health Benefits Liability to the Discount Rate Assumption***

The following presents the June 30, 2017 net retiree health benefits liability of the University calculated using the June 30, 2017 discount rate assumption of 3.58 percent, as well as what the net retiree health benefits liability would be if it were calculated using a discount rate different than the current assumption:

<i>(in thousands of dollars)</i>	<b>1% DECREASE (2.58%)</b>	<b>CURRENT TREND (3.58%)</b>	<b>1% INCREASE (4.58%)</b>
Net retiree health benefits liability	\$23,100,556	\$19,290,424	\$16,466,009

### ***Deferred Outflows of Resources and Deferred Inflows of Resources***

Deferred outflows of resources and deferred inflows of resources for retiree health benefits were related to the following sources:

*(in thousands of dollars)*

<b>2017</b>	<b>CAMPUSES AND MEDICAL CENTERS</b>	<b>LBNL</b>	<b>UNIVERSITY OF CALIFORNIA</b>
<b>DEFERRED OUTFLOWS OF RESOURCES</b>			
Difference between expected and actual experience	\$85,012	\$5,084	\$90,096
Changes of assumptions or other inputs	3,897,003	116,490	4,013,493
Net difference between projected and actual earnings on plan investments	3,352		3,352
<b>Total</b>	<b>\$3,985,367</b>	<b>\$121,574</b>	<b>\$4,106,941</b>
<b>DEFERRED INFLOWS OF RESOURCES</b>			
Difference between expected and actual experience	\$1,471,781	\$52,216	\$1,523,997
Changes of assumptions or other inputs	3,309,220	101,253	3,410,473
<b>Total</b>	<b>\$4,781,001</b>	<b>\$153,469</b>	<b>\$4,934,470</b>

*(in thousands of dollars)*

<b>2016</b>	<b>CAMPUSES AND MEDICAL CENTERS</b>	<b>LBNL</b>	<b>UNIVERSITY OF CALIFORNIA</b>
<b>DEFERRED OUTFLOWS OF RESOURCES</b>			
Changes of assumptions or other inputs	\$4,453,093	\$140,760	\$4,593,853
Net difference between projected and actual earnings on plan investments	2,373		2,373
<b>Total</b>	<b>\$4,455,466</b>	<b>\$140,760</b>	<b>\$4,596,226</b>
<b>DEFERRED INFLOWS OF RESOURCES</b>			
Difference between expected and actual experience	\$1,673,395	\$62,659	\$1,736,054
<b>Total</b>	<b>\$1,673,395</b>	<b>\$62,659</b>	<b>\$1,736,054</b>

The net amount of deferred outflows of resources and deferred inflows of resources as of June 30, 2017 related to retiree health benefits that will be recognized in retiree health benefit expense during the next five years and thereafter are as follows:

<i>(in thousands of dollars)</i>	<b>CAMPUSES AND MEDICAL CENTERS</b>	<b>LBNL</b>	<b>UNIVERSITY OF CALIFORNIA</b>
2018	\$(32,892)	\$(3,981)	\$(36,873)
2019	(32,892)	(3,981)	(36,873)
2020	(33,229)	(3,981)	(37,210)
2021	(33,567)	(3,981)	(37,548)
2022	(33,983)	(8,841)	(42,824)
Thereafter	(629,071)	(7,130)	(636,201)
<b>Total</b>	<b>\$(795,634)</b>	<b>\$(31,895)</b>	<b>\$(827,529)</b>

## 17. ENDOWMENTS AND GIFTS

Endowments and gifts are held and administered either by the University or by the campus foundations.

### University of California

The value of endowments and gifts held and administered by the University, exclusive of income distributed to be used for operating purposes, at June 30, 2017 and 2016 are as follows:

*(in thousands of dollars)*

	UNIVERSITY OF CALIFORNIA			
	RESTRICTED NONEXPENDABLE	RESTRICTED EXPENDABLE	UNRESTRICTED	TOTAL
<i>At June 30, 2017</i>				
Endowments	\$1,121,743	\$2,921,277	\$5,414	\$4,048,434
Funds functioning as endowments		2,526,811	3,742,764	6,269,575
Annuity and life income	21,324	9,534		30,858
Gifts		1,423,479		1,423,479
<b>University endowments and gifts</b>	<b>\$1,143,067</b>	<b>\$6,881,101</b>	<b>\$3,748,178</b>	<b>\$11,772,346</b>
<i>At June 30, 2016</i>				
Endowments	\$1,092,786	\$2,539,481	\$4,770	\$3,637,037
Funds functioning as endowments		2,275,525	2,905,204	5,180,729
Annuity and life income	18,297	8,376		26,673
Gifts		1,261,615	16,954	1,278,569
<b>University endowments and gifts</b>	<b>\$1,111,083</b>	<b>\$6,084,997</b>	<b>\$2,926,928</b>	<b>\$10,123,008</b>

The University's endowment income distribution policies are designed to preserve the value of the endowment in real terms (after inflation) and to generate a predictable stream of spendable income. Endowment investments are managed to achieve the maximum long-term total return. As a result of this emphasis on total return, the proportion of the annual income distribution provided by dividend and interest income and by capital gains may vary significantly from year to year. The University's policy is to retain the realized and unrealized appreciation with the endowment after the annual income distribution has been made. The net appreciation available to meet future spending needs is subject to the approval of The Regents and amounted to \$2.4 billion and \$2.1 billion at June 30, 2017 and 2016, respectively.

The portion of investment returns earned on endowments held by the University and distributed at the end of each year to support current operations for the following year is based upon a rate that is approved by The Regents. The annual income distribution transferred to the campuses from endowments held by the University was \$277.2 million and \$260.5 million for the years ended June 30, 2017 and 2016, respectively. The portion of this annual income distribution from accumulated capital gains, in addition to the dividend and interest income earned during the year, was \$253.8 million and \$240.4 million for the years ended June 30, 2017 and 2016, respectively. Accumulated endowment income available for spending in the future, including the annual income distribution, was \$629.8 million and \$595.6 million at June 30, 2017 and 2016, respectively.

## Campus Foundations

The value of endowments and gifts held by the campus foundations and administered by each of their independent Board of Trustees at June 30 are as follows:

(in thousands of dollars)

	UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS			
	RESTRICTED NONEXPENDABLE	RESTRICTED EXPENDABLE	UNRESTRICTED	TOTAL
<i>At June 30, 2017</i>				
Endowments	\$3,967,220	\$1,246,890		\$5,214,110
Funds functioning as endowments		1,515,774		1,515,774
Annuity and life income	78,705	57,678		136,383
Gifts		1,542,758	\$193,132	1,735,890
<b>Campus foundations' endowments and gifts</b>	<b>\$4,045,925</b>	<b>\$4,363,100</b>	<b>\$193,132</b>	<b>\$8,602,157</b>
<i>At June 30, 2016</i>				
Endowments	\$3,631,455	\$884,701		\$4,516,156
Funds functioning as endowments		1,358,719		1,358,719
Annuity and life income	68,594	52,715		121,309
Gifts		1,445,797	\$94,869	1,540,666
<b>Campus foundations' endowments and gifts</b>	<b>\$3,700,049</b>	<b>\$3,741,932</b>	<b>\$94,869</b>	<b>\$7,536,850</b>

## 18. SEGMENT INFORMATION

The University's medical centers' and CHRCO's revenues are pledged in support of the outstanding University of California Medical Center Pooled Revenue Bonds. The medical centers' operating revenues and expenses consist primarily of revenues associated with patient care and the related costs of providing that care.

Condensed financial statement information related to each of the University's medical centers for the year ended June 30, 2017 is as follows:

(in thousands of dollars)

	UNIVERSITY OF CALIFORNIA MEDICAL CENTERS				
	DAVIS	IRVINE	LOS ANGELES	SAN DIEGO	SAN FRANCISCO
<i>Year Ended June 30, 2017</i>					
Revenue bonds outstanding	\$337,570	\$317,870	\$729,825	\$711,085	\$914,810
Related debt service payments	\$32,491	\$18,190	\$46,008	\$42,662	\$57,013
Bonds due serially through	2047	2049	2049	2049	2049
<b>CONDENSED STATEMENT OF NET POSITION</b>					
Current assets	\$999,025	\$527,151	\$1,471,268	\$740,767	\$1,335,527
Capital assets, net	1,030,246	734,509	1,749,540	1,620,948	2,349,538
Other assets	104,942	69,703	322,112	31,380	272,525
<b>Total assets</b>	<b>2,134,213</b>	<b>1,331,363</b>	<b>3,542,920</b>	<b>2,393,095</b>	<b>3,957,590</b>
<b>Total deferred outflows of resources</b>	<b>362,917</b>	<b>160,399</b>	<b>516,101</b>	<b>345,110</b>	<b>836,506</b>
Current liabilities	328,609	270,520	404,441	231,802	592,470
Long-term debt	362,743	338,340	934,794	754,170	928,264
Other noncurrent liabilities	2,145,257	1,030,129	2,564,310	1,535,743	3,106,945
<b>Total liabilities</b>	<b>2,836,609</b>	<b>1,638,989</b>	<b>3,903,545</b>	<b>2,521,715</b>	<b>4,627,679</b>
<b>Total deferred inflows of resources</b>	<b>369,066</b>	<b>205,017</b>	<b>421,778</b>	<b>251,166</b>	<b>533,051</b>
Net investment in capital assets	640,415	393,404	790,467	857,221	1,396,747
Restricted	86,748	69,703	11,138		90,811
Unrestricted	(1,435,708)	(815,351)	(1,067,907)	(891,897)	(1,854,192)
<b>Total net position</b>	<b>\$(708,545)</b>	<b>\$(352,244)</b>	<b>\$(266,302)</b>	<b>\$(34,676)</b>	<b>\$(366,634)</b>

(in thousands of dollars)

UNIVERSITY OF CALIFORNIA MEDICAL CENTERS					
	DAVIS	IRVINE	LOS ANGELES	SAN DIEGO	SAN FRANCISCO
<b>CONDENSED STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION</b>					
Operating revenues	\$2,147,374	\$1,116,327	\$2,502,552	\$1,688,162	\$3,951,754
Operating expenses	(1,904,823)	(981,506)	(2,241,931)	(1,591,807)	(3,792,538)
Depreciation expense	(78,839)	(69,271)	(142,841)	(76,779)	(210,913)
<b>Operating income (loss)</b>	<b>163,712</b>	<b>65,550</b>	<b>117,780</b>	<b>19,576</b>	<b>(51,697)</b>
Nonoperating revenues (expenses), net	9,467	(17,961)	(36,579)	(10,470)	24,067
<b>Income (loss) before other changes in net position</b>	<b>173,179</b>	<b>47,589</b>	<b>81,201</b>	<b>9,106</b>	<b>(27,630)</b>
Health systems support	(28,088)	(59,727)	(175,341)	(109,586)	(84,898)
Transfers (to) from University, net	(4,349)			(404)	89
Changes in allocation for pension payable to University	1,892	7,266	5,834	(9,130)	6,506
Other, including donated assets	983	1,756	3,500	30,218	30,715
<b>Increase (decrease) in net position</b>	<b>143,617</b>	<b>(3,116)</b>	<b>(84,806)</b>	<b>(79,796)</b>	<b>(75,218)</b>
Net position - beginning of year	(852,162)	(349,128)	(181,496)	45,120	(291,416)
<b>Net position - June 30, 2017</b>	<b>\$(708,545)</b>	<b>\$(352,244)</b>	<b>\$(266,302)</b>	<b>\$(34,676)</b>	<b>\$(366,634)</b>
<b>CONDENSED STATEMENT OF CASH FLOWS</b>					
Net cash provided (used) by:					
Operating activities	\$289,030	\$257,072	\$304,081	\$166,061	\$390,971
Noncapital financing activities	(29,396)	(59,134)	(173,112)	(112,361)	(62,856)
Capital and related financing activities	(25,665)	(30,292)	(43,206)	(135,525)	(136,759)
Investing activities	(70,468)	(78,116)	16,381	11,058	(15,333)
<b>Net increase (decrease) in cash and cash equivalents</b>	<b>163,501</b>	<b>89,530</b>	<b>104,144</b>	<b>(70,767)</b>	<b>176,023</b>
Cash and cash equivalents* - June 30, 2016	464,908	253,332	903,617	465,589	450,701
<b>Cash and cash equivalents* - June 30, 2017</b>	<b>\$628,409</b>	<b>\$342,862</b>	<b>\$1,007,761</b>	<b>\$394,822</b>	<b>\$626,724</b>

\*Cash and cash equivalents on the medical centers' financial statements are included in the University's Short Term Investment Pool.

Condensed financial statement information related to each of the University's medical centers for the year ended June 30, 2016 is as follows:

(in thousands of dollars)

UNIVERSITY OF CALIFORNIA MEDICAL CENTERS					
	DAVIS	IRVINE	LOS ANGELES	SAN DIEGO	SAN FRANCISCO
<i>Year Ended June 30, 2016</i>					
Revenue bonds outstanding	\$282,054	\$265,185	\$700,315	\$658,667	\$832,979
Related debt service payments	\$32,833	\$24,007	\$44,507	\$40,201	\$54,236
Bonds due serially through	2047	2049	2049	2048	2049
<b>CONDENSED STATEMENT OF NET POSITION</b>					
Current assets	\$825,786	\$477,962	\$1,319,490	\$757,892	\$1,120,331
Capital assets, net	1,004,073	718,179	1,813,446	1,471,118	2,381,726
Other assets	18,837		299,918	37,073	224,590
<b>Total assets</b>	<b>1,848,696</b>	<b>1,196,141</b>	<b>3,432,854</b>	<b>2,266,083</b>	<b>3,726,647</b>
<b>Total deferred outflows of resources</b>	<b>630,774</b>	<b>303,895</b>	<b>774,292</b>	<b>422,288</b>	<b>1,003,134</b>
Current liabilities	374,616	240,452	421,741	234,871	510,171
Long-term debt	268,671	267,344	837,071	684,672	829,519
Other noncurrent liabilities	2,493,557	1,237,534	2,920,816	1,596,701	3,419,626
<b>Total liabilities</b>	<b>3,136,844</b>	<b>1,745,330</b>	<b>4,179,628</b>	<b>2,516,244</b>	<b>4,759,316</b>
<b>Total deferred inflows of resources</b>	<b>194,788</b>	<b>103,834</b>	<b>209,014</b>	<b>127,007</b>	<b>261,881</b>
Net investment in capital assets	701,366	446,355	959,252	749,527	1,475,111
Restricted			11,360		63,785
Unrestricted	(1,553,528)	(795,483)	(1,152,108)	(704,407)	(1,830,312)
<b>Total net position</b>	<b>\$(852,162)</b>	<b>\$(349,128)</b>	<b>\$(181,496)</b>	<b>\$45,120</b>	<b>\$(291,416)</b>

(in thousands of dollars)

UNIVERSITY OF CALIFORNIA MEDICAL CENTERS					
	DAVIS	IRVINE	LOS ANGELES	SAN DIEGO	SAN FRANCISCO
<b>CONDENSED STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION</b>					
Operating revenues	\$1,935,274	\$1,009,651	\$2,364,038	\$1,544,658	\$3,567,317
Operating expenses	(1,895,627)	(966,448)	(2,202,804)	(1,448,810)	(3,617,548)
Depreciation expense	(79,291)	(68,706)	(134,100)	(58,391)	(205,146)
<b>Operating income (loss)</b>	<b>(39,644)</b>	<b>(25,503)</b>	<b>27,134</b>	<b>37,457</b>	<b>(255,377)</b>
Nonoperating revenues (expenses), net	(461)	(20,450)	(24,398)	16	(15,663)
<b>Income (loss) before other changes in net position</b>	<b>(40,105)</b>	<b>(45,953)</b>	<b>2,736</b>	<b>37,473</b>	<b>(271,040)</b>
Health systems support	(41,387)	(65,081)	(176,852)	(96,570)	(64,055)
Transfers (to) from University, net	(8,563)	3,086	(8,950)	(2,735)	8,240
Changes in allocation for pension payable to University	(1,184)	681	(452)	(1,613)	(12,414)
Other, including donated assets	2,074	822	16,212	52,255	47,290
<b>Decrease in net position</b>	<b>(89,165)</b>	<b>(106,445)</b>	<b>(167,306)</b>	<b>(11,190)</b>	<b>(291,979)</b>
Net position - beginning of year	(762,997)	(242,683)	(14,190)	56,310	563
<b>Net position - June 30, 2016</b>	<b>\$(852,162)</b>	<b>\$(349,128)</b>	<b>\$(181,496)</b>	<b>\$45,120</b>	<b>\$(291,416)</b>
<b>CONDENSED STATEMENT OF CASH FLOWS</b>					
Net cash provided (used) by:					
Operating activities	\$207,723	\$128,263	\$430,799	\$303,984	\$214,823
Noncapital financing activities	(46,176)	(64,180)	(175,258)	(101,887)	(47,456)
Capital and related financing activities	(118,061)	(84,466)	(102,284)	(188,317)	(175,565)
Investing activities	12,168	(9,042)	15,583	49,764	6,557
<b>Net increase (decrease) in cash and cash equivalents</b>	<b>55,654</b>	<b>(29,425)</b>	<b>168,840</b>	<b>63,544</b>	<b>(1,641)</b>
Cash and cash equivalents* - June 30, 2015	409,254	282,757	734,777	402,045	452,342
<b>Cash and cash equivalents* - June 30, 2016</b>	<b>\$464,908</b>	<b>\$253,332</b>	<b>\$903,617</b>	<b>\$465,589</b>	<b>\$450,701</b>

\*Cash and cash equivalents on the medical centers' financial statements are included in the University's Short Term Investment Pool, except for CHRCO as of June 30, 2015.

Summarized financial information for each medical center is from the medical centers' audited financial statements. Certain revenue, such as financial support from the state for clinical teaching programs, is classified as state educational appropriations rather than medical center revenue in the University's statement of revenues, expenses and changes in net position. However, in the medical centers' audited financial statements and for segment reporting purposes, these revenues are classified as operating revenue. Additional information on the individual University of California medical centers can be obtained from their audited financial statements which are available at <http://reportingtransparency.universityofcalifornia.edu>.

Multiple purpose and housing system projects (including student and faculty housing, parking facilities, student centers, recreation and events facilities, student health service facilities and certain academic and administrative facilities) are also financed by revenue bonds; however, assets and liabilities are not required to be accounted for separately.

## 19. BLENDED COMPONENT UNIT INFORMATION

Condensed financial statement information related to the University's blended component units for the years ended June 30, are as follows:

(in thousands of dollars)

	FIAT LUX		CHRCO	
	2017	2016	2017	2016
<b>CONDENSED STATEMENTS OF NET POSITION</b>				
Current assets	\$543,817	\$69,341	\$249,445	\$195,918
Capital assets, net			295,766	275,951
Other assets	393,049	10,576	253,336	211,711
<b>Total assets</b>	<b>936,866</b>	<b>79,917</b>	<b>798,547</b>	<b>683,580</b>
<b>Total deferred outflows of resources</b>			<b>27,673</b>	<b>44,761</b>
Current liabilities	205,073	3,395	104,878	98,477
Other noncurrent liabilities	583,779	72,105	174,519	147,244
<b>Total liabilities</b>	<b>788,852</b>	<b>75,500</b>	<b>279,397</b>	<b>245,721</b>
<b>Total deferred inflows of resources</b>			<b>2,370</b>	<b>3,030</b>
Net investment in capital assets			191,683	222,236
Restricted			75,403	55,036
Unrestricted	148,014	4,417	277,367	202,318
<b>Total net position</b>	<b>\$148,014</b>	<b>\$4,417</b>	<b>\$544,453</b>	<b>\$479,590</b>
<b>CONDENSED STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION</b>				
Operating revenues	\$216,407	\$17,182	\$597,564	\$483,065
Operating expenses	(242,706)	(31,117)	(558,460)	(524,445)
Depreciation expense			(33,842)	(34,274)
<b>Operating income (loss)</b>	<b>(26,299)</b>	<b>(13,935)</b>	<b>5,262</b>	<b>(75,654)</b>
Nonoperating revenues (expenses), net	12,767	591	42,151	2,899
<b>Income (loss) before other changes in net position in net position</b>	<b>(13,532)</b>	<b>(13,344)</b>	<b>47,413</b>	<b>(72,755)</b>
Transfers from University	157,129			
Other, including donated assets			17,450	20,808
<b>Increase (decrease) in net position</b>	<b>143,597</b>	<b>(13,344)</b>	<b>64,863</b>	<b>(51,947)</b>
Net position – beginning of year	4,417	17,761	479,590	531,537
<b>Net position – end of year</b>	<b>\$148,014</b>	<b>\$4,417</b>	<b>\$544,453</b>	<b>\$479,590</b>
<b>CONDENSED STATEMENT OF CASH FLOWS</b>				
<i>Net cash provided (used) by:</i>				
Operating activities	\$49,463	\$14,859	\$36,732	\$(13,671)
Noncapital financing activities			19,523	10,918
Capital and related financing activities	786,167		5,645	(19,092)
Investing activities	(850,563)	(20,084)	(14,452)	(289)
<b>Net increase (decrease) in cash and cash equivalents</b>	<b>(14,933)</b>	<b>(5,225)</b>	<b>47,448</b>	<b>(22,134)</b>
Cash and cash equivalents – beginning of year	15,635	20,860	71,414	93,548
<b>Cash and cash equivalents – end of year</b>	<b>\$702</b>	<b>\$15,635</b>	<b>\$118,862</b>	<b>\$71,414</b>

Additional information on the blended component units can be found in their separately issued audited financial statements, which can be obtained by contacting Fiat Lux and CHRCO.



## 20. CAMPUS FOUNDATIONS INFORMATION

Under University policies approved by The Regents, each individual campus may establish a separate foundation to provide valuable assistance in fundraising, public outreach and other support for the missions of the campus and the University. Although independent boards govern these foundations, their assets are dedicated for the benefit of the University of California.

Condensed financial statement information related to the University's campus foundations, including their allocated share of the assets and liabilities associated with securities lending transactions in the University's investment pools, for the year ended June 30, 2017 is as follows:

(in thousands of dollars)

	UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS				
	BERKELEY	SAN FRANCISCO	LOS ANGELES	ALL OTHER	TOTAL
<b>CONDENSED STATEMENT OF NET POSITION</b>					
Current assets	\$76,070	\$286,739	\$490,034	\$350,732	\$1,203,575
Noncurrent assets	2,038,355	1,509,773	2,565,913	2,114,987	8,229,028
<b>Total assets</b>	<b>2,114,425</b>	<b>1,796,512</b>	<b>3,055,947</b>	<b>2,465,719</b>	<b>9,432,603</b>
<b>Total deferred outflows of resources</b>					
Current liabilities	16,379	39,032	263,424	118,887	437,722
Noncurrent liabilities	78,392	254,620	32,449	25,540	391,001
<b>Total liabilities</b>	<b>94,771</b>	<b>293,652</b>	<b>295,873</b>	<b>144,427</b>	<b>828,723</b>
<b>Total deferred inflows of resources</b>					
			<b>1,723</b>		<b>1,723</b>
Restricted	2,015,269	1,502,447	2,600,898	2,290,411	8,409,025
Unrestricted	4,385	413	157,453	30,881	193,132
<b>Total net position</b>	<b>\$2,019,654</b>	<b>\$1,502,860</b>	<b>\$2,758,351</b>	<b>\$2,321,292</b>	<b>\$8,602,157</b>
<b>CONDENSED STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION</b>					
Operating revenues	\$114,188	\$155,614	\$305,490	\$293,997	\$869,289
Operating expenses	(208,956)	(231,647)	(292,211)	(236,701)	(969,515)
<b>Operating income (loss)</b>	<b>(94,768)</b>	<b>(76,033)</b>	<b>13,279</b>	<b>57,296</b>	<b>(100,226)</b>
Nonoperating revenues	218,641	155,790	262,941	239,976	877,348
<b>Income before other changes in net position</b>	<b>123,873</b>	<b>79,757</b>	<b>276,220</b>	<b>297,272</b>	<b>777,122</b>
Permanent endowments	67,737	41,513	70,719	108,216	288,185
<b>Increase in net position</b>	<b>191,610</b>	<b>121,270</b>	<b>346,939</b>	<b>405,488</b>	<b>1,065,307</b>
Net position – June 30, 2016	1,828,044	1,381,590	2,411,412	1,915,804	7,536,850
<b>Net position – June 30, 2017</b>	<b>\$2,019,654</b>	<b>\$1,502,860</b>	<b>\$2,758,351</b>	<b>\$2,321,292</b>	<b>\$8,602,157</b>
<b>CONDENSED STATEMENT OF CASH FLOWS</b>					
Net cash provided (used) by:					
Operating activities	\$(97,936)	\$(100,607)	\$(44,964)	\$18,771	\$(224,736)
Noncapital financing activities	49,682	55,862	52,464	94,106	252,114
Capital and related financing activities				(192)	(192)
Investing activities	49,184	103,578	(7,797)	(112,963)	32,002
<b>Net increase (decrease) in cash and cash equivalents</b>	<b>930</b>	<b>58,833</b>	<b>(297)</b>	<b>(278)</b>	<b>59,188</b>
Cash and cash equivalents – June 30, 2016	3,657	152,027	5,576	33,652	194,912
<b>Cash and cash equivalents – June 30, 2017</b>	<b>\$4,587</b>	<b>\$210,860</b>	<b>\$5,279</b>	<b>\$33,374</b>	<b>\$254,100</b>

Condensed financial statement information related to the University's campus foundations, including their allocated share of the assets and liabilities associated with securities lending transactions in the University's investment pools, for the year ended June 30, 2016 is as follows:

(in thousands of dollars)

UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS					
	BERKELEY	SAN FRANCISCO	LOS ANGELES	ALL OTHER	TOTAL
<b>CONDENSED STATEMENT OF NET POSITION</b>					
Current assets	\$78,588	\$193,643	\$434,051	\$259,166	\$965,448
Noncurrent assets	1,838,382	1,456,193	2,254,770	1,738,791	7,288,136
<b>Total assets</b>	<b>1,916,970</b>	<b>1,649,836</b>	<b>2,688,821</b>	<b>1,997,957</b>	<b>8,253,584</b>
Current liabilities	15,950	46,269	246,519	55,988	364,726
Noncurrent liabilities	72,976	221,977	29,430	26,165	350,548
<b>Total liabilities</b>	<b>88,926</b>	<b>268,246</b>	<b>275,949</b>	<b>82,153</b>	<b>715,274</b>
<b>Total deferred inflows of resources</b>			<b>1,460</b>		<b>1,460</b>
Restricted	1,825,680	1,381,166	2,344,581	1,890,554	7,441,981
Unrestricted	2,364	424	66,831	25,250	94,869
<b>Total net position</b>	<b>\$1,828,044</b>	<b>\$1,381,590</b>	<b>\$2,411,412</b>	<b>\$1,915,804</b>	<b>\$7,536,850</b>
<b>CONDENSED STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION</b>					
Operating revenues	\$127,301	\$180,801	\$258,641	\$225,732	\$792,475
Operating expenses	(188,917)	(232,835)	(263,898)	(229,518)	(915,168)
<b>Operating loss</b>	<b>(61,616)</b>	<b>(52,034)</b>	<b>(5,257)</b>	<b>(3,786)</b>	<b>(122,693)</b>
Nonoperating revenues	(34,417)	(32,548)	(62,363)	(39,535)	(168,863)
<b>Loss before other changes in net position</b>	<b>(96,033)</b>	<b>(84,582)</b>	<b>(67,620)</b>	<b>(43,321)</b>	<b>(291,556)</b>
Permanent endowments	88,469	39,538	70,138	79,932	278,077
<b>Increase (decrease) in net position</b>	<b>(7,564)</b>	<b>(45,044)</b>	<b>2,518</b>	<b>36,611</b>	<b>(13,479)</b>
Net position – June 30, 2015	1,835,608	1,426,634	2,408,894	1,879,193	7,550,329
<b>Net position – June 30, 2016</b>	<b>\$1,828,044</b>	<b>\$1,381,590</b>	<b>\$2,411,412</b>	<b>\$1,915,804</b>	<b>\$7,536,850</b>
<b>CONDENSED STATEMENT OF CASH FLOWS</b>					
Net cash provided (used) by:					
Operating activities	\$(93,199)	\$(10,622)	\$(57,870)	\$(59,289)	\$(220,980)
Noncapital financing activities	77,929	17,104	59,081	72,982	227,096
Capital and related financing activities				(970)	(970)
Investing activities	16,259	(13,527)	267	(11,509)	(8,510)
<b>Net increase (decrease) in cash and cash equivalents</b>	<b>989</b>	<b>(7,045)</b>	<b>1,478</b>	<b>1,214</b>	<b>(3,364)</b>
Cash and cash equivalents – June 30, 2015	2,668	159,072	4,098	32,438	198,276
<b>Cash and cash equivalents – June 30, 2016</b>	<b>\$3,657</b>	<b>\$152,027</b>	<b>\$5,576</b>	<b>\$33,652</b>	<b>\$194,912</b>

Additional information on the foundations can be found in the foundations' separately issued annual reports, which can be obtained by contacting the individual foundation.

## 21. COMMITMENTS AND CONTINGENCIES

### Contractual Commitments

Amounts committed but unexpended for construction projects totaled \$1.6 billion at June 30, 2017. Amounts committed to the developer for the design, construction and financing of the facilities at one of its campuses is \$1.6 billion at June 30, 2017. The University has made a commitment to contribute \$87.9 million for an investment in a joint venture to fund construction projects.

The University leases land, buildings and equipment under agreements recorded as operating leases. Operating lease expenses for the years ended June 30, 2017 and 2016 were \$271.4 million and \$236.0 million, respectively. The terms of operating leases extend through March 2042.

Future minimum payments on operating leases with an initial or remaining non-cancelable term in excess of one year are as follows:

<i>(in thousands of dollars)</i>	
UNIVERSITY OF CALIFORNIA	
<i>Year Ending June 30</i>	
2018	\$248,401
2019	204,936
2020	168,626
2021	137,098
2022	98,912
2023-2027	216,638
2028-2032	68,538
2033-2037	45,504
2038-2042	19,898
<b>Total</b>	<b>\$1,208,551</b>

### Contingencies

Substantial amounts are received and expended by the University, including its medical centers, under federal and state programs, and are subject to audit by cognizant governmental agencies. This funding relates to research, student aid, medical center operations and other programs. University management believes that any liabilities arising from such audits will not have a material effect on the University's financial position.

The University and the campus foundations are contingently liable in connection with certain other claims and contracts, including those currently in litigation, arising in the normal course of its activities. Although there are inherent uncertainties in any litigation, University management and general counsel are of the opinion that the outcome of such matters will not have a material effect on the University's financial position.

## REQUIRED SUPPLEMENTARY INFORMATION

### UCRP

The schedule of changes in net pension liability includes multi-year trend information about whether the pension assets are increasing or decreasing over time relative to the pension liabilities. The University's schedule of changes in the net pension liability for UCRP as of June 30 is:

<i>(in thousands of dollars)</i>	<b>2017</b>	<b>2016</b>	<b>2015</b>
<b>TOTAL PENSION LIABILITY</b>			
Service cost	\$1,807,143	\$1,710,241	\$1,589,267
Interest on the total pension liability	5,035,267	4,784,904	4,538,846
Difference between expected and actual experience	74,664	136,167	(112,155)
Changes of assumptions or other inputs			2,136,793
Benefits paid, including refunds of employee contributions	(3,320,990)	(3,105,641)	(2,976,992)
<b>Net change in total pension liability</b>	<b>3,596,084</b>	<b>3,525,671</b>	<b>5,175,759</b>
Total pension liability - beginning of year	69,230,762	65,705,091	60,529,332
<b>Total pension liability - end of year</b>	<b>72,826,846</b>	<b>69,230,762</b>	<b>65,705,091</b>
<b>PLAN NET POSITION</b>			
Contributions - employer	2,385,576	2,426,683	2,510,046
Contributions - member	891,987	845,036	793,012
Contributions - state	171,000	96,000	
Net investment income	7,866,281	(1,104,655)	1,993,801
Benefits paid, including refunds of employee contributions	(3,320,990)	(3,105,641)	(2,976,993)
Administrative expense	(44,128)	(48,341)	(48,283)
<b>Net change in plan net position</b>	<b>7,949,726</b>	<b>(890,918)</b>	<b>2,271,583</b>
Plan net position - beginning of year	54,164,532	55,055,450	52,783,867
<b>Plan net position - end of year</b>	<b>62,114,258</b>	<b>54,164,532</b>	<b>55,055,450</b>
<b>Net pension liability - end of year</b>	<b>\$10,712,588</b>	<b>\$15,066,230</b>	<b>\$10,649,641</b>
<b>TOTAL PENSION LIABILITY</b>			
Service cost	\$1,519,183	\$1,456,761	\$1,531,094
Interest on the total pension liability	4,316,728	4,112,461	3,871,146
Difference between expected and actual experience	(320,624)	(183,253)	(212,758)
Changes of assumptions or other inputs		(3,312,815)	4,923,778
Benefits paid, including refunds of employee contributions	(2,687,540)	(2,487,369)	(2,273,071)
<b>Net change in total pension liability</b>	<b>2,827,747</b>	<b>(414,215)</b>	<b>7,840,189</b>
Total pension liability - beginning of year	57,701,585	58,115,800	50,275,611
<b>Total pension liability - end of year</b>	<b>60,529,332</b>	<b>57,701,585</b>	<b>58,115,800</b>
<b>PLAN NET POSITION</b>			
Contributions - employer	1,580,876	810,056	1,851,460
Contributions - member	577,466	415,641	272,420
Contributions - state			
Net investment income	8,009,980	4,833,339	115,863
Benefits paid, including refunds of employee contributions	(2,687,540)	(2,487,369)	(2,273,071)
Administrative expense	(37,641)	(37,426)	(32,839)
<b>Net change in plan net position</b>	<b>7,443,141</b>	<b>3,534,241</b>	<b>(66,167)</b>
Plan net position - beginning of year	45,340,726	41,806,485	41,872,652
<b>Plan net position - end of year</b>	<b>52,783,867</b>	<b>45,340,726</b>	<b>41,806,485</b>
<b>Net pension liability - end of year</b>	<b>\$7,745,465</b>	<b>\$12,360,859</b>	<b>\$16,309,315</b>

The University's schedule of net pension liability for UCRP as of June 30 is:

<i>(in thousands of dollars)</i>	<b>2017</b>	<b>2016</b>	<b>2015</b>
Total pension liability	\$72,826,846	\$69,230,762	\$65,705,091
Plan net position	62,114,258	54,164,532	55,055,450
<b>Net pension liability</b>	<b>\$10,712,588</b>	<b>\$15,066,230</b>	<b>\$10,649,641</b>
Ratio of plan net position to total pension liability	85.3%	78.2%	83.8%
Covered payroll	\$11,301,506	\$10,689,424	\$10,047,570
Net pension liability as a percentage of covered payroll	94.8%	140.9%	106.0%

<i>(in thousands of dollars)</i>	<b>2014</b>	<b>2013</b>	<b>2012</b>
Total pension liability	\$60,529,332	\$57,701,585	\$58,115,800
Plan net position	52,783,867	45,340,726	41,806,485
<b>Net pension liability</b>	<b>\$7,745,465</b>	<b>\$12,360,859</b>	<b>\$16,309,315</b>
Ratio of plan net position to total pension liability	87.2%	78.6%	71.9%
Covered payroll	\$9,372,583	\$8,921,077	\$8,594,147
Net pension liability as a percentage of covered payroll	82.6%	138.6%	189.8%

The University's schedule of employer contributions for UCRP as of June 30 is:

(in thousands of dollars)

Year Ended June 30	Actuarially Determined Contributions	Contributions in Relation to Actuarial Contributions	Contribution Deficiency (Excess)	Covered Payroll	Contributions as a Percentage of Covered Payroll
2017	\$2,654,710	\$2,556,576	\$98,134	\$11,301,506	23%
2016	2,610,953	2,522,683	88,270	10,689,424	24
2015	2,664,384	2,510,046	154,338	10,047,570	25
2014	2,472,697	1,580,876	891,821	9,372,583	17
2013	2,062,022	810,056	1,251,966	8,921,077	9
2012	1,806,205	1,851,459	(45,254)	8,594,147	22
2011	1,695,137	1,677,921	17,216	8,140,629	21
2010	454	148,445	(147,991)	7,973,921	2
2009	2,657	454	2,203	7,468,809	
2008	23,934	2,657	21,277	7,612,726	

#### Notes to Schedule

Methods and assumptions used to establish "actuarially determined contribution" rates for the campus and medical center segment of UCRP:

Valuation date	Actuarially determined contribution rates are calculated as of July 1, two years prior to the end of the fiscal year in which contributions are reported.	
Actuarial cost method	Entry Age Actuarial Cost Method.	
Amortization method	Level dollar, closed periods.	
Remaining amortization period	20.86 years as of July 1, 2016. The July 1, 2010 amortization bases were combined into a single amortization base and amortized over 30 years. Any changes in unfunded actuarial accrued liability ("UAAL") due to actuarial experience gains or losses after July 1, 2010 are separately amortized over a fixed (closed) 30-year period effective with that valuation. Any changes in UAAL due to a change in actuarial assumptions or plan provisions are separately amortized over a fixed (closed) 15-year period. Any changes in UAAL due to actuarial experience gains or losses or a change in actuarial assumptions after July 1, 2014 are separately amortized over a fixed (closed) 20-year period.	
Asset valuation method	The market value of assets less unrecognized returns in each of the last five years. Unrecognized return is equal to the difference between the actual and the expected returns on a market value basis and is recognized over a five-year period.	
	<b>July 1, 2017 valuation date</b>	<b>July 1, 2016 valuation date</b>
Investment rate of return	7.25%, net of pension plan investment expense, including inflation.	7.25%, net of pension plan investment expense, including inflation.
Inflation	3.00%.	3.00%.
Projected salary increases	3.75% - 6.15%, includes inflation.	3.75% - 6.15%, includes inflation.
Cost-of-living adjustments	2.00%.	2.00%.
Mortality	Post-retirement Healthy: RP-2014 White Collar Healthy Annuitant Mortality Table projected with the two-dimensional MP-2014 projection scale to 2029, set forward one year.	Post-retirement Healthy: RP-2014 White Collar Healthy Annuitant Mortality Table projected with the two-dimensional MP-2014 projection scale to 2029, set forward one year.
Other assumptions	Same as those used in the July 1, 2017 funding actuarial valuation. Same as those used in the July 1, 2016 funding actuarial valuation.	

## UC-VERIP

The University's schedule of changes in net pension liability for UC-VERIP as of June 30 is:

<i>(in thousands of dollars)</i>	<b>2017</b>	<b>2016</b>	<b>2015</b>
<b>TOTAL PENSION LIABILITY</b>			
Interest on the total pension liability	\$2,463	\$2,533	\$2,704
Changes of benefit terms			
Difference between expected and actual experience	(189)	(650)	242
Changes of assumptions or other inputs			1,837
Benefits paid, including refunds of employee contributions	(4,738)	(4,937)	(5,081)
<b>Net change in total pension liability</b>	<b>(2,464)</b>	<b>(3,054)</b>	<b>(298)</b>
Total pension liability - beginning of year	35,008	38,062	38,360
<b>Total pension liability - end of year</b>	<b>32,544</b>	<b>35,008</b>	<b>38,062</b>
<b>PLAN NET POSITION</b>			
Net investment income	8,666	(1,425)	2,550
Benefits paid, including refunds of employee contributions	(4,738)	(4,937)	(5,081)
Administrative expense	(6)	(7)	(6)
<b>Net change in plan net position</b>	<b>3,922</b>	<b>(6,369)</b>	<b>(2,537)</b>
Plan net position - beginning of year	61,056	67,425	69,962
<b>Plan net position - end of year</b>	<b>64,978</b>	<b>61,056</b>	<b>67,425</b>
<b>Net pension liability (asset) - end of year</b>	<b>\$(32,434)</b>	<b>\$(26,048)</b>	<b>\$(29,363)</b>
<i>(in thousands of dollars)</i>	<b>2014</b>	<b>2013</b>	<b>2012</b>
<b>TOTAL PENSION LIABILITY</b>			
Interest on the total pension liability	\$2,857	\$3,052	\$3,227
Changes of benefit terms			11,186
Difference between expected and actual experience	(436)	(241)	172
Changes of assumptions or other inputs			1,267
Benefits paid, including refunds of employee contributions	(5,169)	(5,278)	(5,368)
<b>Net change in total pension liability</b>	<b>(2,748)</b>	<b>(2,467)</b>	<b>10,484</b>
Total pension liability - beginning of year	41,108	43,575	33,091
<b>Total pension liability - end of year</b>	<b>38,360</b>	<b>41,108</b>	<b>43,575</b>
<b>PLAN NET POSITION</b>			
Net investment income	11,035	7,144	90
Benefits paid, including refunds of employee contributions	(5,169)	(5,278)	(5,368)
Administrative expense	(6)	(7)	(7)
<b>Net change in plan net position</b>	<b>5,860</b>	<b>1,859</b>	<b>(5,285)</b>
Plan net position - beginning of year	64,102	62,243	67,528
<b>Plan net position - end of year</b>	<b>69,962</b>	<b>64,102</b>	<b>62,243</b>
<b>Net pension liability (asset) - end of year</b>	<b>\$(31,602)</b>	<b>\$(22,994)</b>	<b>\$(18,668)</b>

The University's schedule of net pension asset for UC-VERIP as of June 30 is:

<i>(in thousands of dollars)</i>	<b>2017</b>	<b>2016</b>	<b>2015</b>
Total pension liability	\$32,544	\$35,008	\$38,062
Plan net position	64,978	61,056	67,425
<b>Net pension asset</b>	<b>\$(32,434)</b>	<b>\$(26,048)</b>	<b>\$(29,363)</b>
Ratio of plan net position to total pension liability (asset)	199.7%	174.4%	177.1%

<i>(in thousands of dollars)</i>	<b>2014</b>	<b>2013</b>	<b>2012</b>
Total pension liability	\$38,360	\$41,108	\$43,575
Plan net position	69,962	64,102	62,243
<b>Net pension asset</b>	<b>\$(31,602)</b>	<b>\$(22,994)</b>	<b>\$(18,668)</b>
Ratio of plan net position to total pension liability (asset)	182.4%	155.9%	142.8%

The University is not required to make contributions to the UC-VERIP due to its fully funded status.

## CHRCO PENSION PLAN

The schedule of changes in the net pension liability for the CHRCO Pension Plan as of June 30:

<i>(in thousands of dollars)</i>	<b>2017</b>	<b>2016</b>	<b>2015</b>	<b>2014</b>
<b>TOTAL PENSION LIABILITY</b>				
Service cost	\$9,910	\$10,410	\$9,448	\$9,274
Interest on the total pension liability	29,672	27,782	24,683	22,453
Changes of benefit terms	33	24	40	142
Difference between expected and actual experience	2,442	(3,690)	762	2,487
Changes of assumptions or other inputs		3,613	33,105	
Benefits paid, including refunds of employee contributions	(11,767)	(9,509)	(8,082)	(6,994)
<b>Net change in total pension liability</b>	<b>30,290</b>	<b>28,630</b>	<b>59,956</b>	<b>27,362</b>
Total pension liability - beginning of year	419,862	391,232	331,276	303,914
<b>Total pension liability - end of year</b>	<b>450,152</b>	<b>419,862</b>	<b>391,232</b>	<b>331,276</b>
<b>PLAN NET POSITION</b>				
Contributions - employer	28,800	24,000	18,000	14,500
Net investment income	41,256	214	11,797	48,704
Benefits paid, including refunds of employee contributions	(11,767)	(9,509)	(8,082)	(6,994)
Administrative expense	(2,727)	(1,816)	(1,222)	(718)
<b>Net change in plan net position</b>	<b>55,562</b>	<b>12,889</b>	<b>20,493</b>	<b>55,492</b>
Total plan net position - beginning of year	353,446	340,557	320,064	264,572
<b>Total plan net position - end of year</b>	<b>409,008</b>	<b>353,446</b>	<b>340,557</b>	<b>320,064</b>
<b>Net pension liability - end of year</b>	<b>\$41,144</b>	<b>\$66,416</b>	<b>\$50,675</b>	<b>\$11,212</b>

The schedule of net pension liability for the CHRCO Pension Plan as of June 30 is:

<i>(in thousands of dollars)</i>	<b>2017</b>	<b>2016</b>	<b>2015</b>	<b>2014</b>
Total pension liability	\$450,152	\$419,862	\$391,232	\$331,276
Plan net position	409,008	353,446	340,557	320,064
<b>Net pension liability</b>	<b>\$41,144</b>	<b>\$66,416</b>	<b>\$50,675</b>	<b>\$11,212</b>
Ratio of plan net position to total pension liability	90.9%	84.2%	87.0%	96.6%
Covered payroll	\$184,083	\$165,672	\$177,986	\$175,189
Net pension liability as a percentage of covered payroll	22.4%	40.1%	28.5%	6.4%



The schedule of employer contributions for the CHRCO Pension Plan as of June 30 is:

<i>(in thousands of dollars)</i>	<b>2017</b>	<b>2016</b>	<b>2015</b>	<b>2014</b>
Actuarially calculated employer contributions	\$5,642	\$7,823	\$12,200	\$21,300
Contributions in relation to the actuarially calculated employer contribution	28,800	24,000	18,000	14,500
<b>Annual contribution deficiency (excess)</b>	<b>\$(23,158)</b>	<b>\$(16,177)</b>	<b>\$(5,800)</b>	<b>\$6,800</b>
Covered payroll	\$184,083	\$165,672	\$177,986	\$175,189
Actual contributions as a percentage of covered payroll	15.6%	14.5%	10.1%	8.3%

#### Notes to schedule

Methods and assumptions used to determine contribution rates:

Valuation date:

Actuarially calculated contributions are calculated as of January 1 of the end of the fiscal year in which contributions are reported.

Actuarially determined contribution The Plan is subject to funding requirements under ERISA. The contribution shown is the IRC Section 430 minimum contribution prior to offset by credit balances prorated for the number of months in the fiscal year. For the period January 1, 2014 to June 30, 2014, the amount shown does not reflect changes in the Highway and Transportation Funding Act of 2014 (HATFA). The contribution for July 1, 2014 to June 30, 2017 includes HATFA.

Contributions in relation to the actuarially determined contribution The amount shown is equal to the overall dollar amount contributed to the Plan during the fiscal year shown.

Actuarial cost method Unit Credit Actuarial Cost Method.

Amortization method Level dollar, closed amortization.

Remaining amortization period 7 years for changes in unfunded liabilities that occur each valuation date.

Asset valuation method The actuarial value of assets is equal to the two-year average of Plan asset values as of the valuation date. The two-year average is the average of the two prior year's adjusted market value of assets and the current year's market value of assets. For this purpose, the prior years' market value of assets is adjusted to reflect benefit payments, administrative expenses, contributions and expected returns for the prior years. The resulting actuarial value of assets is adjusted to be within 10% of the market value of assets at the valuation date, as required by IRC Section 430.

Inflation 3.00%.

Investment rate of return 7.0%, net of pension plan investment expenses, including inflation.

Projected salary increases 5.00%, including inflation through 2017, 4.00% afterward.

Cost-of-living adjustments N/A.

Mortality RP-2016 Healthy Annuitant Mortality Table for males or females, as appropriate, with generational adjustments for mortality improvements based on Scale AA.

## OCERS

The schedule of the University's proportionate share of OCERS' net pension liability is presented below:

(in thousands of dollars)

AS OF JUNE 30	PROPORTION OF THE NET PENSION LIABILITY	PROPORTIONATE SHARE OF NET PENSION LIABILITY	COVERED PAYROLL	PROPORTIONATE SHARE OF THE NET PENSION LIABILITY AS A PERCENTAGE OF ITS COVERED PAYROLL	PLAN FIDUCIARY NET POSITION AS A PERCENTAGE OF THE TOTAL PENSION LIABILITY
2017	0.3%	\$18,057	\$44	41,038.6%	34.5%
2016	0.3%	18,092	285	6,347.5%	34.8%

## University Retiree Health Benefits Plan

The schedule of changes in the net retiree health benefits liability includes multi-year trend information about whether the net retiree health benefits liability is increasing or decreasing over time. The University's net retiree health benefits liability includes liabilities for campuses, medical centers and LBNL. The University's schedule of changes in the net retiree health benefits liability as of, and for, the year ending June 30 is:

(in thousands of dollars)	2017	2016	2015
<b>TOTAL RETIREE HEALTH BENEFIT LIABILITY</b>			
Service cost	\$1,004,644	\$830,041	\$702,935
Interest on the total retiree health benefits liability	646,279	735,294	719,853
Difference between expected and actual experience	101,280	(1,948,111)	
Changes of assumptions or other inputs	(3,827,924)	3,925,503	1,402,476
Retiree contributions	72,716	65,705	56,340
Benefits paid	(467,846)	(451,166)	(435,189)
<b>Net change in total retiree health benefits liability</b>	<b>(2,470,851)</b>	<b>3,157,266</b>	<b>2,446,415</b>
Total retiree health benefits liability - beginning of year	21,867,989	18,710,723	16,264,308
<b>Total retiree health benefits liability - end of year</b>	<b>19,397,138</b>	<b>21,867,989</b>	<b>18,710,723</b>
<b>PLAN NET POSITION</b>			
University contributions	432,953	410,945	367,416
Retiree contributions	72,716	65,705	56,340
Net investment income	606	155	41
Insurance premiums	(467,846)	(451,166)	(435,189)
Other deductions	(4,256)	(3,743)	(3,147)
<b>Net change in UCRHBT net position</b>	<b>34,173</b>	<b>21,896</b>	<b>(14,539)</b>
UCRHBT net position - beginning of year	72,541	50,645	65,184
<b>UCRHBT net position - end of year</b>	<b>106,714</b>	<b>72,541</b>	<b>50,645</b>
<b>Net retiree health benefits liability - end of year</b>	<b>\$19,290,424</b>	<b>\$21,795,448</b>	<b>\$18,660,078</b>

The University's schedule of net retiree health benefits liability as of June 30 is:

(in thousands of dollars)	2017	2016	2015
Total retiree health benefits liability	\$19,397,138	\$21,867,989	\$18,710,723
UCRHBT net position	106,714	72,541	50,645
<b>Net retiree health benefits liability</b>	<b>\$19,290,424</b>	<b>\$21,795,448</b>	<b>\$18,660,078</b>
Ratio of UCRHBT net position to total retiree health benefits liability	0.6%	0.3%	0.3%
Covered payroll	\$11,495,997	\$10,689,424	\$10,047,570
Net retiree health benefits liability as a percentage of covered payroll	167.8%	203.9%	185.7%

## University of California Retiree Health Benefit Trust

The schedule of changes in the net retiree health benefits liability includes multi-year trend information about whether the trust assets are increasing or decreasing over time relative to the total retiree health benefits liability for the campuses and medical centers. UCRHBT's schedule of changes in net retiree health benefit liability as of, and for, the year ending June 30 is:

<i>(in thousands of dollars)</i>	<b>2017</b>	<b>2016</b>	<b>2015</b>
<b>TOTAL RETIREE HEALTH BENEFIT LIABILITY</b>			
Service cost	\$981,745	\$806,817	\$683,220
Interest on the total retiree health benefits liability	625,947	711,365	695,999
Difference between expected and actual experience	95,254	(1,875,009)	
Changes of assumptions or other inputs	(3,707,921)	3,798,113	1,358,761
Retiree contributions	69,968	65,705	56,340
Benefits paid	(447,604)	(433,849)	(418,244)
<b>Net change in total retiree health benefits liability</b>	<b>(2,382,611)</b>	<b>3,073,142</b>	<b>2,376,076</b>
Total retiree health benefits liability - beginning of year	21,168,712	18,095,570	15,719,494
<b>Total retiree health benefits liability - end of year</b>	<b>18,786,101</b>	<b>21,168,712</b>	<b>18,095,570</b>
<b>PLAN NET POSITION</b>			
University contributions	415,459	393,628	350,471
Retiree contributions	69,968	65,705	56,340
Net investment income	606	155	41
Insurance premiums	(447,604)	(433,849)	(418,244)
Other deductions	(4,256)	(3,743)	(3,147)
<b>Net change in UCRHBT net position</b>	<b>34,173</b>	<b>21,896</b>	<b>(14,539)</b>
UCRHBT net position - beginning of year	72,541	50,645	65,184
<b>UCRHBT net position - end of year</b>	<b>106,714</b>	<b>72,541</b>	<b>50,645</b>
<b>Net retiree health benefits liability - end of year</b>	<b>\$18,679,387</b>	<b>\$21,096,171</b>	<b>\$18,044,925</b>

UCRHBT's schedule of net retiree health benefits liability as of June 30 is:

<i>(in thousands of dollars)</i>	<b>2017</b>	<b>2016</b>	<b>2015</b>
Total retiree health benefits liability	\$18,786,101	\$21,168,712	\$18,095,570
UCRHBT net position	106,714	72,541	50,645
<b>Net retiree health benefits liability</b>	<b>\$18,679,387</b>	<b>\$21,096,171</b>	<b>\$18,044,925</b>
Ratio of UCRHBT net position to total retiree health benefits liability	0.6%	0.3%	0.3%
Covered payroll	\$11,196,485	\$10,396,827	\$9,758,795
Net retiree health benefits liability as a percentage of covered payroll	166.8%	202.9%	184.9%

**UNIVERSITY OF CALIFORNIA**  
**Summary Schedule of Expenditures of Federal Awards**  
**For the Fiscal Year Ended June 30, 2017**

Summary of Expenditures	Total Expenditures 2017
STUDENT FINANCIAL ASSISTANCE CLUSTER:	\$ 1,761,371,026
RESEARCH AND DEVELOPMENT CLUSTER:	
Federal Agency Direct Awards Expended	3,061,021,519
Pass-Through Funds Expended	448,551,734
Partial Pass-Through Funds Expended	<u>24,812,608</u>
Total Research and Development Cluster	3,534,385,860
DEPARTMENT OF EDUCATION - GAIN EARLY AWARENESS AND READINESS FOR UNDERGRADUATE	
Direct Awards	9,084,511
Pass-Through Funds Expended	<u>121,134</u>
Total Department of Education - GAIN EARLY AWARENESS AND READINESS FOR UNDERGRADUATE	9,205,645
DEPARTMENT OF AGRICULTURE - SUPPLEMENTAL NUTRITION ASSISTANCE PROGRAM (SNAP) CLUSTER	
Pass-Through Funds Expended	<u>12,228,326</u>
Total Department of Agriculture - Supplemental Nutrition Assistance Program Cluster	12,228,326
DEPARTMENT OF LABOR - WIA/WIOA CLUSTER	
Pass-Through Funds Expended	<u>1,259,149</u>
Total Department of Labor - WIA/WIOA Cluster	1,259,149
DEPARTMENT OF TRANSPORT - FEDERAL TRANSIT CLUSTER	
Pass-Through Funds Expended	<u>538,900</u>
Total Department of Transportation - Federal Transit Cluster	538,900
DEPARTMENT OF TRANSPORT- HIGHWAY SAFETY CLUSTER	
Pass-Through Funds Expended	<u>3,044,065</u>
Total Department of Transportation - Highway Safety Cluster	3,044,065

The accompanying notes are an integral part of this schedule.

**UNIVERSITY OF CALIFORNIA**  
**Summary Schedule of Expenditures of Federal Awards**  
**For the Fiscal Year Ended June 30, 2017**

Summary of Expenditures	Total Expenditures 2017
DEPARTMENT OF EDUCATION - TRIO CLUSTER	
Federal Agency Direct Awards Expended	8,783,750
Pass-Through Funds Expended	<u>32,835</u>
Total Department of Education - TRIO Cluster	8,816,585
DEPARTMENT OF HEALTH AND HUMAN SERVICES - AGING CLUSTER	
Pass-Through Funds Expended	<u>(3,578)</u>
Total Department of Health and Human Services - Aging Cluster	(3,578)
DEPARTMENT OF HEALTH AND HUMAN SERVICES - HEALTH CENTER PROGRAM CLUSTER	
Federal Agency Direct Awards Expended	1,652,141
Pass-Through Funds Expended	<u>313,108</u>
Total Department of Health and Human Services - Health Center Program Cluster	1,965,249
MATERNAL, INFANT, and EARLY CHILDHOOD HOME VISITING CLUSTER	
Pass-Through Funds Expended	<u>230,285</u>
Total Department of Health and Human Services - Health Center Program Cluster	230,285
DEPARTMENT OF HEALTH AND HUMAN SERVICES - TEMPORARY ASSISTANCE FOR NEEDY FAMILIES (TANF) CLUSTER	
Pass-Through Funds Expended	<u>2,579,280</u>
Total Department of Health and Human Services - Temporary Assistance for Needy Families (TANF) Cluster	2,579,280
DEPARTMENT OF HEALTH AND HUMAN SERVICES - CHILD CARE AND DEVELOPMENT FUND (CCDF) CLUSTER	
Pass-Through Funds Expended	<u>1,363,083</u>
Total Department of Health and Human Services - Child Care and Development Fund (CCDF) Cluster	1,363,083

The accompanying notes are an integral part of this schedule.

**UNIVERSITY OF CALIFORNIA**  
**Summary Schedule of Expenditures of Federal Awards**  
**For the Fiscal Year Ended June 30, 2017**

<b>Summary of Expenditures</b>	<b>Total Expenditures 2017</b>
DEPARTMENT OF HEALTH AND HUMAN SERVICES - TITLE IV-E FOSTER CARE PROGRAM CLUSTER	
Pass Through Funds Expended	37,965,131
Total Department of Health and Human Services - Foster Care Title IV-E Program	37,965,131
DEPARTMENT OF HEALTH AND HUMAN SERVICES - MEDICAID CLUSTER	
Pass Through Funds Expended	52,937
Total Department of Health and Human Services - Medicaid Cluster	52,937
OTHER PROGRAMS	
Federal Agency Direct Awards Expended	116,732,372
Pass-Through Funds Expended	46,793,067
Partial Pass-Through Funds Expended	10,621,234
Total Other Programs	174,146,674
Total Federal Awards Expended	\$ 5,549,148,617

The accompanying notes are an integral part of this schedule.

**UNIVERSITY OF CALIFORNIA**  
**Schedule of Expenditures of Federal Awards**  
**For the Fiscal Year Ended June 30, 2017**

Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	Federal CFDA #	FY 2017	
			Federal Expenditures	Pass-Through to Subrecipients
STUDENT FINANCIAL ASSISTANCE CLUSTER:				
DEPARTMENT OF EDUCATION				
Direct Awards				
FEDERAL SUPPLEMENTAL EDUCATIONAL OPPORTUNITIES GRANT	Various	84 007	\$ 8,752,053	
FEDERAL WORK-STUDY PROGRAM	Various	84 033	15,680,451	
FEDERAL PELL GRANTS	Various	84 063	381,157,684	
FEDERAL DIRECT STUDENT LOAN PROGRAM	Various	84 268	1,040,407,260	
FEDERAL PERKINS LOAN PROGRAM BEGINNING BALANCE	Various	84 038	219,880,308	
FEDERAL PERKINS LOAN PROGRAM NEW LOAN	Various	84 038	24,529,779	
FEDERAL PERKINS LOAN PROGRAM ADMINISTRATIVE COST ALLOWANCE	Various	84 038	2,358,725	
TEACHER EDUCATION ASSISTANCE FOR COLLEGE AND HIGHER EDUCATION GRANTS (TEACH)	Various	84 379	133,037	
Total Department of Education			1,692,899,297	0
DEPARTMENT OF HEALTH AND HUMAN SERVICES				
Direct Awards				
SCHOLARSHIPS FOR STUDENTS FROM DISADVANTAGED BACKGROUND	Various	93 925	1,295,000	
HEALTH PROFESSIONS STUDENT LOAN PROGRAM/LOANS FOR DISADVANTAGED STUDENTS/PRIMARY CARE LOAN PROGRAM	Various	93 342	54,583,779	
HEALTH PROFESSIONS STUDENT LOAN PROGRAM/LOANS FOR DISADVANTAGED STUDENTS/PRIMARY CARE LOAN PROGRAM NEW LOA	Various	93 342	9,332,704	
NURSING STUDENT LOAN PROGRAM BEGINNING BALANCE	Various	93 364	1,536,405	
NURSING STUDENT LOAN PROGRAM NEW LOAN	Various	93 364	281,949	
NURSING FACULTY LOAN PROGRAM BEGINNING BALANCE	Various	93 264	1,213,424	
NURSING FACULTY LOAN PROGRAM NEW LOAN	Various	93 264	12,000	
ARRA- NURSING FACULTY LOAN PROGRAM	Various	93 408	216,468	
Total Department of Health and Human Services			68,471,729	0
			1,761,371,026	0
Total Student Financial Assistance Cluster				
RESEARCH AND DEVELOPMENT CLUSTER:				
DEPARTMENT OF AGRICULTURE				
Direct Awards	Various	10 RD	51,898,645	\$ 9,763,379
Pass-Through and Partial Pass-Through				
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	73A96	10 001	3,876,711	50,000
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	86A59	10 001	259,560	
CALIFORNIA STRAWBERRY NURSERYMEN ASSOCIATION	201503945	10 001	63,178	
INTERNATIONAL CROPS RESEARCH INSTITUTE FOR THE SEMI-ARID TROPICS	201503623	10 001	28,318	
MICHIGAN STATE UNIVERSITY	RC105306	10 001	27,425	
NATIONAL ACADEMY OF SCIENCES	2000006101	10 001	18,491	
RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	2012-CA001-ARS	10 001	23,434	
RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	22B67	10 001	87,424	

The accompanying notes are an integral part of this schedule.

**UNIVERSITY OF CALIFORNIA**  
**Schedule of Expenditures of Federal Awards**  
**For the Fiscal Year Ended June 30, 2017**

Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	Federal CFDA #	FY 2017	
			Federal Expenditures	Pass-Through to Subrecipients
WORLD COCOA FOUNDATION INC	AGRT111715	10 001	3,898	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	008247	10 025	43,858	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	150415SF	10 025	20,485	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	160547SF	10 025	71,445	
CITRUS RESEARCH PROGRAM	007713	10 025	98,641	
CITRUS RESEARCH PROGRAM	007880	10 025	7,170	
TEXAS A&M UNIVERSITY - COLLEGE STATION	007660	10 025	19,790	
CALAVERAS UNIFIED SCHOOL DISTRICT	201603165	10 170	3,240	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	88A54	10 170	4,267	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	007095	10 170	134,934	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	007861	10 170	121,286	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	008618	10 170	2,248	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	008684	10 170	5,571	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	008685	10 170	6,457	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	008687	10 170	37,426	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	14SCBGPCA0006	10 170	165,669	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	201502786-01	10 170	71,896	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	2016-160036	10 170	14,490	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	24B08	10 170	6,191	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	24B67	10 170	6,947	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	26593	10 170	138	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	26598	10 170	269	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	26599	10 170	991	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	30921	10 170	222,112	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	30924	10 170	3,602	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	30929	10 170	128,712	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	32A39	10 170	94,725	13,747
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	33A78	10 170	101,290	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	37A80	10 170	42,427	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	38A04	10 170	61,813	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	38A06	10 170	8,352	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	81019	10 170	212,932	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	81027	10 170	17,914	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	81039	10 170	22,016	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	84743	10 170	48,124	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	88A38	10 170	29,542	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	88A41	10 170	1,530	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	88A42	10 170	2,932	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	88A52	10 170	10,894	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	88A84	10 170	14,583	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	A17-0306-001	10 170	51,316	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SA16-3202-UCB	10 170	33,771	

The accompanying notes are an integral part of this schedule.



**UNIVERSITY OF CALIFORNIA**  
**Schedule of Expenditures of Federal Awards**  
**For the Fiscal Year Ended June 30, 2017**

Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	FY 2017		
		Federal CFDA #	Federal Expenditures	Pass-Through to Subrecipients
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB13013	10 170	(157)	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB13019	10 170	861	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB13048	10 170	5,416	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB13049	10 170	(1,076)	135
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB13052	10 170	2,819	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB13055	10 170	0	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB13056	10 170	(4,450)	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB13057	10 170	719	1,548
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB13058	10 170	2,243	2,243
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB13059	10 170	733	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB13060	10 170	1,179	1,179
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB13061	10 170	6,017	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB13062	10 170	25,659	25,659
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB13063	10 170	2,038	2,038
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB13064	10 170	1,020	1,020
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB14007	10 170	42,424	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB14015	10 170	170,700	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB14023	10 170	87,799	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB14027	10 170	59,578	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB14035	10 170	154,107	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB14036	10 170	223,922	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB14037	10 170	167,525	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB14040	10 170	234,164	51,442
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB14048	10 170	161,099	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB15014	10 170	56,947	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB15021	10 170	79,269	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB15026	10 170	12,231	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB15033	10 170	48,961	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB15035	10 170	229,776	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB15037	10 170	72,652	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB15040	10 170	170,117	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB15050	10 170	67,167	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB15058	10 170	34,930	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB16015	10 170	5,824	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB16022	10 170	51,408	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB16032	10 170	11,620	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB16035	10 170	38,570	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB16036	10 170	49	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB16041	10 170	21,484	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB16050	10 170	45,512	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB16054	10 170	12,852	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB16066	10 170	10,351	1,642

The accompanying notes are an integral part of this schedule.

**UNIVERSITY OF CALIFORNIA**  
**Schedule of Expenditures of Federal Awards**  
**For the Fiscal Year Ended June 30, 2017**

Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	FY 2017			
		Federal		Federal	Pass-Through to
		CFDA #		Expenditures	Subrecipients
CALIFORNIA STATE UNIVERSITY, FRESNO FOUNDATION	83A05	10	170	6,865	
CALIFORNIA SUSTAINABLE WINEGROWING ALLIANCE	SCB14038	10	170	4,925	
CENTER FOR PRODUCE SAFETY	2015CPS13	10	170	33,556	18,820
CENTER FOR PRODUCE SAFETY	2015CPS14	10	170	146,484	
CENTER FOR PRODUCE SAFETY	2016CPS02	10	170	73,263	
CENTER FOR PRODUCE SAFETY	2016CPS11	10	170	173,968	
CENTER FOR PRODUCE SAFETY	21B07	10	170	39,000	
CENTER FOR PRODUCE SAFETY	21B76	10	170	21,100	
CENTER FOR PRODUCE SAFETY	SCB16069	10	170	156,090	
MICHIGAN STATE UNIVERSITY	RC104577	10	170	77,978	
RIVERSIDE UNIFIED SCHOOL DISTRICT	88A55	10	170	10,910	
SUSTAINABLE CONSERVATION	30947	10	170	5,740	
SUSTAINABLE CONSERVATION	SCB14028	10	170	17,027	
UNIVERSITY CORPORATION AT MONTEREY BAY	008739	10	170	1,270	
VENTURA COUNTY RESOURCE CONSERVATION DISTRICT	21B66	10	170	1,848	
WASHINGTON STATE UNIVERSITY	16SCBGPCA0035	10	170	8,173	
COLORADO STATE UNIVERSITY	32A30	10	200	11,987	
COLORADO STATE UNIVERSITY	32A31	10	200	18,753	
RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	2014-34383-22362	10	200	1,847	
RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	20153438323710	10	200	14,999	
RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	38A21	10	200	4,604	
RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	5704-VM-Nino	10	200	14,345	
SAN BERNARDINO COMMUNITY COLLEGE DISTRICT	008114	10	200	360	
SAN BERNARDINO COMMUNITY COLLEGE DISTRICT	86660	10	200	16,894	
THE TEXAS A&M UNIVERSITY SYSTEM	06S130666	10	200	42,938	
UNIVERSITY OF FLORIDA	008150	10	200	78,821	
UNIVERSITY OF FLORIDA	008151	10	200	10,795	
UNIVERSITY OF WASHINGTON	20123850019657	10	200	3,631	
UNIVERSITY OF WASHINGTON	748624	10	200	31,449	
UNIVERSITY OF WASHINGTON	748625	10	200	473	
UNIVERSITY OF WASHINGTON	UWSC8213	10	200	1,001	
UNIVERSITY OF WASHINGTON	UWSC8839	10	200	5,215	
UNIVERSITY OF WASHINGTON	UWSC8975	10	200	59,702	
UNIVERSITY OF WASHINGTON	UWSC8976	10	200	30,054	
UNIVERSITY OF WASHINGTON	UWSC8978	10	200	2,750	
INTELLIGENT OPTICAL SYSTEMS, INC.	IOS #3255, USDA-ELIS	10	212	14,903	
MAXENTRIC TECHNOLOGIES LLC	T11.01-9737 (NNX14CG59C)	10	212	67,047	
UTAH STATE UNIVERSITY	120833001	10	215	0	
UTAH STATE UNIVERSITY	130676001	10	215	77,958	
UTAH STATE UNIVERSITY	130676024	10	215	12,397	
UTAH STATE UNIVERSITY	150893-00001-269	10	215	9,356	
UTAH STATE UNIVERSITY	20163864025383	10	215	2,686	

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**UNIVERSITY OF CALIFORNIA**  
**Schedule of Expenditures of Federal Awards**  
**For the Fiscal Year Ended June 30, 2017**

Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	Federal CFDA #	FY 2017	
			Federal Expenditures	Pass-Through to Subrecipients
UTAH STATE UNIVERSITY	20183864023779	10 215	31,598	
UTAH STATE UNIVERSITY	23286	10 215	334	
CORNELL UNIVERSITY	7336510455	10 217	23,085	
CALIFORNIA INSTITUTE OF TECHNOLOGY	18B-1097804	10 250	61,973	
COLUMBIA UNIVERSITY	1(GG009382)	10 250	(54)	
JOHNS HOPKINS UNIVERSITY	008084	10 250	10,294	
JOHNS HOPKINS UNIVERSITY	874B8	10 250	9,337	
UNIVERSITY OF KENTUCKY/UNIVERSITY OF KENTUCKY RESEARCH FOUNDATION	3048111062-14-169	10 250	1,718	
UNIVERSITY OF MARYLAND	A16-0574-001	10 250	15,338	
UNIVERSITY OF KENTUCKY CENTER FOR POVERTY RESEARCH	3048110944-16-034	10 253	62,731	23,507
UNIVERSITY OF KENTUCKY/UNIVERSITY OF KENTUCKY RESEARCH FOUNDATION	3048110944-15-202	10 253	16,102	
OREGON STATE UNIVERSITY	30914	10 303	32,003	
UNIVERSITY OF GEORGIA	RC293636/S000870	10 307	14,792	
WASHINGTON STATE UNIVERSITY	007902	10 307	51,285	
UNIVERSITY OF GEORGIA	RR722-418/5054566	10 308	37,661	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB15046	10 309	87,630	37,085
CALIFORNIA INSTITUTE OF TECHNOLOGY	008523	10 309	78,066	
CITRUS RESEARCH AND DEVELOPMENT FOUNDATION, INC.	13002NU781	10 309	389,233	20,561
CLEMSON UNIVERSITY	20145118122372	10 309	4,475	
CLEMSON UNIVERSITY	82094	10 309	56,430	
CORNELL UNIVERSITY	7640110608	10 309	491,658	
KANSAS STATE UNIVERSITY	S15193	10 309	125,345	
MICHIGAN STATE UNIVERSITY	2014-51181-22378	10 309	66,886	
MICHIGAN STATE UNIVERSITY	RC102039H	10 309	30,992	
MICHIGAN STATE UNIVERSITY	RC102039I	10 309	446,849	70,000
NEW MEXICO CONSORTIUM, INC.	008045	10 309	88,307	
NORTH CAROLINA STATE UNIVERSITY	008663	10 309	14,596	
NORTH CAROLINA STATE UNIVERSITY	2016022807	10 309	174,400	
NORTH CAROLINA STATE UNIVERSITY	2017-0398-11	10 309	260	
NORTH CAROLINA STATE UNIVERSITY	24B87	10 309	10,266	
NORTH CAROLINA STATE UNIVERSITY	89167	10 309	77,822	
UNIVERSITY OF ARKANSAS, FAYETTEVILLE	UAAES9111101	10 309	5,897	
UNIVERSITY OF FLORIDA	UFDSP00011008	10 309	99,996	
UNIVERSITY OF MARYLAND	Z546704	10 309	3,732	
COLORADO STATE UNIVERSITY	20146800621842	10 310	39,179	
COLORADO STATE UNIVERSITY	G-9191-1	10 310	61,249	
DESERT BOTANICAL GARDEN	UCSB 03012015	10 310	12,291	
ILLINOIS INSTITUTE OF TECHNOLOGY	SA542-0127-8756-CYC1	10 310	29,353	
KANSAS STATE UNIVERSITY	S16114	10 310	43,724	
LOUISIANA STATE UNIVERSITY AND AGRICULTURAL AND MECHANICAL COLLEGE	87460	10 310	43,448	
NORTH CAROLINA STATE UNIVERSITY	74A02	10 310	14,734	
NORTH DAKOTA UNIVERSITY SYSTEM	FAR0022074	10 310	16,182	

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**UNIVERSITY OF CALIFORNIA**  
**Schedule of Expenditures of Federal Awards**  
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Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	Federal CFDA #	FY 2017	
			Federal Expenditures	Pass-Through to Subrecipients
OHIO STATE UNIVERSITY	60045862A	10 310	22,244	
OREGON STATE UNIVERSITY	C0471A-B	10 310	70,932	
OREGON STATE UNIVERSITY	C0486A-B	10 310	65,870	
PENNSYLVANIA STATE UNIVERSITY	57558	10 310	95,061	
PURDUE UNIVERSITY	20146701721831	10 310	71,738	
RECOMBINETICS, INC	201403217	10 310	43,609	
TEXAS A&M RESEARCH FOUNDATION	M1701755-cyc1	10 310	1,735	
TEXAS A&M UNIVERSITY - COLLEGE STATION	S110075	10 310	406,785	
TEXAS A&M UNIVERSITY - COLLEGE STATION	S150693	10 310	66,640	
UNIVERSITY CORPORATION AT MONTEREY BAY	29A16	10 310	46,616	
UNIVERSITY OF GEORGIA	29A08	10 310	46,753	
UNIVERSITY OF ILLINOIS	007414	10 310	32,726	
UNIVERSITY OF MARYLAND	32470Z5768002	10 310	45,624	
UNIVERSITY OF MARYLAND	33587Z5763001	10 310	41,649	
UNIVERSITY OF MASSACHUSETTS AMHERST	16009070A00	10 310	15,832	
UNIVERSITY OF MINNESOTA	H004373401	10 310	56,480	
UNIVERSITY OF MINNESOTA	H005365301	10 310	10,758	
UNIVERSITY OF MISSOURI	58110	10 310	15,046	
UNIVERSITY OF NEBRASKA	25-0511-0110-002	10 310	67,472	
UNIVERSITY OF TENNESSEE	83A11	10 310	6,129	
UNIVERSITY OF WASHINGTON	727152	10 310	303,806	76,923
WASHINGTON STATE UNIVERSITY	115320 G002931	10 310	10,010	
WASHINGTON STATE UNIVERSITY	123791G003453	10 310	108,771	
THIRD SECTOR NEW ENGLAND INC.	A17-0168-001	10 311	15,535	
OKLAHOMA STATE UNIVERSITY	2568390.UCM1	10 320	3,799	
UNIVERSITY CORPORATION AT MONTEREY BAY	21B68	10 326	9,911	
UNIVERSITY OF ARIZONA	26B98	10 330	8,735	
UNIVERSITY OF ARIZONA	75A92	10 330	16,045	
UTAH STATE UNIVERSITY	20B95	10 330	7,144	
UTAH STATE UNIVERSITY	25924	10 500	4,810	
UTAH STATE UNIVERSITY	63271	10 500	85	
WASHINGTON STATE UNIVERSITY	108815G003426	10 500	4,858	
CALIFORNIA DEPARTMENT OF EDUCATION	25A39	10 560	(138)	
CALIFORNIA DEPARTMENT OF HEALTH CARE SERVICES	15-92188	10 561	1,245,902	
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	1210111	10 561	(30,518)	
SAN DIEGO COUNTY	SUB 543298 (NONE)	10 561	772,642	
WESTAT	75A88	10 585	31,951	
BAYLOR COLLEGE OF MEDICINE	38A28	10 586	78,505	30,724
BAYLOR COLLEGE OF MEDICINE	WICNEI12TX	10 586	48,224	
ADMINISTRATIVE COMMITTEE FOR PISTACHIOS	29A61	10 604	52,576	33,000
CALIFORNIA CITRUS QUALITY COUNCIL	201700468	10 604	169,511	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	008095	10 604	243,097	

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**UNIVERSITY OF CALIFORNIA**  
**Schedule of Expenditures of Federal Awards**  
**For the Fiscal Year Ended June 30, 2017**

Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	Federal CFDA #	FY 2017	
			Federal Expenditures	Pass-Through to Subrecipients
CITRUS RESEARCH PROGRAM	007294	10 604	58,655	
CITRUS RESEARCH PROGRAM	5050010B	10 604	17,101	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB15051	10 612	112,480	
CALIFORNIA STRAWBERRY NURSEYMEN ASSOCIATION	201500492	10 612	24,086	
CALIFORNIA DEPARTMENT OF FORESTRY AND FIRE PROTECTION	008406	10 675	385	
TAHOE RESOURCE CONSERVATION DISTRICT	201302654	10 690	21,396	
TAHOE RESOURCE CONSERVATION DISTRICT	201401003	10 690	6,339	
NEW KNOWLEDGE ORGANIZATION LTD.	Sub None ( 68-9104-4-207 )	10 912	24,548	
TERRA GLOBAL CAPITAL, LLC	201503505	10 912	2,927	
THE XERCES SOCIETY	034409	10 912	22,246	
THE XERCES SOCIETY	201223562	10 912	993	
ALMOND BOARD OF CALIFORNIA	39A59	10 RD	22,554	
ASSOCIATION OF PUBLIC AND LAND-GRANT UNIVERSITIES	57103	10 RD	2,000	
CALIFORNIA DEPARTMENT OF FINANCE	18498	10 RD	83,952	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	120444SA	10 RD	5,507	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB16045	10 RD	40,448	
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	15-IA-00277	10 RD	183,127	
CLEMSON UNIVERSITY	18322152021022	10 RD	42,310	
CRANBERRY MARKETING COMMITTEE	201700641	10 RD	32,954	
DAVIS, CITY OF	20619	10 RD	6,564	
NATIONAL FISH AND WILDLIFE FOUNDATION	00009434	10 RD	15,923	
NATIONAL FISH AND WILDLIFE FOUNDATION	0806.16.052206	10 RD	20,571	
NATIONAL FISH AND WILDLIFE FOUNDATION	0806.16.052295	10 RD	48,160	
NATIONAL FISH AND WILDLIFE FOUNDATION	0806.16.052375	10 RD	64,889	
NORTH CAROLINA STATE UNIVERSITY	89638	10 RD	7,306	
OAK RIDGE NATIONAL LABORATORY	005934	10 RD	178,193	
TEXAS A&M RESEARCH FOUNDATION	02S140239	10 RD	59,977	
THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	22B00	10 RD	6,253	
UNIVERSITY OF FLORIDA	57599	10 RD	6,970	
UNIVERSITY OF FLORIDA	59996	10 RD	76,132	
UNIVERSITY OF NEBRASKA	25623902350306	10 RD	53,336	
WASHINGTON RED RASPBERRY COMMISSION	201700386	10 RD	19,800	18,000
WASHINGTON RED RASPBERRY COMMISSION	83A97	10 RD	6,000	
Subtotal Pass-Through and Partial Pass-Through Awards			18,457,895	479,273
Total Department of Agriculture			70,356,540	10,242,652
DEPARTMENT OF COMMERCE				
Direct Awards	Various	11 RD	30,864,862	1,917,732
Pass-Through and Partial Pass-Through				
MONTEREY BAY AQUARIUM RESEARCH INSTITUTE	1111340	11 012	218,301	
MONTEREY BAY AQUARIUM RESEARCH INSTITUTE	1611447	11 012	220,094	
MONTEREY BAY AQUARIUM RESEARCH INSTITUTE	63195	11 012	202,444	

The accompanying notes are an integral part of this schedule.

**UNIVERSITY OF CALIFORNIA**  
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Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	Federal CFDA #	FY 2017	
			Federal Expenditures	Pass-Through to Subrecipients
MONTEREY BAY AQUARIUM RESEARCH INSTITUTE	A16-0171-001	11 012	35,892	
MONTEREY BAY AQUARIUM RESEARCH INSTITUTE	PO-1111249:07	11 012	43,211	
REMOTE SENSING SYSTEMS	6103	11 012	28	
SOUTHEASTERN UNIVERSITY'S RESEARCH ASSOCIATION	A00-0975-004	11 012	133,737	
SOUTHERN CALIFORNIA COASTAL WATER RESEARCH PROJECT	10050	11 012	80,492	
UNIVERSITY OF WASHINGTON	762824	11 012	32,430	
UNIVERSITY OF WASHINGTON	UWSC7890 (formerly 763223)	11 012	113,007	
UNIVERSITY OF SOUTHERN CALIFORNIA	60943568:1	11 417	45	
UNIVERSITY OF SOUTHERN CALIFORNIA	61207738	11 417	(32)	
UNIVERSITY OF SOUTHERN CALIFORNIA	61207777	11 417	1,931	
UNIVERSITY OF SOUTHERN CALIFORNIA	75193327	11 417	64,268	
UNIVERSITY OF SOUTHERN CALIFORNIA	75199714	11 417	35,008	
SONOMA COUNTY WATER AGENCY	83960	11 419	8,696	
CALIFORNIA STATE UNIVERSITY, HUMBOLDT STATE UNIVERSITY SPONSORED	PO 0007101733	11 427	3,536	
OCCIDENTAL COLLEGE	G650-SUB1	11 427	12,595	
GLOBAL SCIENCES & TECHNOLOGY, INC.	SA14-UOC01-006-001-cyc4	11 431	67,869	
UNIVERSITY CORPORATION FOR ATMOSPHERIC RESEARCH	SUBAWD000005	11 431	7,957	
UNIVERSITY CORPORATION FOR ATMOSPHERIC RESEARCH	Z17-28065	11 431	12,163	
UNIVERSITY OF WASHINGTON	59894	11 431	15,411	
CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE	P1670009	11 432	51,467	
ECS FEDERAL, INC	209023	11 432	(8,450)	
THE CULTURED ABALONE FARM LLC	201603461	11 432	53,541	
UNIVERSITY OF SOUTHERN CALIFORNIA	53335748	11 432	5,150	
UNIVERSITY OF SOUTHERN CALIFORNIA	75198802	11 432	16,791	
UNIVERSITY OF GEORGIA	RC282-395/S000698	11 433	34,910	
PACIFIC STATES MARINE FISHERIES COMMISSION	1618G	11 437	19,575	
PACIFIC STATES MARINE FISHERIES COMMISSION	17103G	11 437	4,859	
NORTH PACIFIC RESEARCH BOARD	A16-0378-001	11 439	60,148	
NORTH PACIFIC RESEARCH BOARD	A17-0159-001	11 439	134,783	
NATIONAL FISH AND WILDLIFE FOUNDATION	0303.16.052922	11 454	6,202	
NATIONAL FISH AND WILDLIFE FOUNDATION	63442	11 463	9,793	
SONOMA COUNTY WATER AGENCY	TW 1415-102	11 463	33,327	
ATLANTIC STATES MARINE FISHERIES COMMISSION	63439	11 469	11,936	
CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE	P1670004	11 472	574,927	
H.T. HARVEY & ASSOCIATES ECOLOGICAL CONSULTANTS	A15-0207-001	11 472	63,641	
NORTH PACIFIC RESEARCH BOARD	1303	11 472	2,953	
NORTH PACIFIC RESEARCH BOARD	1408	11 472	27,094	
NORTH PACIFIC RESEARCH BOARD	1416	11 472	(2,008)	
NORTH PACIFIC RESEARCH BOARD	1610	11 472	38,346	
PRINCE WILLIAM SOUND SCIENCE CENTER	12-81-01	11 472	239,652	
NATIONAL FISH AND WILDLIFE FOUNDATION	0302.16.053210	11 482	198	
NATURE CONSERVANCY	TNCHI_Scripps_NOAAMesophotic_1	11 482	4,790	

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Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	Federal CFDA #	FY 2017	
			Federal Expenditures	Pass-Through to Subrecipients
APPLIED TECHNOLOGY COUNCIL	1061-24-770 ( SB1341-13-CQ-000	11 609	222,364	
IOWA STATE UNIVERSITY	426-17-02B-cyc2	11 619	507,911	
COUNTY OF SONOMA	33A36	11 RD	49,806	
Subtotal Pass-Through and Partial Pass-Through Awards			3,472,789	-
Total Department of Commerce			34,337,651	1,917,732
DEPARTMENT OF DEFENSE				
Direct Awards				
DEPARTMENT OF AIR FORCE	Various	12 RD	29,423,734	4,821,563
DEPARTMENT OF ARMY	Various	12 RD	81,261,909	14,980,908
DEPARTMENT OF NAVY	Various	12 RD	94,863,161	9,685,449
DEPARTMENT OF NAVY (ARRA)	Various	12 RD	25,895	
DEFENSE ADVANCED RESEARCH PROJECTS AGENCY	Various	12 RD	45,512,514	11,326,979
SEPARATE AGENCIES	Various	12 RD	13,340,155	2,174,589
Sub-Total Direct Awards			264,427,368	42,989,488
Pass-Through and Partial Pass-Through				
LUNA INNOVATIONS INCORPORATED	007882	12 001	149,692	
TRISTAN TECHNOLOGIES	008776	12 001	17,915	
CALIFORNIA PARKS AND RECREATION, DEPARTMENT OF	C1370032	12 114	853,390	
DCS CORPORATION	APX03-S012 Task Order 0014	12 114	728,019	
PHYSICAL OPTICS CORPORATION	SB150124	12 114	22,995	
WESTON SOLUTIONS, INC.	0087111	12 114	41,268	
ARIZONA STATE UNIVERSITY/TEMPE	Sub 17-066 (N00014-16-1-3206)	12 300	108,420	
BOEING COMPANY, THE	PO NO. 1169752	12 300	149,929	
CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	SA0000447	12 300	2,505	
CARNEGIE MELLON UNIVERSITY	1141221-320624	12 300	5,528	
CHARLES RIVER ANALYTICS	SC1315901	12 300	245,181	
COLUMBIA UNIVERSITY	Sub 1(GG012351) N00014-15-1-26	12 300	40,334	
CRAYTEX, LLC	20163237	12 300	351,674	
DIRECTED VAPOR TECHNOLOGIES INTERNATIONAL, INC.	D0145-01-cyc1	12 300	9,275	
DUKE UNIVERSITY	13-ONR-1111	12 300	330,799	
DUKE UNIVERSITY	383-8476	12 300	75,906	
DYNACORP SYSTEM AND SOLUTIONS	59568	12 300	2,936	
FREEDOM PHOTONICS LLC	SB150098	12 300	76,733	
GENERAL ENGINEERING & RESEARCH, LLC	Sub 20125266 (N00173-14-1-G016	12 300	162,586	
GEORGIA INSTITUTE OF TECHNOLOGY	RE023-G2	12 300	80,795	
GEORGIA INSTITUTE OF TECHNOLOGY	RE866-G1	12 300	36,757	
GEORGIA INSTITUTE OF TECHNOLOGY	RG923-G1	12 300	417,548	
GEORGIA STATE UNIVERSITY	SP00011356-03	12 300	140,905	
GSI ENVIRONMENTAL, INC	13-009	12 300	98,464	
HIGH-TEST LABORATORIES, INC.	Sub 2103-001 (none)	12 300	49,282	
IRIS TECHNOLOGY	85298	12 300	(2,969)	

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**UNIVERSITY OF CALIFORNIA**  
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Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	Federal CFDA #	FY 2017	
			Federal Expenditures	Pass-Through to Subrecipients
JOHNS HOPKINS UNIVERSITY	2002694585	12 300	113,569	
LEHIGH UNIVERSITY	Sub 542549-78002 (N00014-11-1-	12 300	86,201	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	5710002996	12 300	291,467	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	94694	12 300	(1,410)	
NEW YORK UNIVERSITY	F7112-01:04	12 300	101,947	
NORTH CAROLINA STATE UNIVERSITY	SUB 2015-1959-03 (N00014-15-1-	12 300	295,985	
NORTHWESTERN UNIVERSITY	SP0028970-PROJ0007989:4	12 300	195,844	
OBJECTVIDEO, INC.	FINDER-7212-UCB-090113	12 300	(35,304)	
PHYSICAL OPTICS CORPORATION	7193-UCI-cyc1	12 300	12,804	
PURDUE UNIVERSITY	410478961	12 300	26,294	
QUANTITATIVE MORPHOLOGY CONSULTING	Sub 2015-5001 (N00014-12-1-051	12 300	82,019	
QUINSTAR TECHNOLOGY, INC	50961	12 300	9,999	
SIEMENS CORPORATION	1037-01-cyc1	12 300	43,833	
SMRU LIMITED	A17-0639-001	12 300	38,356	
STANFORD UNIVERSITY	60744755-114407-UCB	12 300	428,110	
THE TEXAS A&M UNIVERSITY SYSTEM	C2411	12 300	14,550	
TOYON RESEARCH CORPORATION	SC16-5968-1	12 300	124,426	
UNIVERSITY OF ARIZONA	008996	12 300	1,552	
UNIVERSITY OF ARIZONA	200257	12 300	397,650	
UNIVERSITY OF ARIZONA	206874	12 300	249,159	
UNIVERSITY OF ARIZONA	217733:1	12 300	181,306	
UNIVERSITY OF COLORADO BOULDER	1553360 (N0014-15-1-2809 )	12 300	275,645	
UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	1548376	12 300	71,722	
UNIVERSITY OF MARYLAND	Z8160002	12 300	239,721	
UNIVERSITY OF MASSACHUSETTS AMHERST	SUB 17-009730 B 00 (N00014-17-	12 300	31,385	
UNIVERSITY OF MICHIGAN	3003005562	12 300	73,517	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	Sub 5103081 (N00014-15-1-2578)	12 300	89,555	
UNIVERSITY OF NOTRE DAME (INCL GEM)	201839	12 300	145,689	
UNIVERSITY OF PENNSYLVANIA	559918	12 300	169,480	
UNIVERSITY OF PITTSBURGH	0035700 (409185-2)	12 300	(1,779)	
UNIVERSITY OF SOUTHERN CALIFORNIA	158857:10	12 300	77,699	
UNIVERSITY OF SOUTHERN CALIFORNIA	158860-cyc13	12 300	24,301	
UNIVERSITY OF SOUTHERN CALIFORNIA	82976179-cyc1	12 300	1,581	
UNIVERSITY OF SOUTHERN CALIFORNIA	85470620	12 300	20,740	
UNIVERSITY OF SOUTHERN CALIFORNIA	Sub 84902573 (N00014-17-1-2062	12 300	1,717	
UNIVERSITY OF TEXAS-AUSTIN	UTA11-000572	12 300	98,652	
UNIVERSITY OF VIRGINIA	GG11764 146901-cyc1	12 300	503,949	
UNIVERSITY OF VIRGINIA	GG11821 148033:01	12 300	70,026	
UNIVERSITY OF WASHINGTON	UWSC9067	12 300	297,676	
UNIVERSITY OF WASHINGTON	UWSC9069	12 300	3,695	
UNIVERSITY OF WISCONSIN-MADISON	590K122	12 300	18,742	
VANDERBILT UNIVERSITY	2489-018400	12 300	(891)	

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Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	Federal CFDA #	FY 2017	
			Federal Expenditures	Pass-Through to Subrecipients
WOODS HOLE OCEANOGRAPHIC INSTITUTION	Sub none (A100749)	12 300	(310)	
LEIDOS, INC.	Sub 10163495 (N62645-14-C-4030)	12 301	479,340	
GE GLOBAL RESEARCH	401077965-cyc1	12 335	19,598	
PHYSICAL OPTICS CORPORATION	7155-UCI-cyc1	12 335	15,000	
SOAR TECHNOLOGY, INC.	SC17008	12 340	47,830	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	8737B	12 340	(101)	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	88169	12 340	(658)	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	88172	12 340	(437)	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	88318	12 340	(545)	
CAYETANO HEREDIA UNIVERSITY	80582	12 350	3,657	
LEIDOS, INC.	Sub PO1014827 (N62645-12-C-410)	12 350	22	
METABIOTA, INC	201405DTRA	12 351	433,800	60,633
METABIOTA, INC	201406DTRA	12 351	838,202	465,000
QUANTITATIVE BIOSCIENCES, INC.	Sub none (HDTRA1-15-C-0064)	12 351	120,880	
TEMPLE UNIVERSITY	258954UCLA	12 351	37,833	
TEMPLE UNIVERSITY	79966	12 351	(24,908)	
TEXAS A&M UNIVERSITY - COLLEGE STATION	S162368/M1602830	12 351	82,438	
UNIVERSITY OF MICHIGAN	3003629387	12 351	261,958	
VANDERBILT UNIVERSITY	3044-018968	12 351	65,220	
WASHINGTON UNIVERSITY IN ST. LOUIS	Sub WU-15-309 (HDTRA11510032)	12 351	79,461	
LUNA INNOVATIONS INCORPORATED	3287-DPA-2S/UCI-cyc1	12 360	117,268	
AMERICAN BURN ASSOCIATION	201013674	12 420	98,716	
AMERICAN BURN ASSOCIATION	89821	12 420	18,795	
AMERICAN BURN ASSOCIATION	Sub NONE(W81XWH-10-1-0527)	12 420	240,405	
BANYAN BIOMARKERS	Sub ATO-06 (W81XWH-10-C-0251)	12 420	103	
BOSTON UNIVERSITY	4500000823:004	12 420	664,265	
BRONX VETERANS MEDICAL RESEARCH FOUNDATION	W81XWH-13-1-0071	12 420	49,146	
CALIFORNIA INSTITUTE FOR BIOMEDICAL RESEARCH	24233 ( W81XWH-15-1-0424 )	12 420	43,281	
CHILDREN'S NATIONAL MEDICAL CENTER	300013771201	12 420	(3,562)	
COGNIONICS, INC.	Sub UCSD093016 (W81XWH-16- C-0	12 420	49,832	
GENEVA FOUNDATION	201400882	12 420	4,402	
GENEVA FOUNDATION	S-1326-01:4	12 420	94,791	
GEORGETOWN UNIVERSITY	411097-GR405815-UCI-cyc3	12 420	64,168	
GEORGETOWN UNIVERSITY	411790_GR402344-UCI-cyc1	12 420	405,617	
GEORGETOWN UNIVERSITY	AWD-4222804-cyc1	12 420	355,599	
HARVARD UNIVERSITY	Sub 5060404 (W81XWH-12-2-0113)	12 420	15,557	
HENRY FORD HEALTH SYSTEM	B70089UCSF	12 420	133,912	
HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY MEDICINE	3582 PO 887817	12 420	25,183	
HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY MEDICINE	823738WX81XWH112017	12 420	260,309	
JOHNS HOPKINS UNIVERSITY	125025	12 420	167,046	
JOHNS HOPKINS UNIVERSITY	130812	12 420	51,607	
JOHNS HOPKINS UNIVERSITY	2000851841	12 420	90	

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		Federal CFDA #	Federal Expenditures	Pass-Through to Subrecipients
JOHNS HOPKINS UNIVERSITY	2002015246/METRC2	12 420	42,824	
JOHNS HOPKINS UNIVERSITY	2002397378:1	12 420	65,628	
JOHNS HOPKINS UNIVERSITY	2002431696	12 420	254	
JOHNS HOPKINS UNIVERSITY	2003195468	12 420	3,866	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B612254	12 420	24,949	
MASSACHUSETTS GENERAL HOSPITAL	229338-cyc1	12 420	34,639	
MEDICAL COLLEGE OF WISCONSIN	20153757:1	12 420	625,559	
MEDICAL COLLEGE OF WISCONSIN	A125339	12 420	(5,379)	
NATIONAL JEWISH HEALTH	20108701	12 420	23,317	
NATIONAL TRAUMA INSTITUTE	89806	12 420	(60,280)	
NATIONAL TRAUMA INSTITUTE	NTI-JWMP-201501	12 420	51,702	
NATIONAL TRAUMA INSTITUTE	NTI-NTRR15-05	12 420	37,445	
NATIONAL TRAUMA INSTITUTE	Sub NTI-JWMP-201502(W81XWH-15	12 420	94,252	42,995
NEW YORK UNIVERSITY	11-01935	12 420	(49,839)	
NEW YORK UNIVERSITY	13-A0-00-001212	12 420	219,299	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	1810	12 420	18,586	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	1812	12 420	33,701	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	85312	12 420	7,052	7,052
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	94109	12 420	48	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	WEI1872-02	12 420	313,670	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	WEI187205094728	12 420	21,704	
NORTHWESTERN UNIVERSITY	60038197 UCLA:A01	12 420	(561)	
OCEANIT LABORATORIES, INC.	20171946	12 420	19,578	
PACIFIC HEALTH RESEARCH AND EDUCATION INSTITUTE	Sub PHREI-21501-01(W81XWH-15-1	12 420	36,702	
PARTNERS HEALTHCARE SYSTEM, INC	228593	12 420	115,380	
PELAGIQUE, LLC	W81XWH	12 420	3,841	
PURDUE UNIVERSITY	4104-64057	12 420	132,054	
RESEARCH FOUNDATION FOR MENTAL HYGIENE	26001	12 420	2,742	
RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	8222	12 420	7,281	
SPR THERAPEUTICS LLC	Sub 20161887 (W81XWH-12-2-0132	12 420	41,587	
STANFORD UNIVERSITY	60920976-113110-cyc2	12 420	2,562	
STANFORD UNIVERSITY	61112906-117345	12 420	64,442	
STANFORD UNIVERSITY	61357202-122325	12 420	60,190	
STANFORD UNIVERSITY	61414227-117996	12 420	20,522	
STATE UNIVERSITY SYSTEM OF FLORIDA	22206065	12 420	58,695	
TERUMO CORPORATION	W81XWH-13-C-0160	12 420	8,649	
UNIVERSITY OF MICHIGAN	3003219081:1	12 420	125,025	
UNIVERSITY OF PENNSYLVANIA	560142/3724801	12 420	46,873	
UNIVERSITY OF SOUTHERN CALIFORNIA	69094653-cyc1	12 420	1,000	
UNIVERSITY OF SOUTHERN CALIFORNIA	69986229-cyc1	12 420	4,000	
UNIVERSITY OF TEXAS MEDICAL BRANCH AT GALVESTON	15-017	12 420	86,247	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	8720G	12 420	(901)	

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			Federal Expenditures	Pass-Through to Subrecipients
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	87488	12 420	(819)	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	88206	12 420	(2,110)	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	88222	12 420	(2,183)	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	88223	12 420	(8,309)	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	88378	12 420	(2,440)	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	88380	12 420	(892)	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA ACHESON (W81XWH-16-1-0015)	12 420	11,537	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA ADV ALLARD (W81XWH-15-1-03	12 420	12,822	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA ADV GOLSHAN W81XWH-15-1-03	12 420	26,823	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA ADV LANG (W81XWH-15-1-0330	12 420	21,764	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA ADV NORMAN (W81XWH-15-1-03	12 420	43,105	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA ALLARD ( W81XWH-11-1-0073	12 420	10,258	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA BAKER (W81XWH-16-1-0015)	12 420	38,284	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Delarosa 316416 ( W81XWH-1	12 420	16,267	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA JAK (W81XWH-11-1-0641)	12 420	11,462	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA JAK 08174004 (W81XWH-11-1-	12 420	6,846	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA JAK(W81XWH-11-1-0641)	12 420	9,904	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Lang 298028 (W81XWH-10-1-0	12 420	16,946	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Mills 307391 (W81XWH-12-1-	12 420	1,691	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA MORLAND(W81XWH-12-1-0614)	12 420	1,302	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Norman ( W81XWH-11-1-0073	12 420	19,373	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Norman (W81XWH-15-1-0030)	12 420	3,312	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA NORMAN/09054002 (W81XWH-15	12 420	11,053	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Rodgers 301910 (W81XWH-10-	12 420	1,334	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA ZURAW 08842001 (W81XWH-14-	12 420	13,513	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA ZURAW 313179 W81XWH-14-050	12 420	78,985	
WAKE FOREST UNIVERSITY	WFOHS 441005B GU-05	12 420	67,051	
WAKE FOREST UNIVERSITY	WFOHS 441042 CTA-12.4	12 420	109,907	
UNIVERSITY OF PUERTO RICO	88739	12 421	2,802	
BROWN UNIVERSITY	Sub 00000820 (W911NF-15-2-0122	12 431	92,851	
CALIFORNIA INSTITUTE OF TECHNOLOGY	43B-1097280	12 431	420,966	
CALIFORNIA INSTITUTE OF TECHNOLOGY	Sub 43B-1097279 (W911NF-16-1-0	12 431	181,390	
CALIFORNIA STATE UNIVERSITY, NORTHRIDGE	F-14-3462UCLA:3	12 431	86,562	
CARNEGIE MELLON UNIVERSITY	1990360-350166	12 431	50,733	
CASE WESTERN RESERVE UNIVERSITY	RES509887	12 431	22,150	
COLORADO STATE UNIVERSITY	G-33024-1-CYC1	12 431	15,363	
CORNELL UNIVERSITY	76091-10531	12 431	827,194	
CORNELL UNIVERSITY	78845-10693	12 431	168,266	
DCS CORPORATION	None (W911NF-10-2-0022)	12 431	659,965	
DUKE UNIVERSITY	313-0590-cyc1	12 431	147,110	
GALOIS INC	2015-001-cyc5	12 431	474,148	
GALOIS INC	2015-001-cyc8	12 431	9,929	

The accompanying notes are an integral part of this schedule.

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Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	FY 2017		
		Federal CFDA #	Federal Expenditures	Pass-Through to Subrecipients
GEORGIA INSTITUTE OF TECHNOLOGY	RF228-G1	12 431	240,753	
GEORGIA INSTITUTE OF TECHNOLOGY	RF386-S3	12 431	160,745	
HARVARD UNIVERSITY	152295.5082220.0002	12 431	251,543	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B617445	12 431	367,078	
LEHIGH UNIVERSITY	543152-78001:2	12 431	85,685	
MAXENTRIC TECHNOLOGIES LLC	89459	12 431	6,407	
METRO ENGINEERING AND SURVEYING CO., INC.	85290	12 431	4,602	
MICROELECTRONICS ADVANCED RESEARCH CORPORATION	2013-MA-2382	12 431	5,218,794	3,590,331
OCEAN NANOTECH	20143181	12 431	313,843	
OEWAVES	20161012	12 431	108,227	
OHIO STATE UNIVERSITY	60043375/RF01358012:03	12 431	160,183	
STANFORD UNIVERSITY	60284806-107307-C	12 431	216,830	
TOYON RESEARCH CORPORATION	SC16-6970-1	12 431	93,752	
UNIVERSITY OF CHICAGO	FP057787-C:3	12 431	3,848	
UNIVERSITY OF ILLINOIS	Sub 2015-05174-03 (W911NF-15-1	12 431	142,967	
UNIVERSITY OF MARYLAND	37919-Z8424101	12 431	141,510	
UNIVERSITY OF MASSACHUSETTS AMHERST	16-008956 B 00 (W911NF-15-1-05	12 431	402,798	
UNIVERSITY OF MICHIGAN	3001996186	12 431	1,744	
UNIVERSITY OF MICHIGAN	3001996235:9	12 431	43,712	
UNIVERSITY OF MICHIGAN	Sub 3002677619 (W911NF-11-1-03	12 431	414,701	31,686
UNIVERSITY OF MISSOURI	C00045065-2	12 431	291,796	
UNIVERSITY OF MISSOURI	C00045065-3	12 431	201,686	
UNIVERSITY OF NORTH CAROLINA AT CHARLOTTE	SUB 20160506-02-RUC (W911NF-12	12 431	34,883	
UNIVERSITY OF SOUTHERN CALIFORNIA	80483423	12 431	43,195	
UNIVERSITY OF TEXAS-AUSTIN	UTA14-000975	12 431	51,513	
ZYMERGEN, INC.	4282	12 431	121,988	
INSTITUTE OF INTERNATIONAL EDUCATION	0054-UCLA-10:1	12 550	235,737	
LEMON GROVE SCHOOL DISTRICT	B 20134296 (DOD DEPENDENT SCH)	12 556	1,931	
UNIVERSITY OF PITTSBURGH	0043845-1	12 561	163,579	
HYPRES, INC.	20153278	12 615	222,093	
UNIVERSITY OF SOUTHERN CALIFORNIA	113597-1-cyc1	12 617	94,846	
ACADEMY OF APPLIED SCIENCE	AAS-203759-cyc1	12 630	991	
ACADEMY OF APPLIED SCIENCE	AAS-203763-cyc1	12 630	991	
ACADEMY OF APPLIED SCIENCE	AAS-206699-cyc1	12 630	14,841	
ACADEMY OF APPLIED SCIENCE	AAS-206700-cyc1	12 630	9,105	
CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	SA0000537	12 630	13,568	
CREATIVE ENGINEERING SOLUTIONS	20141952	12 630	37,110	
CSU SAN BERNARDINO/UNIVERSITY ENTERPRISES CORPORATION	57996	12 630	(7)	
PENNSYLVANIA STATE UNIVERSITY	006576	12 630	195,347	
PENNSYLVANIA STATE UNIVERSITY	4957UCDARMY0045	12 630	259,974	
RAYTHEON BBN TECHNOLOGIES CORP.	W911NF-09-2-0053	12 630	744,961	
SYSTEM OF SYSTEMS SECURITY CONSORTIUM	Sub 1006-15-1-3 (W15QKN-12-9-1	12 630	152,015	

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			Federal Expenditures	Pass-Through to Subrecipients
THE RESEARCH CORPORATION OF THE UNIVERSITY OF HAWAII	77493	12 630	(7)	
TULANE UNIVERSITY	TUL-SCC-553849-15/16	12 630	73,080	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA LEUNG (W81XWH-16-1-0754)	12 630	18,114	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA MAIHOLFER (W81XWH-16-1-001	12 630	16,866	
HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY MEDICINE	2942	12 750	8,748,515	
HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY MEDICINE	3404	12 750	1,809	
HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY MEDICINE	Sub 2880/837344 (HU0001-15-2-0	12 750	459,499	
APOGEE RESEARCH LLC	201802-cyc5	12 800	189,848	
APOGEE RESEARCH LLC	201802-cyc8	12 800	1,804	
ASSURED INFORMATION SECURITY, INC.	C231-SA-cyc1	12 800	13,977	
BAE SYSTEMS (GREAT BRITAIN)	316063	12 800	764,499	
BINGHAMTON UNIVERSITY	72611	12 800	18,004	
BORON SPECIALTIES, LLC	20163342	12 800	45,000	
BROWN UNIVERSITY	00000552	12 800	163,361	
CALIFORNIA INSTITUTE OF TECHNOLOGY	52-1092313:07	12 800	164,508	
CARBON TECHNOLOGY, INC.	CTI-205420-cyc1	12 800	48,823	
CFD RESEARCH CORPORATION	20121004	12 800	216,756	
CHEMAT TECHNOLOGY, INC.	88893	12 800	(3,591)	
FLEXTECH ALLIANCE	Sub MCA 00009475 (042299)	12 800	31,204	
FLORIDA TURBINE TECHNOLOGIES, INC.	FTT160403	12 800	50,104	
GEORGE MASON UNIVERSITY	E203722-1-cyc1	12 800	130,615	
GEORGIA INSTITUTE OF TECHNOLOGY	RB267-G4	12 800	(4)	
HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY MEDICINE	2888	12 800	43,013	
JOHNS HOPKINS UNIVERSITY	2001622119	12 800	177,786	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	5710003664	12 800	291,535	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	7000289513	12 800	(4)	
METRO LASER	UCI23WP32-cyc1	12 800	11,172	
MICROXACT INCORPORATED	59469	12 800	8,402	
MORTON PHOTONICS	MP-UCSB-03	12 800	172,883	
NORTHWESTERN UNIVERSITY	Sub SP0032777-PROJ0008738 ( FA	12 800	819,589	
RICE UNIVERSITY	007847	12 800	202,411	
RICE UNIVERSITY	59621	12 800	120,566	
STANFORD UNIVERSITY	008542	12 800	4,614	
STANFORD UNIVERSITY	29017650-51649-B	12 800	164,701	
STANFORD UNIVERSITY	29182280-51677-C	12 800	324,461	
STANFORD UNIVERSITY	60796566-114411:02	12 800	151,636	
STANFORD UNIVERSITY	79531	12 800	(257)	
STATE UNIVERSITY OF NEW YORK	SB160126-0001	12 800	560,473	
STATE UNIVERSITY OF NEW YORK	SB160126-0001B	12 800	59,302	
STATE UNIVERSITY OF NEW YORK	SB160126-0003	12 800	629,862	
STATE UNIVERSITY OF NEW YORK	SB160126-0003B	12 800	323,379	
STATE UNIVERSITY OF NEW YORK	SB160126-0004	12 800	448,511	

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			Federal Expenditures	Pass-Through to Subrecipients
STATE UNIVERSITY OF NEW YORK	SB160126-0004B	12 800	186,292	
STATE UNIVERSITY OF NEW YORK	SB160126-0005	12 800	466,623	
STATE UNIVERSITY OF NEW YORK	SB160126-0005B	12 800	93,475	
STATE UNIVERSITY OF NEW YORK	SB160126-0007	12 800	338,388	
STATE UNIVERSITY OF NEW YORK	SB160126-0007B	12 800	90,358	
STATE UNIVERSITY OF NEW YORK	SB160126-A	12 800	364,211	
STATE UNIVERSITY OF NEW YORK	SB160126-Academy1A	12 800	232,967	
STATE UNIVERSITY OF NEW YORK	SB160126-Academy2B	12 800	2,639	
STATE UNIVERSITY OF NEW YORK	SB160126-Academy3B	12 800	16,641	
STONY BROOK UNIVERSITY (A STATE UNIVERSITY OF NEW YORK CAMPUS)	70297-1122373-2-cyc1	12 800	67,292	
STONY BROOK UNIVERSITY (A STATE UNIVERSITY OF NEW YORK CAMPUS)	77020-1137156-2-cyc1	12 800	15,433	
TECHNOLOGY ASSESSMENT AND TRANSFER, INC.	59731	12 800	(3,890)	
UNIVERSITY OF BATH	Sub none (FA8655-13-1-3056)	12 800	42,077	
UNIVERSITY OF CENTRAL FLORIDA	24086151-01	12 800	297,736	
UNIVERSITY OF CONNECTICUT	SUB 141414 (FA9550-14-1-0351)	12 800	269,906	
UNIVERSITY OF ILLINOIS	065435-13908	12 800	154,701	
UNIVERSITY OF ILLINOIS	079253-15763-cyc3	12 800	155,504	
UNIVERSITY OF ILLINOIS	2010-04904-03	12 800	14,875	
UNIVERSITY OF MARYLAND	36954Z8165003	12 800	158,870	
UNIVERSITY OF MARYLAND	7479-Z8142001:E	12 800	44,972	
UNIVERSITY OF MARYLAND	Z812401:C	12 800	71,362	
UNIVERSITY OF MICHIGAN	3003832475	12 800	86,646	
UNIVERSITY OF MICHIGAN	Sub 20124774(UNKNOWN)	12 800	188,271	
UNIVERSITY OF MINNESOTA	A004376801	12 800	120,389	
UNIVERSITY OF NEW MEXICO	271387-870D-cyc10	12 800	352,275	
UNIVERSITY OF PENNSYLVANIA	96045	12 800	0	
UNIVERSITY OF PENNSYLVANIA	Sub 561009 (FA9550-13-1-0097)	12 800	144,162	
UNIVERSITY OF SOUTHERN CALIFORNIA	55231182-cyc2	12 800	159,592	
UNIVERSITY OF TEXAS SYSTEM	UTA14-001123	12 800	44,049	
UNIVERSITY OF TEXAS-AUSTIN	UTA12-000748	12 800	966	
UNIVERSITY OF TEXAS-PAN AMERICAN FOUNDATION	12602015166:1	12 800	259,751	
UNIVERSITY OF UTAH	10038423-S2	12 800	91,361	
UNIVERSITY OF WASHINGTON	A16-0323-001	12 800	150,556	
UNIVERSITY OF WASHINGTON	SUB UWSC8748 (BPO10328)	12 800	143,932	
UNIVERSITY OF WISCONSIN-MADISON	580K742	12 800	12,436	
VIBRANT	784	12 800	113,947	
VOXTEL, INC	AFRL-16-7638-UCI-ML-cyc1	12 800	118,355	
YALE UNIVERSITY	876E7	12 800	20,720	
YALE UNIVERSITY	Sub C13L11586 (FA9550-13-1-002	12 800	550	
SCIENTIFIC SIMULATION SYSTEMS, INC.	1409-SC002/FA7000-14-2-0017	12 801	160,241	
CARNEGIE MELLON UNIVERSITY	1990365-346574-cyc2	12 902	98,542	
ABBOTT LABORATORIES (INCL PERCLOSE)	20170050 ( HR0011-16-C-0065 )	12 910	87,957	

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			Federal Expenditures	Pass-Through to Subrecipients
ADVANCED BRAIN MONITORING, INC.	88421	12 910	46,755	
ARIZONA STATE UNIVERSITY/TEMPE	16-889-cyc3	12 910	69,358	
ARIZONA STATE UNIVERSITY/TEMPE	17055	12 910	34,002	
AURRION, LLC.	SB120043	12 910	35,409	
BAE SYSTEMS INFORMATION AND ELECTRONIC SYSTEMS INTEGRATION INC.	89175	12 910	(4,599)	
BOEING COMPANY, THE	1250821	12 910	163,951	
BROWN UNIVERSITY	A16-0282-001	12 910	39,873	
BROWN UNIVERSITY	Sub 00001055 (N66001-17-C-4013	12 910	67,803	
CALIFORNIA INSTITUTE OF TECHNOLOGY	008138	12 910	99,838	
CHARLES RIVER ANALYTICS	SC1315902 (APPRIL)-CYC1	12 910	180,130	
COLUMBIA UNIVERSITY	1(GG011207)-cyc1	12 910	139,029	
CREONEX SYSTEMS	20143806	12 910	11,255	
CREONEX SYSTEMS	20152726	12 910	17,571	
ERC, INCORPORATED	PO NO. PS160001	12 910	180,473	
HARVARD UNIVERSITY	152236.5099921.0005-cyc1	12 910	29,180	
HARVARD UNIVERSITY	Sub 152220.5094542.0003	12 910	268,379	
HONEYWELL INTERNATIONAL INC.	86026	12 910	(2,897)	
HP INC.	HPL-MM-UCSB-0007-1	12 910	54,450	
HRL LABORATORIES, LLC	15041-160573-DS	12 910	71,609	
INTERNATIONAL BUSINESS MACHINES CORPORATION	Sub 4915012801 (W911NF-15-C-02	12 910	90,215	
JOHNS HOPKINS UNIVERSITY	2003366140	12 910	77,758	
JOHNS HOPKINS UNIVERSITY	2003367845	12 910	209,528	
LEIDOS, INC.	P010166985-cyc5	12 910	287,478	229,138
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	5710003491	12 910	(4,009)	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	5710003584	12 910	129,883	
MICROELECTRONICS ADVANCED RESEARCH CORPORATION	006094	12 910	113,996	
MICROELECTRONICS ADVANCED RESEARCH CORPORATION	006096	12 910	233,526	
MICROELECTRONICS ADVANCED RESEARCH CORPORATION	006098	12 910	242,944	
MICROELECTRONICS ADVANCED RESEARCH CORPORATION	006101	12 910	160,042	
MICROELECTRONICS ADVANCED RESEARCH CORPORATION	006111	12 910	237,546	
MICROELECTRONICS ADVANCED RESEARCH CORPORATION	2013-MA-2386	12 910	6,224,268	3,031,253
MICROELECTRONICS ADVANCED RESEARCH CORPORATION	442580/2A-57125	12 910	146,098	
MORTON PHOTONICS	59464	12 910	1,058	
NORTHEASTERN UNIVERSITY	505068-708050	12 910	412,899	
NORTHWESTERN UNIVERSITY	25543	12 910	10,114	
RAYTHEON BBN TECHNOLOGIES CORP.	008658	12 910	53,726	
SLS GR LLC	A15-0023	12 910	12,805	
SOTERA DEFENSE SOLUTIONS, INC.	SC150119	12 910	135,954	
SOUTHWEST SCIENCES, INC.,	20162036	12 910	24,000	
SRI INTERNATIONAL	27-001455	12 910	236,217	
TELEDYNE SCIENTIFIC & IMAGING LLC	008322	12 910	202,028	
TELEDYNE TECHNOLOGIES, INC.	PO00099849	12 910	89,478	

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TELEDYNE TECHNOLOGIES, INC.	PO00099889	12 910	53,176	
TELEDYNE TECHNOLOGIES, INC.	PO00118622	12 910	53,093	
UNIVERSITY OF COLORADO BOULDER	1550663	12 910	64,524	
UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	1550652:7	12 910	188,753	
UNIVERSITY OF MASSACHUSETTS MEDICAL SCHOOL	WA00419007/OSP2016183	12 910	116,346	
UNIVERSITY OF MELBOURNE	DARPA-CROZIER-1	12 910	298,563	
UNIVERSITY OF MINNESOTA	006112	12 910	156,982	
UNIVERSITY OF MINNESOTA	008590	12 910	137,742	
UNIVERSITY OF MINNESOTA	A002069701:7	12 910	337,722	
UNIVERSITY OF NOTRE DAME (INCL GEM)	202092-UCB LEAST	12 910	172,328	
UNIVERSITY OF NOTRE DAME (INCL GEM)	SB150081	12 910	159,055	
UNIVERSITY OF UTAH	10036982-UCI-cyc1	12 910	399,773	
UNIVERSITY OF UTAH	SUB 10038364-UCSD (N66001-15-2	12 910	18,836	
VANDERBILT UNIVERSITY	007905	12 910	169,176	
VANDERBILT UNIVERSITY	3128-019187	12 910	609,998	
WHITEHEAD INSTITUTE FOR BIOMEDICAL RESEARCH	79641	12 910	(7,768)	
AGILTRON, INC.	87968	12 RD	(55,000)	
AMERICAN BURN ASSOCIATION	201016372	12 RD	47,286	
AMERICAN BURN ASSOCIATION	201119157	12 RD	30,061	
AMERICAN BURN ASSOCIATION	201120166	12 RD	12,653	
AMERICAN BURN ASSOCIATION	201121884	12 RD	10,716	
AMERICAN BURN ASSOCIATION	201401038	12 RD	16,721	
ANALOG PHOTONICS LLC	Sub-2-HR0011-16- C-0108	12 RD	116,520	
ARGONNE NATIONAL LABORATORY (DOE GOCO LAB OPERATED BY UNIV OF CHICAGO)	6F30603	12 RD	149,611	
BAE SYSTEMS (GREAT BRITAIN)	846660	12 RD	124,087	
BOEING COMPANY, THE	1078934	12 RD	9,553	
BRAIN TRAUMA FOUNDATION, INC.	A120415	12 RD	33,095	
CALIFORNIA PARKS AND RECREATION, DEPARTMENT OF	C1370016	12 RD	47,146	
CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	SA0000449	12 RD	14,485	
CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	Sub NONE(SA0000453)	12 RD	80,107	
CH2M HILL	1306090	12 RD	10,322	
COLUMBIA UNIVERSITY	2GG011207	12 RD	135,664	
DISTANT FOCUS CORPORATION	SUB PO 3344 (W15QKN-15-C-0026)	12 RD	23,984	
ENGILITY CORP.	2015SEGL0112	12 RD	143,140	
ENSCO, INC.	G273613851	12 RD	81,251	
ENSCO, INC.	G273713884	12 RD	165,331	
FLEXTECH ALLIANCE	042299	12 RD	25,408	
FLEXTECH ALLIANCE	RFP15-175	12 RD	47,096	
HLS RESEARCH, INC.	Sub 2011-103 ( N00014-10-C-044	12 RD	25,345	
INSTITUTE OF MOLECULAR AND CELL BIOLOGY	RL2016-157	12 RD	18,463	
JOHNS HOPKINS UNIVERSITY	118122	12 RD	14,766	
JOHNS HOPKINS UNIVERSITY	134841	12 RD	34,659	

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JOHNS HOPKINS UNIVERSITY	2002761143	12 RD	132,451	
KITWARE, INC.	K001892-00-S02	12 RD	213,737	
LOCKHEED MARTIN CORPORATION	LC4101833507	12 RD	3,820	
LOGISTIC GLIDERS INC	201502221	12 RD	14,060	
LOGISTIC GLIDERS INC	201602876	12 RD	99,384	
LOS ALAMOS NATIONAL SECURITY, LLC	346271	12 RD	76,086	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	5710003875	12 RD	253,045	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	5710003876	12 RD	133,146	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	5710003939	12 RD	221,044	46,599
MATERIALS SCIENCES CORPORATION	208285 P.O. 10199-SD36-cyc1	12 RD	461	
MATRIX RESEARCH, INC.	SUBCONTRACT 20140236	12 RD	38,636	
MAYACHITRA, INC.	007843	12 RD	95,789	
MAYACHITRA, INC.	008228	12 RD	84,126	
MAYACHITRA, INC.	57959	12 RD	5,561	
MAYACHITRA, INC.	MC68335-16-C-0028	12 RD	184,348	
MCCONNELL FOUNDATION (THE)	29B39	12 RD	8,675	
METRON, INCORPORATED	008423	12 RD	60,312	
MICROELECTRONICS ADVANCED RESEARCH CORPORATION	20130445	12 RD	174,988	
MICROELECTRONICS ADVANCED RESEARCH CORPORATION	20130533	12 RD	196,912	
NEW JERSEY INSTITUTE OF TECHNOLOGY	SUB (NP) 996402(W911NF-15-C-02	12 RD	62,443	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	1679	12 RD	44,522	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	1680	12 RD	9,718	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	1684	12 RD	2,605	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	88130	12 RD	48,492	179,811
NORTHROP GRUMMAN SYSTEMS CORPORATION	4502026470	12 RD	83,935	
OLEANDR SCIENTIFIC LLC	OS-205266-cyc1	12 RD	60,000	
ORACLE CORPORATION	8713D	12 RD	20,791	
OREGON STATE UNIVERSITY	96143	12 RD	10	
PENNSYLVANIA STATE UNIVERSITY	5576UCDACC0003	12 RD	21,435	
PRINCETON UNIVERSITY	SUB0000116	12 RD	18,091	
RADIABEAM TECHNOLOGIES, LLC	201504143	12 RD	31,023	
RADIABEAM TECHNOLOGIES, LLC	201602621	12 RD	31,240	
RAYTHEON BBN TECHNOLOGIES CORP.	007176	12 RD	133,866	
RAYTHEON BBN TECHNOLOGIES CORP.	W911NF0920053	12 RD	187,743	
RAYTHEON COMPANY	85684	12 RD	(2,161)	
ROYAL CALIBER LLC	201500146	12 RD	131,850	
SOAR TECHNOLOGY, INC.	1028102UCDavis	12 RD	19,500	
SOUTHERN METHODIST UNIVERSITY	GA00137-7510	12 RD	30,567	
STATE UNIVERSITY OF NEW YORK POLYTECHNIC INSTITUTE	AIM-014 C.1	12 RD	121,158	
STATE UNIVERSITY OF NEW YORK POLYTECHNIC INSTITUTE	AIM-014 C.2	12 RD	219,339	
SYLVATICA BIOTECH, INC.	20162072	12 RD	14,569	
TELEDYNE TECHNOLOGIES, INC.	G9U571158	12 RD	25,916	

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TULANE UNIVERSITY	TULHSC5131314	12 RD	23,177	
UNIVERSITY OF ALASKA	15-0068 (P.O. P0487114)	12 RD	258,076	
UNIVERSITY OF ALASKA	UAF 17-0094	12 RD	68,397	
UNIVERSITY OF CENTRAL FLORIDA	24086133-02	12 RD	140,835	
UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	W81XWH-15-1-0584	12 RD	67,056	
UNIVERSITY OF IDAHO	GWK121SB001	12 RD	86,648	
UNIVERSITY OF ILLINOIS	077083-16369	12 RD	106,177	
UNIVERSITY OF ILLINOIS	2013-01024-01	12 RD	914,305	
UNIVERSITY OF INNSBRUCK	030378	12 RD	25,675	
UNIVERSITY OF MICHIGAN	3002565241	12 RD	90,470	
UNIVERSITY OF SOUTHERN CALIFORNIA	Sub 48894253 (HR0011-12-C-0094	12 RD	129,896	
VACUUM PROCESS ENGINEERING, INC	201502661	12 RD	37,167	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	83595	12 RD	(2,985)	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA NIEVERGELT (W81XWH-16-1-00	12 RD	18,516	
VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY	450319-19A28	12 RD	45,459	
ZYMERGEN, INC.	4209	12 RD	103,249	
Subtotal Pass-Through and Partial Pass-Through Awards			73,316,031	7,684,498
Total Department of Defense			337,743,399	50,673,986
CENTRAL INTELLIGENCE AGENCY				
Pass-Through and Partial Pass-Through				
UNIVERSITY OF UTAH	006950	13 431	202,027	
DUKE UNIVERSITY	283-0280	13 RD	418,166	
DUKE UNIVERSITY	283-1047	13 RD	27,097	
Total Central Intelligence Agency			647,290	-
HOUSING & URBAN DEVELOPMENT				
Direct Awards	Various	14 RD	63,845	
Pass-Through and Partial Pass-Through				
NORTH CAROLINA STATE UNIVERSITY	2016-0720-04	14 008	41,962	
Total Housing & Urban Development			105,807	-
DEPARTMENT OF INTERIOR				
Direct Awards	Various	15 RD	15,014,037	595,780
Pass-Through and Partial Pass-Through				
UNIVERSITY OF NEVADA, LAS VEGAS/UNLV RESEARCH FOUNDATION	007919	15 231	45,423	
UNIVERSITY OF WISCONSIN-MADISON	714K335	15 232	8,214	
CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	SA0000474	15 423	40,193	
CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	SA0000513	15 423	111,773	
CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	SA0000544	15 423	92,729	
METROPOLITAN WATER DIST OF SO CALIFORNIA	163764	15 530	4,045	
METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA	008263	15 530	6,249	

The accompanying notes are an integral part of this schedule.

**UNIVERSITY OF CALIFORNIA**  
**Schedule of Expenditures of Federal Awards**  
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Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	Federal CFDA #	FY 2017	
			Federal Expenditures	Pass-Through to Subrecipients
METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA	008264	15 530	9,101	
METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA	008266	15 530	10,000	
STATE UNIVERSITY OF NEW YORK	67464	15 608	8,488	
MISSISSIPPI STATE UNIVERSITY	7518B2200001	15 611	500	
CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE	P1382003	15 615	10,453	
CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE	P1582003	15 615	17,282	
CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE	P1620105	15 615	485	
CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE	P1480014	15 634	28,026	
CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE	P1680038	15 634	38,937	
CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE	P1691005	15 634	8,985	
CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE	P1482005	15 650	96,338	
SOUTHWEST WETLANDS INTERPRETIVE ASSOCIATION	20160861	15 650	25,034	
SRI INTERNATIONAL	69-000539-cyc7	15 650	8,680	
WILDLIFE MANAGEMENT INSTITUTE	63495	15 657	20,182	
WILDLIFE MANAGEMENT INSTITUTE	A16-0493-001	15 657	56,196	
NATIONAL FISH AND WILDLIFE FOUNDATION	0104.14.041425	15 663	(47)	
TROUT UNLIMITED	20162013	15 663	120,855	
NORTH SLOPE BOROUGH (ALASKA)	2015-131	15 668	29,676	
SONOMA ECOLOGY CENTER	20110725CALCCSUBUCDICE	15 669	0	
UNIVERSITY OF SOUTH CAROLINA	007931	15 805	40,580	
UNIVERSITY OF SOUTHERN CALIFORNIA	39072289:3	15 808	3,968	
UNIVERSITY OF SOUTHERN CALIFORNIA	49239887:3	15 808	22,756	
UNIVERSITY OF SOUTHERN CALIFORNIA	50030741:1	15 808	20,126	
UNIVERSITY OF SOUTHERN CALIFORNIA	57266713:2	15 808	11,850	
AMERICAVIEW, INC.	AV13CA01	15 815	23,166	
NATURE CONSERVANCY	OCS-NCEAS-02012016	15 820	179,932	
UNIVERSITY OF ARIZONA	131696	15 820	12,083	
UNIVERSITY OF ARIZONA	221641	15 820	85,218	
UNIVERSITY OF ARIZONA	223659	15 820	28,732	
UNIVERSITY OF ARIZONA	227572:1	15 820	12,647	
UNIVERSITY OF ARIZONA	288625	15 820	256,258	
UNIVERSITY OF ARIZONA	G15AP00174	15 820	31,394	
UNIVERSITY OF ARIZONA	Y561461:7	15 820	108,087	
UNIVERSITY OF ARIZONA	Y561946	15 820	88,929	
CALIFORNIA PARKS AND RECREATION, DEPARTMENT OF	80030	15 904	9,000	
UNIVERSITY OF WASHINGTON	27913	15 954	(2,381)	
CALIFORNIA DEPARTMENT OF INDUSTRIAL RELATIONS	C8957513	15 RD	9,000	
CALIFORNIA DIVISION OF BOATING AND WATERWAYS	C1370030	15 RD	274,583	
UNIVERSITY OF GEORGIA	RR2677094353608	15 RD	27,413	
Subtotal Pass-Through and Partial Pass-Through Awards			2,041,138	-
Total Department of Interior			17,055,175	595,780

The accompanying notes are an integral part of this schedule.

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		Federal		Federal Expenditures	Pass-Through to Subrecipients
		CFDA #			
DEPARTMENT OF JUSTICE					
Direct Awards	Various	16	RD	2,437,387	182,798
Pass-Through and Partial Pass-Through					
UNIVERSITY OF SOUTHERN CALIFORNIA	74457911-cyc1	16	123	28,094	
ARKANSAS STATE UNIVESITY	14-678-15-cyc1	16	560	79,980	
PACIFIC INSTITUTE FOR RESEARCH AND EVALUATION	Sub 0874(2016-CK-BX-0008)	16	560	7,903	
UNIVERSITY OF COLORADO BOULDER	1553430 ( 2015-DN-BX-K016	16	560	35,154	
UNIVERSITY OF WASHINGTON	UWSC8970-cyc1	16	560	20,153	
CALIFORNIA EMERGENCY MANAGEMENT AGENCY	XE16 01 1792	16	575	51,810	
NATIONAL 4-H COUNCIL	21B74	16	726	31,162	12,050
NATIONAL 4-H COUNCIL	71A77	16	726	136,757	62,146
Subtotal Pass-Through and Partial Pass-Through Awards				391,013	74,196
Total Department of Justice				2,828,400	256,994
DEPARTMENT OF LABOR					
Direct Awards	Various	17	RD	53,955	
Pass-Through and Partial Pass-Through					
CITY OF SANTA ANA	20656	17	258	(32,504)	
CALIFORNIA EMPLOYMENT DEVELOPMENT DEPARTMENT	M6102380	17	261	102,106	
CHAFFEY COLLEGE	007218	17	282	24,578	
L&M POLICY RESEARCH, LLC	59430	17	RD	4,562	
Subtotal Pass-Through and Partial Pass-Through Awards				98,742	-
Total Department of Labor				152,697	-
DEPARTMENT OF STATE					
Direct Awards	Various	19	RD	1,448,912	170,701
Pass-Through and Partial Pass-Through					
ASPEN INSTITUTE, THE	SI_UCB1_SubR-2016	19	415	78,281	
ARTERIOCYTE MEDICAL SYSTEMS, INC	201602302	19	RD	4,250	
PARTNERS OF THE AMERICAS, INC.	88754	19	RD	649	
UNIVERSITY OF NOTRE DAME (INCL GEM)	202809UCB	19	RD	37,070	
Subtotal Pass-Through and Partial Pass-Through Awards				120,250	-
Total Department of State				1,569,162	170,701
DEPARTMENT OF TRANSPORTATION					
Direct Awards	Various	20	RD	5,957,738	885,387
Pass-Through and Partial Pass-Through					
UNIVERSITY OF MARYLAND	Z990102	20	108	4,429	
CALIFORNIA DEPARTMENT OF TRANSPORTATION	65A0510	20	200	59,707	
CITY AND COUNTY OF SAN FRANCISCO	VPPL-6328(054)	20	200	87,780	
LEIDOS, INC.	85685	20	200	17,373	
LEIDOS, INC.	85733	20	200	302	

The accompanying notes are an integral part of this schedule.

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Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	FY 2017		
		Federal CFDA #	Federal Expenditures	Pass-Through to Subrecipients
LEIDOS, INC.	86003	20 200	(48,444)	
LEIDOS, INC.	P010123388R2	20 200	30,136	
CALIFORNIA DEPARTMENT OF TRANSPORTATION	65A0541-cyc1	20 205	96,607	
PRINCETON UNIVERSITY	00002057	20 205	30,590	
OREGON DEPARTMENT OF TRANSPORTATION	30286	20 215	24,182	17,896
CALIFORNIA DEPARTMENT OF TRANSPORTATION	65A0521	20 237	374,301	15,825
CALIFORNIA HIGH-SPEED RAIL AUTHORITY (ARRA)	HSR15-97	20 319	2,650,766	
CALIFORNIA OFFICE OF TRAFFIC SAFETY	84576	20 608	(2,508)	
CALIFORNIA OFFICE OF TRAFFIC SAFETY	AL1732	20 608	410,306	339,274
TEXAS A&M UNIVERSITY - COLLEGE STATION	008768	20 701	19,746	
UNIVERSITY OF NORTH CAROLINA SYSTEM	5106575	20 701	29,519	
UNIVERSITY OF SOUTHERN CALIFORNIA	84381457-cyc1	20 701	890	
BOOZ ALLEN HAMILTON INC.	106258SB44 TO 1	20 762	423	
BOOZ ALLEN HAMILTON INC.	106258SB44 TO 2	20 762	19,551	
BOOZ ALLEN HAMILTON INC.	106990SB1M	20 762	29,304	
BOOZ ALLEN HAMILTON INC.	108679SB1M	20 762	52,491	
CALIFORNIA DEPARTMENT OF TRANSPORTATION	65A0540	20 RD	471,160	
CALIFORNIA DEPARTMENT OF TRANSPORTATION	65A0548	20 RD	156,374	
CALIFORNIA DEPARTMENT OF TRANSPORTATION	65A0556	20 RD	214,360	
CALIFORNIA DEPARTMENT OF TRANSPORTATION	65A0594	20 RD	80,566	
CALIFORNIA DEPARTMENT OF TRANSPORTATION	74A0851-cyc1	20 RD	610,246	
CALIFORNIA DEPT OF TRANSPORTATION DIVISION OF RESEARCH AND INNOVATION	65A0542	20 RD	3,539,227	487,264
CALIFORNIA DEPT OF TRANSPORTATION DIVISION OF RESEARCH AND INNOVATION	65A0562	20 RD	194,128	
CALIFORNIA DEPT OF TRANSPORTATION DIVISION OF RESEARCH AND INNOVATION	65A0563	20 RD	452,626	
CAMBRIDGE SYSTEMATICS, INC.	86197	20 RD	6,905	
HONEYWELL INTERNATIONAL INC.	59294	20 RD	(1,923)	
UNIVERSITY OF ILLINOIS	20150068103	20 RD	64,320	
UNIVERSITY OF MARYLAND	31673-Z9825002	20 RD	103,524	
UNIVERSITY OF SOUTHERN CALIFORNIA	84380215	20 RD	618	
WASHINGTON STATE DEPARTMENT OF TRANSPORTATION	GCB1359	20 RD	46,841	
Subtotal Pass-Through and Partial Pass-Through Awards			9,826,423	860,259
Total Department of Transportation			15,784,161	1,745,646
FEDERAL COMMUNICATIONS COMMISSION				
Direct Awards	Various	32 RD	143,975	
Total Federal Communications Commission			143,975	-
NATIONAL AERONAUTICS & SPACE ADMINISTRATION				
Direct Awards	Various	43 RD	94,354,586	22,149,130
Pass-Through and Partial Pass-Through				
AERO INSTITUTE	AERO 673	43 001	(347)	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	58345	43 001	9,705	

The accompanying notes are an integral part of this schedule.

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			Federal Expenditures	Pass-Through to Subrecipients
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	58351	43 001	10,857	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	86421	43 001	27,857	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A00-0010-012	43 001	27,155	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A00-0012-003	43 001	6,030	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A00-0013-003	43 001	27,942	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A00-0029-004	43 001	48,748	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A00-0037-003	43 001	6,504	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A00-0061-011	43 001	776	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A00-0065-003	43 001	242	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A00-0275-007	43 001	(617)	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A00-0277-003	43 001	1,872	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A00-0280-002	43 001	9,436	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A00-0282-002	43 001	6,692	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A00-1429-006	43 001	22,387	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A15-0078-001	43 001	306	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A15-0102-001	43 001	37,231	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A15-0184-002	43 001	9,743	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A15-0191-001	43 001	51,783	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A15-0196-002	43 001	1,806	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A15-0234-002	43 001	19,746	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A15-0235-002	43 001	3,297	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A15-0242-002	43 001	20,139	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A15-0250-002	43 001	70,709	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A15-0256-002	43 001	6,086	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A16-0226-001	43 001	5,781	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A16-0319-001	43 001	32,763	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A16-0353-001	43 001	31,812	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A16-0354-001	43 001	1,771	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A16-0355-001	43 001	656	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A16-0361-001	43 001	1,922	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A16-0419-001	43 001	38,558	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A16-0511-001	43 001	814	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A17-0419-001	43 001	76,194	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A17-0420-001	43 001	139,247	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A17-0530-001	43 001	3,049	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A17-0531-001	43 001	15,443	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A17-0545-001	43 001	9,526	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A17-0782-001	43 001	15,396	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A17-0783-001	43 001	856	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A18-0181-001	43 001	2,565	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-AR-13260.02-A	43 001	87	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-AR-13271.010-A:1	43 001	937	

The accompanying notes are an integral part of this schedule.

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			Federal Expenditures	Pass-Through to Subrecipients
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-AR-13883.008-A	43 001	58,202	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-AR-13918.002-A	43 001	52	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-AR-14281.006-A	43 001	14,153	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-AR-14307.001-A	43 001	52,312	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-12889.013-A:1	43 001	1,267	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-12898.011-A	43 001	16,284	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-12902.001-A:1	43 001	28,401	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-12914.008-A	43 001	4,458	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-12914.04-A-cyc3	43 001	10,886	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13028.020-A	43 001	20,444	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13423.001-A	43 001	16,350	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13431.007-A	43 001	92	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13459.017-A	43 001	233,569	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13459.09-A	43 001	234	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13467.03-A	43 001	765	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13501.06-A	43 001	53	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13609.001-A	43 001	34,163	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13612.001-A	43 001	19,226	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13665.004-A	43 001	54	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13732.004-A	43 001	24,468	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13758.002-A	43 001	40,688	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13767.009-A	43 001	45,996	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13826.017-A	43 001	15,300	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13846.005-A	43 001	5,639	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13865.001-A	43 001	11,832	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13866.001-A	43 001	9,858	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14044.001-A	43 001	3,715	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14045.001-A	43 001	1,592	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14178.001-A	43 001	140,385	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14191.008-A	43 001	2,098	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14199.002-A	43 001	69,378	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14208.002-A	43 001	7,573	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14219.002-A	43 001	72,245	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14254.001-A	43 001	44,660	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14263.001-A	43 001	14,676	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14458.001-A	43 001	1,086	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14498.001-A	43 001	3,214	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14528.003-A	43 001	20,214	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14614.002-A	43 001	23,806	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-HF2-51353.001-A	43 001	104,198	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-HF2-51379.001-A-cyc1	43 001	88,749	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST.AR.14280.004A	43 001	25,468	

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ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	Sub None ( HST-GO-14241.005-A	43 001	1,456	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	Sub None (HSG-GO-14130.001-A)	43 001	14,494	
ATAC	10-1616-UCB	43 001	86,579	
BERMUDA INSTITUTE OF OCEAN SCIENCES	154444UCSB	43 001	26,573	
BIGELOW LABORATORY FOR OCEAN SCIENCES	BLOS 17-001	43 001	9,779	
BOISE STATE UNIVERSITY	6194A	43 001	63,385	
BOSTON UNIVERSITY	4500001963	43 001	31,008	
CALIFORNIA INSTITUTE OF TECHNOLOGY	44E-1097276-cyc1	43 001	95,752	
CALIFORNIA INSTITUTE OF TECHNOLOGY	65L-1097809	43 001	84,780	
CALIFORNIA STATE UNIVERSITY, SAN JOSE STATE UNIVERSITY FOUNDATION	008690	43 001	11,476	
CALIFORNIA STATE UNIVERSITY, SAN JOSE STATE UNIVERSITY FOUNDATION	S2000000027333	43 001	92,016	
CATHOLIC UNIVERSITY OF AMERICA, THE	361207 - Sub 1	43 001	52,755	
CENTER FOR THE ADVANCEMENT OF SCIENCE IN SPACE INC	GA-2014-154	43 001	72,517	
CENTRAL WASHINGTON UNIVERSITY	22465-1	43 001	23,380	
CENTRAL WASHINGTON UNIVERSITY	22465-2	43 001	7,919	
CONSORTIUM FOR OCEAN LEADERSHIP	SA 16-33	43 001	80,598	
CORNELL UNIVERSITY	73739-10510	43 001	8,822	
DARTMOUTH COLLEGE	59894	43 001	61,942	
DESERT RESEARCH INSTITUTE	656.7206	43 001	6,907	
EARTH AND SPACE RESEARCH	ESR-2016-224-UCSD	43 001	22,962	
GEORGIA INSTITUTE OF TECHNOLOGY	RG176-G1-cyc1	43 001	54,646	
HARVARD UNIVERSITY	130812-5096205	43 001	70,770	
JET PROPULSION LABORATORY	1401886:008	43 001	70,153	
JET PROPULSION LABORATORY	1409809:025	43 001	349,000	
JET PROPULSION LABORATORY	1424022	43 001	289,382	
JET PROPULSION LABORATORY	1446040:007	43 001	85,421	
JET PROPULSION LABORATORY	1473073-cyc6	43 001	8,206	
JET PROPULSION LABORATORY	1490248	43 001	114,386	
JET PROPULSION LABORATORY	1492856	43 001	96,387	
JET PROPULSION LABORATORY	1506677	43 001	20,645	
JET PROPULSION LABORATORY	1507032-cyc4	43 001	16,854	
JET PROPULSION LABORATORY	1508617	43 001	45,024	
JET PROPULSION LABORATORY	1512986:002	43 001	353,608	
JET PROPULSION LABORATORY	1516625	43 001	153,501	
JET PROPULSION LABORATORY	1521593:001	43 001	43,500	20,996
JET PROPULSION LABORATORY	1521683	43 001	190,856	
JET PROPULSION LABORATORY	1522155	43 001	87,082	
JET PROPULSION LABORATORY	1523995:001	43 001	144,502	
JET PROPULSION LABORATORY	1524322-cyc1	43 001	93,955	
JET PROPULSION LABORATORY	1525520	43 001	22,385	
JET PROPULSION LABORATORY	1526267	43 001	21,405	
JET PROPULSION LABORATORY	1526530	43 001	38,190	

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Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	Federal CFDA #	FY 2017	
			Federal Expenditures	Pass-Through to Subrecipients
JET PROPULSION LABORATORY	1527849	43 001	17,735	
JET PROPULSION LABORATORY	1530672	43 001	43,057	
JET PROPULSION LABORATORY	1531424:001	43 001	32,735	
JET PROPULSION LABORATORY	1531879	43 001	66,846	
JET PROPULSION LABORATORY	1532733:004	43 001	186,972	
JET PROPULSION LABORATORY	1533870:002	43 001	163,861	
JET PROPULSION LABORATORY	1536981	43 001	85,674	
JET PROPULSION LABORATORY	1537426	43 001	387,343	
JET PROPULSION LABORATORY	1541706	43 001	4,088	
JET PROPULSION LABORATORY	1542315:001	43 001	136,093	
JET PROPULSION LABORATORY	1543317	43 001	83,645	
JET PROPULSION LABORATORY	1547288-cyc1	43 001	161,775	
JET PROPULSION LABORATORY	1548664	43 001	250,000	
JET PROPULSION LABORATORY	1548805	43 001	157,472	
JET PROPULSION LABORATORY	1551859	43 001	160,774	
JET PROPULSION LABORATORY	1552843	43 001	70,299	
JET PROPULSION LABORATORY	1553641	43 001	98,550	
JET PROPULSION LABORATORY	1554126	43 001	49,728	
JET PROPULSION LABORATORY	1554759	43 001	96,523	
JET PROPULSION LABORATORY	1555910	43 001	48,817	
JET PROPULSION LABORATORY	1556185	43 001	147,916	
JET PROPULSION LABORATORY	1556303-cyc1	43 001	300	
JET PROPULSION LABORATORY	1556392	43 001	2,322	
JET PROPULSION LABORATORY	1557709	43 001	67,126	
JET PROPULSION LABORATORY	1558329-cyc1	43 001	32,511	
JET PROPULSION LABORATORY	1558785-cyc1	43 001	8,446	
JET PROPULSION LABORATORY	1560037	43 001	33,333	
JET PROPULSION LABORATORY	1561043	43 001	47,875	
JET PROPULSION LABORATORY	1561131:01	43 001	66,107	
JET PROPULSION LABORATORY	1561322	43 001	47,943	
JET PROPULSION LABORATORY	1561663	43 001	64,363	
JET PROPULSION LABORATORY	1561962	43 001	73,909	
JET PROPULSION LABORATORY	1562552	43 001	48,861	
JET PROPULSION LABORATORY	1562628	43 001	20,904	
JET PROPULSION LABORATORY	1564202	43 001	2,947	
JET PROPULSION LABORATORY	1564598	43 001	30,690	
JET PROPULSION LABORATORY	1564910	43 001	21,863	
JET PROPULSION LABORATORY	1565047	43 001	35,068	
JET PROPULSION LABORATORY	1565110-cyc1	43 001	3,166	
JET PROPULSION LABORATORY	1565268	43 001	28,894	
JET PROPULSION LABORATORY	1565339	43 001	25,955	
JET PROPULSION LABORATORY	1565521	43 001	42,845	

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			Federal Expenditures	Pass-Through to Subrecipients
JET PROPULSION LABORATORY	1565523	43 001	43,083	
JET PROPULSION LABORATORY	1565887	43 001	28,574	
JET PROPULSION LABORATORY	1567344	43 001	29,900	
JET PROPULSION LABORATORY	1567551	43 001	48,659	
JET PROPULSION LABORATORY	1568167	43 001	11,489	
JET PROPULSION LABORATORY	1569095	43 001	20,701	
JET PROPULSION LABORATORY	1569162	43 001	34,650	
JET PROPULSION LABORATORY	1570200:02	43 001	11,299	
JET PROPULSION LABORATORY	1570407	43 001	32,353	
JET PROPULSION LABORATORY	1570861	43 001	18,480	
JET PROPULSION LABORATORY	1571562	43 001	10,038	
JET PROPULSION LABORATORY	RSA 1524191	43 001	4,619	
JOHNS HOPKINS UNIVERSITY	131186	43 001	32,367	
JOHNS HOPKINS UNIVERSITY	132224	43 001	37,751	
LINKED, INC.	20163054	43 001	48,100	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	5710003371:7	43 001	52,081	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	5710003374	43 001	95,482	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	Sub 5710003786 (NNA14AB01A)	43 001	21,365	
METRO LASER	UCI24NG08-cyc1	43 001	32,800	
METRON AVIATION, INC.	UCB-0001-96C-N132	43 001	61,425	
MONTANA STATE UNIVERSITY	A16-0520-001	43 001	24,215	
NATIONAL INSTITUTE OF AEROSPACE ASSOCIATES	X13-7143-UCLA	43 001	4,122	
NATIONAL SPACE BIOMEDICAL RESEARCH INSTITUTE	MA02801-cyc5	43 001	(11,290)	
OHIO STATE UNIVERSITY	60031541-cyc3	43 001	20,569	
OHIO STATE UNIVERSITY	60040479:3	43 001	12,363	
OREGON STATE UNIVERSITY	NS2527A-A	43 001	72,227	
OREGON STATE UNIVERSITY	NS278A-B	43 001	14,404	
PLANETARY SCIENCE INSTITUTE	1480	43 001	7,996	
PLANETARY SCIENCE INSTITUTE	1492	43 001	9,055	
PREDICTIVE SCIENCE INC.	20154780:001	43 001	107,934	
PRINCETON UNIVERSITY	SUB0000139	43 001	43,652	
RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	58142	43 001	1,037	
SOUTHWEST RESEARCH INSTITUTE	699046X :25	43 001	78,564	
SOUTHWEST RESEARCH INSTITUTE	H99068CO	43 001	28,150	
SOUTHWEST RESEARCH INSTITUTE	H99074MO	43 001	114,459	
TEXAS A&M UNIVERSITY - COLLEGE STATION	16-02	43 001	28,767	
THE WOODS HOLE RESEARCH CENTER INC	WHRC-ZG0827-01-cyc1	43 001	53,956	
U.S.-ISRAEL BINATIONAL SCIENCE FOUNDATION	2012304	43 001	12,483	
UNIVERSITIES SPACE RESEARCH ASSOCIATION	09959-02	43 001	8,011	
UNIVERSITIES SPACE RESEARCH ASSOCIATION	09962-01	43 001	10,000	
UNIVERSITIES SPACE RESEARCH ASSOCIATION	GrantSOF 04-0062	43 001	3,000	
UNIVERSITIES SPACE RESEARCH ASSOCIATION	GrantSOF04-0060	43 001	67,993	

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			Federal Expenditures	Pass-Through to Subrecipients
UNIVERSITIES SPACE RESEARCH ASSOCIATION	SOF 05-00COORAY-cyc1	43 001	6,943	
UNIVERSITY CORPORATION AT MONTEREY BAY	140226-5035501A-S-A	43 001	6,579	
UNIVERSITY CORPORATION FOR ATMOSPHERIC RESEARCH	Z14-96410	43 001	16,472	
UNIVERSITY OF ARIZONA	63450	43 001	(1,163)	
UNIVERSITY OF ARIZONA	A16-0345-001	43 001	15,909	
UNIVERSITY OF CHICAGO	Sub FP061308-A(NNX16AJ34G)	43 001	21,638	
UNIVERSITY OF COLORADO BOULDER	1551728	43 001	268,967	
UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	1546525:1	43 001	80,995	
UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	1552631:1	43 001	48,427	
UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	1554053	43 001	37,898	
UNIVERSITY OF DELAWARE	40042	43 001	18,576	
UNIVERSITY OF DELAWARE	40505	43 001	124,168	
UNIVERSITY OF DELAWARE	A15-0179-002	43 001	91,676	
UNIVERSITY OF ILLINOIS	A17-0876-001	43 001	137,999	21,545
UNIVERSITY OF IOWA	1000933166:05	43 001	23,479	
UNIVERSITY OF IOWA	1001515160	43 001	185,079	
UNIVERSITY OF IOWA	W000827989	43 001	385	
UNIVERSITY OF IOWA	W000837133	43 001	127,904	
UNIVERSITY OF MAINE SYSTEM	UM-S966	43 001	35,184	
UNIVERSITY OF MARYLAND	16311-Z6905001:A	43 001	17,852	
UNIVERSITY OF MARYLAND	2510-Z681002:D	43 001	8,372	
UNIVERSITY OF MARYLAND	Sub Z680501 (NNX13AH67G)	43 001	13,654	
UNIVERSITY OF MASSACHUSETTS AMHERST	81263	43 001	1,341	
UNIVERSITY OF MASSACHUSETTS SYSTEM	S20140000019910	43 001	92,006	
UNIVERSITY OF MICHIGAN	3002467381:3	43 001	14,514	
UNIVERSITY OF MINNESOTA	A005276801	43 001	42,964	
UNIVERSITY OF MINNESOTA	A005821701	43 001	507,779	
UNIVERSITY OF MONTANA	PG15-26841-01-cyc2	43 001	29,195	
UNIVERSITY OF NEW HAMPSHIRE	06-001	43 001	920,599	139,380
UNIVERSITY OF NEW HAMPSHIRE	17-001	43 001	3,500	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5100754:1	43 001	26,688	
UNIVERSITY OF NORTH DAKOTA	10162-18240	43 001	92,663	
UNIVERSITY OF TEXAS-AUSTIN	A16-0314-001	43 001	16,873	
UNIVERSITY OF TEXAS-AUSTIN	A17-0561-001	43 001	950	
UNIVERSITY OF TEXAS-AUSTIN	UTA15-000804	43 001	14,211	
UNIVERSITY OF TEXAS-AUSTIN	UTA16-000861	43 001	44,981	
UNIVERSITY OF WASHINGTON	764015	43 001	62,180	
UNIVERSITY OF WASHINGTON	764017	43 001	45,383	
UNIVERSITY OF WASHINGTON	A00-1487-003	43 001	49,230	
UNIVERSITY OF WASHINGTON	UWSC241-cyc1	43 001	14,083	
UNIVERSITY OF WASHINGTON	UWSC8011	43 001	10,833	
UNIVERSITY OF WASHINGTON	UWSC9226_BPO16911	43 001	40,341	

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			Federal Expenditures	Pass-Through to Subrecipients
UNIVERSITY OF WISCONSIN-MADISON	545K204:2	43 001	137,746	
VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY	426670-19B03	43 001	114,325	
WYLE LABORATORIES	T72556	43 001	256,861	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-AR-14282.001-A-cyc1	43 002	33,755	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-12879.04-A	43 002	1,980	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13334.05-A	43 002	1,834	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14083.002-A-cyc1	43 002	4,057	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14199.006-A	43 002	21,827	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14268.012-A-cyc1	43 002	171	
CALIFORNIA INSTITUTE OF TECHNOLOGY	44A-1085101	43 002	1,082,679	
CALIFORNIA STATE UNIVERSITY, SAN JOSE STATE UNIVERSITY FOUNDATION	2116144877UCDAVIS2015	43 002	25,113	
GEORGIA TECH RESEARCH CORPORATION	Sub RG183-G1 (NNX15AU22A)	43 002	22,040	
JET PROPULSION LABORATORY	1528152-cyc1	43 002	386,493	52,524
JET PROPULSION LABORATORY	1541673-cyc1	43 002	13,417	
JET PROPULSION LABORATORY	86090	43 002	33,245	
NATIONAL SPACE BIOMEDICAL RESEARCH INSTITUTE	4600578728-cyc1	43 002	9,933	
NATIONAL SPACE BIOMEDICAL RESEARCH INSTITUTE	HFP03401	43 002	40,887	
NATIONAL SPACE BIOMEDICAL RESEARCH INSTITUTE	Sub NCC9-58-127 ( SMST04202 )	43 002	91,566	
THE UNIVERSITY OF ALABAMA (TUSCALOOSA)	000419712-001-cyc6	43 002	56,515	
UNIVERSITIES SPACE RESEARCH ASSOCIATION	05-0047 (NAS2-97001)	43 002	7,002	
JET PROPULSION LABORATORY	78105	43 003	2,606	
SOUTHWEST RESEARCH INSTITUTE	J99018CP	43 003	79,549	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-AR-13907.001-A	43 007	52,066	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13646.002-A	43 007	15,823	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13677.001-A	43 007	207,647	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14041.002-A	43 007	24,257	
PRINCETON PLASMA PHYSICS LABORATORY	S014279-H	43 007	21,296	
AERO INSTITUTE	D-13-IFS-014	43 008	21,622	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-AR-14289.001-A-cyc1	43 008	37,605	
CAL STATE L.A. UNIVERSITY AUXILIARY SERVICES, INC. (UAS)	UC1231210-cyc1	43 008	227,904	
UNIVERSITY OF WISCONSIN-MADISON	483K501	43 008	88,402	
UNIVERSITY OF WISCONSIN-MADISON	483K534	43 008	33,124	
UNIVERSITIES SPACE RESEARCH ASSOCIATION	09960-03	43 010	5,298	
ANGSTROM DESIGNS ENGRG SERV	NASA STTR UCSB 091714-UCSB02	43 RD	23,766	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	005647	43 RD	16,887	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	006578	43 RD	29,834	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	006768	43 RD	11,410	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	007208	43 RD	8,948	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	007253	43 RD	19,414	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	007272	43 RD	16,246	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	007279	43 RD	49,627	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	007393	43 RD	12,669	

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			Federal Expenditures	Pass-Through to Subrecipients
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	007521	43 RD	42,219	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	007999	43 RD	4,148	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	008000	43 RD	5,451	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	008174	43 RD	93,926	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	008183	43 RD	1,029	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	008659	43 RD	27,512	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	008660	43 RD	5,934	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	81787	43 RD	16,551	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A17-0539-001	43 RD	35,470	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-AR-12160.001-A	43 RD	(678)	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-AR-12649.01-A(NONE)	43 RD	(5,831)	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-AR-12823.001-A	43 RD	7,813	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-AR-12847.001-A	43 RD	4,249	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-AR-13242.01-A-CYC1	43 RD	37,964	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-AR-13886.001-A-CYC1	43 RD	3,873	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-AR-13888.003-A-cyc1	43 RD	17,010	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-AR-14280.001-A	43 RD	153,816	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-AR-14284.002-A	43 RD	45,984	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-12099.03-A	43 RD	0	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13008.02-A	43 RD	1,873	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13286.04-A	43 RD	1,729	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13335.04-A	43 RD	874	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13343.09-A-CYC1	43 RD	3,320	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13362.001-A	43 RD	34,424	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13434.001-A	43 RD	6,039	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13643.001-A	43 RD	7,554	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13700.001-A	43 RD	939	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13718.002-A-CYC1	43 RD	5,866	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13726.001-A	43 RD	3,672	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13748-002-A	43 RD	6,864	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13776.001-A	43 RD	42,848	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13777.001-A	43 RD	18,221	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13797.001-A	43 RD	54,574	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13937.003-A	43 RD	97,520	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14096.007-A	43 RD	3,672	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14104.002-A	43 RD	34,647	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14492.001-A	43 RD	5,793	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14661.001-A	43 RD	19,839	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14754.001-A	43 RD	16,244	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO13659.001-A	43 RD	60,175	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-HF2-51359.002-A	43 RD	98,165	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-HF2-51363.001-A	43 RD	80,269	

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**Schedule of Expenditures of Federal Awards**  
**For the Fiscal Year Ended June 30, 2017**

Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	Federal CFDA #	FY 2017		
			Federal Expenditures	Pass-Through to Subrecipients	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-HF2-51376.001-A	43 RD	62,234		
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HSTAR1323501A	43 RD	22,720		
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HSTAR1323802A	43 RD	310		
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HSTGO-14252.002-A	43 RD	8,732		
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HSTGO1289801A	43 RD	5,429		
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HSTGO1317701A	43 RD	45		
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HSTGO1334301A	43 RD	930		
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HSTGO14254004A	43 RD	7,032		
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HSTGO14456003A	43 RD	14,780		
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	Sub HST-GO-13176-04-A(NAS 5-26	43 RD	804		
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	Sub HST-GO-14606.001-A (NAS5-2	43 RD	1,307		
ATA ENGINEERING, INC.	66316-100-cyc1	43 RD	2,528		
CATHOLIC UNIVERSITY OF AMERICA, THE	362486	43 RD	26,876		
CRAMER FISH SCIENCES	201703205	43 RD	23,749		
EARTH AND SPACE RESEARCH	2013-183 UCSD	43 RD	85,954		
JET PROPULSION LABORATORY	007453	43 RD	14,818		
JET PROPULSION LABORATORY	008598	43 RD	60,537		
JET PROPULSION LABORATORY	008974	43 RD	8,731		
JET PROPULSION LABORATORY	009046	43 RD	1,770		
JET PROPULSION LABORATORY	1356389	43 RD	252,755		
JET PROPULSION LABORATORY	1356970	43 RD	28,971		
JET PROPULSION LABORATORY	1388406	43 RD	6,055		
JET PROPULSION LABORATORY	1466422	43 RD	30,824		
JET PROPULSION LABORATORY	1492976	43 RD	117,292		
JET PROPULSION LABORATORY	1509483-cyc2	43 RD	26,820		
JET PROPULSION LABORATORY	1531033	43 RD	4,067		
JET PROPULSION LABORATORY	1531105	43 RD	40,883		
JET PROPULSION LABORATORY	1532090	43 RD	2,944		
JET PROPULSION LABORATORY	1533766	43 RD	179,792		42,226
JET PROPULSION LABORATORY	1538071	43 RD	2,752		
JET PROPULSION LABORATORY	1539176	43 RD	44,314		
JET PROPULSION LABORATORY	1540690	43 RD	5,823		
JET PROPULSION LABORATORY	1546204	43 RD	9,678		
JET PROPULSION LABORATORY	1547132	43 RD	(4)		
JET PROPULSION LABORATORY	1554065	43 RD	39,399		
JET PROPULSION LABORATORY	1557778	43 RD	23,116		
JET PROPULSION LABORATORY	1557798	43 RD	24,967		
JET PROPULSION LABORATORY	1558252	43 RD	9,554		
JET PROPULSION LABORATORY	1560329	43 RD	29,745		
JET PROPULSION LABORATORY	1562208	43 RD	50,219		
JET PROPULSION LABORATORY	1563911	43 RD	47,132		
JET PROPULSION LABORATORY	1564273	43 RD	12,348		

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**UNIVERSITY OF CALIFORNIA**  
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Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	Federal CFDA #	FY 2017		
			Federal Expenditures	Pass-Through to Subrecipients	
JET PROPULSION LABORATORY	39A21	43 RD	13,275		
JET PROPULSION LABORATORY	78529	43 RD	54,946		
JET PROPULSION LABORATORY	85923	43 RD	0		
JET PROPULSION LABORATORY	88457	43 RD	19,484		
JET PROPULSION LABORATORY	89146	43 RD	(904)		
JET PROPULSION LABORATORY	Sub 1450442 (NM07100956)	43 RD	132,299		
JET PROPULSION LABORATORY	SUB 1498834	43 RD	851		
JET PROPULSION LABORATORY	Sub 1542954 (NNN12AA01C)	43 RD	56,238		
JET PROPULSION LABORATORY	Sub 1563698(NONE)	43 RD	36,914		
JOHNS HOPKINS UNIVERSITY	975268	43 RD	4,738,229	1,158,719	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B621545	43 RD	52,128		
LOS GATOS RESEARCH, INC.	20161484	43 RD	11,975		
MALIN SPACE SCIENCE SYSTEMS	12-0256	43 RD	31,182		
NATIONAL SPACE BIOMEDICAL RESEARCH INSTITUTE	HFP03801	43 RD	204,150		
PHYSICAL SCIENCES INC.	67872-6606-46	43 RD	132,035		
ROCHESTER INSTITUTE OF TECHNOLOGY	31264-01:6	43 RD	1,519		
SOUTHWEST RESEARCH INSTITUTE	D99005L	43 RD	57,072		
STANFORD UNIVERSITY	A00-1350-015	43 RD	131,032		
UNIVERSITIES SPACE RESEARCH ASSOCIATION	SOF 05-0171 RICHTER	43 RD	7,513		
UNIVERSITY CORPORATION FOR ATMOSPHERIC RESEARCH	Z11-92258:M06	43 RD	42,719		
UNIVERSITY OF ARIZONA	A16-0449-001	43 RD	31,196		
UNIVERSITY OF ARIZONA	A16-0505-001	43 RD	54,326		
UNIVERSITY OF CENTRAL FLORIDA	66016028	43 RD	15,188		
UNIVERSITY OF COLORADO BOULDER	1000013136	43 RD	2,491,478		
UNIVERSITY OF COLORADO BOULDER	1000023229	43 RD	54,749	20,000	
UNIVERSITY OF COLORADO BOULDER	1000144280	43 RD	364,068		
UNIVERSITY OF ILLINOIS	20120430801	43 RD	43,990		
UNIVERSITY OF MINNESOTA	X5336545101	43 RD	12,829		
UNIVERSITY OF NEW HAMPSHIRE	13-041:07	43 RD	14,804		
UNIVERSITY OF NEW HAMPSHIRE	14-081	43 RD	48,863		
WYLE LABORATORIES	Sub PO T72614 (NNX14AN75G)	43 RD	12,089		
Subtotal Pass-Through and Partial Pass-Through Awards			27,829,720	1,455,390	
Total National Aeronautics & Space Administration			122,184,306	23,604,520	
NATIONAL FOUNDATION ARTS & HUMANITIES					
Direct Awards	Various	45 RD	1,117,380	32,421	
Pass-Through and Partial Pass-Through					
CALIFORNIA HUMANITIES	COS15-470	45 129	2,679		
BROWN UNIVERSITY	BU-205742-cyc1	45 160	33,600		
CALIFORNIA STATE LIBRARY	008404	45 310	277,718		
Subtotal Pass-Through and Partial Pass-Through Awards			313,997	-	
Total National Foundation Arts & Humanities			1,431,377	32,421	

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			Federal Expenditures	Pass-Through to Subrecipients	
NATIONAL SCIENCE FOUNDATION					
Direct Awards	Various	47 RD	462,015,647	27,260,061	
Direct Awards (ARRA)	Various	47 RD	407,733		
Sub-Total Direct Awards			462,423,380	27,260,061	
Pass-Through and Partial Pass-Through					
AMERICAN PHYSICAL SOCIETY	CWC-012	47 041	40,000		
ARIZONA STATE UNIVERSITY/TEMPE	15742	47 041	596,728		
ARIZONA STATE UNIVERSITY/TEMPE	17-026	47 041	21,846		
ATOCERA, INC.	201603405	47 041	35,000		
BIOINSPIRA, INC.	20151766	47 041	(2,949)		
CALWAVE POWER TECHNOLOGIES, INC.	042560	47 041	33,247		
CARDIAC MOTION, LLC	201403401	47 041	140,881		
CITY UNIVERSITY OF NEW YORK	40E48-A	47 041	83,781		
CLEMSON UNIVERSITY RESEARCH FOUNDATION	SUB 1649-206-2009147 (CMMI-12	47 041	84,576		
COLORADO STATE UNIVERSITY	007837	47 041	55,184		
COLORADO STATE UNIVERSITY	G-00973-2	47 041	56,382		
CORNELL UNIVERSITY	70369-10329:1	47 041	73,925		
CORNELL UNIVERSITY	75855-10557	47 041	80,292		
DASCENA, INC.	A127940	47 041	67,462		
EMBR LABS INC.	20161719	47 041	27,578		
GEORGIA INSTITUTE OF TECHNOLOGY	R3392-G1	47 041	(2,710)		
GEORGIA INSTITUTE OF TECHNOLOGY	RG382-G1	47 041	190,110		
INSTON, INC	59242	47 041	259		
IOWA STATE UNIVERSITY	420-72-25-cyc13	47 041	307,251		
JOHNS HOPKINS UNIVERSITY	SUB 2001929066 (ERFI-1332344)	47 041	66,896		
KNOX MEDICAL DIAGNOSTICS INC	A127937	47 041	74,108		
MENTOR ON THE GO, LLC	Sub 20164627 (1621825)	47 041	47,164		
METAL FATIGUE SOLUTIONS, INC.	20162427	47 041	82,412		
NANOELECTRONICS RESEARCH CORPORATION	Sub 2016-NE-2701 (ECCS-1640173	47 041	10,611		
NORTHWESTERN UNIVERSITY	SPO032077-PROJ0008536	47 041	107,296		
OHIO STATE UNIVERSITY	27A39	47 041	26,036		
OHIO STATE UNIVERSITY	27A40	47 041	8,075		
OHIO STATE UNIVERSITY	RF01410401	47 041	32,818		
PHASE DIAGNOSTICS, INC.	20155110	47 041	20,305		
PRINCETON PLASMA PHYSICS LABORATORY	S013865-U	47 041	6,801		
PURDUE UNIVERSITY	4101-51805	47 041	123,509		
PURDUE UNIVERSITY	Sub NEES-4101-34566 (CMMI-0927	47 041	(105)		
SAFELYYOU INC.	042186	47 041	65,099		
SINWAVES, INC.	206034-cyc1	47 041	55,000		
SMARTDOCFINDER LLC	007346	47 041	40,775		
STANFORD UNIVERSITY	28139880-50542-C	47 041	869,118		

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Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	Federal CFDA #	FY 2017	
			Federal Expenditures	Pass-Through to Subrecipients
STANFORD UNIVERSITY	60359058-108886-C	47 041	11,334	
STANFORD UNIVERSITY	Sub 61174008-120872 (CBET-1508	47 041	13,930	
SYNVITROBIO, INC.	20155140	47 041	86,125	
TRITON ALGAE INNOVATIONS, LLC	Sub None (1555951)	47 041	26,678	
UNIVERSITY OF ARIZONA	349548	47 041	24,397	
UNIVERSITY OF ARIZONA	57564	47 041	66	
UNIVERSITY OF ARIZONA	Sub Y502629 (EEC-0812072)	47 041	645,141	
UNIVERSITY OF CENTRAL FLORIDA	UCF-105305-cyc2	47 041	44,645	
UNIVERSITY OF CINCINNATI	009010-009-cyc1	47 041	23,000	
UNIVERSITY OF IDAHO	FEK232-SB-001	47 041	42,055	
UNIVERSITY OF ILLINOIS	2012-03500-02	47 041	92,701	
UNIVERSITY OF ILLINOIS	2014-04512-01	47 041	27,587	
UNIVERSITY OF KANSAS/KU CENTER FOR RESEARCH, INC.	FY2011-031-M3	47 041	10,320	
UNIVERSITY OF MINNESOTA	A004622001	47 041	30,125	
UNIVERSITY OF PENNSYLVANIA	Sub 567084 (EFMA-1542879)	47 041	109,493	
UNIVERSITY OF SOUTH CAROLINA	162918	47 041	4,493	
UNIVERSITY OF SOUTHERN CALIFORNIA	58669052:2	47 041	282,790	
UNIVERSITY OF TEXAS-AUSTIN	Sub UTA15-000855 (1520817)	47 041	40,065	
UNIVERSITY OF TEXAS-AUSTIN	UTA12-000944	47 041	580,308	
UNIVERSITY OF TEXAS-AUSTIN	UTA15-000860	47 041	37,886	
VAULT NANO INC.	20173688	47 041	1,103	
VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY	479198-19905-cyc1	47 041	16,694	
TEMPLE UNIVERSITY	330162-18110	47 047	47,119	
UNIVERSITY OF WASHINGTON	UWSC6735	47 047	136,213	
WASHINGTON STATE UNIVERSITY	006518	47 047	4,807	
ASSOCIATED UNIVERSITIES, INC	20155187	47 049	927	
ASSOCIATED UNIVERSITIES, INC	27A68	47 049	27,631	
ASSOCIATED UNIVERSITIES, INC	350584	47 049	1,155	
ASSOCIATED UNIVERSITIES, INC	SOSPA3-013-cyc1	47 049	25,974	
ASSOCIATED UNIVERSITIES, INC	Sub SOSPA4-006 ( AST-1519126)	47 049	1,623	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A15-0131-002	47 049	100,808	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	N56981C	47 049	402,334	
CALIFORNIA ASSOCIATION FOR RESEARCH IN ASTRONOMY	11678:5	47 049	611	
CALIFORNIA ASSOCIATION FOR RESEARCH IN ASTRONOMY	11934	47 049	76,246	
CALIFORNIA ASSOCIATION FOR RESEARCH IN ASTRONOMY	13401	47 049	180,429	
CALIFORNIA ASSOCIATION FOR RESEARCH IN ASTRONOMY	63291	47 049	1,305	
CALIFORNIA INSTITUTE OF TECHNOLOGY	44Q-1092164	47 049	75,728	
CALIFORNIA INSTITUTE OF TECHNOLOGY	68D1094593	47 049	149,479	
CALIFORNIA STATE UNIVERSITY, SAN FRANCISCO STATE UNIVERSITY	S15-0001	47 049	66,789	
CARNEGIE INSTITUTION	008446	47 049	61,126	
COLD SPRING HARBOR LABORATORY	52380212	47 049	80,319	
COLUMBIA UNIVERSITY	CU-53010-cyc11	47 049	675,436	

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Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	Federal CFDA #	FY 2017	
			Federal Expenditures	Pass-Through to Subrecipients
CORNELL UNIVERSITY	75548-10820	47 049	64,825	
DUKE UNIVERSITY	14-NSF-1017	47 049	197	
EMORY UNIVERSITY	T439063-cyc1	47 049	171,950	
EMORY UNIVERSITY	T439305	47 049	105,211	
EMORY UNIVERSITY	T662235:6	47 049	128,426	
GEORGIA INSTITUTE OF TECHNOLOGY	RG173-G1	47 049	18,842	
INDIANA UNIVERSITY	BL-4830927-UCSC	47 049	17,333	
JACKSON STATE UNIVERSITY	633156-UCSB	47 049	189,060	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	5710003959	47 049	44,302	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	5710003976	47 049	98,137	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	5710004001:1	47 049	86,570	
MATHEMATICAL SCIENCE RESEARCH INSTITUTE, THE	20171487	47 049	32,688	
OHIO STATE UNIVERSITY	60046604	47 049	48,991	
OHIO STATE UNIVERSITY	60046614:1	47 049	62,277	
OREGON STATE UNIVERSITY	S1412A-B	47 049	85,904	
OREGON STATE UNIVERSITY	S1412A-C	47 049	124,215	
OREGON STATE UNIVERSITY	S1891A-D	47 049	42,089	
OREGON STATE UNIVERSITY	S1891AE	47 049	38,189	
PENNSYLVANIA STATE UNIVERSITY	5148-UCB-NSF-0620	47 049	61,710	
PENNSYLVANIA STATE UNIVERSITY	5182-UC-NSF-0620-cyc1	47 049	94,155	
PRINCETON UNIVERSITY	1120138	47 049	1,360,323	
PRINCETON UNIVERSITY	Sub Sub0000182(PHY-1624356)	47 049	4,840	
RICE UNIVERSITY	Sub R3E031 (DMS-1309542)	47 049	91,747	
SRI INTERNATIONAL	139-000030	47 049	43,964	
STONY BROOK UNIVERSITY (A STATE UNIVERSITY OF NEW YORK CAMPUS)	76749/1136652/2-cyc1	47 049	16,055	
TEXAS A&M UNIVERSITY - COLLEGE STATION	28S172803	47 049	2,335	
UNIVERSITY OF COLORADO BOULDER	1554565	47 049	174,168	
UNIVERSITY OF COLORADO BOULDER	1554568-cyc1	47 049	30,250	
UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	1554564	47 049	167,676	
UNIVERSITY OF MARYLAND	A00-1404-002	47 049	218,130	
UNIVERSITY OF MICHIGAN	3003700329	47 049	93,544	
UNIVERSITY OF MICHIGAN	3003700330-cyc1	47 049	93,798	
UNIVERSITY OF MINNESOTA	30919	47 049	6,104	
UNIVERSITY OF MISSOURI	C00047906-1	47 049	78,173	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5105683	47 049	59,195	
UNIVERSITY OF NOTRE DAME (INCL GEM)	201940/UCSB-Golf	47 049	894	
UNIVERSITY OF SAN DIEGO	Sub S1175-U2017-002 (1255326 A	47 049	20,160	
UNIVERSITY OF SOUTHERN CALIFORNIA	78356329	47 049	2,096	
UNIVERSITY OF TEXAS-EL PASO	226100829B	47 049	57,227	
UNIVERSITY OF UTAH	10030555	47 049	27,771	
UNIVERSITY OF WASHINGTON	755097:2	47 049	11,646	
UNIVERSITY OF WASHINGTON	UWSC 6791	47 049	1,747	

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UNIVERSITY OF WASHINGTON	UWSC9674	47 049	89,649	
UNIVERSITY OF WISCONSIN-MADISON	658K210-cyc1	47 049	97,901	
UNIVERSITY OF WISCONSIN-MADISON	726K305-cyc1	47 049	247	
UNIVERSITY OF WISCONSIN-MADISON	sUB 408K133 (PHY-1148698)	47 049	416,641	
WEST VIRGINIA UNIVERSITY	A17-0637-001	47 049	82,075	
ARIZONA STATE UNIVERSITY/TEMPE	006585	47 050	89,782	
ARIZONA STATE UNIVERSITY/TEMPE	59004	47 050	41,951	
BOSTON UNIVERSITY	4500001274	47 050	2	
CALIFORNIA INSTITUTE OF TECHNOLOGY	681096456	47 050	32,240	
CALIFORNIA STATE UNIVERSITY, SAN FRANCISCO STATE UNIVERSITY	S140007	47 050	64,436	
COLORADO STATE UNIVERSITY	G-96783-2	47 050	2,085	
COLORADO STATE UNIVERSITY	Sub 20101139 (ATM0425247)	47 050	22	
COLUMBIA UNIVERSITY	15(GG009393)	47 050	15,507	
COLUMBIA UNIVERSITY	2(GG009393-01)	47 050	57,096	
COLUMBIA UNIVERSITY	3 (GG008992)	47 050	154,914	
COLUMBIA UNIVERSITY	3(GG008855)	47 050	82,080	
COLUMBIA UNIVERSITY	46(GG009393)	47 050	1,470	
COLUMBIA UNIVERSITY	A16-0326-001	47 050	24,368	
COLUMBIA UNIVERSITY	A17-0414-001	47 050	53,707	
COLUMBIA UNIVERSITY	A17-0707-001	47 050	23,736	
CONSERVATION INTERNATIONAL FOUNDATION	1000487	47 050	27,329	
CONSORTIUM FOR OCEAN LEADERSHIP	88875	47 050	5	
CONSORTIUM FOR OCEAN LEADERSHIP	89854	47 050	8	
CONSORTIUM FOR OCEAN LEADERSHIP	SA 9-08	47 050	(174)	
CONSORTIUM FOR OCEAN LEADERSHIP	62293	47 050	(2,195)	
DUKE UNIVERSITY	333-2224	47 050	10,491	
FRANKLIN & MARSHALL COLLEGE	13-001	47 050	48	
INCORPORATED RESEARCH INSTITUTIONS FOR SEISMOLOGY	08-UCSD-SAGE	47 050	4,132,232	
INCORPORATED RESEARCH INSTITUTIONS FOR SEISMOLOGY	09-UCSD (MD)-SAGE	47 050	597,658	
INCORPORATED RESEARCH INSTITUTIONS FOR SEISMOLOGY	IRIS 56-OMO	47 050	1,359,839	
INCORPORATED RESEARCH INSTITUTIONS FOR SEISMOLOGY	Sub 92-UCSD-ECBB (ICER-1343709	47 050	5,413	
JOHNS HOPKINS UNIVERSITY	2001377399	47 050	69,537	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	5710003955	47 050	74,542	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	5710004225	47 050	16,472	
MONTANA STATE UNIVERSITY	89350	47 050	(2)	
NORTHERN ARIZONA UNIVERSITY	A16-0498-001	47 050	14,331	
OLD DOMINION UNIVERSITY RESEARCH FOUNDATION	15-186-100257-10	47 050	34,633	
PENNSYLVANIA STATE UNIVERSITY	4755-UCB-NSF-0507	47 050	20,024	
PENNSYLVANIA STATE UNIVERSITY	5038-UC-NSF-0507	47 050	54,483	
PRINCETON UNIVERSITY	SUB0000001:3	47 050	14,426	
PRINCETON UNIVERSITY	SUB00000008	47 050	743,563	
PRINCETON UNIVERSITY	SUB0000189	47 050	365	

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RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	5898	47 050	22,953	
RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	5995	47 050	13,724	
STROUD WATER RESEARCH CENTER	88561	47 050	2,814	
THE UNIVERSITY OF ALABAMA IN HUNTSVILLE	SUB 2014-107 (AGS-1358386)	47 050	29,992	
TUFTS UNIVERSITY	101180-00001	47 050	150,755	
UNAVCO, INC.	UNAVCO S13-EAR1261833-S3	47 050	259,205	
UNIVERSITY AT BUFFALO (A STATE UNIVERSITY OF NEW YORK CAMPUS)	R983146	47 050	136,503	
UNIVERSITY CORPORATION FOR ATMOSPHERIC RESEARCH	Sub Z14-16839 (AGS-0753581)	47 050	(352)	
UNIVERSITY CORPORATION FOR ATMOSPHERIC RESEARCH	Z15-16975-cyc1	47 050	26,476	
UNIVERSITY CORPORATION FOR ATMOSPHERIC RESEARCH	Z16-21927-cyc1	47 050	32,010	
UNIVERSITY CORPORATION FOR ATMOSPHERIC RESEARCH	Z16-22493-cyc1	47 050	19,816	
UNIVERSITY OF CHICAGO	FP052668	47 050	88,940	
UNIVERSITY OF CHICAGO	FP052668-D	47 050	497,701	
UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	1553802	47 050	36,622	
UNIVERSITY OF HAWAII AT HILO	MA1129	47 050	48,308	
UNIVERSITY OF HAWAII AT MANOA	63373	47 050	963	
UNIVERSITY OF HAWAII AT MANOA	MA1126	47 050	141,002	
UNIVERSITY OF ILLINOIS	2014-04289-03-00	47 050	263,038	
UNIVERSITY OF ILLINOIS	78230	47 050	210	
UNIVERSITY OF MIAMI	S15-15-cyc2	47 050	40,099	
UNIVERSITY OF MIAMI	S15-49	47 050	105,728	
UNIVERSITY OF MIAMI	S15-50	47 050	225,243	
UNIVERSITY OF MINNESOTA	88575	47 050	(416)	
UNIVERSITY OF MINNESOTA	D004450802	47 050	86,679	
UNIVERSITY OF NEW HAMPSHIRE	14-063	47 050	21,616	
UNIVERSITY OF NEW HAMPSHIRE	16-001	47 050	13,436	
UNIVERSITY OF NEW HAMPSHIRE	17-014	47 050	3,197	
UNIVERSITY OF NEW MEXICO	A16-0471-003	47 050	338,194	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	63463	47 050	9,546	
UNIVERSITY OF SOUTH FLORIDA	2500156500A	47 050	92,874	
UNIVERSITY OF SOUTHERN CALIFORNIA	32774854	47 050	14,880	
UNIVERSITY OF SOUTHERN CALIFORNIA	33312147	47 050	17,184	
UNIVERSITY OF SOUTHERN CALIFORNIA	33312147:5	47 050	111	
UNIVERSITY OF SOUTHERN CALIFORNIA	33312147:6	47 050	24,548	
UNIVERSITY OF SOUTHERN CALIFORNIA	39073248	47 050	6,734	
UNIVERSITY OF SOUTHERN CALIFORNIA	40244683-cyc5	47 050	7,294	
UNIVERSITY OF SOUTHERN CALIFORNIA	63134	47 050	63,355	
UNIVERSITY OF SOUTHERN CALIFORNIA	63280	47 050	33,980	
UNIVERSITY OF SOUTHERN CALIFORNIA	79230	47 050	11,241	
UNIVERSITY OF SOUTHERN CALIFORNIA	79240	47 050	4,341	
UNIVERSITY OF SOUTHERN CALIFORNIA	79310	47 050	4,345	
UNIVERSITY OF SOUTHERN CALIFORNIA	79574	47 050	2,076	

The accompanying notes are an integral part of this schedule.

**UNIVERSITY OF CALIFORNIA**  
**Schedule of Expenditures of Federal Awards**  
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			Federal Expenditures	Pass-Through to Subrecipients
UNIVERSITY OF SOUTHERN CALIFORNIA	79575	47 050	2,931	
UNIVERSITY OF SOUTHERN CALIFORNIA	79844	47 050	1,741	
UNIVERSITY OF SOUTHERN CALIFORNIA	80170	47 050	13,191	
UNIVERSITY OF SOUTHERN CALIFORNIA	80561	47 050	30,000	
UNIVERSITY OF SOUTHERN CALIFORNIA	85452	47 050	29,375	
UNIVERSITY OF SOUTHERN CALIFORNIA	A00-0823-010	47 050	36,665	
UNIVERSITY OF SOUTHERN CALIFORNIA	A00-0936-013	47 050	33,047	
UNIVERSITY OF SOUTHERN CALIFORNIA	A00-0936-015	47 050	27,519	
UNIVERSITY OF SOUTHERN CALIFORNIA	SUB 53899157 (EAR-1349180)	47 050	(206)	
UNIVERSITY OF SOUTHERN CALIFORNIA	Sub 77612892 (EAR-1033462)	47 050	29,984	
UNIVERSITY OF SOUTHERN CALIFORNIA	Y81716	47 050	38,333	
UNIVERSITY OF SOUTHERN CALIFORNIA	Y86552-A	47 050	44,549	
UNIVERSITY OF SOUTHERN CALIFORNIA	Y86564	47 050	175,269	
UNIVERSITY OF SOUTHERN CALIFORNIA	Y88412	47 050	61,445	
UNIVERSITY OF TEXAS-AUSTIN	UTA11-001081	47 050	32,500	
UNIVERSITY OF WASHINGTON	UWSC6489	47 050	1,075	
UNIVERSITY OF SOUTHERN CALIFORNIA	Y86552-A	47 050	58,042	
BINGHAMTON UNIVERSITY	007239	47 070	46,501	
COMPUTING RESEARCH ASSOCIATION	BDhub004	47 070	228,916	
COMPUTING RESEARCH ASSOCIATION	UCLA_ALLIANCE001	47 070	76,383	
CORNELL UNIVERSITY	76221-10547	47 070	348,204	
GEORGIA INSTITUTE OF TECHNOLOGY	RD199-G11-cyc1	47 070	12,127	
HDF GROUP	05-15	47 070	221,916	
INDIANA UNIVERSITY	BL-4840230-UCLA	47 070	39,818	
INDIANA UNIVERSITY	UA4812506UCD	47 070	80,588	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	5710003559:2	47 070	7,486	
NEW JERSEY INSTITUTE OF TECHNOLOGY	008491	47 070	35,331	
NORTHWESTERN UNIVERSITY	SPO029341 Proj0007719 (ACI-145	47 070	196,926	
OHIO STATE UNIVERSITY	60056238	47 070	15,238	
OHIO STATE UNIVERSITY	60057106	47 070	11,394	
OHIO STATE UNIVERSITY	GRT00038045	47 070	63,812	
OLD DOMINION UNIVERSITY RESEARCH FOUNDATION	SUB 17-123-100613-010(1608140)	47 070	3,873	
PENNSYLVANIA STATE UNIVERSITY	5038-UCSB-NSF-3052	47 070	297	
PURDUE UNIVERSITY	4101-38048	47 070	425,346	
PURDUE UNIVERSITY	Sub 4101-38049 (CCF-0939370)	47 070	414,618	
RENAISSANCE COMPUTING INSTITUTE	Sub 5037380 (ACI-1440715)	47 070	4,582	
UNIVERSITY OF ILLINOIS	078343-15668	47 070	35,519	
UNIVERSITY OF ILLINOIS	SUB 083842-16110(ACI-1548562)	47 070	2,356,127	
UNIVERSITY OF ILLINOIS	Sub 2007-01077-55 (CSA OCI-072	47 070	37,340	
UNIVERSITY OF ILLINOIS AT CHICAGO	Sub 20151074 (CNS-1456638)	47 070	616,475	
UNIVERSITY OF MASSACHUSETTS AMHERST	13-007361 A 00-CYC1	47 070	79,179	
UNIVERSITY OF MEMPHIS	20163902	47 070	48,838	

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**UNIVERSITY OF CALIFORNIA**  
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			Federal Expenditures	Pass-Through to Subrecipients
UNIVERSITY OF MEMPHIS	A126878	47 070	67,099	
UNIVERSITY OF MICHIGAN	SUB 3002984028 (CNS-1419243)	47 070	15,444	
UNIVERSITY OF NEW MEXICO	007941	47 070	88,133	
UNIVERSITY OF NEW MEXICO	59770	47 070	410,098	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5105700	47 070	5,617	
UNIVERSITY OF NOTRE DAME (INCL GEM)	202917UCI-cyc1	47 070	5,834	
UNIVERSITY OF SOUTHERN CALIFORNIA	20154552	47 070	216,504	
UNIVERSITY OF TEXAS-AUSTIN	UTA16-000755	47 070	49,384	
UNIVERSITY OF TEXAS-DALLAS	96084	47 070	1	
UNIVERSITY OF UTAH	10037670-UCI-cyc1	47 070	117,555	
UNIVERSITY OF UTAH	10038993-UCI-cyc1	47 070	90,938	
UNIVERSITY OF WASHINGTON	UWSC7698	47 070	71,750	
UNIVERSITY OF WASHINGTON	UWSC9467	47 070	68,809	
VANDERBILT UNIVERSITY	3833-019899	47 070	38,888	
VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY	479589-19910	47 070	85,214	
UNIVERSITY OF ARIZONA	Y503161	47 071	82,977	
AMERICAN SOCIETY FOR CELL BIOLOGY	201400396	47 074	21,896	
ARIZONA STATE UNIVERSITY/TEMPE	17184	47 074	1,836	
ARIZONA STATE UNIVERSITY/TEMPE	DEB1414374	47 074	923	
BARNARD COLLEGE	UCD1455957	47 074	129,227	
BIGELOW LABORATORY FOR OCEAN SCIENCES	BLOS2015001	47 074	82,333	
BROWN UNIVERSITY	00000776	47 074	9,953	
CARY INSTITUTE OF ECOSYSTEM STUDIES	3161/200201406	47 074	31,735	
CARY INSTITUTE OF ECOSYSTEM STUDIES	3298/200201818	47 074	7,500	
CHAPMAN UNIVERSITY	500223-0001-cyc1	47 074	23,934	
CHAPMAN UNIVERSITY	81734	47 074	3,147	
COLORADO STATE UNIVERSITY	G-4023-2	47 074	68,120	
COLORADO STATE UNIVERSITY	G25762	47 074	6,271	
CORNELL UNIVERSITY	6718310110	47 074	392,129	
CORNELL UNIVERSITY	B2428	47 074	1,322	
DANFORTH FOUNDATION	Sub 22707-UCSD ( MCB-1330562)	47 074	47,780	
DUKE UNIVERSITY	333-2160	47 074	36,319	
FLORIDA STATE UNIVERSITY	008063	47 074	116,274	
FLORIDA STATE UNIVERSITY	86634	47 074	91,702	
INSTITUTE OF ECOSYSTEM STUDIES INC.	3280/200201842	47 074	32,121	
IOWA STATE UNIVERSITY	420-40-45D	47 074	109,057	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	5710003122	47 074	141,061	
MICHIGAN TECHNOLOGICAL UNIVERSITY	006931	47 074	563,488	
MONTANA STATE UNIVERSITY	Sub G103-14-W4431 (DBI-1254309	47 074	38,321	
NEVADA SYSTEM OF HIGHER EDUCATION	UNR-16-23	47 074	18,080	
NORTHERN ARIZONA UNIVERSITY	A00-1073-002	47 074	46,834	
OKLAHOMA STATE UNIVERSITY	AA-5-54654	47 074	307,160	

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**UNIVERSITY OF CALIFORNIA**  
**Schedule of Expenditures of Federal Awards**  
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Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	FY 2017		
		Federal CFDA #	Federal Expenditures	Pass-Through to Subrecipients
PENNSYLVANIA STATE UNIVERSITY	5280-UC-DHHS-6044	47 074	126,758	
RANCHO SANTA ANA BOTANIC GARDEN	005351	47 074	18,747	
RICE UNIVERSITY	Sub R3G401 (MCB-1616755)	47 074	71,651	
RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	20132841	47 074	1,818,105	
UNIVERSITY AT BUFFALO (A STATE UNIVERSITY OF NEW YORK CAMPUS)	R877841	47 074	230,100	
UNIVERSITY OF ARIZONA	357961	47 074	47,859	
UNIVERSITY OF ARIZONA	59769	47 074	143,855	
UNIVERSITY OF FLORIDA	UFDSP00011009	47 074	12,151	
UNIVERSITY OF GEORGIA	007057	47 074	100,672	
UNIVERSITY OF GEORGIA	39A78	47 074	109,878	
UNIVERSITY OF HAWAII AT MANOA	59774	47 074	15,892	
UNIVERSITY OF MAINE SYSTEM	UMS-1046	47 074	194,119	
UNIVERSITY OF MICHIGAN	3003046693	47 074	54,863	
UNIVERSITY OF MINNESOTA	D002520602	47 074	5,552	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	SUB 5-37293 (IOS-1343020)	47 074	254,315	
UNIVERSITY OF NOTRE DAME (INCL GEM)	202236	47 074	401	
UNIVERSITY OF NOTRE DAME (INCL GEM)	202799UCD	47 074	15,103	
UNIVERSITY OF PUERTO RICO	2016-002	47 074	59,536	
UNIVERSITY OF SOUTHERN CALIFORNIA	64141351	47 074	141,980	
UNIVERSITY OF SOUTHERN CALIFORNIA	875F4	47 074	1,529	
UNIVERSITY OF TEXAS-AUSTIN	UTA13-000215	47 074	8,554	
UNIVERSITY OF WASHINGTON	UWSC6250:4	47 074	334	
UNIVERSITY OF WISCONSIN-MADISON	59886	47 074	73,655	
UNIVERSITY OF WYOMING	1002790A	47 074	84,109	
UNIVERSITY OF WYOMING	1547796	47 074	2,046	
VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY	47898919326	47 074	255,592	
WASHINGTON STATE UNIVERSITY	127507_G003626	47 074	353	
WASHINGTON STATE UNIVERSITY	B 121253 G003275 (IOS 1344288)	47 074	12,003	
WASHINGTON UNIVERSITY IN ST. LOUIS	008615	47 074	4,493	
ARIZONA STATE UNIVERSITY/TEMPE	16-823	47 075	12,560	
ASSOCIATION FOR INSTITUTIONAL RESEARCH	DG15-8891	47 075	4,180	
BOSTON UNIVERSITY	007901	47 075	33,303	
BOSTON UNIVERSITY	Sub 4500001956 (SMA-1540920)	47 075	23,101	
HARVARD UNIVERSITY	133873-5090398	47 075	16,496	
JOHNS HOPKINS UNIVERSITY	2003169999	47 075	23,773	
NATIONAL BUREAU OF ECONOMIC RESEARCH, INC	273556000791857700	47 075	19,595	
NATIONAL BUREAU OF ECONOMIC RESEARCH, INC	38-3620-00-0-79-733-7700	47 075	53,290	
RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	0080	47 075	413	
STANFORD UNIVERSITY	61343100-122890-cyc1	47 075	58,111	
SYRACUSE UNIVERSITY	27510-03710-S01-cyc3	47 075	20,944	
TEMPLE UNIVERSITY	330161-UCLA:3	47 075	(30,184)	
UNIVERSITY OF MICHIGAN	3003321372:02	47 075	8,795	

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**UNIVERSITY OF CALIFORNIA**  
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Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	Federal CFDA #	FY 2017	
			Federal Expenditures	Pass-Through to Subrecipients
UNIVERSITY OF MICHIGAN	3004172823	47 075	49,124	
UNIVERSITY OF MINNESOTA	A005858801	47 075	2,327	
UNIVERSITY OF WISCONSIN-MADISON	498K982	47 075	117,248	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	83524	47 075	(1,020)	
WASHINGTON UNIVERSITY IN ST. LOUIS	WU-16-62	47 075	19,164	
YALE UNIVERSITY	C17D12563(D02257)	47 075	1,890	
AMERICAN MUSEUM OF NATURAL HISTORY	3-2014	47 076	193,679	
AMERICAN EDUCATIONAL RESEARCH ASSOCIATION	AER-203893-cyc1	47 076	20,000	
CITY COLLEGE OF THE CITY UNIVERSITY OF NEW YORK, THE	Sub 40F51-A ( DUE-1524779)	47 076	32,067	
COLORADO STATE UNIVERSITY	G-96702-4	47 076	3,325	
CONCORD CONSORTIUM, THE	282-02.01	47 076	84,807	
EDUCATION DEVELOPMENT CENTER, INC.	11826	47 076	215,499	
HARVARD UNIVERSITY	123930-5097974-cyc1	47 076	2,781	
MICHIGAN STATE UNIVERSITY	RC104101UCB	47 076	79,635	
NATIONAL ACADEMY OF ENGINEERING	79235	47 076	(26)	
NEW YORK UNIVERSITY	20164861	47 076	42,629	
NORTHWESTERN UNIVERSITY	SP0009801-PROJ0002728	47 076	37,982	
NORTHWESTERN UNIVERSITY	SP0024546-PROJ0007926	47 076	59,350	
RAND CORP	9920160031	47 076	80,192	
RICE UNIVERSITY	R3F911	47 076	25,076	
STEVENS INSTITUTE OF TECHNOLOGY	SUB 2102411-01 (DUE-1407123)	47 076	16,842	
UNIVERSITY OF ILLINOIS	58081	47 076	(1,504)	
UNIVERSITY OF KANSAS/KU CENTER FOR RESEARCH, INC.	FY2016056	47 076	5,591	
UNIVERSITY OF MICHIGAN	3003356473-cyc2	47 076	114,531	
UNIVERSITY OF MICHIGAN	3003593049	47 076	40,049	
UNIVERSITY OF SAN DIEGO	F12078-U2013-005	47 076	86,082	
UNIVERSITY OF SAN DIEGO	MARSS1172-U2014-003	47 076	132,785	
WESTED	S-00014572-cyc1	47 076	2,902	
WESTED	S11-208-cyc4	47 076	4,007	
WGBH EDUCATIONAL FOUNDATION	K201700254	47 076	38,336	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5105374	47 076	16,080	
UNIVERSITY OF WISCONSIN-MADISON	Sub 490K884 (DUE-1231286)	47 076	55,363	
UNIVERSITY OF CHICAGO	94232	47 078	(141)	
UNIVERSITY OF WISCONSIN-MADISON	96277	47 078	(6)	
CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	SA0000200	47 079	323,063	
CRDF GLOBAL	OISE-16-62791-0	47 079	1,080	
CRDF GLOBAL	OISE-15-62024-1-cyc1	47 079	58,409	
OHIO STATE UNIVERSITY	58064	47 079	5,600	
UNIVERSITY OF ILLINOIS	20105006	47 080	833	
UNIVERSITY OF ILLINOIS	2011-00318-07	47 080	3,689	
UNIVERSITY OF ILLINOIS	SUB 2011-00318-13 (OCI-105357	47 080	493,450	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	Sub 5-37146 (OCI-0940841)	47 080	87,205	

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Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	Federal CFDA #	FY 2017	
			Federal Expenditures	Pass-Through to Subrecipients
UNIVERSITY OF SOUTHERN CALIFORNIA	36558820:1	47 080	4,757	
BOISE STATE UNIVERSITY	6800-G	47 083	1,424	
PENNSYLVANIA STATE UNIVERSITY	86699	47 083	32,448	
UNIVERSITY OF ILLINOIS	2015-02361-01	47 083	87,897	
UNIVERSITY OF SOUTHERN CALIFORNIA	72781708	47 083	87,969	
UNIVERSITY OF SOUTHERN CALIFORNIA	A16-0468-002	47 083	200,712	
AMERICAN EDUCATIONAL RESEARCH ASSOCIATION	201400493	47 RD	5,748	
ASTRONOMICAL SOCIETY OF THE PACIFIC, THE	A00-1812-004	47 RD	39,416	
COLORADO STATE UNIVERSITY	79985	47 RD	671	
FLUENCY LIGHTING TECHNOLOGIES	SB160083	47 RD	77,090	
GEORGIA INSTITUTE OF TECHNOLOGY	26730	47 RD	(1,422)	
HARVARD UNIVERSITY	130783-5097125	47 RD	58,661	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	0255-8612-4609	47 RD	151,689	
K2 COMMUNICATIONS	201301455	47 RD	9,965	
OHIO STATE UNIVERSITY	RF01422608	47 RD	8,029	
TENNESSEE STATE UNIVERSITY	034250	47 RD	36,429	
UNIVERSITY OF ILLINOIS	15859	47 RD	39,492	
UNIVERSITY OF MINNESOTA	A004088504	47 RD	728,523	
UNIVERSITY OF NOTRE DAME (INCL GEM)	202764UCD	47 RD	19,622	
VISOLIS, INC.	042800	47 RD	1,565	
WESTED	s00030264.0	47 RD	96,180	
CARLETON COLLEGE	28-1773	47 RD	3,683	
FORT VALLEY STATE UNIVERSITY	201703511	47 RD	8,675	
UNIVERSITY OF GEORGIA	E323961	47 RD	55,276	
Subtotal Pass-Through and Partial Pass-Through Awards			41,446,690	-
Total National Science Foundation			503,870,070	27,260,061
DEPARTMENT OF VETERANS AFFAIRS				
Direct Awards	Various	64 RD	9,812,015	
Total Department of Veterans Affairs			9,812,015	-
ENVIRONMENTAL PROTECTION AGENCY				
Direct Awards	Various	66 RD	7,332,220	822,794
Pass-Through and Partial Pass-Through				
CALIFORNIA STATE COASTAL CONSERVANCY	12065	66 126	125,269	
HEALTH EFFECTS INSTITUTE	A8085	66 306	(56)	
UNIVERSITY OF CONNECTICUT	137828	66 437	62,032	
CONSTITUTIONAL RIGHTS FOUNDATION	2016 EPA01	66 440	18,319	
STATE WATER RESOURCES CONTROL BOARD	D16-15001	66 454	14,313	
CALIFORNIA STATE COASTAL CONSERVANCY	15-051	66 461	11,013	
COLORADO STATE UNIVERSITY	G-58008-1-CYC1	66 509	10,787	
PARADIGM ENVIRONMENTAL, INC.	PE-EPAR9-UCB001	66 509	26,623	

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Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	FY 2017			
		Federal		Federal	Pass-Through to
		CFDA #		Expenditures	Subrecipients
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT	17203	66	509	5,698	
UNIVERSITY OF ILLINOIS	070066-14318-cyc5	66	509	46,687	
UNIVERSITY OF MICHIGAN	3002024856:06	66	509	23,620	
UNIVERSITY OF NORTH CAROLINA SYSTEM	5754601602	66	509	14,250	
UNIVERSITY OF WASHINGTON	79156	66	509	800	
COLORADO SCHOOL OF MINES	401090-5801	66	511	31,883	
PUBLIC POLICY INSTITUTE OF CALIFORNIA	201500318	66	511	159,195	
CALIFORNIA DEPARTMENT OF PESTICIDE REGULATION	15C0091	66	605	2,873	
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	16-10004	66	707	213,088	
MONTEREY BAY AQUARIUM FOUNDATION	A16-0584-001	66	951	4,987	
ABT ASSOCIATES INC.	47281	66	RD	6,227	
BAY AREA AIR QUALITY MANAGEMENT DISTRICT	2016129	66	RD	88,600	34,515
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT	15650	66	RD	12,664	
STATE WATER RESOURCES CONTROL BOARD	70A99	66	RD	794,631	
UNIVERSITY OF WASHINGTON	UWSC7556	66	RD	13,596	
Subtotal Pass-Through and Partial Pass-Through Awards				1,687,099	34,515
<b>Total Environmental Protection Agency</b>				<b>9,019,319</b>	<b>857,309</b>
NUCLEAR REGULATORY COMMISSION					
Direct Awards	Various	77	RD	1,004,116	56,415
Total Nuclear Regulatory Commission				1,004,116	56,415
DEPARTMENT OF ENERGY					
Direct Awards	Various	81	RD	117,802,124	10,761,925
Direct Awards (ARRA)	Various	81	RD	44,969	(8,330)
Sub-Total Direct Awards				117,847,093	10,753,595
Pass-Through and Partial Pass-Through					
BATTELLE MEMORIAL INSTITUTE	170434	81	036	17,471	
GENERAL ATOMICS	4500059737-cyc1	81	036	250,270	
GENERAL ATOMICS	4500063485-cyc1	81	036	106,094	
INCOM, INC.	20161925	81	036	10,039	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B610987	81	036	18,676	
OAK RIDGE NATIONAL LABORATORY	4000136272-cyc1	81	036	499,003	103,216
AERODYNE RESEARCH, INC.	ARI 10978-5-cyc2	81	049	55,319	
AERODYNE RESEARCH, INC.	ARI112931	81	049	11,013	
AEROSOL DYNAMICS, INC.	3528	81	049	78,290	
AEROSOL DYNAMICS, INC.	3641-cyc1	81	049	122,312	
AGILTRON, INC.	150545	81	049	101,167	
BINGHAMTON UNIVERSITY	039699	81	049	94,338	
BROOKHAVEN NATIONAL LABORATORY/BROOKHAVEN SCIENCE ASSOCIATES, LLC	198731:10	81	049	72,545	
BROOKHAVEN NATIONAL LABORATORY/BROOKHAVEN SCIENCE ASSOCIATES, LLC	233044:3	81	049	147,105	
BROOKHAVEN NATIONAL LABORATORY/BROOKHAVEN SCIENCE ASSOCIATES, LLC	238854:3	81	049	69,497	

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			Federal Expenditures	Pass-Through to Subrecipients
BUCK INSTITUTE FOR RESEARCH ON AGING	SA29494	81 049	239,403	
CALIFORNIA INSTITUTE OF TECHNOLOGY	68J-1090279-cyc10	81 049	283,231	
CALIFORNIA INSTITUTE OF TECHNOLOGY	SUB 65Q-1094584 (DE-SC0010574)	81 049	30,226	
CALIFORNIA INSTITUTE OF TECHNOLOGY	Sub 65Q-1097562 (DE-SC0016469)	81 049	176,540	
CALIFORNIA INSTITUTE OF TECHNOLOGY	SUB 68JCAP-1090300 (DE-SC00049)	81 049	129,042	
COLORADO STATE UNIVERSITY	G000272	81 049	119,365	
COLUMBIA UNIVERSITY	1(GG008772)	81 049	119,684	
DIRAC SOLUTIONS INC.	A17-0242-001	81 049	39,622	
FERMI RESEARCH ALLIANCE, LLC (FRA) (INCL FERMILAB-DOE GOCO)	626040	81 049	38,090	
FERMI RESEARCH ALLIANCE, LLC (FRA) (INCL FERMILAB-DOE GOCO)	PO 613885	81 049	70,766	70,766
FERMI RESEARCH ALLIANCE, LLC (FRA) (INCL FERMILAB-DOE GOCO)	PO#619181:3	81 049	7,025	
GENERAL ATOMICS	4500059085	81 049	635,502	
GENERAL ATOMICS	Sub 4500059469 (DE-NA0002730)	81 049	34,305	
GENERAL ENGINEERING & RESEARCH, LLC	Sub 20163004 (DE-SC0015932)	81 049	50,000	
HJ SCIENCE AND TECHNOLOGY, INC.	20161999	81 049	16,827	
INCOM, INC.	036602	81 049	73,192	
IOWA STATE UNIVERSITY	401-21-37D	81 049	1,352	
JOHNS HOPKINS UNIVERSITY	SUB 2002373314 (DESC0012658)	81 049	220,810	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B613194:1	81 049	31,391	
LOS ALAMOS NATIONAL SECURITY, LLC	383906	81 049	108,748	
LOS ALAMOS NATIONAL SECURITY, LLC	416628	81 049	72,283	
LOS ANGELES DEPARTMENT OF WATER AND POWER	20616	81 049	(67,542)	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	5710003279:3	81 049	39,903	
MIDWEST RESEARCH INST	XFC-6-62064-01	81 049	114,631	
MOLECULAR VISTA	MV-204785-cyc1	81 049	195,169	
NORTHWESTERN UNIVERSITY	CNV0055224/PROJ0000253:9	81 049	160,682	
OAK RIDGE NATIONAL LABORATORY	4000116770:09	81 049	348,561	
PACIFIC NORTHWEST NATIONAL LABORATORIES	20152753	81 049	46,630	
PACIFIC NORTHWEST NATIONAL LABORATORIES	A17-0585-001	81 049	42,998	
PENNSYLVANIA STATE UNIVERSITY	4916-USB-DOE-0620	81 049	56,861	
PENNSYLVANIA STATE UNIVERSITY	5024-UCLA-DOE-2377:1	81 049	91,545	
PENNSYLVANIA STATE UNIVERSITY	Sub 5065-UCSD-DOE-2375 (DE-SC0)	81 049	171,516	
PRINCETON PLASMA PHYSICS LABORATORY	S014889-R	81 049	77,671	
PURDUE UNIVERSITY	59585	81 049	187,171	
RADIABEAM TECHNOLOGIES, LLC	20164118	81 049	92,928	
RADIABEAM TECHNOLOGIES, LLC	DE-SC0017102	81 049	4,255	
RADIASOFT LLC	20171598	81 049	5,342	
REACTIVE INNOVATIONS LLC	79264	81 049	(4,124)	
SMART MANUFACTURING LEADERSHIP COALITION	20162895	81 049	433,486	
SPEC, INC.	SPEC SRA-15-100115JTA	81 049	7,244	
STATE UNIVERSITY OF NEW YORK	68799	81 049	147,704	
STATE UNIVERSITY OF NEW YORK	68856-11194936-3	81 049	72,873	

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STONY BROOK UNIVERSITY (A STATE UNIVERSITY OF NEW YORK CAMPUS)	72115:1	81 049	38,391	
TDA RESEARCH, INC.	GA.2050.UC1.14.03-cyc2	81 049	31,208	
ULTRAMET	PO No. 10776:2	81 049	8,964	
ULTRAMET	PO No. 13403	81 049	44,358	
UNIVERSITIES RESEARCH ASSOCIATION (OPERATES FERMILAB)	603654:10	81 049	252,933	
UNIVERSITIES RESEARCH ASSOCIATION (OPERATES FERMILAB)	PO #605974:6	81 049	201,243	
UNIVERSITIES RESEARCH ASSOCIATION (OPERATES FERMILAB)	SUB 606537 (NONE)	81 049	96,864	
UNIVERSITY OF CENTRAL FLORIDA	004518	81 049	151,973	
UNIVERSITY OF CINCINNATI	009725-002	81 049	228,646	
UNIVERSITY OF COLORADO BOULDER	1553192-cyc1	81 049	60,980	
UNIVERSITY OF KANSAS/KU CENTER FOR RESEARCH, INC.	007775	81 049	41,752	
UNIVERSITY OF MARYLAND	028-Z7181002:A	81 049	127,248	
UNIVERSITY OF MARYLAND	Z7181005-cyc3	81 049	336,797	
UNIVERSITY OF MICHIGAN	3002880403	81 049	184,391	
UNIVERSITY OF MICHIGAN	3003694279	81 049	165,371	
UNIVERSITY OF MICHIGAN	3003723421	81 049	77,566	
UNIVERSITY OF MINNESOTA	A004527503	81 049	174,540	
UNIVERSITY OF NOTRE DAME (INCL GEM)	202373	81 049	112,086	
UNIVERSITY OF NOTRE DAME (INCL GEM)	82125	81 049	282,586	
UNIVERSITY OF TEXAS-AUSTIN	UTA14-000160:2	81 049	8,145	
UNIVERSITY OF WASHINGTON	763613-cyc2	81 049	177,916	
UNIVERSITY OF WASHINGTON	UWSC8126	81 049	98,888	
UNIVERSITY OF WISCONSIN SYSTEM	005878	81 049	200,925	
UNIVERSITY OF WISCONSIN-MADISON	609K674:1	81 049	236,038	
UNIVERSITY OF WISCONSIN-MADISON	614K924:1	81 049	151,524	
UNIVERSITY OF WISCONSIN-MADISON	Sub 420K991 (DE-SC0008713)	81 049	84,063	
WASHINGTON UNIVERSITY IN ST. LOUIS	004368	81 049	157,356	
WASHINGTON UNIVERSITY IN ST. LOUIS	006723	81 049	180,560	
WAYNE STATE UNIVERSITY	WSU14139-A2	81 049	166,079	63,471
UNIVERSITY OF TEXAS-ARLINGTON	B 1260801390-61 (DE-FE0023118)	81 057	25,605	
UNIVERSITY OF ILLINOIS	2014-04905-01	81 079	341,416	
NORTH CAROLINA STATE UNIVERSITY	2014-0654-63	81 086	239,938	
NORTH CAROLINA STATE UNIVERSITY	2014-0654-65	81 086	255,907	
SILURIA TECHNOLOGIES, INC.	DE-EE0005769	81 086	10,357	
UNIVERSITY OF TENNESSEE	A15-0653	81 086	33,469	
UNIVERSITY OF TEXAS-AUSTIN	UTA13-001076	81 086	362,804	
ALLIANCE FOR SUSTAINABLE ENERGY, LLC	008145	81 087	118,726	
ALLIANCE FOR SUSTAINABLE ENERGY, LLC	Sub XHD-4-23068-01 (DE-AC36-08	81 087	27,499	
BROOKHAVEN NATIONAL LABORATORY/BROOKHAVEN SCIENCE ASSOCIATES, LLC	267696-cyc3	81 087	5,751	
BROOKHAVEN NATIONAL LABORATORY/BROOKHAVEN SCIENCE ASSOCIATES, LLC	325257-cyc5	81 087	574,558	
CALIFORNIA MANUFACTURING TECHNOLOGY CONSULTING	DE-EE0007613	81 087	19,625	
CALIFORNIA POLYTECHNIC STATE UNIVERSITY FOUNDATION	16-16-45263	81 087	9,170	

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			Federal Expenditures	Pass-Through to Subrecipients
COLORADO STATE UNIVERSITY	G-12018-1-cyc1	81 087	45,453	
ELECTRIC POWER RESEARCH INSTITUTE	008250	81 087	98,294	
ELECTRIC POWER RESEARCH INSTITUTE	10007378-cyc1	81 087	361	
FUEL CELL ENERGY INC.	10002506-cyc1	81 087	45,870	
GLOBAL ALGAE INNOVATIONS	Sub 160849 (DE-EE0007689)	81 087	239,559	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B617108	81 087	26,348	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B620105	81 087	34,001	
LOS ALAMOS NATIONAL SECURITY, LLC	324390-cyc1	81 087	136,425	
OAK RIDGE NATIONAL LABORATORY	4000132775	81 087	160,612	
OAK RIDGE NATIONAL LABORATORY	4000152959	81 087	11,094	
OHIO FUEL CELL COALITION	OFCC-205761-cyc1	81 087	10,589	
OREGON STATE UNIVERSITY	G0154FA	81 087	133,438	
SANDIA NATIONAL LABORATORIES	1802334	81 087	29,438	
SMART MANUFACTURING LEADERSHIP COALITION	CESMII - 2017 - S - 01-cyc1	81 087	1,254	
SOLAR RESERVE LLC	1443	81 087	168,496	
SOLAR RESERVE LLC	Sub UCSD-2 (DE-EE0007113)	81 087	38,631	
STANFORD UNIVERSITY	60094381-51077-C	81 087	146,552	
STANFORD UNIVERSITY	60094382-51077-B	81 087	174,198	
STANFORD UNIVERSITY	60094385-51077-A	81 087	3	
STANFORD UNIVERSITY	60962297-51077-2	81 087	491	
STANFORD UNIVERSITY	A15-0114-002	81 087	10,500	
TDA RESEARCH, INC.	GA.2941.UCI.14.01-cyc3	81 087	7,298	
UNIVERSITY OF CENTRAL FLORIDA	Sub 16226104-06 (EE0007327)	81 087	1,650	
ALTEX TECHNOLOGIES CORPORATION	DEF002663UCD002	81 089	74,454	
COLUMBIA UNIVERSITY	A17-0866-001	81 089	4,163	
MICROBIO ENGINEERING, INC.	MBE 2015-3963R1	81 089	49,918	
OREGON STATE UNIVERSITY	008188	81 089	33,815	
OREGON STATE UNIVERSITY	G0148A-B	81 089	92,935	
TDA RESEARCH, INC.	GA.2074.UCI.16.01-cyc1	81 089	48,559	
TDA RESEARCH, INC.	GA.2208.UCI.16.01-cyc1	81 089	73,490	
TDA RESEARCH, INC.	GA.2339.UCI.16.01-cyc1	81 089	34,813	
TDA RESEARCH, INC.	GA.2942.UCI.14.04-cyc4	81 089	68,094	
UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	DE-FE0029168	81 089	80,677	
UNIVERSITY OF SOUTHERN CALIFORNIA	66913872	81 089	159,639	
CARNEGIE INSTITUTION	4-10469-07:3	81 112	463	
CARNEGIE INSTITUTION	4-10469-12	81 112	53,952	
CORNELL UNIVERSITY	SUB 67350-9962 (DE-NA0001836)	81 112	200,517	
HARVARD UNIVERSITY	130805-5088706	81 112	109,779	
INTERNATIONAL BUSINESS MACHINES CORPORATION	SUB 20133515 (UNKNOWN)	81 112	84,114	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B620838	81 112	66,217	
OAK RIDGE NATIONAL LABORATORY	4000139957	81 112	141,703	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B618358	81 113	96,627	

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SANDIA NATIONAL LABORATORIES	1653354	81 113	220,864	
ARIZONA STATE UNIVERSITY/TEMPE	14-423	81 121	66,421	
BATTELLE ENERGY ALLIANCE, LLC (BEA)	168284-cyc1	81 121	104,156	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B613986	81 121	(7,814)	
LOS ALAMOS NATIONAL SECURITY, LLC	278765-CYC1	81 121	156,344	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	5710003847	81 121	585,261	41,782
UNIVERSITY OF ILLINOIS	2014-05784-01	81 121	72,670	
UNIVERSITY OF MICHIGAN	3002964742	81 121	167,260	
UNIVERSITY OF MICHIGAN	3002964977	81 121	60,694	
UNIVERSITY OF WISCONSIN-MADISON	634K071	81 121	107,290	
ARIZONA STATE UNIVERSITY/TEMPE	15-617	81 122	628	
BROOKHAVEN NATIONAL LABORATORY/BROOKHAVEN SCIENCE ASSOCIATES, LLC	A17-0695-001	81 123	14,954	
BROOKHAVEN NATIONAL LABORATORY/BROOKHAVEN SCIENCE ASSOCIATES, LLC	A17-0696-001	81 123	7,648	
BROOKHAVEN NATIONAL LABORATORY/BROOKHAVEN SCIENCE ASSOCIATES, LLC	A17-0697-001	81 123	43,696	
BROOKHAVEN NATIONAL LABORATORY/BROOKHAVEN SCIENCE ASSOCIATES, LLC	A17-0698-001	81 123	43,842	
BROOKHAVEN NATIONAL LABORATORY/BROOKHAVEN SCIENCE ASSOCIATES, LLC	A17-0699-001	81 123	42,488	
BROOKHAVEN NATIONAL LABORATORY/BROOKHAVEN SCIENCE ASSOCIATES, LLC	A17-0700-001	81 123	32,648	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B614637-cyc3	81 123	8,612	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B615672	81 123	8,518	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B616375-cyc1	81 123	65,969	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B622155-cyc1	81 123	32,171	
LOS ALAMOS NATIONAL SECURITY, LLC	368641-cyc1	81 123	62,967	
PRINCETON PLASMA PHYSICS LABORATORY	S015152-F	81 124	14,008	
UNIVERSITY OF UTAH	10029200-UCB	81 124	323,826	
ARIZONA STATE UNIVERSITY/TEMPE	16002	81 135	200,024	
GAS TECHNOLOGY INSTITUTE	S492	81 135	419,594	
MAGNETO-INERTIAL FUSION TECHNOLOGIES, INC	Sub None ( AR0000569)	81 135	607,549	
METROPIA INC.	201503221	81 135	87,260	
NANOSD, INC.	Sub None (DE-AR0000744)	81 135	208,549	
PRINCETON PLASMA PHYSICS LABORATORY	S015422-F	81 135	122,111	
ROBERT BOSCH NORTH AMERICA	E-AR0000278-001 (DE-AR0000278)	81 135	(2,792)	
SRI INTERNATIONAL	119-000279-1	81 135	349,918	
STANFORD UNIVERSITY	61275607-120983	81 135	275,403	
STONY BROOK UNIVERSITY (A STATE UNIVERSITY OF NEW YORK CAMPUS)	80173	81 135	76,168	
UNIVERSITY OF CINCINNATI	009725-002	81 135	110,832	
UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	sub 1554800 (DE-AR0000770)	81 135	120,229	
UNIVERSITY OF FLORIDA	UFDSP00010600	81 135	0	
UNIVERSITY OF ILLINOIS	15653-cyc1	81 135	77,413	
UNIVERSITY OF TENNESSEE	8500051702	81 135	45,047	
CARNEGIE INSTITUTION	6-10031-01	81 214	2,722	
ADVANCED RESEARCH CORPORATION	201602640	81 RD	44,899	
ALLIANCE FOR SUSTAINABLE ENERGY, LLC	XAT-4-42242-01	81 RD	60,218	

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ALLIANCE FOR SUSTAINABLE ENERGY, LLC	XAT-6-62531-01	81 RD	124,199	
ALSTOM	3487-4500790783	81 RD	22,077	
AMERICAN LITHIUM ENERGY	Sub NONE(DE-SC0013839)	81 RD	1,670	
AMES LABORATORY	SC13395	81 RD	224,233	
ARGONNE NATIONAL LABORATORY	5F30561	81 RD	(1,113)	
ARGONNE NATIONAL LABORATORY (DOE GOCO LAB OPERATED BY UNIV OF CHICAGO)	6F32161	81 RD	36,466	
BATTELLE MEMORIAL INSTITUTE	00118545	81 RD	12,965	
BATTELLE MEMORIAL INSTITUTE	00119430	81 RD	(909)	
BATTELLE MEMORIAL INSTITUTE	177836	81 RD	19,522	
BLUE RIVER TECHNOLOGY	38A17	81 RD	256,242	
BLUE RIVER TECHNOLOGY	Y152594	81 RD	10,849	
BROOKHAVEN NATIONAL LABORATORY/BROOKHAVEN SCIENCE ASSOCIATES, LLC	39554	81 RD	187,203	
BROOKHAVEN NATIONAL LABORATORY/BROOKHAVEN SCIENCE ASSOCIATES, LLC	63913	81 RD	196,222	
CARNEGIE INSTITUTION	4-10469-18	81 RD	59,567	
CENTER FOR ENERGY AND ENVIRONMENT	201602545	81 RD	27,282	
COLORADO SCHOOL OF MINES	400769-5808	81 RD	51,831	
FERMI RESEARCH ALLIANCE, LLC (FRA) (INCL FERMILAB-DOE GOCO)	29A40	81 RD	39,372	
FERMI RESEARCH ALLIANCE, LLC (FRA) (INCL FERMILAB-DOE GOCO)	553611	81 RD	54,150	
FERMI RESEARCH ALLIANCE, LLC (FRA) (INCL FERMILAB-DOE GOCO)	617067	81 RD	6,000	
FERMI RESEARCH ALLIANCE, LLC (FRA) (INCL FERMILAB-DOE GOCO)	619952	81 RD	10,240	
FERMI RESEARCH ALLIANCE, LLC (FRA) (INCL FERMILAB-DOE GOCO)	625607	81 RD	43,701	
FERMI RESEARCH ALLIANCE, LLC (FRA) (INCL FERMILAB-DOE GOCO)	625999	81 RD	118,938	
FERMI RESEARCH ALLIANCE, LLC (FRA) (INCL FERMILAB-DOE GOCO)	628813	81 RD	58,911	
FERMI RESEARCH ALLIANCE, LLC (FRA) (INCL FERMILAB-DOE GOCO)	631801	81 RD	23,835	
FERMI RESEARCH ALLIANCE, LLC (FRA) (INCL FERMILAB-DOE GOCO)	633923	81 RD	39	
GENERAL ATOMICS	PO4500055468 (DE-NE0008323)	81 RD	84,052	
GENERAL ATOMICS	SUB 4500054833 (DE-FG02-95ER54	81 RD	51,684	
GENERAL ATOMICS	Sub 4500060525(DE-FC02-04ER546	81 RD	103,716	
GENERAL ATOMICS	Sub 4500060575(DE-FC02-08ER549	81 RD	47,538	
GENERAL ATOMICS	sub 4500065590 (DE-SC0015499)	81 RD	39,359	
HYPERV TECHNOLOGIES CORP	H20162	81 RD	74,183	
IDAHO NATIONAL LABORATORY	167290	81 RD	10,421	
IOWA STATE UNIVERSITY	401-21-36B	81 RD	2,003	
JET PROPULSION LABORATORY	1507890	81 RD	1,021	
KOOTENAI TRIBE OF IDAHO	1988-064-00	81 RD	465	
KOOTENAI TRIBE OF IDAHO	201502254	81 RD	78,760	
KRELL INSTITUTE	UCD2011G12	81 RD	1,000	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	201602508	81 RD	43,676	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	86067	81 RD	4,372	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	96308	81 RD	(649)	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B604236	81 RD	31,841	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B611060	81 RD	17,324	

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LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B611564	81 RD	(42,742)	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B613230	81 RD	46,370	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B615553	81 RD	37,964	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B615664	81 RD	16,937	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B615842	81 RD	39,686	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B616121	81 RD	27,382	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B616616	81 RD	26,575	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B616790	81 RD	23,269	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B617085	81 RD	142,704	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B617449	81 RD	21,273	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B617862	81 RD	48,051	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B617930	81 RD	0	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B618165	81 RD	29,655	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B618376	81 RD	17,919	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B618392	81 RD	223,361	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B618408	81 RD	47,894	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B619357	81 RD	17,490	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B6200849	81 RD	91,916	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B620352	81 RD	63,476	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B620580	81 RD	39,766	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B620728	81 RD	38,464	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B621019	81 RD	38,007	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B621105	81 RD	25,840	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B621286	81 RD	20,377	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B623076	81 RD	3,482	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B921899	81 RD	24,966	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	Sub B615607 B599552 (DE-AC52-0	81 RD	51,525	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	Sub B620706 (B599552)	81 RD	37,846	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	Sub B622171 (DE-AC52-07NA27344	81 RD	24,710	
LOS ALAMOS NATIONAL SECURITY, LLC	211060	81 RD	96,033	
LOS ALAMOS NATIONAL SECURITY, LLC	257842 (DE-AC52-06NA25396)	81 RD	(1,038)	
LOS ALAMOS NATIONAL SECURITY, LLC	295779	81 RD	30,362	
LOS ALAMOS NATIONAL SECURITY, LLC	87367	81 RD	6,841	
LOS ALAMOS NATIONAL SECURITY, LLC	Sub 277921 (DE-AC52-06NA25396)	81 RD	67,685	
LOS ALAMOS NATIONAL SECURITY, LLC	Sub 318473 ( DE-AC52-06NA25396	81 RD	84,589	
LOS ALAMOS NATIONAL SECURITY, LLC	Sub 351623 (DEAC52-06NA25396)	81 RD	1,107,531	
LOS ALAMOS NATIONAL SECURITY, LLC	Sub 370334 (DE-AC52-06NA25396)	81 RD	263,445	
LOS ALAMOS NATIONAL SECURITY, LLC	Sub 398502 (DE-AC52-06NA25396)	81 RD	47,360	
LOS ALAMOS NATIONAL SECURITY, LLC	Sub 404673 ( None)	81 RD	113,065	
MAGNETO-INERTIAL FUSION TECHNOLOGIES, INC	Sub 20162681 (DE-SC0015732)	81 RD	32,515	
MIDWEST RESEARCH INST	96472	81 RD	(6,459)	
MIDWEST RESEARCH INST	XGJ-7-62614-01	81 RD	59,924	

The accompanying notes are an integral part of this schedule.



**UNIVERSITY OF CALIFORNIA**  
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Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	Federal CFDA #	FY 2017	
			Federal Expenditures	Pass-Through to Subrecipients
OAK RIDGE NATIONAL LABORATORY	005903	81 RD	486,587	
OAK RIDGE NATIONAL LABORATORY	006982	81 RD	68,859	
OAK RIDGE NATIONAL LABORATORY	008531	81 RD	39,461	
OAK RIDGE NATIONAL LABORATORY	40000139641	81 RD	93,820	
OAK RIDGE NATIONAL LABORATORY	4000100283	81 RD	4,512	
OAK RIDGE NATIONAL LABORATORY	4000101858-CYC3	81 RD	5,782	
OAK RIDGE NATIONAL LABORATORY	4000134953	81 RD	76,335	
OAK RIDGE NATIONAL LABORATORY	4000140266	81 RD	195,238	
OAK RIDGE NATIONAL LABORATORY	4000141233	81 RD	369,081	
OAK RIDGE NATIONAL LABORATORY	4000142358	81 RD	42,394	
OAK RIDGE NATIONAL LABORATORY	4000145177	81 RD	131,171	
OAK RIDGE NATIONAL LABORATORY	4000145975	81 RD	61,997	
OAK RIDGE NATIONAL LABORATORY	4000147510	81 RD	137,380	
OAK RIDGE NATIONAL LABORATORY	4000148444	81 RD	49,816	
OAK RIDGE NATIONAL LABORATORY	4000151688	81 RD	104,376	
OAK RIDGE NATIONAL LABORATORY	59545	81 RD	(13)	
OAK RIDGE NATIONAL LABORATORY	85462	81 RD	(38)	
OAK RIDGE NATIONAL LABORATORY	Sub 4000153844 (DE-ACOS-00OR22	81 RD	4,955	
PACIFIC NORTHWEST NATIONAL LABORATORIES	008287	81 RD	100,000	
PACIFIC NORTHWEST NATIONAL LABORATORIES	008894	81 RD	20,020	
PACIFIC NORTHWEST NATIONAL LABORATORIES	190110	81 RD	31,291	
PACIFIC NORTHWEST NATIONAL LABORATORIES	275882	81 RD	149,650	
PACIFIC NORTHWEST NATIONAL LABORATORIES	28A40	81 RD	4,413	
PACIFIC NORTHWEST NATIONAL LABORATORIES	Sub 274570 (DE-AC05-76RL01830)	81 RD	93,984	
PACIFIC NORTHWEST NATIONAL LABORATORIES	Sub 295287 (DE-AC05-76RL01830)	81 RD	55,315	
PRINCETON PLASMA PHYSICS LABORATORY	Sub S014011-F (DE-AC02-09CH114	81 RD	29,441	
RADIABEAM TECHNOLOGIES, LLC	20160519	81 RD	26,867	
SANDIA NATIONAL LABORATORIES	1439950	81 RD	4,162	
SANDIA NATIONAL LABORATORIES	1590734	81 RD	149,274	
SANDIA NATIONAL LABORATORIES	1592672	81 RD	8,142	
SANDIA NATIONAL LABORATORIES	1646732 (DE-AC04-94AL85000)	81 RD	82,828	
SANDIA NATIONAL LABORATORIES	1651967	81 RD	29,342	
SANDIA NATIONAL LABORATORIES	1673089	81 RD	1,548	
SANDIA NATIONAL LABORATORIES	1693730	81 RD	40,784	
SANDIA NATIONAL LABORATORIES	1742077	81 RD	29,702	
SANDIA NATIONAL LABORATORIES	1742701	81 RD	28,156	
SANDIA NATIONAL LABORATORIES	1743585	81 RD	61,039	
SANDIA NATIONAL LABORATORIES	1750185	81 RD	18,800	
SANDIA NATIONAL LABORATORIES	1770585	81 RD	17,461	
SANDIA NATIONAL LABORATORIES	1786332	81 RD	61,737	
SANDIA NATIONAL LABORATORIES	86220	81 RD	87,312	
SANDIA NATIONAL LABORATORIES	94912	81 RD	(691)	

The accompanying notes are an integral part of this schedule.

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Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	Federal CFDA #	FY 2017		
			Federal Expenditures	Pass-Through to Subrecipients	
SANDIA NATIONAL LABORATORIES	PO1404595	81 RD	52,586		
SANDIA NATIONAL LABORATORIES	PO1627708	81 RD	167,693		
SANDIA NATIONAL LABORATORIES	PO1667993	81 RD	73,114		
SANDIA NATIONAL LABORATORIES	PO1668054	81 RD	142,735		
SANDIA NATIONAL LABORATORIES	PO1751525	81 RD	5,995		
SANDIA NATIONAL LABORATORIES	SUB 1534256 (776622)	81 RD	(4,834)		
TDA RESEARCH, INC.	GA.2085.UCL.15.02-cyc1	81 RD	29,293		
UNIVERSITIES RESEARCH ASSOCIATION (OPERATES FERMILAB)	604705	81 RD	28,577		
UNIVERSITY OF MINNESOTA	A003127005	81 RD	156,962		
UNIVERSITY OF TENNESSEE	A13-0708-S006-A01	81 RD	28,777		
Subtotal Pass-Through and Partial Pass-Through Awards			29,458,474	279,235	
Total Department of Energy			147,305,567	11,032,830	
DEPARTMENT OF EDUCATION					
Direct Awards	Various	84 RD	17,515,004	4,281,480	
Pass-Through and Partial Pass-Through					
VENTURA COUNTY COMMUNITY COLLEGE DISTRICT	P031C110025	84 013	78,437		
HARTNELL COLLEGE	A00-2068-009	84 031	140,803		
GEORGIA STATE UNIVERSITY	008047	84 116	183,881		
REHABILITATION INSTITUTE OF CHICAGO	81760-cyc5	84 133	190,019		
CALIFORNIA DEPARTMENT OF REHABILITATION	29616	84 136	89,022		
CALIFORNIA DEPARTMENT OF EDUCATION	15-14349-3001-9A	84 287	1,864,402	1,003,657	
CALIFORNIA DEPARTMENT OF EDUCATION	15-14765-3001-9A	84 287	67,542	24,206	
COLUMBIA UNIVERSITY	1 (GG009670)	84 305	32,672		
EDBOOST	20103499	84 305	119,029		
FLORIDA STATE UNIVERSITY	R01833-cyc1	84 305	101,892		
FLORIDA STATE UNIVERSITY	R01854-cyc1	84 305	30,247		
FLORIDA STATE UNIVERSITY	R01855-cyc1	84 305	45,393		
HARVARD UNIVERSITY	108135-5099346	84 305	128,585		
LITERACY DESIGN COLLABORATIVE, INC	20145515	84 305	278,997		
UNIVERSITY OF MICHIGAN	3004027875	84 305	124,177		
UNIVERSITY OF SOUTH CAROLINA	15-2906	84 305	107,819		
VANDERBILT UNIVERSITY	007088	84 305	14,767		
WASHINGTON STATE UNIVERSITY	121927G003243	84 305	48,601		
GEORGIA STATE UNIVERSITY	SP00010919-06-cyc1	84 324	24,255		
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B620630	84 324	32,281		
PENNSYLVANIA STATE UNIVERSITY	5265-UCI-USDE-0126-cyc1	84 324	90,121		
SRI INTERNATIONAL	51-001228:5	84 324	5,329		
UNIVERSITY OF MICHIGAN	3003847265-cyc1	84 324	144,174		
ORANGE COUNTY DEPARTMENT OF EDUCATION	41113-cyc1	84 366	29,496		
SAN DIEGO COUNTY OFFICE OF EDUCATION	16170185	84 366	318,752		
CALIFORNIA DEPARTMENT OF EDUCATION	15-15196-3001-00	84 367	175,295	60,076	

The accompanying notes are an integral part of this schedule.

**UNIVERSITY OF CALIFORNIA**  
**Schedule of Expenditures of Federal Awards**  
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Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	FY 2017		
		Federal CFDA #	Federal Expenditures	Pass-Through to Subrecipients
CALIFORNIA DEPARTMENT OF EDUCATION	NCLB12-CSP-UCSB	84 367	5,323	
CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	A00-1301-002	84 367	24,146	
CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	NCLB12-CMP-UCSB	84 367	121	
CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	NCLB12-CWP-UCSB	84 367	2,866	
CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	NCLB12-CWP-UCSD	84 367	524	
CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	NCLB13-CHSSP-UCI-cyc1	84 367	44,994	
CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	NCLB13-CMP-UCSB	84 367	22,652	
CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	NCLB13-CSP-UCSB	84 367	36,000	
CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	NCLB13-CWLP-UCB	84 367	27,648	
CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	NCLB13-CWP-UCI-cyc1	84 367	25,000	
CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	NCLB13-CWP-UCSB	84 367	32,088	
CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	Sub NCLB12-CRLP-UCSD	84 367	0	
CALIFORNIA POSTSECONDARY EDUCATION COMMISSION	83560	84 367	351,272	61,151
NATIONAL WRITING PROJECT	92-CA06-SEED2012-1-CYC4	84 367	6,543	
NATIONAL WRITING PROJECT	92-CA06-SEED2016-ILI-cyc1	84 367	11,227	
NATIONAL WRITING PROJECT	92-CA06-SEED2017-CRWPAI-cyc1	84 367	3,114	
NATIONAL WRITING PROJECT	92-CA07-SEED2016 (DOEdu U367D1	84 367	14,246	
NATIONAL WRITING PROJECT	92-CA07-SEED2017-CRWPPD	84 367	2,111	
NATIONAL WRITING PROJECT	Sub 92-CA07-SEED2017-ILI	84 367	232	
SRI INTERNATIONAL	51-001299	84 367	43,744	
UNIVERSITY OF WISCONSIN-MADISON	388K975.5	84 368	6,912	
NATIONAL MATH AND SCIENCE INITIATIVE, INC.	20160003	84 411	567,395	
ONU TECHNOLOGY, INC.	201504131	84 411	156,973	
CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	Sub 57795A p2128 7802 212 (291	84 418	13,337	
AFINGEN, INC.	201400874	84 RD	44,729	
MINDSET WORKS, INC.	201500250	84 RD	177,764	
NATIONAL SCHOOL DISTRICT	20151009	84 RD	50,597	
WESTAT	88188	84 RD	342	
Subtotal Pass-Through and Partial Pass-Through Awards			6,137,888	1,149,090
Total Department of Education			23,652,892	5,430,570
SMITHSONIAN INSTITUTE				
Direct Awards	Various	85 RD	4,609,414	41,907
Total Smithsonian Institute			4,609,414	41,907
INSTITUTE OF PEACE				
Pass-Through and Partial Pass-Through				
ATOX BIO	201600397	91 RD	2,528	
Subtotal Pass-Through and Partial Pass-Through Awards			2,528	-
Total Institute of Peace			2,528	-
NATIONAL COUNCIL ON DISABILITY				

The accompanying notes are an integral part of this schedule.

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Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	FY 2017			
		Federal		Federal	Pass-Through to
		CFDA #		Expenditures	Subrecipients
Pass-Through and Partial Pass-Through					
THE SCRIPPS RESEARCH INSTITUTE	SUB 5-52225 (NS092306)	92	273	176,168	
UNIVERSITY OF VIRGINIA	SUB GB1025 150187 (HL127564)	92	837	276,060	
Subtotal Pass-Through and Partial Pass-Through Awards				452,228	-
Total National Council on Disability				452,228	-
DEPARTMENT OF HEALTH AND HUMAN SERVICES					
Direct Awards					
ADMH PHS (SAMHSA) MENTAL HEALTH - CENTER FOR MENTAL HEALTH SERVICES	Various	93	RD	415,587	21,882
ADMH PHS (SAMHSA) PREVENTION - CENTER FOR SUBSTANCE ABUSE PREVENTION	Various	93	RD	3,797,219	1,786,609
CDC CENTERS FOR DISEASE CONTROL AND PREVENTION	Various	93	RD	27,631,488	10,042,393
CDC NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH	Various	93	RD	943,509	2,647
FDA PHS FOOD AND DRUG ADMINISTRATION	Various	93	RD	7,210,508	1,311,173
HCFA CENTERS FOR MEDICARE AND MEDICAID SERVICES	Various	93	RD	5,835,219	1,908,954
HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	Various	93	RD	16,949,281	3,437,145
HRSA HHS OFFICE OF MINORITY HEALTH	Various	93	RD	226,932	
NIH AGING, NATIONAL INSTITUTE ON	Various	93	RD	96,246,408	12,524,522
NIH AGING, NATIONAL INSTITUTE ON (ARRA)	Various	93	RD	(736)	
NIH ALCOHOL ABUSE AND ALCOHOLISM, NATIONAL INSTITUTE OF	Various	93	RD	17,289,640	2,362,530
NIH ARTHRITIS, MUSCULOSKELETAL & SKIN DISEASES, NATIONAL INSTITUTE OF	Various	93	RD	38,645,816	1,670,116
NIH CHILD HEALTH & HUMAN DEVELOPMENT, NATIONAL INSTITUTE OF	Various	93	RD	76,627,238	11,554,086
NIH DEAFNESS & OTHER COMMUNICATION DISORDERS, NATIONAL INSTITUTE ON	Various	93	RD	18,568,097	566,907
NIH DENTAL AND CRANIOFACIAL RESEARCH, NATIONAL INSTITUTE OF	Various	93	RD	32,103,675	2,239,664
NIH DIABETES, DIGESTIVE & KIDNEY DISEASES, NATIONAL INSTITUTE OF	Various	93	RD	94,602,799	9,139,351
NIH DRUG ABUSE, NATIONAL INSTITUTE OF	Various	93	RD	69,387,619	12,375,596
NIH ENVIRONMENTAL HEALTH SCIENCES, NATIONAL INSTITUTE OF	Various	93	RD	38,447,792	5,952,152
NIH JOHN F. FOGARTY INTERNATIONAL CENTER	Various	93	RD	6,949,108	2,238,074
NIH MEDICINE, NATIONAL LIBRARY OF	Various	93	RD	3,552,817	480,004
NIH MENTAL HEALTH, NATIONAL INSTITUTE OF (NIMH)	Various	93	RD	144,366,684	18,870,457
NIH NATIONAL CANCER INSTITUTE	Various	93	RD	220,327,223	32,575,578
NIH NATIONAL CENTER FOR COMPLEMENTARY AND INTEGRATIVE HEALTH	Various	93	RD	5,959,561	156,013
NIH NATIONAL EYE INSTITUTE	Various	93	RD	59,477,138	3,776,978
NIH NATIONAL HUMAN GENOME RESEARCH INSTITUTE	Various	93	RD	24,012,564	3,179,575
NIH NATIONAL INST OF ALLERGY AND INFECTIOUS DISEASES	Various	93	RD	230,735,034	50,870,303
NIH NATIONAL INSTITUTE OF BIOMEDICAL IMAGING AND BIOENGINEERING	Various	93	RD	29,661,721	2,947,534
NIH NATIONAL INSTITUTE OF GENERAL MEDICAL SCIENCE	Various	93	RD	216,253,569	10,259,164
NIH NATIONAL INSTITUTE OF GENERAL MEDICAL SCIENCE (ARRA)	Various	93	RD	3,884	
NIH NATIONAL INSTITUTE OF HEART, LUNG & BLOOD	Various	93	RD	150,345,152	15,913,402
NIH NATIONAL INSTITUTE ON MINORITY HEALTH AND HEALTH DISPARITIES	Various	93	RD	3,844,587	364,164
NIH NATIONAL INSTITUTES OF HEALTH CENTER FOR SCIENTIFIC REVIEW	Various	93	RD	12,607,340	477,467
NIH NATIONAL INSTITUTES OF HEALTH OFFICE OF THE DIRECTOR	Various	93	RD	27,774,202	1,370,354
NIH NEUROLOGICAL DISORDERS & STROKE, NATIONAL INSTITUTE OF	Various	93	RD	133,130,928	22,079,369

The accompanying notes are an integral part of this schedule.

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			Federal Expenditures	Pass-Through to Subrecipients	
NIH NIH NATIONAL CENTER FOR ADVANCING TRANSLATIONAL SCIENCES	Various	93 RD	64,547,296	6,050,405	
NIH NIH NATIONAL CENTER FOR RESEARCH RESOURCES	Various	93 RD	97,591	(110)	
NIH NIH/MISCELLANEOUS AGENCIES & DEPARTMENTS	Various	93 RD	26,656,340	1,420,431	
NIH NURSING RESEARCH, NATIONAL INSTITUTE OF	Various	93 RD	8,373,348	725,970	
NIH OFFICE OF RESEARCH INFRASTRUCTURE PROGRAMS, NIH	Various	93 RD	28,671		
OHDS ADMINISTRATION FOR CHILDREN AND FAMILIES	Various	93 RD	156,843	48,376	
OHDS HHSOHDS/MISCELLANEOUS AGENCIES & DEPARTMENTS	Various	93 RD	867,830		
PHS AGENCY FOR HEALTHCARE RESEARCH AND QUALITY	Various	93 RD	8,501,019	1,007,453	
PHS PHS OFFICE OF ADOLESCENT HEALTH	Various	93 RD	1,004,153	270,375	
PHS PHS OFFICE OF POPULATION AFFAIRS	Various	93 RD	388,841		
PHS PHS OFFICE OF WOMEN'S HEALTH	Various	93 RD	776,728	57,879	
PHS PHS TOXIC SUBSTANCES AND DISEASE REGISTRY, AGENCY FOR (ATSDR)	Various	93 RD	(202)		
SEC ADMINISTRATION FOR COMMUNITY LIVING	Various	93 RD	977,223	336,581	
SEC HHS OFFICE OF THE SECRETARY	Various	93 RD	46,437		
SEC HHS PLANNING & EVALUATION, ASSISTANT SECRETARY FOR	Various	93 RD	183,613	48,756	
Sub-Total Direct Awards			1,926,535,334	252,420,279	
Pass-Through and Partial Pass-Through					
CHEMONICS INTERNATIONAL CONSULTING DIVISION	59234	93 001	822		
RIVERSIDE-SAN BERNARDINO COUNTY INDIAN HEALTH, INC	20163878	93 001	81,124		
Q-CHEM, INC.	2R44GM096678-02	93 003	88,021		
DXTERTY DIAGNOSTICS	20150825	93 004	11,617		
HISPANIC-SERVING HEALTH PROFESSIONS SCHOOLS, INC.	89933	93 004	(54)		
UNIVERSITY OF ARIZONA	278887-cyc2	93 061	33,318		
STANFORD UNIVERSITY	60770272-104939	93 065	118,992		
UNIVERSITY OF WASHINGTON	755454	93 067	214,525		
SEQUOIA FOUNDATION	UCSF#A119218	93 073	635		
HEALTH RESEARCH, INC.	174-01	93 077	12,572		
PORTLAND STATE UNIVERSITY	007815	93 077	25,338		
UNIVERSITY OF ILLINOIS AT CHICAGO	2013-02549-04-00	93 077	104,448		
UNIVERSITY OF MINNESOTA	C0280	93 077	47,366		
UNIVERSITY OF WISCONSIN-MADISON	605K356	93 077	109,741		
CENTER FOR COMPREHENSIVE CARE & DIAGNOSIS OF INHERITED BLOOD DISORDERS	Sub CIBDIX2015CDC-UCSD-1 ( DD0	93 080	28,473		
HARVARD PILGRIM HEALTH CARE	HPHC-203160-cyc1	93 084	1,033,768		
HARVARD PILGRIM HEALTH CARE	HPHC-204704-cyc1	93 084	132,400		
HARVARD PILGRIM HEALTH CARE	HPHC-204773-cyc1	93 084	56,692		
JOHN WAYNE INSTITUTE FOR CANCER TREATMENT AND RESEARCH	KESARI-16-01 (7R01FD005077-02	93 103	158,333		
JOHNS HOPKINS UNIVERSITY	2002172146	93 103	155,076		
JOHNS HOPKINS UNIVERSITY	SUB 2012-0171(FD003898)	93 103	1,506		
RTI INTERNATIONAL	29-312-0212305-52091L-cyc3	93 103	4,790		
STANFORD UNIVERSITY	61334664-122011	93 103	89,609	8,953	
TRACE-ABILITY, INC	TA-UCSF-sub1	93 103	80,631		
UNIVERSITY OF KANSAS/KU CENTER FOR RESEARCH, INC.	QB85973A-cyc1	93 103	26,827		

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			Federal Expenditures	Pass-Through to Subrecipients
UNIVERSITY OF TENNESSEE	R073223438	93 103	2,766	
MASSACHUSETTS GENERAL HOSPITAL	227146-cyc1	93 110	10,659	
MASSACHUSETTS GENERAL HOSPITAL	MGH-205328-cyc1	93 110	76,798	
PARTNERS HEALTHCARE SYSTEM, INC	226858-cyc1	93 110	30,330	
PARTNERS HEALTHCARE SYSTEM, INC	226859-cyc1	93 110	305,093	23,809
RAND CORP	9920140170 :02	93 110	114,810	
RAND CORP	9920150142	93 110	22,956	
UNIVERSITY OF MASSACHUSETTS MEDICAL SCHOOL	Sub WA0022229/RFS2015045 (5UA3	93 110	(31)	
BOSTON UNIVERSITY	4500001761:002	93 113	69,147	
BRIGHAM AND WOMEN'S HOSPITAL	113499	93 113	13,485	
CALIFORNIA STATE UNIVERSITY, NORTHRIDGE	F-14-3503UCLA:1	93 113	4,320	
CANCER PREVENTION INSTITUTE OF CALIFORNIA	R01ES019598-02-UCSF	93 113	100,203	
CANCER PREVENTION INSTITUTE OF CALIFORNIA	R01ES026171-UCI-cyc1	93 113	15,076	
COLORADO STATE UNIVERSITY	1-R01ES023688-01A1	93 113	18,784	
COLUMBIA UNIVERSITY	78842	93 113	743	
COLUMBIA UNIVERSITY	A7925	93 113	(5,555)	
DREXEL UNIVERSITY	232600	93 113	45,000	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	02558271-4609	93 113	153,040	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	63297	93 113	73,870	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	A16-0590-001	93 113	42,939	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	A17-0820-001	93 113	54,571	
JOHNS HOPKINS UNIVERSITY	2002850255	93 113	57,421	
JOHNS HOPKINS UNIVERSITY	2003191417	93 113	17,372	
JOHNS HOPKINS UNIVERSITY	2003218455	93 113	47,180	
JOHNS HOPKINS UNIVERSITY	79894	93 113	(5,245)	
KAISER PERMANENTE DIVISION OF RESEARCH	96005	93 113	(71)	
MICROVI BIOTECHNOLOGY	041991	93 113	60,741	
RAND CORP	79088	93 113	5,495	
RENSSELAER POLYTECHNIC INSTITUTE	A12363	93 113	(66)	
RESEARCH FOUNDATION OF STATE UNIVERSITY OF NEW YORK (THE)	1603	93 113	15,862	
SALK INSTITUTE FOR BIOLOGICAL STUDIES	SUB NONE (ES025585)	93 113	139,395	
SALK INSTITUTE FOR BIOLOGICAL STUDIES	SUB P0170265 (ES025585)	93 113	41,216	
SILENT SPRING INSTITUTE	7475- UCB	93 113	5,993	
STANFORD UNIVERSITY	60219953-52089-A	93 113	(5,464)	
STATE UNIVERSITY OF NEW YORK	1456	93 113	152,485	
SUNY UNIVERSITY AT ALBANY	15-21	93 113	13,760	
UNIVERSITY OF COLORADO DENVER	FY17.625.006-cyc1	93 113	287,018	
UNIVERSITY OF COLORADO DENVER	Sub FY17.625.007(ES027698)	93 113	195,019	
UNIVERSITY OF MICHIGAN	008002	93 113	19,615	
UNIVERSITY OF MISSOURI	005947	93 113	39,524	
UNIVERSITY OF NEW MEXICO	3RT23	93 113	84,077	
UNIVERSITY OF PITTSBURGH	U01AG012553	93 113	(3,224)	

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			Federal Expenditures	Pass-Through to Subrecipients
UNIVERSITY OF SOUTHERN CALIFORNIA	52728343:2	93 113	86,006	
UNIVERSITY OF SOUTHERN CALIFORNIA	61933158	93 113	142,986	
UNIVERSITY OF SOUTHERN CALIFORNIA	62248213:1	93 113	8,740	
UNIVERSITY OF TEXAS-AUSTIN	A16-0601-001	93 113	35,802	
UNIVERSITY OF WASHINGTON	A00-0864-005	93 113	51,410	
WASHINGTON STATE UNIVERSITY	A9930	93 113	(2,599)	
WASHINGTON UNIVERSITY IN ST. LOUIS	Sub WU-14-109 (ES021488)	93 113	19,452	
WASHINGTON UNIVERSITY IN ST. LOUIS	WU-16-159	93 113	16,217	
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	A8156	93 116	127,793	
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	B1726	93 116	2,984,142	
BIOVINC LLC	20152314	93 121	9,394	
BIOVINC LLC	2R44DE025524-02	93 121	22,530	
BRIGHAM AND WOMEN'S HOSPITAL	110670	93 121	279,526	
BRIGHAM AND WOMEN'S HOSPITAL	UM1-AI068636 HAVLIR	93 121	284,364	
CASE WESTERN RESERVE UNIVERSITY	80098	93 121	(2,354)	
CASE WESTERN RESERVE UNIVERSITY	RESS11675	93 121	46,953	
GLADSTONE INSTITUTES	R01831A	93 121	66,324	
HARVARD UNIVERSITY	114244-5097391	93 121	46,097	
HARVARD UNIVERSITY	5030334	93 121	(11,374)	
J. CRAIG VENTER INSTITUTE	JCVI-16-004	93 121	11,707	
JOHNS HOPKINS UNIVERSITY	3P50DE019032-11S2	93 121	29,566	
JOHNS HOPKINS UNIVERSITY	SUB 2002808748 ( DE019032)	93 121	5,759	
JOHNS HOPKINS UNIVERSITY	Sub 2002818823 (DE025398)	93 121	11,122	
KAISER FOUNDATION HEALTH PLAN OF WASHINGTON	2015154243	93 121	0	
KAISER FOUNDATION HEALTH PLAN OF WASHINGTON	2016156615	93 121	33,406	
LANKENAU INSTITUTE FOR MEDICAL RESEARCH	06297-0792	93 121	17,706	
NEW YORK UNIVERSITY	F7606-02	93 121	43,905	
PALO ALTO VETERANS INSTITUTE FOR RESEARCH, INC.	1R01DE023113-01A1	93 121	103,101	
PHASE DIAGNOSTICS, INC.	20152317	93 121	36,441	
SCARLESS LABORATORIES, INC	1R44DE026080-01	93 121	33,014	
SIMON FRASER UNIVERSITY	A8446	93 121	(4,092)	
STANFORD UNIVERSITY	1U01DE024430-01/61206320	93 121	484,265	
UNIVERSITY AT BUFFALO (A STATE UNIVERSITY OF NEW YORK CAMPUS)	R980481	93 121	27,789	
UNIVERSITY OF COLORADO DENVER	FY15.530.001-cyc2	93 121	216,357	
UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	FY15.236.004	93 121	178,531	
UNIVERSITY OF MARYLAND	1100600:6	93 121	73,181	
UNIVERSITY OF MICHIGAN	3004085830	93 121	201,995	
UNIVERSITY OF MICHIGAN	3004119292	93 121	29,914	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5105898	93 121	17,515	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	532727	93 121	285,057	
UNIVERSITY OF PENNSYLVANIA	567164:1	93 121	107,658	
UNIVERSITY OF PENNSYLVANIA	79030	93 121	1,429	

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			Federal Expenditures	Pass-Through to Subrecipients
UNIVERSITY OF SOUTHERN CALIFORNIA	52681472:02	93 121	52,730	
UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT HOUSTON	0009450A	93 121	309,789	
UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT HOUSTON	0010816B	93 121	273,200	
WASHINGTON UNIVERSITY IN ST. LOUIS	Sub WU-15-147 (ES024120)	93 133	922	
UNIVERSITY OF KENTUCKY/UNIVERSITY OF KENTUCKY RESEARCH FOUNDATION	3210000169-16-135	93 135	157,293	
UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT HOUSTON	00003349	93 135	6,969	
CALIFORNIA CENTER FOR PUBLIC HEALTH ADVOCACY	20153323	93 136	78,526	
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	1511002	93 136	201,178	
CHILDREN'S HOSPITAL OF PITTSBURGH	88156	93 136	(13,585)	
PUBLIC HEALTH FOUNDATION ENTERPRISES, INC.	0392.0101	93 136	14,107	
LUPUS RESEARCH INSTITUTE INC	LRI-204292-cyc1	93 137	26,999	
BOSTON UNIVERSITY	4500002069-cyc1	93 143	126,370	
UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	57564	93 143	14,382	
CITY AND COUNTY OF SAN FRANCISCO	BPHC11000127	93 145	131,144	
PUBLIC HEALTH FOUNDATION ENTERPRISES, INC.	79120	93 153	1,500	
AMERICAN COLLEGE OF MEDICAL TOXICOLOGY INC.	41U61TS000238-R9-01	93 161	181,589	(20,597)
ARIMA GENOMICS, INC.	Sub 20143838 (HG008118)	93 172	66,850	
BROAD INSTITUTE INC.	A17-0095-001	93 172	90,195	
COLUMBIA UNIVERSITY	2 (GG011936-01)-cyc5	93 172	7,890	
CORNELL UNIVERSITY	63519-9682	93 172	(50)	
HARVARD UNIVERSITY	87479	93 172	184	
HUDSONALPHA INSTITUTE FOR BIOTECHNOLOGY	20000.002.04-01-cyc1	93 172	82,168	
INDIANA UNIVERSITY	Sub BL-4629708-UCSD (HG007078)	93 172	(74)	
JACKSON LABORATORY, THE	Sub TBI (HG007497)	93 172	141,990	
KAISER PERMANENTE DIVISION OF RESEARCH	115-9547-1	93 172	121,381	
LUDWIG INSTITUTE FOR CANCER RESEARCH	Sub 241301-05003 (HG006997)	93 172	145,402	
LUDWIG INSTITUTE FOR CANCER RESEARCH	SUB 242201-05003A (HG008135)	93 172	239,928	
LUDWIG INSTITUTE FOR CANCER RESEARCH	Sub 242201-05003B (HG008135 )	93 172	445,389	
NEW YORK GENOME CENTER INC	UM1-UCLA-1	93 172	60,546	
NEW YORK GENOME CENTER INC	UM1-UCSF-1	93 172	20,724	
STANFORD UNIVERSITY	61280478-121626	93 172	197,262	
STANFORD UNIVERSITY	61285160-123166	93 172	430,327	
STANFORD UNIVERSITY	63266	93 172	(512)	
STANFORD UNIVERSITY	A00-0664-011	93 172	69,356	
UNIVERSITY OF CHICAGO	FP055388:4	93 172	(3,924)	
UNIVERSITY OF CONNECTICUT	Sub 43161830 (HG007005)	93 172	74,092	
UNIVERSITY OF CONNECTICUT	SUB UCHC6-66263883 (HG007005)	93 172	818,470	
UNIVERSITY OF MASSACHUSETTS MEDICAL SCHOOL	WA00276640/RFS2015141	93 172	158,956	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	1U01HG007437-01	93 172	19,884	
UNIVERSITY OF WASHINGTON	UWSC8775	93 172	15,290	
WASHINGTON UNIVERSITY IN ST. LOUIS	UCSF#A122114	93 172	118,895	
WELLCOME TRUST, THE	A00-2225-005	93 172	259,979	

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			Federal Expenditures	Pass-Through to Subrecipients
CALIFORNIA INSTITUTE OF TECHNOLOGY	18B-1097781-cyc1	93 173	144,388	
CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	Sub SA0000505 ( DC015046 )	93 173	58,704	
CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	Sub SA0000551 (DC015046)	93 173	91,544	
FATHER FLANAGANS BOYS HOME	A125753	93 173	37,166	
JOHNS HOPKINS UNIVERSITY	2002596820:1	93 173	45,928	
NATIONWIDE CHILDREN'S HOSPITAL	719115-cyc5	93 173	6,849	
OREGON HEALTH & SCIENCE UNIVERSITY	008310	93 173	127,093	
OREGON HEALTH & SCIENCE UNIVERSITY	Sub 1002383 (DC012938	93 173	20,696	
RESEARCH FOUNDATION FOR STATE UNIVERSITY OF NEW YORK, THE	1048815	93 173	46,632	
SALK INSTITUTE FOR BIOLOGICAL STUDIES	201601254	93 173	76,081	
UNIVERSITY OF ILLINOIS	89189	93 173	(308)	
UNIVERSITY OF SOUTH CAROLINA	16-3089-cyc1	93 173	161,187	
UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT HOUSTON	0011468C-cyc1	93 173	27,376	
UNIVERSITY OF TEXAS-AUSTIN	R03DC013403	93 173	47,340	
WEST VIRGINIA UNIVERSITY	Sub 05-159-UCSD (DC007695)	93 173	17,299	
PUBLIC HEALTH INSTITUTE	78716	93 184	120	
JOHNS HOPKINS UNIVERSITY	Sub 2001377393 (HHSA2902011000	93 185	49,489	
UNIVERSITY OF ROCHESTER	416757:1	93 185	6,522	
UNIVERSITY OF ROCHESTER	416941	93 185	207	
DUKE UNIVERSITY	212079	93 210	1,155	
MIRIAM HOSPITAL, THE	Sub 710-9146 ( AT006948 )	93 213	14,331	
RAND CORP	9920140048:03	93 213	180,091	
RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	5596	93 213	19,986	
UNIVERSITY OF CONNECTICUT	Sub 59264 (AT006466)	93 213	80,421	
UNIVERSITY OF TEXAS-SOUTHWESTERN MEDICAL CENTER AT DALLAS	A15-0206-001	93 213	205,662	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	88957	93 213	(6,999)	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	89473	93 213	(616)	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	SUB 08658002-313884 (AT007600)	93 213	(2,441)	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA 314281 CASMAR (AT007936)	93 213	16,085	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA ADV LANG ( AT007936)	93 213	40,378	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA GOLSHAN 312138 ( AT 007936	93 213	20,927	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA HURST 312140 ( AT 007936)	93 213	6,249	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA REDWINE 08658(AT007600)	93 213	15,067	
CEDARS-SINAI MEDICAL CENTER	0001207401	93 226	61,653	
CHILDREN'S HOSPITAL MEDICAL CENTER OF CINCINNATI	134795:1	93 226	31,712	
CHILDREN'S HOSPITAL OF PHILADELPHIA	28592	93 226	39,971	
DARTMOUTH COLLEGE	R814	93 226	69,407	
DARTMOUTH COLLEGE	R815	93 226	320,120	
DUKE UNIVERSITY	2038054	93 226	54,921	
DUKE UNIVERSITY	2038742	93 226	153,124	
DUKE UNIVERSITY	5P50HS023418	93 226	5,119	
HARVARD PILGRIM HEALTH CARE	1R18HS021424-01-cyc6	93 226	43,380	

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JOHNS HOPKINS UNIVERSITY	2002441400-cyc1	93 226	147,174	
RAND CORP	9920150014:1	93 226	19,447	
RAND CORP	9920160022	93 226	86,207	
RHODE ISLAND HOSPITAL	701-713-7041-CA	93 226	72,015	
STANFORD UNIVERSITY	6085-6377-114856	93 226	117,626	
UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	FY16.755.005	93 226	7,101	
UNIVERSITY OF MICHIGAN	3003841906-cyc1	93 226	22,692	
UNIVERSITY OF MICHIGAN	3003979846-cyc1	93 226	38,639	
UNIVERSITY OF ROCHESTER	416668	93 226	75,325	
UNIVERSITY OF ROCHESTER	416933-cyc1	93 226	33,003	
UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT HOUSTON	0011289	93 226	90,060	
VANDERBILT UNIVERSITY	VUMC 57336	93 226	22,425	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	08512004-315743-cyc1	93 226	(24,702)	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Agha ( 1R01HS021290-01A1)	93 226	(151)	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Liu 308749 (HS 021290)	93 226	(292)	
WAYNE STATE UNIVERSITY	WSU12079	93 226	7,993	
ARIZONA STATE UNIVERSITY/TEMPE	15-601:01	93 233	94,740	
UNIVERSITY OF COLORADO DENVER	FY15.001.001-cyc3	93 237	172,312	
STANFORD UNIVERSITY	60983264-104354-cyc2	93 239	5,397	
STANFORD UNIVERSITY	61248833-104354-cyc1	93 239	9,564	
ADVANCED BRAIN MONITORING, INC.	Sub None (MH097303)	93 242	346,929	
ALLEN/LOEB ASSOCIATES	A127351	93 242	120,663	
BIOPICO SYSTEMS	BPS-101073-cyc3	93 242	3,688	
BRANDEIS UNIVERSITY	SUB 402255 (MH102841)	93 242	(2,437)	
BRIGHAM AND WOMEN'S HOSPITAL	Sub 112807 (MH091448)	93 242	109,113	
CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	88710	93 242	(69)	
CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	89229	93 242	(100)	
CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	Sub SA0000067 (MH100260)	93 242	18,089	
CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	Sub SA0000471 (MH107802)	93 242	14,803	
CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	Sub SA0000475 (MH103494)	93 242	42,579	
CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	Sub SA0000478 (MH107802)	93 242	22,337	
CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	Sub SA0000502 (5R01MH101173-02	93 242	28,840	
CALIFORNIA STATE UNIVERSITY, SAN FRANCISCO STATE UNIVERSITY	S16-0021	93 242	28,473	
CEDARS-SINAI MEDICAL CENTER	0255-2131-4609(MH111499)	93 242	24,998	
COLD SPRING HARBOR LABORATORY	SUB 64090112 (MH109113)	93 242	575,096	
COLUMBIA UNIVERSITY	1(GG009636):2	93 242	57,507	
COLUMBIA UNIVERSITY	86542	93 242	(854)	
COLUMBIA UNIVERSITY	87917	93 242	(2,782)	
COLUMBIA UNIVERSITY MEDICAL CENTER	008292	93 242	13,838	
DANA-FARBER CANCER INSTITUTE	1229301	93 242	36,472	
DECODE GENETICS, INC.	58051	93 242	(1,051)	
DIGITAL ARTEFACTS, LLC	Sub 20162384 (MH099964)	93 242	71,432	

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DUKE UNIVERSITY	2035615	93 242	50,513	
EMORY UNIVERSITY	Sub T674498(MH108826)	93 242	75,910	
GEORGE WASHINGTON UNIVERSITY	13-528	93 242	19,353	
GEORGE WASHINGTON UNIVERSITY	16-M111	93 242	333,890	
GEORGE WASHINGTON UNIVERSITY	16-M72	93 242	28,606	
GEORGETOWN UNIVERSITY	Sub 411069 GR411012-UCSD (MH10	93 242	97,550	
GLADSTONE INSTITUTES	R2419-A	93 242	381,858	
HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY MEDICINE	834958	93 242	15,421	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	025528514609	93 242	3,955	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	89445	93 242	(752)	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	MSINAD-Fields	93 242	6,122	
JOHNS HOPKINS UNIVERSITY	2002933836-cyc1	93 242	17,118	
JOHNS HOPKINS UNIVERSITY	2003078234	93 242	73,116	
JOHNS HOPKINS UNIVERSITY	20161223	93 242	27,259	
JOHNS HOPKINS UNIVERSITY	88452	93 242	285	
JOHNS HOPKINS UNIVERSITY	SUB 2003199958(MH111516)	93 242	266,121	
JOHNS HOPKINS UNIVERSITY	Sub Task LDR03 (AI068632)	93 242	19,524	
KAISER FOUNDATION HEALTH PLAN OF WASHINGTON	MH092201-04-UCSF	93 242	2,298	
KDAC THERAPEUTICS	KDAC-203835-cyc1	93 242	26,022	
KENNEDY KRIEGER INSTITUTE	SUB NONE (MH085328)	93 242	6,632	
LOS ANGELES BIOMEDICAL RESEARCH INSTITUTE AT HARBOR-UCLA MEDICAL CTR	58844	93 242	(45)	
MASSACHUSETTS GENERAL HOSPITAL	225144	93 242	182,855	
MASSACHUSETTS GENERAL HOSPITAL	79602	93 242	(3)	
MCLEAN HOSPITAL	SUB 401185 (MH109334)	93 242	278,295	
NEUROSCRIPT, LLC	82587	93 242	(12,434)	
NEW YORK UNIVERSITY	15-A1-00-002894-01	93 242	7,142	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	MAT1870-095181	93 242	120,911	
NORTHWESTERN UNIVERSITY	60041990-cyc1	93 242	66,836	
OREGON HEALTH & SCIENCE UNIVERSITY	1003474_UCLA:2	93 242	14,124	
PRINCETON UNIVERSITY	SUB0000130	93 242	33,692	
PUBLIC HEALTH FOUNDATION ENTERPRISES, INC.	1R01MH109320-01	93 242	24,169	
PUBLIC HEALTH FOUNDATION ENTERPRISES, INC.	A129116	93 242	29,162	
PUBLIC HEALTH FOUNDATION ENTERPRISES, INC.	A129224	93 242	18,968	
RADY CHILDREN'S HOSPITAL RESEARCH CENTER	Sub none (MH104289)	93 242	46,582	
RAND CORP	58263	93 242	(4,492)	
RAND CORP	9920150037:04	93 242	166,363	
RAND CORP	9920150088	93 242	85,666	
RESEARCH FOUNDATION FOR MENTAL HYGIENE	128309:1	93 242	127,986	
ROCKEFELLER UNIVERSITY	1U01MH108898-01	93 242	3,491	
ROCKEFELLER UNIVERSITY	Sub 1U01 (MH108898)	93 242	131,865	
SALK INSTITUTE FOR BIOLOGICAL STUDIES	87449	93 242	(890)	
SALK INSTITUTE FOR BIOLOGICAL STUDIES	Sub 20162859(MH111534)	93 242	239,875	

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SALK INSTITUTE FOR BIOLOGICAL STUDIES	SUB none (MH099571)	93 242	84,775	
SANFORD BURNHAM PREBYS MEDICAL DISCOVERY INSTITUTE	Sub 59273-12708-UCSD (MH106865	93 242	274,831	
SOCIAL AND SCIENTIFIC SYSTEMS, INC.	CRB-IPHRM-S-10-00260	93 242	9,381	
STANFORD UNIVERSITY	60546456:2	93 242	65,421	
STANFORD UNIVERSITY	60870346-103420	93 242	47,983	
STANFORD UNIVERSITY	61097380-119948	93 242	98,692	
STANFORD UNIVERSITY	61350493-114917	93 242	19,699	
TEMPLE UNIVERSITY	360762-UCLA:4	93 242	36,477	
THE MIND RESEARCH NETWORK	6169-002 SUBN1-cyc2	93 242	14,788	
THE SCRIPPS RESEARCH INSTITUTE	Sub 5-50366 (MH100175)	93 242	288,313	
THE SCRIPPS RESEARCH INSTITUTE	SUB 5-50499 (MH103134)	93 242	52,439	
THE UNIVERSITY OF ALABAMA (TUSCALOOSA)	000388010-017	93 242	16,467	
THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	000506211-002	93 242	217,876	
THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	Sub 000509302 (MH081917 )	93 242	(1,434)	
THINK-NOW INC.	20132773	93 242	6,579	
THINK-NOW INC.	20153040	93 242	133,417	
THINK-NOW INC.	20154140	93 242	63,535	
UNIVERSITY OF CAPE TOWN	A125318	93 242	23,359	
UNIVERSITY OF CHICAGO	FP056858-A	93 242	2,554	
UNIVERSITY OF CHICAGO	Sub FP060924 (MH087214)	93 242	102,243	
UNIVERSITY OF COLORADO DENVER	FY17.496.001	93 242	72,785	
UNIVERSITY OF CONNECTICUT	136123	93 242	22,407	
UNIVERSITY OF ILLINOIS	59734	93 242	1,128	
UNIVERSITY OF ILLINOIS	Sub 2013-00362-02-00 (MH101043	93 242	1,687	
UNIVERSITY OF IOWA	SUB W000657638 (MH105527)	93 242	26,562	
UNIVERSITY OF MARYLAND, BALTIMORE	7761	93 242	149,102	
UNIVERSITY OF MASSACHUSETTS MEDICAL SCHOOL	WA00482521/OSP2017067	93 242	20,794	
UNIVERSITY OF MIAMI	Sub 663805 (MH100942)	93 242	516,465	
UNIVERSITY OF MICHIGAN	3003330099	93 242	23,092	
UNIVERSITY OF MICHIGAN	3003844676-cyc2	93 242	26,837	
UNIVERSITY OF NEBRASKA	88555	93 242	(23,390)	
UNIVERSITY OF NEBRASKA	SUB 34-5160-2085-002(MH094160)	93 242	26,519	
UNIVERSITY OF NEBRASKA MEDICAL CENTER	Sub 34-5160-2057-615 (MH062261	93 242	220	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5031865	93 242	10,916	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5101901	93 242	21,180	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5101902:1	93 242	36,405	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5104172	93 242	28,370	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5104173	93 242	62,851	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5106481	93 242	16,533	
UNIVERSITY OF PENNSYLVANIA	562318	93 242	43,328	
UNIVERSITY OF PENNSYLVANIA	567333/10039757/15340	93 242	54,963	
UNIVERSITY OF PENNSYLVANIA	Sub 569829(MH109382)	93 242	79,402	

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UNIVERSITY OF PENNSYLVANIA	Sub 569975 (MH111389)	93 242	41,282	
UNIVERSITY OF PITTSBURGH	0017881 (121318-2):4	93 242	95,495	
UNIVERSITY OF PITTSBURGH	0030253 (123481-1)	93 242	22,663	
UNIVERSITY OF PITTSBURGH	0049614 (127776-1)	93 242	71,852	
UNIVERSITY OF SOUTH FLORIDA	6119-1266-22-A	93 242	6,060	
UNIVERSITY OF SOUTHERN CALIFORNIA	44748603:02	93 242	150,043	
UNIVERSITY OF SOUTHERN CALIFORNIA	89026	93 242	(114)	
UNIVERSITY OF WASHINGTON	UWSC8566	93 242	6,316	
UNIVERSITY OF WASHINGTON	UWSC9388	93 242	23,552	
UNIVERSITY OF WISCONSIN-MADISON	Sub 647K544 ( MH095984 )	93 242	37,307	
VANDERBILT UNIVERSITY	80342	93 242	(9)	
VANDERBILT UNIVERSITY	Sub 38441 (MH095621)	93 242	27,304	
VANDERBILT UNIVERSITY	Sub 8077-020521 (MH106748)	93 242	13,728	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	83496	93 242	(4,691)	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	872G3	93 242	0	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	88696	93 242	(3,420)	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Granholm (MH100410)	93 242	8,661	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Granholm 300615 (MH091057)	93 242	6,212	
VIRGINIA COMMONWEALTH UNIVERSITY	PD302841-SC107123	93 242	154,563	
WASHINGTON UNIVERSITY IN ST. LOUIS	Sub WU-17-128 ( MH111520 )	93 242	282,829	
WASHINGTON UNIVERSITY IN ST. LOUIS	WU-17-34	93 242	242,279	
WAYNE STATE UNIVERSITY	WSU16124	93 242	14,319	
WEST VIRGINIA UNIVERSITY	14716	93 242	151,962	
WRIGHT STATE UNIVERSITY	R21MH099361	93 242	36,385	
YALE UNIVERSITY	1P50MH106934-01	93 242	178,938	
YALE UNIVERSITY	80151	93 242	(16)	
YALE UNIVERSITY	C15A12041 (A10333)	93 242	650,521	
YALE UNIVERSITY	C16A12292 (A10323)	93 242	40,437	
YALE UNIVERSITY	M13A11486 (A10380):5	93 242	22,880	
YALE UNIVERSITY	M15A11970 (A10040) (MH977969)	93 242	34,980	
YALE UNIVERSITY	M15A12179 (A10304)	93 242	90,136	
YALE UNIVERSITY	M15A12265 (A10667):Yr 03S1	93 242	117,589	
YALE UNIVERSITY	M16A12222 (A10393)	93 242	962,234	
YALE UNIVERSITY	M16A12225 (A10393)	93 242	230,103	
YALE UNIVERSITY	YALE_M14A11892	93 242	83,023	
A-G ASSOCIATES, INC.	CSAT WA: 15-02-31-cyc1	93 243	27,332	
CLARE FOUNDATION, INC.	20152532	93 243	62,184	
RAND CORP	9920170049	93 243	3,360	
CALIFORNIA DEPARTMENT OF HEALTH CARE SERVICES	15-92217	93 251	1,476	
CPWR - THE CENTER FOR CONSTRUCTION RESEARCH AND TRAINING	16-3-PS	93 262	15,000	
CPWR - THE CENTER FOR CONSTRUCTION RESEARCH AND TRAINING	3001-609-01	93 262	61,179	
CPWR - THE CENTER FOR CONSTRUCTION RESEARCH AND TRAINING	3001-613-01	93 262	219,244	

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			Federal Expenditures	Pass-Through to Subrecipients
CPWR - THE CENTER FOR CONSTRUCTION RESEARCH AND TRAINING	3001-614-01	93 262	225,603	81,712
GEORGE WASHINGTON UNIVERSITY	13-M107	93 262	(12,524)	
GEORGE WASHINGTON UNIVERSITY	15-M43	93 262	5,811	
GEORGE WASHINGTON UNIVERSITY	16-M80	93 262	31,000	
STANFORD UNIVERSITY	61405844-48844	93 262	40,328	
STANFORD UNIVERSITY	96352	93 262	59	
UNIVERSITY OF BERN	032503	93 262	(10)	
UNIVERSITY OF IOWA	Sub W000794302 (OH010238)	93 262	141,101	
UNIVERSITY OF MINNESOTA	A004330202	93 262	11,745	
UNIVERSITY OF WASHINGTON	UWSC8016	93 262	55,535	
UNIVERSITY OF WISCONSIN-MADISON	707K545	93 262	41,756	
HEALTH RESEARCH, INC.	5306-01	93 266	222,108	
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	B1548	93 268	12,707,873	
BIOLINQ, INC.	871G8	93 273	27	
BRENTWOOD BIOMEDICAL RESEARCH INSTITUTE	20111179	93 273	51,300	
BRENTWOOD BIOMEDICAL RESEARCH INSTITUTE	20111881:5	93 273	16,275	
BROWN UNIVERSITY	Sub 00000613 (AA019072)	93 273	4,393	
CHILDREN'S HOSPITAL LOS ANGELES	P2013-0010:4	93 273	11,567	
CLEVELAND CLINIC FOUNDATION	Sub 733-SUB(NS100610)	93 273	1,587	
COLUMBIA UNIVERSITY	1(GG008346)	93 273	1,228	
FAST-TRACK DRUGS & BIOLOGICS, LLC	HHSN27500003-1061-NCIG6-UCLA-0	93 273	397,739	
KAISER FOUNDATION HEALTH PLAN OF WASHINGTON	2016108379	93 273	10,605	
KENNEDY KRIEGER INSTITUTE	Sub None ( AA024404)	93 273	27,813	
NEW YORK UNIVERSITY	F7090-01:01	93 273	12,206	
OREGON HEALTH & SCIENCE UNIVERSITY	1007778_UCSF	93 273	114,083	
OREGON HEALTH & SCIENCE UNIVERSITY	Sub 9007455 (AA013641)	93 273	40,741	
PUBLIC HEALTH INSTITUTE	1020572	93 273	51,964	
RAND CORP	9920130157:02	93 273	66,136	
RHODE ISLAND HOSPITAL	701-5475-1-CA	93 273	4,092	
SRI INTERNATIONAL	157-000018	93 273	(19)	
SUNY DOWNSTATE MEDICAL CENTER	Sub 1009189 (AA008401)	93 273	614,729	
UNIVERSITY OF MINNESOTA	H004915501/R21AA0245	93 273	7,943	
UNIVERSITY OF MISSOURI - KANSAS CITY	004428500036238	93 273	22,648	
UNIVERSITY OF SOUTHERN CALIFORNIA	58445116:1	93 273	66,230	
UNIVERSITY OF SOUTHERN CALIFORNIA	80313	93 273	128,201	
UNIVERSITY OF SOUTHERN CALIFORNIA	Sub 48143238 (AA011999)	93 273	100,070	
UNIVERSITY OF SOUTHERN CALIFORNIA	Sub 70546921 (AA011999)	93 273	30,139	
UNIVERSITY OF SOUTHERN CALIFORNIA	Sub 70547055 ( AA011999)	93 273	43,073	
UNIVERSITY OF TEXAS-AUSTIN	UTA13-000879	93 273	5,100	
UNIVERSITY OF VIRGINIA	SUB GC12038-140273 (AA019720)	93 273	(101)	
UNIVERSITY OF WASHINGTON	UWSC 5955-cyc1	93 273	31,580	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	876G6	93 273	788	

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VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	876G7	93 273	3,545	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	876G8	93 273	3,545	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Ho 310664 (AA021908)	93 273	3,036	
WAYNE STATE UNIVERSITY	Sub WSU14013 (AA022891)	93 273	9,959	
AMERICAN ACADEMY OF CHILD & ADOLESCENT PSYCHIATRY	20165007	93 276	168,151	
AFASCI, INC.	5R44DA031578	93 279	1,548	
AMERICAN ACADEMY OF CHILD & ADOLESCENT PSYCHIATRY	NIDA-AACAP-Meruelo	93 279	13,909	
AMERICAN ACADEMY OF CHILD & ADOLESCENT PSYCHIATRY	Sub 20163988 (DA000357)	93 279	151,266	
ANTIDOTE THERAPEUTICS, INC.	Sub 20143632 (DA038877)	93 279	5,075	
ASTRAEA THERAPEUTICS, LLC	2014-UCI-033744-01-cyc4	93 279	8,163	
BAYLOR COLLEGE OF MEDICINE	Sub SC102150631 (DA036134 )	93 279	10,456	
BOSTON MEDICAL CENTER CORPORATION	Sub 2157 0310101 (DA032082)	93 279	14,789	
BOSTON UNIVERSITY	4500001814	93 279	76,140	
CHILDREN'S HOSPITAL LOS ANGELES	P2014-0049	93 279	33,844	
CHILDREN'S HOSPITAL LOS ANGELES	P2015-0407:1	93 279	1,020,468	
COLUMBIA UNIVERSITY	1 (GG011510)	93 279	186,186	
COLUMBIA UNIVERSITY	1(GG008409)	93 279	34,045	
COLUMBIA UNIVERSITY	1GG01154701	93 279	26,238	
EMMES CORPORATION, THE	20154935	93 279	112,561	
EMORY UNIVERSITY	Sub T232419 (DA036233)	93 279	26,223	
FLORIDA INTERNATIONAL UNIVERSITY	800002647-01	93 279	9,276	
FRED HUTCHINSON CANCER RESEARCH CENTER	0000848137	93 279	99,045	
FRIENDS RESEARCH INST., INC.	11338-4	93 279	5,286	
INTERNATIONAL AIDS SOCIETY	857FD	93 279	(50)	
IQ SOLUTIONS INC.	NIDA-ANRS Fellowship	93 279	31,799	
IQ SOLUTIONS INC.	NIDA-Inserm-Zell	93 279	8,769	
JOHNS HOPKINS UNIVERSITY	2001603363	93 279	107,301	
KAISER FOUNDATION HEALTH PLAN OF WASHINGTON	2015173125	93 279	2,959	
KAISER PERMANENTE DIVISION OF RESEARCH	RNG200022	93 279	11,034	
KAISER PERMANENTE DIVISION OF RESEARCH	RNG200340-UCSF-01	93 279	93,246	
KDAC THERAPEUTICS	KDAC-203834-cyc1	93 279	15,907	
MAGEE-WOMENS HOSPITAL, RESEARCH INSTITUTE AND FOUNDATION	8020	93 279	7,519	
NANOCOLLECT BIOMEDICAL, INC.	Sub 20164584 (DA042636)	93 279	70,430	
NEW YORK UNIVERSITY	15-A0-S1-003671:2	93 279	508,760	
NEW YORK UNIVERSITY	15-A0-S2-003671:2	93 279	743,030	604,711
NEW YORK UNIVERSITY	80165	93 279	5,703	
NORTHWESTERN UNIVERSITY	57592	93 279	(3,079)	
NORTHWESTERN UNIVERSITY	60031384	93 279	62,101	
NORTHWESTERN UNIVERSITY	60044679 UCLA	93 279	3,947	
OREGON HEALTH & SCIENCE UNIVERSITY	1003544 UCI-cyc4	93 279	275,058	
OREGON HEALTH & SCIENCE UNIVERSITY	GPHPM0183A_UCSF	93 279	16	
PENNSYLVANIA STATE UNIVERSITY	5431-UC-DHHS-4618-cyc1	93 279	43,453	

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PUBLIC HEALTH FOUNDATION ENTERPRISES, INC.	0391.0101	93 279	48,761	
PUBLIC HEALTH FOUNDATION ENTERPRISES, INC.	R01DA031678	93 279	4,841	
PUBLIC HEALTH FOUNDATION ENTERPRISES, INC.	UCSF #A121523	93 279	5,278	
RAND CORP	9920100039:6	93 279	(14)	
RTI INTERNATIONAL	1R01DA038632-01	93 279	63,777	
STANFORD UNIVERSITY	60317762-26345-F	93 279	25,980	
STOCHASTECH CORPORATION	201602008	93 279	7,399	
STOCHASTECH CORPORATION	Sub 20160222 (R43DA041760 )	93 279	29,636	
TEXAS TECHNICAL UNIVERSITY	21F123-01	93 279	14,684	
THE SCRIPPS RESEARCH INSTITUTE	Sub 5-52217 (DA 036164)	93 279	45,979	
THE SCRIPPS RESEARCH INSTITUTE	SUB 5-52431 (DA040458)	93 279	233	
THE SCRIPPS RESEARCH INSTITUTE	Sub 5-52673 ( DA041750)	93 279	79,943	
THE SCRIPPS RESEARCH INSTITUTE	Sub 5-52953 (DA043268)	93 279	13,472	
THE SCRIPPS RESEARCH INSTITUTE	Sub 5-53163(DA043799)	93 279	3,973	
TULANE UNIVERSITY	88632	93 279	37	
UNIVERSITY OF CHICAGO	FP095270-B:1	93 279	61,622	
UNIVERSITY OF COLORADO DENVER	Sub none (DA035804)	93 279	300,617	
UNIVERSITY OF GEORGIA	RR376-417/4945336	93 279	(3,973)	
UNIVERSITY OF KANSAS/KU CENTER FOR RESEARCH, INC.	1R01DA03579-01A1	93 279	13,363	
UNIVERSITY OF KANSAS/KU CENTER FOR RESEARCH, INC.	QN858270	93 279	50,107	
UNIVERSITY OF MICHIGAN	Sub 3004429839 (U01DA043098)	93 279	17,756	
UNIVERSITY OF MINNESOTA	P004140308	93 279	461,655	
UNIVERSITY OF NEVADA, RENO	UNR-16-07 (DA038185 )	93 279	24,461	
UNIVERSITY OF NEW MEXICO	2R01DA016017-12	93 279	1,081,829	
UNIVERSITY OF NEW MEXICO	R01DA031056	93 279	5,341	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	1R01DA037215	93 279	56,594	
UNIVERSITY OF OREGON	006526	93 279	87,588	
UNIVERSITY OF PENNSYLVANIA	554035/10021771/1889200	93 279	334,323	
UNIVERSITY OF PITTSBURGH	0046202-cyc1	93 279	30,810	
UNIVERSITY OF SOUTHERN CALIFORNIA	64576033:1	93 279	5,155	
UNIVERSITY OF TEXAS-SOUTHWESTERN MEDICAL CENTER AT DALLAS	GMO160819	93 279	201,167	
UNIVERSITY OF WASHINGTON	UWSC8956	93 279	71,329	
WASHINGTON UNIVERSITY IN ST. LOUIS	WU-17-355-cyc1	93 279	18,449	
WAYNE STATE UNIVERSITY	SUB WSU12080 DA034497	93 279	104,923	
AMERICAN THROMBOSIS AND HEMOSTASIS NETWORK	Sub ATHN2015-ATHN1 EXTENSION	93 283	1,852	
ASSOCIATION OF SCHOOLS OF PUBLIC HEALTH	S5058	93 283	663,695	140,822
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	16-10942	93 283	35,912	
COMMUNITY ACTION PARTNERSHIP OF ORANGE COUNTY	CAPOC -201561-cyc2	93 283	125,734	
HARVARD PILGRIM HEALTH CARE	HPHC-205795-cyc1	93 283	45,897	
NATIONAL FRAGILE X FOUNDATION	201302771	93 283	4,541	
PUBLIC HEALTH FOUNDATION ENTERPRISES, INC.	235.013.920	93 283	60,199	
BAYLOR COLLEGE OF MEDICINE	PO7000000072	93 286	39,625	

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BOSTON UNIVERSITY	4500001787 amd1	93 286	1,089	
BOSTON UNIVERSITY	4500001790	93 286	(56)	
BOSTON UNIVERSITY	4500002154	93 286	155,674	
CALIFORNIA INSTITUTE OF TECHNOLOGY	19GM1087680	93 286	247	
COLORADO STATE UNIVERSITY SYSTEM (SYSTEM PARENT CODE)	G-00068-1-cyc1	93 286	98,476	
CORNELL UNIVERSITY	16040595	93 286	116,515	
EMORY UNIVERSITY	T494666	93 286	184,226	
GE GLOBAL RESEARCH	400161117	93 286	328,365	
GEORGIA INSTITUTE OF TECHNOLOGY	008457	93 286	24,112	
INDIANA UNIVERSITY	SUB BL-4629710(EB023685)	93 286	97,323	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B620867	93 286	41,629	
MASSACHUSETTS GENERAL HOSPITAL	221952	93 286	42,848	
MAYO CLINIC/MAYO FOUNDATION FOR MEDICAL EDUCATION & RESEARCH	65002243:4	93 286	93,688	
NANOCELLECT BIOMEDICAL, INC.	Sub 20160567 (R43EB021129 )	93 286	52,313	
NEUROENABLING TECHNOLOGIES, INC.	20145487	93 286	(1,663)	
NEUROENABLING TECHNOLOGIES, INC.	20145497	93 286	27,787	
NORTHWESTERN UNIVERSITY	SP0021845-PROJ0010811	93 286	141,379	
NORTHWESTERN UNIVERSITY	SUB SP0030422-PROJ0008084 (EB0	93 286	43,396	
RUSH UNIVERSITY MEDICAL CENTER	Sub 2R56AI065361(AI065361)	93 286	23,756	
STANFORD UNIVERSITY	26590470-44290-A	93 286	152,433	
STANFORD UNIVERSITY	60664402-113972	93 286	443,009	
STANFORD UNIVERSITY	Sub 61456675-125287 (R01EB0183	93 286	90,446	
UNIVERSITY OF ARIZONA	345325-cyc1	93 286	37,846	
UNIVERSITY OF MASSACHUSETTS MEDICAL SCHOOL	Sub WA00433493/OSP2016194 (EB0	93 286	302,209	
UNIVERSITY OF MASSACHUSETTS MEDICAL SCHOOL	WA00433491/OSP2016197-cyc1	93 286	67,191	
UNIVERSITY OF MASSACHUSETTS MEDICAL SCHOOL	WA00433492/OSP2016195	93 286	43,499	
UNIVERSITY OF MASSACHUSETTS MEDICAL SCHOOL	WA00433618/OSP2016203	93 286	54,195	
UNIVERSITY OF MEMPHIS	20142301	93 286	294,923	
UNIVERSITY OF MEMPHIS	A124520	93 286	215,834	
UNIVERSITY OF MEMPHIS	Sub none (EB020404)	93 286	85,567	
UNIVERSITY OF MICHIGAN	3003598082-cyc2	93 286	212,214	
YALE UNIVERSITY	C17A12668 (A10908)	93 286	59,602	
HEALTH RESEARCH, INC.	1U81HP27843-01-03	93 300	62,779	
ALTAMED HEALTH SERVICES CORPORATION	5NU58DP005740-02-00	93 304	8,419	
MANDELA MARKETPLACE INCORPORATED	82818	93 304	76,316	
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	16-10576	93 305	115,615	13,000
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	16-10577	93 305	143,582	15,000
CHARLES R. DREW UNIVERSITY OF MEDICINE AND SCIENCE	15-16-RV-G0070700-UCLA	93 307	12,024	
CHARLES R. DREW UNIVERSITY OF MEDICINE AND SCIENCE	20155050	93 307	109,795	
CHARLES R. DREW UNIVERSITY OF MEDICINE AND SCIENCE	20164501	93 307	113,058	
CHARLES R. DREW UNIVERSITY OF MEDICINE AND SCIENCE	58096	93 307	(212)	
CHARLES R. DREW UNIVERSITY OF MEDICINE AND SCIENCE	79431	93 307	(113)	

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CHARLES R. DREW UNIVERSITY OF MEDICINE AND SCIENCE	80326	93 307	(5,616)	
MOREHOUSE COLLEGE	001UCLA16	93 307	59,706	
PACIFIC INSTITUTE FOR RESEARCH AND EVALUATION	Sub 0784 (MD010292)	93 307	33,221	
RAND CORP	9920140145:3	93 307	221,025	
RAND CORP	9920160089	93 307	30,888	
SAINT BARNABAS MEDICAL CENTER	UCLA1	93 307	154,994	
THE UNIVERSITY OF ALABAMA (TUSCALOOSA)	000505098-001	93 307	19,179	
UNIVERSITY OF MINNESOTA	H003876602	93 307	7,597	
UNIVERSITY OF MINNESOTA	N004745103	93 307	5,829	
UNIVERSITY OF PITTSBURGH	0047269 (126836-1)	93 307	64,211	
UNIVERSITY OF ROCHESTER	416172-G-cyc4	93 307	26,431	
UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT HOUSTON	0008663AM-cyc1	93 307	6,368	
UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT HOUSTON	0008663AS-cyc1	93 307	10,440	
UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT HOUSTON	Sub None (MD006941)	93 307	2,709	
BRENTWOOD BIOMEDICAL RESEARCH INSTITUTE	20164475	93 310	52,047	
BRIGHAM AND WOMEN'S HOSPITAL	Sub 111215 (HL117861)	93 310	(4,124)	
BRIGHAM AND WOMEN'S HOSPITAL	Sub 111353 (HL117861)	93 310	1,243	
BROAD INSTITUTE INC.	5230123-5500000600:2	93 310	85,022	
BROAD INSTITUTE INC.	SUB 5230123-55000000792 (DK102	93 310	54,563	
CALIFORNIA STATE UNIVERSITY, SAN FRANCISCO STATE UNIVERSITY	9S16-0015	93 310	471,194	
COLUMBIA UNIVERSITY	1(GG011868-01)	93 310	5,645	
DREXEL UNIVERSITY	800059	93 310	80,219	
DREXEL UNIVERSITY	800060	93 310	61,980	
HARVARD UNIVERSITY	A00-2207-002	93 310	89,262	
INDIANA UNIVERSITY	BL-4624901-UCI-cyc1	93 310	228,535	
LUDWIG INSTITUTE FOR CANCER RESEARCH	Sub 242301-05003A (DK107977 )	93 310	309,819	
LUDWIG INSTITUTE FOR CANCER RESEARCH	Sub 242301-05003B (DK107977)	93 310	175,773	
LUDWIG INSTITUTE FOR CANCER RESEARCH	SUB 242301-05003s (DK107977)	93 310	7,716	
MASSACHUSETTS GENERAL HOSPITAL	1U01MH105027-01	93 310	14,895	
NEW YORK UNIVERSITY	16-A0-00-006256-0 I	93 310	11,471	
NEW YORK UNIVERSITY	F8708-05-cyc1	93 310	16,491	
PROFUSA, INC.	UCSF#A120651	93 310	(993)	
RAND CORP	9920150065:03	93 310	38,636	
SALK INSTITUTE FOR BIOLOGICAL STUDIES	SUB NONE (EB021247)	93 310	323,854	
STANFORD UNIVERSITY	60392112-109837-A:3	93 310	35,662	
THE SCRIPPS RESEARCH INSTITUTE	Sub 5-52994 ( OD023176)	93 310	135,432	
UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	UG3OD023313-01	93 310	4,665	
UNIVERSITY OF CONNECTICUT	UCHC6-61884479-cyc2	93 310	141,592	
UNIVERSITY OF ILLINOIS	084337-16048	93 310	271,243	
UNIVERSITY OF MASSACHUSETTS AMHERST	WA00363865/OSP2016101	93 310	162,601	
UNIVERSITY OF NEW MEXICO	3RBL1	93 310	110,511	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	1U01MH104974-01	93 310	90,323	

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UNIVERSITY OF ROCHESTER	416985-G/UR FAO GR510571-cyc1	93 310	284,639	
UNIVERSITY OF SOUTHERN CALIFORNIA	64860970:01	93 310	31,683	
UNIVERSITY OF SOUTHERN CALIFORNIA	68588929	93 310	74,246	
UNIVERSITY OF SOUTHERN CALIFORNIA	Sub 70853595 (TR000967)	93 310	30,869	
UNIVERSITY OF SOUTHERN CALIFORNIA	Sub 71082591 (TR000967)	93 310	47,771	
UNIVERSITY OF WASHINGTON	UWSC9402	93 310	107,585	
UNIVERSITY OF WISCONSIN-MADISON	708K396	93 310	5,835	
YALE UNIVERSITY	89310	93 310	(368,999)	(367,840)
YESHIVA UNIVERSITY	310952	93 310	447,882	
UNIVERSITY OF MASSACHUSETTS MEDICAL SCHOOL	WA00510787/OSP2017126	93 318	121,468	
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	1510403	93 323	474,530	
PUBLIC HEALTH FOUNDATION ENTERPRISES, INC.	201701024	93 323	222,920	
PUBLIC HEALTH FOUNDATION ENTERPRISES, INC.	3U50CK000410	93 323	16,921	
CAIRN BIOSCIENCES, INC	20162958	93 350	41,529	
CHILDREN'S HOSPITAL CORP. (THE), BOSTON, MASS.	GENFD0001170248	93 350	185,771	
HARVARD UNIVERSITY	149749.5104143.4474	93 350	24,676	
INSTITUTE FOR SYSTEMS BIOLOGY	Sub 2016.0004(1OT3TR002026-01)	93 350	283,852	
J. CRAIG VENTER INSTITUTE	JCVI-16-005-cyc1	93 350	107,420	
J. CRAIG VENTER INSTITUTE	JCVI-16-007 (U01TR001801)	93 350	47,421	
J. CRAIG VENTER INSTITUTE	JCVI-16-008	93 350	45,277	
J. CRAIG VENTER INSTITUTE	Sub JCVI-16-006(TR001801)	93 350	49,356	
MOLECULAR EXPRESS	20152516	93 350	49,977	
UNIVERSITY OF CINCINNATI	009904-004	93 350	80,913	
UNIVERSITY OF PITTSBURGH	0055353 (128885-17)	93 350	39,436	
UNIVERSITY OF PITTSBURGH	0055353 (128885-18)	93 350	39,251	
UNIVERSITY OF PITTSBURGH	0055353 (128885-19)-cyc1	93 350	38,570	
UNIVERSITY OF PITTSBURGH	0055353 (128885-20)	93 350	39,869	
UNIVERSITY OF PITTSBURGH	Sub 0055353 (128885-16) (TR001	93 350	216,732	
WASHINGTON UNIVERSITY IN ST. LOUIS	WU-16-33-cyc2	93 350	349,135	
WASHINGTON UNIVERSITY IN ST. LOUIS	WU-17-248-cyc1	93 350	142,397	
EMORY UNIVERSITY	T688100	93 351	27,818	
JACKSON LABORATORY, THE	SUB NONE (OD020351)	93 351	18,629	
JACKSON LABORATORY, THE	TBI	93 351	15,661	
MASSACHUSETTS GENERAL HOSPITAL	224641	93 351	199,417	
MICHIGAN STATE UNIVERSITY	RC104007UCD	93 351	71,483	
OREGON HEALTH & SCIENCE UNIVERSITY	1001928UCD	93 351	(432)	
UNIVERSITY OF KANSAS/KU CENTER FOR RESEARCH, INC.	FY2016-054-cyc2	93 351	197,679	
NATIONAL UNIVERSITY	202101-001-FY2016	93 359	30,130	
SRI INTERNATIONAL	2583	93 360	77,353	
DASCENA, INC.	A129186	93 361	3,832	
DUKE UNIVERSITY	2035445	93 361	310,667	
DUKE UNIVERSITY	2035667	93 361	25,139	

The accompanying notes are an integral part of this schedule.

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			Federal Expenditures	Pass-Through to Subrecipients
KENT STATE UNIVERSITY	403016UCD	93 361	29,693	
KENT STATE UNIVERSITY	A15-0113-002	93 361	36,887	
NEW YORK UNIVERSITY	F7604-01	93 361	48,805	
UNIVERSITY OF COLORADO DENVER	FY17.782.004	93 361	74,750	
UNIVERSITY OF COLORADO DENVER	Sub FY17.105.002 (1283501)	93 361	9,195	
UNIVERSITY OF MIAMI	87673	93 361	236	
UNIVERSITY OF PITTSBURGH	0032090 (123962-2)	93 361	37,549	
UNIVERSITY OF PITTSBURGH	0050074 (128868-2)	93 361	12,558	
WASHINGTON UNIVERSITY IN ST. LOUIS	Sub WU-14-85 (NR014449)	93 361	3,860	
WASHINGTON UNIVERSITY IN ST. LOUIS	Sub WU-16-302 (NR015738)	93 361	19,878	
CHILDREN'S HOSPITAL AND RESEARCH CENTER FOUNDATION	79A23	93 365	4,453	
THE SCRIPPS RESEARCH INSTITUTE	Sub 5-50506 (TR001114)	93 371	154,442	
OCT MEDICAL IMAGING, INC	78675	93 389	(2,272)	
UNIVERSITY OF SOUTHERN CALIFORNIA	58389	93 389	(7)	
BODIMOJO	R43CA206666	93 393	14,840	
BRIGHAM AND WOMEN'S HOSPITAL	107288;5	93 393	37,776	
BRIGHAM AND WOMEN'S HOSPITAL	108520	93 393	3,999	
CASE WESTERN RESERVE UNIVERSITY	RES511397	93 393	66,486	
CEDARS-SINAI MEDICAL CENTER	P.O.0001291278	93 393	104,847	
CHILDREN'S HOSPITAL OF PHILADELPHIA	321072	93 393	153,192	
CHILDREN'S HOSPITAL OF PHILADELPHIA	88309	93 393	1,101	
CHILDREN'S MERCY HOSPITAL, THE	Sub 16-0002 ( CA194492)	93 393	89,532	
CITY OF HOPE	22524.915837.6695-cyc13	93 393	351	
CITY OF HOPE	3000026124	93 393	164,598	
CITY OF HOPE	50040.1914961.669303:5	93 393	6,826	
CITY OF HOPE	50297.2000498.669301-cyc2	93 393	(7,182)	
CITY OF HOPE	51974.2001759.669304-cyc1	93 393	58,646	
CITY OF HOPE	Sub 51974.2001759.669301 (CA19	93 393	921,179	
DANA-FARBER CANCER INSTITUTE	1286601	93 393	2,395	
DARTMOUTH COLLEGE	DARTMOUTH#902	93 393	7,169	
FRED HUTCHINSON CANCER RESEARCH CENTER	0000845112	93 393	7,889	
FRED HUTCHINSON CANCER RESEARCH CENTER	R01CA183570	93 393	24,846	
GEORGETOWN UNIVERSITY	411842_GR410064-UCLA	93 393	18,336	
H. LEE MOFFITT CANCER CENTER & RESEARCH INSTITUTE, INC	10-18701-99-01-S3	93 393	2,006	
HEALTH RESEARCH, INC.	Sub55-0979-01(CA132951)	93 393	2,035	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	Sub 0255 7461 4609 (CA178307	93 393	(14)	
JOHNS HOPKINS UNIVERSITY	2002945254	93 393	41,233	
KAISER FOUNDATION HEALTH PLAN OF WASHINGTON	201400520	93 393	75,910	
KAISER FOUNDATION HEALTH PLAN OF WASHINGTON	CA154292-UCSF	93 393	307,703	51,977
KAISER PERMANENTE DIVISION OF RESEARCH	UCSF#A121466	93 393	(846)	
LEIDOS BIOMEDICAL RESEARCH, INC.	16X164	93 393	193,348	
MAYO CLINIC/MAYO FOUNDATION FOR MEDICAL EDUCATION & RESEARCH	63253912	93 393	199,601	

The accompanying notes are an integral part of this schedule.

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			Federal Expenditures	Pass-Through to Subrecipients
MAYO CLINIC/MAYO FOUNDATION FOR MEDICAL EDUCATION & RESEARCH	PRIME:1R01CA154517-01A1	93 393	77,339	
MAYO CLINIC/MAYO FOUNDATION FOR MEDICAL EDUCATION & RESEARCH	USF-225625	93 393	12,624	
NATIONAL DEVELOPMENT AND RESEARCH INSTITUTES, INC.	626A	93 393	49,933	
NORTHWESTERN UNIVERSITY	1R01CA16404101	93 393	19,914	
NORTHWESTERN UNIVERSITY	60034672UCD	93 393	30,974	
NORTHWESTERN UNIVERSITY	60037274 UCLA:A01	93 393	123,120	
NORTHWESTERN UNIVERSITY	Sub 60037274 UCSD (CA186878)	93 393	109,534	
PROTEIN SCIENCES CORP.	2U44CA167593-02	93 393	157,166	
RESEARCH FOUNDATION FOR STATE UNIVERSITY OF NEW YORK, THE	1784	93 393	76,354	
ROCKEFELLER UNIVERSITY	R01CA204127	93 393	26,052	
SANFORD BURNHAM PREBYS MEDICAL DISCOVERY INSTITUTE	Sub 58196-12674-UCSD (CA177322)	93 393	21,527	
UNIVERSITY OF ARIZONA	3003980	93 393	143,225	
UNIVERSITY OF HAWAII AT MANOA	KA0084	93 393	66,233	
UNIVERSITY OF HOUSTON	R-15-0034:1	93 393	9,391	
UNIVERSITY OF ILLINOIS AT CHICAGO	Sub 2010-03794-15-00 (CA154254)	93 393	6,919	
UNIVERSITY OF IOWA	1001588781:01	93 393	82,674	
UNIVERSITY OF MICHIGAN	3004171785	93 393	16,233	
UNIVERSITY OF NEW MEXICO	3RB58	93 393	891	
UNIVERSITY OF PENNSYLVANIA	562194:1	93 393	53,446	
UNIVERSITY OF ROCHESTER	415597G	93 393	89,002	
UNIVERSITY OF ROCHESTER	416055-G	93 393	189,316	
UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT HOUSTON	00002076	93 393	27,488	
UNIVERSITY OF TEXAS-M.D. ANDERSON CANCER CENTER	00003027	93 393	6,821	
UNIVERSITY OF TEXAS-M.D. ANDERSON CANCER CENTER	00003065	93 393	18,583	
UNIVERSITY OF TEXAS-M.D. ANDERSON CANCER CENTER	Sub 00001664 (CA177914)	93 393	184,175	
UNIVERSITY OF TEXAS-M.D. ANDERSON CANCER CENTER	Sub 00003030 (CA186566)	93 393	18,690	
UNIVERSITY OF UTAH	10035205	93 393	86,220	
UNIVERSITY OF WASHINGTON	UWC8242	93 393	125,776	
UNIVERSITY OF WASHINGTON	UWSC9125	93 393	34,291	
UNIVERSITY OF WASHINGTON	UWSC9237	93 393	178,976	
WAKE FOREST UNIVERSITY	WUHS 114040	93 393	40,287	
WAKE FOREST UNIVERSITY HEALTH SCIENCES	114040	93 393	25,733	
WASHINGTON STATE UNIVERSITY	123700-G003622-cyc1	93 393	17,400	
YALE UNIVERSITY	M11A10846(A07956)	93 393	(11,559)	
AMERICAN COLLEGE OF RADIOLOGY	58940	93 394	55,177	
AMERICAN COLLEGE OF RADIOLOGY	82225	93 394	5	
AMERICAN COLLEGE OF RADIOLOGY	88797	93 394	8,518	
BLUENOVO BIOSYSTEMS, INC.	Sub CA214386	93 394	1,380	
CANCER TARGETED TECHNOLOGY	A126694	93 394	156,237	
DANA-FARBER CANCER INSTITUTE	Sub 1217703 (CA176058 )	93 394	7,471	
DIAGNOLOGIX LLC	Sub 20164142 (R44CA176892)	93 394	70,000	
DREXEL UNIVERSITY	Sub 232545 (CA168856)	93 394	4,310	

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			Federal Expenditures	Pass-Through to Subrecipients
DUKE UNIVERSITY	14-NIH-1105	93 394	3,508	
FHI 360	58030	93 394	(521)	
FRED HUTCHINSON CANCER RESEARCH CENTER	0000886002	93 394	72,664	
JOHNS HOPKINS UNIVERSITY	2002335877:1	93 394	19,823	
KAISER FOUNDATION HEALTH PLAN OF WASHINGTON	2011120783	93 394	820	
MEMORIAL SLOAN-KETTERING CANCER CENTER	B0134	93 394	5,024	
MEMORIAL SLOAN-KETTERING CANCER CENTER	BD516943	93 394	154,994	
NRG ONCOLOGY	NRG BSB - UCSF Yr 1	93 394	740,132	
OCT MEDICAL IMAGING, INC	OCT-201177-cyc2	93 394	108,406	
SPECTRAL MOLECULAR IMAGING, INC.	SMI-103747-cyc3	93 394	76,901	
STANFORD UNIVERSITY	29200920-50890-B	93 394	(19,253)	
THOMAS JEFFERSON UNIVERSITY	Sub 080-30000-S22601(CA194307)	93 394	92,715	
UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	2-5-27545	93 394	10,292	
UNIVERSITY OF MICHIGAN	3003732467	93 394	162,760	
UNIVERSITY OF PENNSYLVANIA	568870	93 394	65,923	
UNIVERSITY OF PITTSBURGH	79018	93 394	(3,091)	
UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT SAN ANTONIO	58460	93 394	9,433	
UNIVERSITY OF TEXAS-M.D. ANDERSON CANCER CENTER	00003874	93 394	39,544	
UNIVERSITY OF TEXAS-M.D. ANDERSON CANCER CENTER	00005316	93 394	1,375	
WEINBERG MEDICAL PHYSICS LLC	WMP-54529-cyc3	93 394	175	
ABREOS BIOSCIENCES	79639	93 395	1,522	
AMERICAN COLLEGE OF RADIOLOGY	82594	93 395	(8,417)	
BRIGHAM AND WOMEN'S HOSPITAL	UCSF #A120606	93 395	10	
CALIFORNIA INSTITUTE OF TECHNOLOGY	68-1093781:03	93 395	(7)	
CELLSIGHT TECHNOLOGIES	A121974	93 395	14,666	
CHEMOFILTER, INC	UCSF#A124229	93 395	(5,375)	
CHILDREN'S HOSPITAL CORP. (THE), BOSTON, MASS.	SUB RSTFD0000659211 (CA109467)	93 395	139,213	
CHILDREN'S HOSPITAL LOS ANGELES	2004-05	93 395	29,217	
CHILDREN'S HOSPITAL LOS ANGELES	P2014-0022_UCLA3:3	93 395	20,971	
CHILDREN'S HOSPITAL OF PHILADELPHIA	1U10CA180886-01	93 395	43,095	
CHILDREN'S HOSPITAL OF PHILADELPHIA	1UG1CA189955-01	93 395	74,134	
CHILDREN'S HOSPITAL OF PHILADELPHIA	201503563	93 395	20,017	
CHILDREN'S HOSPITAL OF PHILADELPHIA	20150682	93 395	1,323	
CHILDREN'S HOSPITAL OF PHILADELPHIA	8567G	93 395	1,542	
CHILDREN'S HOSPITAL OF PHILADELPHIA	88569	93 395	9,810	
CHILDREN'S HOSPITAL OF PHILADELPHIA	88748	93 395	15,876	
CHILDREN'S HOSPITAL OF PHILADELPHIA	89236	93 395	25,198	
CHILDREN'S HOSPITAL OF PHILADELPHIA	89464	93 395	12,079	
CHILDREN'S HOSPITAL OF PHILADELPHIA	9500100715	93 395	3,746	
CHILDREN'S HOSPITAL OF PHILADELPHIA	961551-RSUB	93 395	19,517	
CHILDREN'S HOSPITAL OF PHILADELPHIA	962112-RSUB	93 395	13,659	
CHILDREN'S HOSPITAL OF PHILADELPHIA	A128833	93 395	2,669	

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CHILDREN'S HOSPITAL OF PHILADELPHIA	PRM:UM1CA097452	93 395	49,780	
CHILDREN'S HOSPITAL OF PHILADELPHIA	Sub 20161421 (UG1CA189955 )	93 395	4,054	
CHILDREN'S HOSPITAL OF PHILADELPHIA	Sub 9500080215-12C (CA180886)	93 395	50,986	
CHILDREN'S HOSPITAL OF PHILADELPHIA	Sub FP13560 (CA097452)	93 395	1,301	
CHILDREN'S HOSPITAL OF PHILADELPHIA	SUB UG1CA189955	93 395	19,384	
CHILDREN'S HOSPITAL OF PHILADELPHIA	U10CA180886	93 395	95,389	
CHILDREN'S HOSPITAL OF PHILADELPHIA	UCSF#A121763	93 395	19,794	
CHILDREN'S HOSPITAL OF PHILADELPHIA	UCSF#A122092	93 395	29,427	
CHILDREN'S HOSPITAL OF PHILADELPHIA	UCSF#A124469	93 395	59,654	
CHILDREN'S HOSPITAL OF PHILADELPHIA	UCSF#A124960	93 395	7,625	
CITY OF HOPE	51183.2000123.669399	93 395	98,560	
CITY OF HOPE	52284.2002184.669302	93 395	217,959	
COLUMBIA UNIVERSITY	Sub GG010355 (CA167174)	93 395	65,187	
CORNELL UNIVERSITY	76088-10742	93 395	30,048	
ECOG-ACRIN MEDICAL RESEARCH FOUNDATION INC.	U10CA180820-01-UCLA1:2	93 395	16,245	
ECOG-ACRIN MEDICAL RESEARCH FOUNDATION INC.	U10CA180820-01-UCSF1	93 395	24,940	
EMMES CORPORATION, THE	89538	93 395	(60,862)	
EPIC SCIENCES, INC	88805	93 395	(22,955)	
FRED HUTCHINSON CANCER RESEARCH CENTER	0000852801	93 395	11,166	
FRED HUTCHINSON CANCER RESEARCH CENTER	Sub 000821830 (CA154967)	93 395	462	
GYNECOLOGIC ONCOLOGY GROUP	57650	93 395	(12,964)	
GYNECOLOGIC ONCOLOGY GROUP	78065	93 395	2,101	
GYNECOLOGIC ONCOLOGY GROUP	GOG-101462-cyc4	93 395	40,088	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	Sub 0255-1071-4609 (CA 195164)	93 395	15,532	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	Sub 02556-0601-4609 (CA193523)	93 395	85,332	
INTEGRATED SENSORS, LLC	A16-0372-001	93 395	95,067	
JOHN WAYNE INSTITUTE FOR CANCER TREATMENT AND RESEARCH	FARIES-15-03	93 395	129,094	
JOHN WAYNE INSTITUTE FOR CANCER TREATMENT AND RESEARCH	FARIES-15-04	93 395	70,796	
JOHNS HOPKINS UNIVERSITY	2002439005	93 395	6,739	
JOHNS HOPKINS UNIVERSITY	80180	93 395	2,230	
JOHNS HOPKINS UNIVERSITY	ABTC 1202	93 395	(1,694)	
JOHNS HOPKINS UNIVERSITY	ABTC 1301	93 395	(26,285)	
JOHNS HOPKINS UNIVERSITY	ABTC1302	93 395	1,396	
JOHNS HOPKINS UNIVERSITY	ABTC1403	93 395	1,155	
JOHNS HOPKINS UNIVERSITY	PO #2002555461	93 395	855	
LEIDOS, INC.	Sub 13XS025 (HHSN261200800001E	93 395	80,112	
LOMA LINDA UNIVERSITY (INCL NATL MEDICAL TECHNOLOGY TESTBED, INC.)	2150223	93 395	26,550	
MAGNESENSORS, INC.	83214	93 395	(42,218)	
MASSACHUSETTS GENERAL HOSPITAL	222723	93 395	(873)	
MASSACHUSETTS GENERAL HOSPITAL	226035	93 395	157,444	
MASSACHUSETTS GENERAL HOSPITAL	Sub 220879 (CA069246)	93 395	35,959	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	5710004107	93 395	91,589	

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MASSACHUSETTS INSTITUTE OF TECHNOLOGY	85791	93 395	33,430	
MAYO CLINIC/MAYO FOUNDATION FOR MEDICAL EDUCATION & RESEARCH	SUB MCC-194321 (CA189823)	93 395	135,934	
MAYO CLINIC/MAYO FOUNDATION FOR MEDICAL EDUCATION & RESEARCH	Sub SAD-149321 (CA189823)	93 395	113,273	
MEDICAL COLLEGE OF WISCONSIN	R01CA184798	93 395	8,880	
MEMORIAL SLOAN-KETTERING CANCER CENTER	226691-cyc2	93 395	5,008	
MEMORIAL SLOAN-KETTERING CANCER CENTER	BD517413B-cyc1	93 395	3,426	
MEMORIAL SLOAN-KETTERING CANCER CENTER	BD517413C-cyc1	93 395	19,288	
MONTEFIORE MEDICAL CENTER	A127377	93 395	80,000	
NEW YORK UNIVERSITY	F7618-02	93 395	234,295	
NRG ONCOLOGY	BIQSFP YR1-UCSF	93 395	45,028	
NRG ONCOLOGY	GOG237 - UCI - 02-cyc2	93 395	125,308	
NRG ONCOLOGY	NRG Oncology	93 395	50,149	
NRG ONCOLOGY	NRG-201385-cyc1	93 395	10,326	
NRG ONCOLOGY	UCAI - Yr. 1:Ganz - Yr. 4	93 395	8,473	
NRG ONCOLOGY	UCAI-YR.1-cyc3	93 395	7,153	
NRG ONCOLOGY	UOFC,IRVINE - YR. 1-cyc3	93 395	33,244	
NSABP FOUNDATION, INC.	TFED41-137	93 395	14	
OLD DOMINION UNIVERSITY RESEARCH FOUNDATION	100516-010	93 395	57,979	
OREGON HEALTH & SCIENCE UNIVERSITY	1004086001UCDavis	93 395	20,682	
OREGON HEALTH & SCIENCE UNIVERSITY	1005019_UCIRVINE-cyc2	93 395	39,763	
OREGON HEALTH & SCIENCE UNIVERSITY	21B21	93 395	62,510	
OREGON HEALTH & SCIENCE UNIVERSITY	27A45	93 395	59,994	
OREGON HEALTH & SCIENCE UNIVERSITY	36A93	93 395	14,373	
OREGON HEALTH & SCIENCE UNIVERSITY	9009627_UCIRVINE-cyc2	93 395	123,928	
OREGON HEALTH & SCIENCE UNIVERSITY	9009627_UCLA:2	93 395	30,745	
OREGON HEALTH & SCIENCE UNIVERSITY	sub 9009627 UCSD (CA180888)	93 395	88,204	
OREGON HEALTH & SCIENCE UNIVERSITY	SWOG-201304-cyc3	93 395	26,332	
PANDOMEDX	201603988	93 395	43,293	
PPD INC.	78981	93 395	31,106	
PPD INC.	78994	93 395	30,078	
SAINT LOUIS UNIVERSITY	Sub 33245 (CA169519)	93 395	39,668	
SANFORD BURNHAM PREBYS MEDICAL DISCOVERY INSTITUTE	59510-12770-UCSD ( CA198103)	93 395	144,697	
SANFORD BURNHAM PREBYS MEDICAL DISCOVERY INSTITUTE	Sub 59953-12989 (CA128814)	93 395	208,056	
SIGNALRX PHARMACEUTICALS, INC	Sub 20143837 (CA192656 )	93 395	736	
SIGNALRX PHARMACEUTICALS, INC	Sub 20163117 (CA206859)	93 395	89,702	
ST. JUDE CHILDREN'S RESEARCH HOSPITAL	111287230-7744212	93 395	24,551	
STANFORD UNIVERSITY	60958489-117119:1	93 395	18,786	
STANFORD UNIVERSITY	61251710-118307	93 395	204,147	
STANFORD UNIVERSITY	61251750-118307	93 395	62,644	
SWOG	20154355	93 395	(4,242)	
SWOG	20161228	93 395	4,898	
SWOG	31277	93 395	10,029	

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SWOG	80504	93 395	1,254	
UNIVERSITY OF ARIZONA	316616	93 395	8,289	
UNIVERSITY OF ARKANSAS, FAYETTEVILLE	51758	93 395	87,761	
UNIVERSITY OF FLORIDA	UFDSP00011465	93 395	32,803	
UNIVERSITY OF MARYLAND	1600557/14433	93 395	20,847	
UNIVERSITY OF MICHIGAN	3002128521	93 395	9,092	
UNIVERSITY OF MINNESOTA	N005494302	93 395	38,515	
UNIVERSITY OF MINNESOTA	Sub H005023201 (CA203348)	93 395	268,950	
UNIVERSITY OF NEVADA, LAS VEGAS/UNLV RESEARCH FOUNDATION	17-22AY-01-cyc1	93 395	93,510	
UNIVERSITY OF PITTSBURGH	0048529(127109-1)	93 395	22,478	
UNIVERSITY OF PITTSBURGH	0049527(127522-1)	93 395	187,247	
UNIVERSITY OF PITTSBURGH	5R01CA178766-03	93 395	5,692	
UNIVERSITY OF PITTSBURGH	9010905(125165-1)	93 395	20,955	
UNIVERSITY OF PITTSBURGH	B5213	93 395	2,929	
YALE UNIVERSITY	M16A12481(A10651)	93 395	5,799	
YESHIVA UNIVERSITY	310635	93 395	119,472	
ZONEONE PHARMA, INC.	1R41CA192689-01	93 395	5,174	
ACOUSTIC MEDSYSTEMS, INC.	2R44CA121740-02	93 396	186,475	
BAYLOR RESEARCH INSTITUTE	41010301401-cyc2	93 396	336,577	
CALIFORNIA INSTITUTE OF TECHNOLOGY	Sub 19GM-1093586 (CA164803)	93 396	103,269	
CASE WESTERN RESERVE UNIVERSITY	SUB RES509813 (CA198941)	93 396	175,631	
CEDARS-SINAI MEDICAL CENTER	0001238740:01	93 396	3,601	
CEDARS-SINAI MEDICAL CENTER	1335054:2	93 396	111,392	
CHILDREN'S HOSPITAL MEDICAL CENTER OF CINCINNATI	137592	93 396	24,952	
JOHNS HOPKINS UNIVERSITY	SUB 2002785140 (CA177669)	93 396	5,682	
LEIDOS BIOMEDICAL RESEARCH, INC.	16x002, not 003,004,005,	93 396	441,070	
LEIDOS BIOMEDICAL RESEARCH, INC.	29XS133	93 396	(651)	
LEIDOS BIOMEDICAL RESEARCH, INC.	29XS133TO13	93 396	12,124	
LEIDOS BIOMEDICAL RESEARCH, INC.	A9311	93 396	12,378	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	SUB 5710004012 (CA184898)	93 396	145,515	
MEDICAL UNIVERSITY OF SOUTH CAROLINA	59927	93 396	(1,168)	
NEW YORK UNIVERSITY	16-A1-00-005762-01	93 396	3,894	
NVIGEN INC.	A17-0625-001	93 396	68,654	
ST. JUDE CHILDREN'S RESEARCH HOSPITAL	111913019-7593083	93 396	23,732	
UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	FY14.701.001	93 396	78,500	
UNIVERSITY OF ILLINOIS	2014-03427-01	93 396	26,105	
UNIVERSITY OF PENNSYLVANIA	1P01CA165997-01A1	93 396	83,173	
UNIVERSITY OF SOUTHERN CALIFORNIA	45390795-cyc3	93 396	11,982	
UNIVERSITY OF SOUTHERN CALIFORNIA	65232523:1	93 396	116,330	
UNIVERSITY OF SOUTHERN CALIFORNIA	65279540-cyc2	93 396	50,689	
UNIVERSITY OF SOUTHERN CALIFORNIA	65318381:1	93 396	59,303	
UNIVERSITY OF TEXAS-M.D. ANDERSON CANCER CENTER	00003639	93 396	99,805	

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UNIVERSITY OF TEXAS-M.D. ANDERSON CANCER CENTER	Sub 00001959 (CA182905)	93 396	99,809	
UNIVERSITY OF TEXAS-M.D. ANDERSON CANCER CENTER	SUB 00003638 ( CA196403 )	93 396	97,657	
VANDERBILT UNIVERSITY	VUMC38098	93 396	12,413	
WISTAR INSTITUTE, THE	A7574	93 396	(23,403)	
CALIFORNIA INSTITUTE OF TECHNOLOGY	68D-1096829:1	93 397	1,340,964	
CHARLES R. DREW UNIVERSITY OF MEDICINE AND SCIENCE	14-15-DM-G0987A00-UCLA:3	93 397	467,990	
CORNELL UNIVERSITY	B9491	93 397	44,789	
INDIANA UNIVERSITY	B9293	93 397	36,407	
INDIANA UNIVERSITY	IIN4689833UCSF	93 397	241,181	
INDIANA UNIVERSITY	IN4681941UCSF	93 397	52,395	
INDIANA UNIVERSITY	IN4681942UCSF	93 397	30,744	
INDIANA UNIVERSITY	IN4687563UCSF	93 397	37,578	
INDIANA UNIVERSITY	IN4689835UCSF	93 397	39,094	
INDIANA UNIVERSITY	IN4689836UCSF	93 397	458,896	
INDIANA UNIVERSITY	IN4689838UCSF	93 397	24,891	
KAISER PERMANENTE DIVISION OF RESEARCH	B4771	93 397	(1,150)	
MEMORIAL SLOAN-KETTERING CANCER CENTER	BD511891	93 397	9,621	
NORTHWESTERN UNIVERSITY	60040958UCSF	93 397	40,095	
NORTHWESTERN UNIVERSITY	79188	93 397	16,475	
OREGON HEALTH & SCIENCE UNIVERSITY	9008723	93 397	24,310	
OREGON HEALTH & SCIENCE UNIVERSITY	96396	93 397	(407)	
OREGON HEALTH & SCIENCE UNIVERSITY	A7823	93 397	(8,106)	
PRINCETON UNIVERSITY	58685	93 397	1,786	
UNIVERSITY OF MARYLAND	SR00004046	93 397	33,962	
UNIVERSITY OF PITTSBURGH	0046110 (127890-1)	93 397	150,634	
UNIVERSITY OF PITTSBURGH	0046110(126709-1)	93 397	(916)	
UNIVERSITY OF PITTSBURGH	9012056(126714-1)	93 397	(1,925)	
UNIVERSITY OF PITTSBURGH	9013520 (128999-1)	93 397	145,617	
YESHIVA UNIVERSITY	31082B	93 397	55,502	
CHILDREN'S HOSPITAL OF PHILADELPHIA	89022	93 398	1,114	
NRG ONCOLOGY	Sub 908798 (NCI)	93 398	5,503	
PURDUE UNIVERSITY	1R25CA174665-01A1	93 398	7,683	
BRIGHAM AND WOMEN'S HOSPITAL	CALGB/CA136	93 399	156,955	
ORGANIZATION OF TERATOLOGY INFORMATION SPECIALISTS	Sub none(20174089)	93 424	3,125	
REHABILITATION INSTITUTE OF CHICAGO	81758-cyc5	93 433	27,017	
UNIVERSITY OF MINNESOTA	A005198604	93 433	26,877	
RIVERSIDE-SAN BERNARDINO COUNTY INDIAN HEALTH, INC	20132665	93 508	75,430	
CALIFORNIA DEPARTMENT OF INSURANCE	13038IA	93 511	632,400	
UNIVERSITY OF ARIZONA	226256	93 516	81,178	68,233
PUBLIC HEALTH FOUNDATION ENTERPRISES, INC.	0190.0104	93 521	44,892	
PUBLIC HEALTH FOUNDATION ENTERPRISES, INC.	0190.0105	93 521	81,417	
CALIFORNIA HEALTH BENEFIT EXCHANGE	13-E9001:A2	93 525	1,505,472	816,200

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CALIFORNIA HEALTH BENEFIT EXCHANGE	18321	93 525	(661)	
CALIFORNIA HEALTH BENEFIT EXCHANGE	84521	93 525	(8)	
LOS ANGELES COUNTY DEPARTMENT OF HEALTH SERVICES	20708	93 531	(39)	
PUBLIC HEALTH INSTITUTE	57558	93 531	(375)	
UNIVERSITY OF ROCHESTER	416576	93 533	16,309	
JOHNS HOPKINS UNIVERSITY	SUB 2002922541(DP005045)	93 542	44,954	
CALIFORNIA CHILD DEVELOPMENT DIVISION	84482	93 575	(631)	
CALIFORNIA CHILD DEVELOPMENT DIVISION	84505	93 575	31,087	
UNIVERSITY OF CINCINNATI	83268	93 583	9,167	
SOUTH BAY COMMUNITY SERVICES	Sub 20140475 (90EV0422-01-00)	93 592	62,522	
ASSOCIATION OF AMERICAN MEDICAL COLLEGES	C1CMS331324	93 610	228,846	
ASSOCIATION OF AMERICAN MEDICAL COLLEGES	Sub GT-32013-06 (1CICMS331324-	93 610	342,876	
CHILDREN'S NATIONAL MEDICAL CENTER	30002606-07:2	93 610	293,562	
LOS ANGELES GAY AND LESBIAN COMMUNITY SERVICES CENTER INC	79715	93 648	(105,400)	
LOS ANGELES LGBT CENTER	20161170	93 648	45,360	
SUNY UNIVERSITY AT ALBANY	1135853-9-76397	93 648	78,570	3,713
SUNY UNIVERSITY AT ALBANY	15-49	93 648	78,901	1,321
SUNY UNIVERSITY AT ALBANY	86027	93 648	159	
BRENTWOOD BIOMEDICAL RESEARCH INSTITUTE (ARRA)	20140254:2	93 701	53,174	
EMMES CORPORATION, THE (ARRA)	20101609	93 701	23,345	
TULANE UNIVERSITY (ARRA)	87447	93 701	(18)	
UNIVERSITY OF MICHIGAN (ARRA)	9166sc	93 701	118	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO (ARRA)	83594	93 701	(5,016)	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO (ARRA)	VPA Terkeltaub (AG007996)	93 701	34,397	
OUTCOME SCIENCES, LLC	DEcIDE:62-EHC	93 715	(57)	
ACADEMIC PEDIATRIC ASSOCIATION	20152248:1	93 733	28,458	
MERCED COUNTY DEPARTMENT OF PUBLIC HEALTH	2015074	93 737	93,564	
NEW YORK MEDICAL COLLEGE	L-10215	93 737	24,391	
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	1410730	93 757	85,731	
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	16-10961	93 758	108,533	
BATTELLE MEMORIAL INSTITUTE	236817	93 800	(48,394)	
BRIGHAM AND WOMEN'S HOSPITAL	Sub None (HL101422)	93 827	14,747	
BAYLOR COLLEGE OF MEDICINE	5601104669	93 837	688	
BETH ISRAEL DEACONESS MEDICAL CENTER	Sub None (HL 108724)	93 837	(37,884)	
BIOPICO SYSTEMS	BPS-54576-cyc4	93 837	2,646	
BLOOD SYSTEMS, INC. DBA BLOOD SYSTEMS RESEARCH INSTITUTE	11506UCSF128	93 837	28,121	
BRIGHAM AND WOMEN'S HOSPITAL	114963 (HL134168)	93 837	64,366	
BRIGHAM AND WOMEN'S HOSPITAL	59455	93 837	(3,437)	
BRIGHAM AND WOMEN'S HOSPITAL	A124946	93 837	4,385	
BRIGHAM AND WOMEN'S HOSPITAL	B3973	93 837	12,984	
BRIGHAM AND WOMEN'S HOSPITAL	BWH-101848-CYC1	93 837	20,494	
BRIGHAM AND WOMEN'S HOSPITAL	Sub 109135 (HL 117713)	93 837	10,863	

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BRIGHAM AND WOMEN'S HOSPITAL	Sub 110007 (AI068636)	93 837	5,592	
BRIGHAM AND WOMEN'S HOSPITAL	Sub 110009 (AI068636)	93 837	11,407	
BRIGHAM AND WOMEN'S HOSPITAL	SUB 112044 (HL128135)	93 837	179,115	
BRIGHAM AND WOMEN'S HOSPITAL	SUB 225707 (HL123336)	93 837	260,670	
BRIGHAM AND WOMEN'S HOSPITAL	SUB PS#107223 (HL101422)	93 837	2,370	
CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	Sub SA0000320-321-322 (HL08557)	93 837	303,057	
CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	Sub SA0000322 (HL085577)	93 837	607,481	
CASE WESTERN RESERVE UNIVERSITY	RES510228	93 837	86,539	
CASE WESTERN RESERVE UNIVERSITY	SUB RES510972(HL132364)	93 837	21,383	
CEDARS-SINAI MEDICAL CENTER	0001150918:003	93 837	136,359	
CEDARS-SINAI MEDICAL CENTER	0001250543:003	93 837	16,692	
CEDARS-SINAI MEDICAL CENTER	R01HL117983	93 837	(30)	
CHILDREN'S HOSPITAL MEDICAL CENTER OF CINCINNATI	137341	93 837	443,136	
CHILDREN'S HOSPITAL MEDICAL CENTER OF CINCINNATI	Sub 138275(HL131003)	93 837	68,361	
CHILDREN'S HOSPITAL MEDICAL CENTER OF CINCINNATI	Sub 138281 (HL131003)	93 837	239,976	
CLEVELAND CLINIC FOUNDATION	P20HL113452	93 837	135,406	
COLUMBIA UNIVERSITY	1 (GG011504)-cyc2	93 837	9,570	
COLUMBIA UNIVERSITY	1(GG011028)	93 837	98,531	
COLUMBIA UNIVERSITY	7(GG011046)	93 837	16,376	
COLUMBIA UNIVERSITY	SUB 1 (GG007512) (HL112388)	93 837	(27,578)	
COLUMBIA UNIVERSITY	Sub GG10320 (HL123061)	93 837	192,628	
CORNELL UNIVERSITY	R24HL120847	93 837	49,588	
DETON CORPORATION	Sub 20154348 (HL128120)	93 837	13,791	
DUKE UNIVERSITY	077	93 837	17,189	
DUKE UNIVERSITY	203-8302	93 837	5,113	
DUKE UNIVERSITY	2036055	93 837	156,170	
DUKE UNIVERSITY	SUB NONE (HL105448)	93 837	2,514	
FRED HUTCHINSON CANCER RESEARCH CENTER	8710F	93 837	(5,272)	
FRED HUTCHINSON CANCER RESEARCH CENTER	Sub 0000798072 (HL105065)	93 837	78,817	
FRED HUTCHINSON CANCER RESEARCH CENTER	Sub 0000857429 (HL122273)	93 837	75,865	
GEORGIA TECH RESEARCH CORPORATION	RG884-G1	93 837	107,954	
GLADSTONE INSTITUTES	R02177-A	93 837	63,098	
GLADSTONE INSTITUTES	R02177-C	93 837	48,620	
GLADSTONE INSTITUTES	R2316-A	93 837	383,028	
HUMACYTE, INC	UCSF#A123087	93 837	10,550	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	Sub 0255-7877-4609(HL127624)	93 837	79,357	
JOHNS HOPKINS UNIVERSITY	2002681722	93 837	225,157	
KAISER PERMANENTE DIVISION OF RESEARCH	115-9306-01-cyc8	93 837	123,007	
LA JOLLA INSTITUTE FOR ALLERGY AND IMMUNOLOGY	Sub 22593-44-393 (HL055798)	93 837	415,171	
LOMA LINDA UNIVERSITY (INCL NATL MEDICAL TECHNOLOGY TESTBED, INC.)	2160056-UCLA	93 837	55,031	
LOS ANGELES BIOMEDICAL RESEARCH INSTITUTE AT HARBOR-UCLA MEDICAL CTR	30147-01:2	93 837	12,351	
MASSACHUSETTS GENERAL HOSPITAL	20152224:2	93 837	8,478	

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MASSACHUSETTS GENERAL HOSPITAL	201522908:3	93 837	56,798	
MASSACHUSETTS GENERAL HOSPITAL	218179	93 837	1,038	
MASSACHUSETTS GENERAL HOSPITAL	224883	93 837	8,227	
MASSACHUSETTS GENERAL HOSPITAL	MGH#224883	93 837	5,818	
MASSACHUSETTS GENERAL HOSPITAL	U01HL23336	93 837	57,905	
MAYO CLINIC/MAYO FOUNDATION FOR MEDICAL EDUCATION & RESEARCH	64624813:1	93 837	12,129	
MEDICAL COLLEGE OF WISCONSIN	R01HL115267	93 837	51,227	
MEMORIAL HOSPITAL OF RHODE ISLAND	5001191-KLEIN	93 837	30,627	
MEMORIAL HOSPITAL OF RHODE ISLAND	Sub 5001191-LaCroix (HL130591)	93 837	51,294	
MIRIAM HOSPITAL, THE	Sub 710-9868 (HL109116)	93 837	8,821	
NATIONAL BUREAU OF ECONOMIC RESEARCH, INC	33-4144-UCSF	93 837	142,944	
NATIONAL JEWISH HEALTH	20103401	93 837	108,646	
NATIONAL JEWISH HEALTH	2020100601	93 837	66,057	
NEW ENGLAND RESEARCH INSTITUTE, INC.	201500084	93 837	12,380	
NEW ENGLAND RESEARCH INSTITUTE, INC.	20151999	93 837	439	
NEW ENGLAND RESEARCH INSTITUTE, INC.	83086	93 837	(999)	
NEW ENGLAND RESEARCH INSTITUTE, INC.	Sub 20170873 (HL068270)	93 837	7,587	
NEW ENGLAND RESEARCH INSTITUTE, INC.	Sub B2B (HL098188)	93 837	87,246	
NEW ENGLAND RESEARCH INSTITUTE, INC.	Sub None (HL107407)	93 837	7,024	
NEW YORK UNIVERSITY	20131088	93 837	18,405	
NEW YORK UNIVERSITY	NYU-103915-CYC1	93 837	(35,867)	
NEW YORK UNIVERSITY	NYU-202588-cyc1	93 837	33,551	
NEW YORK UNIVERSITY	UCSF#A126863	93 837	30,142	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	1774:3	93 837	36,034	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	PUL1939	93 837	48,510	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	RAT1855-01	93 837	135,242	
NORTHWESTERN UNIVERSITY	60036200UCSF	93 837	264,160	
NORTHWESTERN UNIVERSITY	60043010UCSF	93 837	17,621	
NORTHWESTERN UNIVERSITY	SP0028071-PROJ0007326:1	93 837	21,762	
OCT MEDICAL IMAGING, INC	OCTMI-204394-cyc1	93 837	33,621	
OHIO STATE UNIVERSITY	60028980	93 837	13,945	
OHIO STATE UNIVERSITY	60041988:3	93 837	61,936	
OHIO STATE UNIVERSITY	SUB 60040456 (HL123015)	93 837	33,598	
OKLAHOMA MEDICAL RESEARCH FOUNDATION	0280-01/UCSF	93 837	63,675	
OREGON HEALTH & SCIENCE UNIVERSITY	1002459_UCLA:2	93 837	42,910	
OREGON HEALTH & SCIENCE UNIVERSITY	1002459UCDHS	93 837	16,140	
OREGON HEALTH & SCIENCE UNIVERSITY	1005364UCDavis	93 837	56,522	
OREGON HEALTH & SCIENCE UNIVERSITY	58066	93 837	(5,851)	
OREGON HEALTH & SCIENCE UNIVERSITY	59617	93 837	(4,837)	
OREGON HEALTH & SCIENCE UNIVERSITY	79553	93 837	(534)	
OREGON HEALTH & SCIENCE UNIVERSITY	SUB 1005338 UCSD (HL078610)	93 837	13,026	
PARTNERS HEALTHCARE SYSTEM, INC	229172	93 837	14,760	

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PENNSYLVANIA STATE UNIVERSITY	5 U10 HL098115-06	93 837	51,836	
PENNSYLVANIA STATE UNIVERSITY	UCAHL098115_TO7	93 837	57,459	
PENNSYLVANIA STATE UNIVERSITY	UCAHL098115-07	93 837	33,542	
PENNSYLVANIA STATE UNIVERSITY	UCAHL098115#5	93 837	(20,150)	
PENNSYLVANIA STATE UNIVERSITY	UCASF HL098115	93 837	(8,453)	
PROFUSA, INC.	A127632	93 837	652	
QT MEDICAL, INC.	QT001-cyc4	93 837	36,196	
RHODE ISLAND HOSPITAL	701-7137112:3	93 837	133,224	
SANFORD BURNHAM PREBYS MEDICAL DISCOVERY INSTITUTE	60062-12920-UCSB	93 837	439,435	
SANFORD BURNHAM PREBYS MEDICAL DISCOVERY INSTITUTE	Sub 60062-12921-UCSD (HL131474	93 837	357,594	
SOCIAL AND SCIENTIFIC SYSTEMS, INC.	CRB-SSS-S-15-004351	93 837	398,636	163,704
STANFORD UNIVERSITY	60436086-107606:03	93 837	39,789	
STANFORD UNIVERSITY	60436089107606C	93 837	84,023	
STANFORD UNIVERSITY	60594679-107635	93 837	42,900	
STANFORD UNIVERSITY	61335463-121980	93 837	125,809	
STANFORD UNIVERSITY	R01HL128170	93 837	92,450	
STANFORD UNIVERSITY	Sub 60988003-118781 (HL083359)	93 837	106,439	
STANFORD UNIVERSITY	Sub 61153993-121531 ( HL123689	93 837	115,191	
STANFORD UNIVERSITY	Sub 61289425-123492 (HL132225)	93 837	19,691	
STANFORD UNIVERSITY	Sub 61324668-122625(HL130840)	93 837	39,812	
TARGESON, INC	89001	93 837	403	
TARGESON, INC	Sub 20150555 (HL110496)	93 837	(37,223)	
THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	000506834-001:A01	93 837	5,743	
THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	UCSF#A126440	93 837	(6)	
TOURO COLLEGE AND UNIVERSITY SYSTEM	00007sc	93 837	170,199	
TOURO COLLEGE AND UNIVERSITY SYSTEM	00008SC	93 837	37,418	
TRANSTARGET, INC.	A128899	93 837	51,398	
UNIVERSITY OF ARIZONA	381130	93 837	5,731	
UNIVERSITY OF CHICAGO	Sub FP053587 (HL119967)	93 837	287,234	
UNIVERSITY OF CONNECTICUT	Sub 133694 (HL128067)	93 837	19,416	
UNIVERSITY OF ILLINOIS AT CHICAGO	15927	93 837	127,073	
UNIVERSITY OF IOWA	1001475908	93 837	231,758	
UNIVERSITY OF IOWA	871E7	93 837	8,473	
UNIVERSITY OF KENTUCKY/UNIVERSITY OF KENTUCKY RESEARCH FOUNDATION	3200000734-17-033	93 837	381,647	
UNIVERSITY OF MIAMI	667431	93 837	57,202	
UNIVERSITY OF MICHIGAN	3003212185-cyc1	93 837	75,435	
UNIVERSITY OF MICHIGAN	Sub 3002988796 (HL117860)	93 837	45,480	
UNIVERSITY OF MISSISSIPPI	66105170517-UCLA	93 837	29,534	
UNIVERSITY OF NEW SOUTH WALES	RG161191-RUC01	93 837	39,530	
UNIVERSITY OF PENNSYLVANIA	567197	93 837	78,400	
UNIVERSITY OF PITTSBURGH	88777	93 837	(16,134)	
UNIVERSITY OF PITTSBURGH	Sub 0041597 (HL122144)	93 837	84,929	

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UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT HOUSTON	0010612A	93 837	171,373	39,619
UNIVERSITY OF TEXAS-AUSTIN	UTA16-000560	93 837	223,907	
UNIVERSITY OF VERMONT	1UM1HL120877-01	93 837	(7)	
UNIVERSITY OF WASHINGTON	749902	93 837	(1,602)	
UNIVERSITY OF WASHINGTON	8535:1	93 837	40,254	
UNIVERSITY OF WASHINGTON	SUB UWSC8735 (HL122199)	93 837	27,020	
UNIVERSITY OF WASHINGTON	UWSC 9407	93 837	36,754	
UNIVERSITY OF WASHINGTON	UWSC7526	93 837	26,958	
UNIVERSITY OF WASHINGTON	UWSC9050	93 837	51,651	
UNIVERSITY OF WISCONSIN-MADISON	646K925	93 837	1,238	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	83429	93 837	174	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	83518	93 837	(647)	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	Sub 08558-309843 (HL066941)	93 837	5,504	5,180
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	Sub 08558-309844 (HL066941)	93 837	276,027	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	Sub 08558-309845 (HL066941)	93 837	331,751	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA 315351 FU ( HL066941 )	93 837	101,626	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA GUATELLI 315752 (AI 081668	93 837	93,238	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Hammond (HL066941)	93 837	34,434	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA HAMMOND (HL122038 )	93 837	56,888	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Schilling 315389 (HL066941	93 837	(3,272)	
WAKE FOREST UNIVERSITY	WUFUHS 114486	93 837	77,373	
WASHINGTON UNIVERSITY IN ST. LOUIS	WU-15-188-MOD-1	93 837	71,573	
ARADIGM CORPORATION	A122751	93 838	29,264	
BAYLOR COLLEGE OF MEDICINE	7000000159	93 838	24,511	
BOSTON UNIVERSITY	4500002273	93 838	165,426	
CHILDREN'S HOSPITAL CORP. (THE), BOSTON, MASS.	5U01HL107681-03	93 838	7,220	
CHILDREN'S HOSPITAL CORP. (THE), BOSTON, MASS.	74159	93 838	4,273	
COLUMBIA UNIVERSITY	1(GG010909)	93 838	52,380	
COLUMBIA UNIVERSITY	3(GG007619-03)	93 838	51,952	
DUKE UNIVERSITY	2039484	93 838	255,119	
EMORY UNIVERSITY	T702698	93 838	148,877	
HENRY FORD HEALTH SYSTEM	1R01HL118267-01A1	93 838	309,010	
JOHNS HOPKINS UNIVERSITY	A7740	93 838	133	
MASSACHUSETTS GENERAL HOSPITAL	A126302	93 838	118,072	58,210
NEOVATIVE, INC.	NV001-cyc1	93 838	8,042	
NORTHWESTERN UNIVERSITY	60043345 UC:A03	93 838	133,495	
NORTHWESTERN UNIVERSITY	SP0038565-PROJ0011189	93 838	43,642	
PENNSYLVANIA STATE UNIVERSITY	UCASF HL109086	93 838	61,871	
PENNSYLVANIA STATE UNIVERSITY	UCASFHL109086-SARP3	93 838	81,679	
RADIOLOGICAL SOCIETY OF NORTH AMERICA INC	HSN268201200078C(2A)	93 838	268,512	
THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	Sub 000503442 (HL122626)	93 838	237,081	
UNIVERSITY OF ARIZONA	291957	93 838	208,730	

The accompanying notes are an integral part of this schedule.

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			Federal Expenditures	Pass-Through to Subrecipients
UNIVERSITY OF COLORADO DENVER	FY15.727.002	93 838	(854)	
UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	FY13.369.006	93 838	46,748	
UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	FY14.064.001	93 838	177,356	
UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	FY14.064.003	93 838	176,000	
UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	FY15.369.005	93 838	55,528	
UNIVERSITY OF ILLINOIS	2015-03875-01-00	93 838	61,600	
UNIVERSITY OF IOWA	79892	93 838	(1,090)	
UNIVERSITY OF MICHIGAN	3003837218	93 838	55,810	
UNIVERSITY OF MICHIGAN	3004355200	93 838	47,896	
UNIVERSITY OF MICHIGAN	B1953	93 838	(3,467)	
UNIVERSITY OF MICHIGAN	R01HL122438	93 838	10,248	
UNIVERSITY OF MINNESOTA	A000213101	93 838	120,218	
UNIVERSITY OF MINNESOTA	A005956202	93 838	9,329	
UNIVERSITY OF PENNSYLVANIA	565138	93 838	21,617	
UNIVERSITY OF PENNSYLVANIA	B8568	93 838	29,857	
UNIVERSITY OF PITTSBURGH	0014426(118315-1)	93 838	8,983	
UNIVERSITY OF PITTSBURGH	0035200(123815-1)	93 838	190,074	
UNIVERSITY OF PITTSBURGH	0041577 (1251-1)	93 838	67,969	
UNIVERSITY OF PITTSBURGH	0041577(125120-2)	93 838	163,420	
UNIVERSITY OF PITTSBURGH	0045031(126089-1)	93 838	58,709	
UNIVERSITY OF PITTSBURGH	79221	93 838	(1,350)	
UNIVERSITY OF WASHINGTON	13487	93 838	178,512	
UNIVERSITY OF WASHINGTON	17561:2	93 838	417,153	
VANDERBILT UNIVERSITY	VUMC 44299:1	93 838	(1,584)	
VANDERBILT UNIVERSITY	VUMC 44301	93 838	(16,505)	
VANDERBILT UNIVERSITY MEDICAL CENTER	vumc 44301	93 838	114,509	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	88277	93 838	(728)	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Fuster 308305 (HL107652)	93 838	20,835	
XFIBRA, LLC	Sub (20152506) (HL122022)	93 838	7,236	
XFIBRA, LLC	SUB 20160160 (HL127919)	93 838	49,004	
YALE UNIVERSITY	Sub M15A120003 (HL116235)	93 838	(3,420)	
CHILDREN'S HOSPITAL AND RESEARCH CENTER FOUNDATION	127909	93 839	91,622	
CHILDREN'S HOSPITAL AND RESEARCH CENTER FOUNDATION	2_7909_UCSF_OI_i6_17	93 839	34,485	
CHILDREN'S HOSPITAL LOS ANGELES	8018-RGF008095-00:3	93 839	163,539	
DUKE UNIVERSITY	82232	93 839	103	
NATIONAL JEWISH MEDICAL AND RESEARCH CENTER	SUB 2020072608 (HL089897)	93 839	296,439	
NATIONAL MARROW DONOR PROGRAM	A111930	93 839	70,860	
OHIO STATE UNIVERSITY	60057321 ( HL126945 )	93 839	91,821	
PENNSYLVANIA STATE UNIVERSITY	UCA-SFHL098115-02	93 839	36,720	
PROTEOGENOMICS RESEARCH INSTITUTE FOR SYSTEMS MEDICINE	SUB NONE (HL119165)	93 839	350,775	
SANFORD BURNHAM PREBYS MEDICAL DISCOVERY INSTITUTE	Sub 60062-12923-UCSD (HL131474	93 839	288,773	
THE SCRIPPS RESEARCH INSTITUTE	Sub 5-50314 (HL031950)	93 839	(29,295)	

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			Federal Expenditures	Pass-Through to Subrecipients
UNIVERSITY OF MARYLAND	14822-Z0552001	93 839	335,229	
UNIVERSITY OF MICHIGAN	A16-0006-003	93 839	32,459	
UNIVERSITY OF MINNESOTA	N003130601	93 839	172,525	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	201122155	93 839	162,321	
UNIVERSITY OF PENNSYLVANIA	564154/10042446/14855/00	93 839	146,711	
UNIVERSITY OF PENNSYLVANIA	565117	93 839	205,860	
UNIVERSITY OF PENNSYLVANIA	566085:1	93 839	95,798	
UNIVERSITY OF VERMONT	SUB 30768 SUB UCSD1(HL110955)	93 839	233,829	
UNIVERSITY OF WASHINGTON	UWSC8734	93 839	85,137	
UNIVERSITY SYSTEM OF MARYLAND	14242-cyc1	93 839	60,224	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA CHEN (HL066941)	93 839	12,840	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA HAMMOND (HL066941)	93 839	88,872	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA HAMMOND 309658 ( HL066941)	93 839	91,823	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA HAMMOND 309878 (HL066941-1	93 839	45,912	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA PATEL (HL066941)	93 839	19,293	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA ROSS 310094 (2P01 HL066941	93 839	27,679	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Zemljic-Harpf 315611 (HL06	93 839	50,858	
WASHINGTON UNIVERSITY IN ST. LOUIS	WU-14-194	93 839	29,531	
YESHIVA UNIVERSITY	Sub 9-526-6969 (HL110900)	93 839	356,974	
BLOOD SYSTEMS, INC. DBA BLOOD SYSTEMS RESEARCH INSTITUTE	10841UC131	93 840	21,418	
CEDARS-SINAI MEDICAL CENTER	0000953876	93 845	38,626	
BAYLOR COLLEGE OF MEDICINE	102008496:1	93 846	106,992	
BENAROYA RESEARCH INSTITUTE AT VIRGINIA MASON	FY141TN112	93 846	161,879	
BIONIKS	R41AR068202	93 846	20,999	
BIOPICO SYSTEMS	BPS-200053-cyc2	93 846	13,826	
BOSTON UNIVERSITY	4500001229	93 846	60,144	
BOSTON UNIVERSITY	4500001983	93 846	161,706	
BOSTON UNIVERSITY	450001255	93 846	1,385	
BRIGHAM AND WOMEN'S HOSPITAL	109136	93 846	36,916	
BRIGHAM AND WOMEN'S HOSPITAL	20163020	93 846	71,987	
BROWN UNIVERSITY	00000531-cyc6	93 846	10,485	
CALIFORNIA PACIFIC MEDICAL CENTER RESEARCH INSTITUTE	280201003-0714-S167	93 846	165,161	
CHILDREN'S NATIONAL MEDICAL CENTER	08381202	93 846	14,020	
COLUMBIA UNIVERSITY	1 (GG007778)	93 846	99,887	
EMORY UNIVERSITY	Sub T190800 (AR064307)	93 846	26,283	
FEINSTITUTEIN INSTITUTE FOR MEDICAL RESEARCH	20165243	93 846	15,400	
HARVARD UNIVERSITY	88772	93 846	(173)	
ICELANDIC HEART ASSOCIATION	HHSN27120120022C	93 846	2,240	
LA JOLLA INSTITUTE FOR ALLERGY AND IMMUNOLOGY	Sub 22474-44-334 (AR066053)	93 846	9,334	
MAYO CLINIC/MAYO FOUNDATION FOR MEDICAL EDUCATION & RESEARCH	THE-214784	93 846	24,551	
MICHIGAN STATE UNIVERSITY	RC105700UCSF	93 846	93,630	
MOLECULAR IMAGING CORPORATION(ACQUIRED)	78468	93 846	(14)	

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			Federal Expenditures	Pass-Through to Subrecipients
NATIONWIDE CHILDREN'S HOSPITAL	Sub 735611 (AR060949)	93 846	161,439	
NORTHWELL HEALTH INC	500678UCSF	93 846	219,283	80,475
NORTHWESTERN UNIVERSITY	60031647 UCSF	93 846	15,701	
NORTHWESTERN UNIVERSITY	R01AR065473	93 846	346,041	
O.N. DIAGNOSTICS, LLC	007FUS1-01	93 846	5,375	
O.N. DIAGNOSTICS, LLC	2R44AR057616-03A1	93 846	94,859	
PHYSICAL SCIENCES INC.	201500396	93 846	29,868	
PURDUE UNIVERSITY	410275517	93 846	33,490	
SANFORD BURNHAM PREBYS MEDICAL DISCOVERY INSTITUTE	Sub 58556-12524 (AR 064873)	93 846	20,588	
SCARLESS LABORATORIES, INC	2R44AR064126-03A1	93 846	101,718	
SUTTER WEST BAY HOSPITALS	Sub 280201005-S175 (AR0065268)	93 846	23,386	
THE FEINSTEIN INSTITUTE FOR MEDICAL RESEARCH	500649 ( AR063407 )	93 846	15,527	
THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	000502603-004-cyc1	93 846	18,852	
TUFTS MEDICAL CENTER, INC.	5012099-SERV	93 846	40,523	
UNIVERSITY OF ARIZONA	247411	93 846	175,672	
UNIVERSITY OF CINCINNATI	008754-013:3	93 846	61,748	
UNIVERSITY OF COLORADO DENVER	FY17.873.001	93 846	33,042	
UNIVERSITY OF COLORADO DENVER	Sub 15.090.005 (AR067681)	93 846	272,904	
UNIVERSITY OF CONNECTICUT	Sub UCHC6-80676187(AR070879)	93 846	14,959	
UNIVERSITY OF FLORIDA	UFDSP00010892	93 846	316,294	
UNIVERSITY OF FLORIDA	UFDSP00010893	93 846	24,089	
UNIVERSITY OF FLORIDA	UFDSP00010895	93 846	104,098	
UNIVERSITY OF MICHIGAN	3003938003	93 846	16,226	
UNIVERSITY OF NORTH CAROLINA SYSTEM	5103374	93 846	55,777	
UNIVERSITY OF PENNSYLVANIA	566571:1	93 846	60,197	
UNIVERSITY OF SOUTHERN CALIFORNIA	67569403:1	93 846	24,402	
UNIVERSITY OF WISCONSIN-MADISON	Sub 630K464 (AR068373)	93 846	149,872	
WASHINGTON STATE UNIVERSITY	11617 G003092	93 846	86,366	
WASHINGTON UNIVERSITY IN ST. LOUIS	87623	93 846	195	
WASHINGTON UNIVERSITY IN ST. LOUIS	89107	93 846	(262)	
YESHIVA UNIVERSITY	310451	93 846	1,995	
ACOUSTIC MEDSYSTEMS, INC.	A127047	93 847	255,609	
ARBOR RESEARCH COLLABORATIVE FOR HEALTH	20162920:1	93 847	60,741	
ARBOR RESEARCH COLLABORATIVE FOR HEALTH	ARB041916	93 847	149	
AUGUSTA UNIVERSITY	25034-72	93 847	54,401	
AUGUSTA UNIVERSITY	2503482	93 847	826	
AUGUSTA UNIVERSITY	Sub 25034-71 ( DK076169)	93 847	2,911	
AUGUSTA UNIVERSITY	Sub 25034-84 ( DK076169)	93 847	5,497	
AUGUSTA UNIVERSITY	SUB 25732-77 (DK076169)	93 847	2,588	
BAYLOR COLLEGE OF MEDICINE	008859	93 847	23,175	
BAYLOR COLLEGE OF MEDICINE	102159190	93 847	25,567	
BAYLOR COLLEGE OF MEDICINE	102159207	93 847	188,522	

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			Federal Expenditures	Pass-Through to Subrecipients
BECKMAN RESEARCH INSTITUTE OF THE CITY OF HOPE	50578.1914951.669302-cyc1	93 847	101,277	
BIOLINQ, INC.	Sub 20150264 (DK103559)	93 847	26,645	
BOSTON UNIVERSITY	4500001991	93 847	12,711	
BRENTWOOD BIOMEDICAL RESEARCH INSTITUTE	20145153	93 847	234,870	
BROAD INSTITUTE INC.	SUB 5216277-00000942(DK105554)	93 847	18,075	
BROAD INSTITUTE INC.	Sub 5216277-5500000870 (DK1055)	93 847	97,774	
CALIFORNIA PACIFIC MEDICAL CENTER RESEARCH INSTITUTE	28000004128	93 847	334,072	
CALIFORNIA PACIFIC MEDICAL CENTER RESEARCH INSTITUTE	280201011-S2104	93 847	51,382	
CASE WESTERN RESERVE UNIVERSITY	78264	93 847	7	
CASE WESTERN RESERVE UNIVERSITY	RESS11776	93 847	110,206	
CASE WESTERN RESERVE UNIVERSITY	Sub RES509275 (DK094157)	93 847	219,412	
CASE WESTERN RESERVE UNIVERSITY	SUB RES509478 (DK104438)	93 847	23,875	
CEDARS-SINAI MEDICAL CENTER	0001073756A	93 847	(4,672)	
CEDARS-SINAI MEDICAL CENTER	0001163606:1	93 847	8,761	
CEDARS-SINAI MEDICAL CENTER	0001179467	93 847	61,175	
CEDARS-SINAI MEDICAL CENTER	0001285404	93 847	46,730	
CEDARS-SINAI MEDICAL CENTER	0001285442	93 847	12,847	
CEDARS-SINAI MEDICAL CENTER	0001297218:001	93 847	1,613	
CHILDREN'S HOSPITAL LOS ANGELES	86A76	93 847	540	
CHILDREN'S HOSPITAL LOS ANGELES	P2012-0029	93 847	539	
CHILDREN'S HOSPITAL MEDICAL CENTER OF CINCINNATI	137610	93 847	55,770	
CHILDREN'S MERCY HOSPITAL, THE	13-0022:2	93 847	17,083	
CHILDREN'S MERCY HOSPITAL, THE	13-0025	93 847	2,089	
CITY OF HOPE	51504.2000556.669309 (5U01DK10	93 847	21,630	
COLUMBIA UNIVERSITY	1(ACCT.#5-39391)	93 847	(34)	
COLUMBIA UNIVERSITY	87416	93 847	(1,712)	
COLUMBIA UNIVERSITY	88422	93 847	(15)	
COLUMBIA UNIVERSITY	Sub 1 (GG010427-02) (DK061734-	93 847	0	
COLUMBIA UNIVERSITY	Sub 1 (GG010427-05) (DK061734)	93 847	5,902	
COLUMBIA UNIVERSITY	SUB 1(GG010427)(DK061734)	93 847	523,645	
COLUMBIA UNIVERSITY	Sub 3 (GG010427) (DK061734)	93 847	398,232	
COLUMBIA UNIVERSITY	Sub GG005583-02 (DK061734)	93 847	438,240	
CONNECTICUT CHILDRENS MEDICAL CENTER	12-179296-28	93 847	9,589	
DUKE UNIVERSITY	R34-DK094116-04 REVISED	93 847	(9)	
EMORY UNIVERSITY	Sub S726754 (DK094346)	93 847	24,165	
GEORGE WASHINGTON UNIVERSITY	Sub S-DPP1718-JC03 (U01DK04849	93 847	6,585	
GEORGE WASHINGTON UNIVERSITY	Sub S-GRD1213-KR40 (DK098246)	93 847	53,866	
IATERION, INC.	041630	93 847	46,379	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	0255-2171-4609	93 847	27,677	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	0255-3831-4609	93 847	124,198	
INDIANA UNIVERSITY	A15-0013-002	93 847	85,525	
JOHNS HOPKINS UNIVERSITY	1R24DK099803-01A1	93 847	418,101	

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JOHNS HOPKINS UNIVERSITY	2001646276	93 847	14,833	
KAISER PERMANENTE DIVISION OF RESEARCH	11 5-9075-07	93 847	25,424	
KAISER PERMANENTE DIVISION OF RESEARCH	115-7257/1494	93 847	46,783	
KAISER PERMANENTE DIVISION OF RESEARCH	115-7258/1493	93 847	3,367	
KAISER PERMANENTE DIVISION OF RESEARCH	115-9075-01	93 847	11,184	
KAISER PERMANENTE DIVISION OF RESEARCH	115-9075-06	93 847	5,387	
KAISER PERMANENTE DIVISION OF RESEARCH	RNG200295-03:1	93 847	41,748	
KAISER PERMANENTE DIVISION OF RESEARCH	RNG200381-UCSF	93 847	77,374	
KAISER PERMANENTE DIVISION OF RESEARCH	RNG500630-01	93 847	162,104	
LA JOLLA INSTITUTE FOR ALLERGY AND IMMUNOLOGY	871E3	93 847	(1,342)	
LOUISIANA STATE UNIVERSITY AND AGRICULTURAL AND MECHANICAL COLLEGE	1 R01 DK090607-50326-S1	93 847	(18,141)	
LOUISIANA STATE UNIVERSITY AND AGRICULTURAL AND MECHANICAL COLLEGE	5R01DK092575	93 847	68,863	
LOYOLA UNIVERSITY OF CHICAGO	206423	93 847	14,454	
LUDWIG INSTITUTE FOR CANCER RESEARCH	Sub 242001-05003B (DK105541)	93 847	319,236	
LUDWIG INSTITUTE FOR CANCER RESEARCH	Sub 2420012-05003A (DK105541)	93 847	412,555	
MAINE MEDICAL CENTER	145703	93 847	34,516	
MASSACHUSETTS GENERAL HOSPITAL	217977	93 847	3,526	
MCGILL UNIVERSTIY	215686	93 847	89,946	
MEDICAL COLLEGE OF WISCONSIN	201501396	93 847	175,864	
NEXTRAST, INC	UCSF#A124589	93 847	17,226	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	YUUKL1941-098824	93 847	48,653	
NORTHWESTERN UNIVERSITY	60042868UCD	93 847	28,170	
OREGON HEALTH & SCIENCE UNIVERSITY	SUB 1005905 UCSD (DK102813)	93 847	63,122	
SAFE MEDICAL DESIGN, LLC	B3236	93 847	(3,065)	
SAINT BARNABAS MEDICAL CENTER	UCLA3	93 847	26,368	
STANFORD UNIVERSITY	60867766-111862	93 847	141,452	
STANFORD UNIVERSITY	60896104-116817	93 847	40,400	
STANFORD UNIVERSITY	61065546-117234	93 847	23,272	
STANFORD UNIVERSITY	61111888-116833	93 847	2,330	
STANFORD UNIVERSITY	61328829-116833	93 847	15,485	
THE UNIVERSITY OF ALABAMA SYSTEM (SYSTEMWIDE PARENT CODE)	SUB 000501524 (DK079337)	93 847	550,482	
TOURO COLLEGE AND UNIVERSITY SYSTEM	1R01DK089216-01-RADIOLOGY-UCSF	93 847	1,959	
UNIVERSITY OF ARIZONA	Sub 92941 (DK080801)	93 847	(872)	
UNIVERSITY OF ARIZONA	Sub PO 148522 (DK058251)	93 847	274,632	
UNIVERSITY OF CINCINNATI	009897-002	93 847	59,042	
UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	FY13.269.004:FY17.269.001_AMD4	93 847	47,142	
UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	FY13.274.003	93 847	126,108	53,172
UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	FY15.018.001	93 847	71,069	
UNIVERSITY OF FLORIDA	Sub UFDSP00010634 (DK099334)	93 847	6,208	
UNIVERSITY OF IOWA	1001420122	93 847	37,711	
UNIVERSITY OF IOWA	W000834895	93 847	18,278	
UNIVERSITY OF MARYLAND	1300318A	93 847	1,624	

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UNIVERSITY OF MASSACHUSETTS AMHERST	Sub 13-007352 (DK064902)	93 847	62,626	
UNIVERSITY OF MASSACHUSETTS AMHERST	Sub 14-007792 (DK097011)	93 847	142,745	
UNIVERSITY OF MICHIGAN	Sub 3004220372(DK082841)	93 847	84,196	
UNIVERSITY OF MICHIGAN	SUBK00004867	93 847	26,482	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5-34392	93 847	99,801	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5101190:1	93 847	51,927	
UNIVERSITY OF OREGON	SUB 215380A (DK095926)	93 847	32,446	
UNIVERSITY OF PITTSBURGH	0019927(118536-5)	93 847	116,047	
UNIVERSITY OF SOUTH FLORIDA	188359	93 847	66,791	
UNIVERSITY OF SOUTH FLORIDA	6119-1295-00-AV	93 847	1,067	
UNIVERSITY OF SOUTHERN CALIFORNIA	66872909	93 847	78,229	
UNIVERSITY OF TENNESSEE	R01DK096920UCIRVINE-cyc6	93 847	45,875	
UNIVERSITY OF TEXAS-SOUTHWESTERN MEDICAL CENTER AT DALLAS	161111-Registry	93 847	166,103	
UNIVERSITY OF TEXAS-SOUTHWESTERN MEDICAL CENTER AT DALLAS	79573	93 847	97	
UNIVERSITY OF TEXAS-SOUTHWESTERN MEDICAL CENTER AT DALLAS	A8297	93 847	(11,374)	
UNIVERSITY OF WASHINGTON	1R01DK102134-01	93 847	8,728	
UNIVERSITY OF WASHINGTON	87573	93 847	(1,279)	
UNIVERSITY OF WASHINGTON	Sub 698055 (DK082325)	93 847	39,838	
UNIVERSITY OF WASHINGTON	UWSC8994	93 847	22,456	
VALITOR, INC.	A121392	93 847	11,984	
VANDERBILT UNIVERSITY	UNIV 58354	93 847	126,554	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA ADV IX (DK102438)	93 847	3,930	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Edelman (DK098246-01)	93 847	5,951	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Henry (DK098246)	93 847	22,115	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA HENRY( DK098246)	93 847	36,620	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA HENRY(DK098246)	93 847	25,544	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA IRIFKIN (DK105314)	93 847	3,201	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA IX (DK097093)	93 847	41,979	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA IX (DK101720)	93 847	86,242	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA IX 310177 DK098234-01A1	93 847	6,514	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA IX 5013860(DK102730)	93 847	11,433	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA VALLON (DK106102)	93 847	75,265	
VIRGINIA COMMONWEALTH UNIVERSITY	1R01DK094818-01A1	93 847	142,619	
VIRGINIA COMMONWEALTH UNIVERSITY	Sub PD304070-SC106315 (DK10596)	93 847	438,382	
WAKE FOREST UNIVERSITY	WFOHS118247	93 847	144,815	
WASHINGTON UNIVERSITY IN ST. LOUIS	Sub WU-15-284 (DK078669)	93 847	112,623	
WASHINGTON UNIVERSITY IN ST. LOUIS	Sub WU-15-285 (DK078669)	93 847	56,013	
YALE UNIVERSITY	M15A11978(A10081)-cyc2	93 847	144,028	
UNIVERSITY OF SOUTHERN CALIFORNIA	80035	93 848	(8,445)	
CHILDREN'S MERCY HOSPITAL, THE	59331	93 849	1,674	
CHILDREN'S MERCY HOSPITAL, THE	Sub 07-005 (DK066143)	93 849	10,001	
MEDICAL COLLEGE OF WISCONSIN	Sub none (DK088831)	93 849	418,446	

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TEXAS BIOMEDICAL RESEARCH INSTITUTE (TEXAS BIOMED)	Sub 16-04613-401 (DK110096)	93 849	21,996	
THE SCRIPPS RESEARCH INSTITUTE	Sub TSRI-20162946-Godino(DK112	93 849	13,392	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA 316786 Rifkin (5 R01 DK101	93 849	48,403	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Afari (1 R01 DK106415-01A1	93 849	71,439	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA AFARI 316834 ( DK106415-01	93 849	37,281	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Godino ( DK106415 )	93 849	8,322	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA GOLSHAN 317249 ( DK106415	93 849	25,534	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA IX (1U01 DK102730-01)	93 849	26,325	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Lang 316833 (1 R01 DK10641	93 849	11,578	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA RIEG 9317001 (DK110621)	93 849	45,168	
ALLEN INSTITUTE FOR BRAIN SCIENCE	R01NS092474	93 853	168,504	
AUGUSTA UNIVERSITY	31350-1-cyc1	93 853	187,125	
BAYLOR COLLEGE OF MEDICINE	Sub 102068662 (NS089366)	93 853	87,051	
BETH ISRAEL DEACONESS MEDICAL CENTER	01025970	93 853	151,317	
BOSTON UNIVERSITY	4500002090	93 853	7,409	
BOSTON UNIVERSITY	4500002214	93 853	27,934	
BOSTON UNIVERSITY	A16-0139-001	93 853	65,152	
BRENTWOOD BIOMEDICAL RESEARCH INSTITUTE	58029	93 853	(52,047)	
BRENTWOOD BIOMEDICAL RESEARCH INSTITUTE	58458	93 853	13,109	
BRIGHAM AND WOMEN'S HOSPITAL	108685-cyc4	93 853	342,168	
BRIGHAM AND WOMEN'S HOSPITAL	Sub 108685 (NS 079201)	93 853	224,631	
C. LIGHT TECHNOLOGIES, INC.	20163454	93 853	11,645	
CALIFORNIA INSTITUTE OF TECHNOLOGY	SUB 18B-1097808(NS094403B)	93 853	65,506	
CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	SA0000528 ( 2R56NS051247 )	93 853	12,568	
CASE WESTERN RESERVE UNIVERSITY	RES510373	93 853	428,951	
CAYETANO HEREDIA UNIVERSITY	20162017	93 853	72,178	
CHICAGO ASSOCIATION FOR RESEARCH AND EDUCATION IN SCIENCE	80367	93 853	(2,658)	
CHILDREN'S HOSPITAL CORP. (THE), BOSTON, MASS.	0000299804	93 853	55,808	
CHILDREN'S HOSPITAL CORP. (THE), BOSTON, MASS.	GENFD0001201720:7	93 853	236,457	
CHILDREN'S HOSPITAL CORP. (THE), BOSTON, MASS.	GENFD0001201721:1	93 853	133,897	
CHILDREN'S HOSPITAL CORP. (THE), BOSTON, MASS.	GENFD0001206273:2	93 853	41,519	
CHILDREN'S HOSPITAL CORP. (THE), BOSTON, MASS.	GENFD0001206274:3	93 853	44,933	
CHILDREN'S HOSPITAL CORP. (THE), BOSTON, MASS.	RSTFD0000668912:6	93 853	18,340	
CHILDREN'S HOSPITAL OF PHILADELPHIA	3210390817:5	93 853	205,973	
CLEVELAND CLINIC FOUNDATION	88438	93 853	(69)	
COLD SPRING HARBOR LABORATORY	64100112	93 853	198,169	
COLUMBIA UNIVERSITY	1(GG008135-02)	93 853	14,072	
COLUMBIA UNIVERSITY	1(GG010432-02)	93 853	45,687	
COLUMBIA UNIVERSITY	1(GG010432) / G10319	93 853	313	
COLUMBIA UNIVERSITY	Sub GG010312 (NS078059)	93 853	18,568	
CORNELL UNIVERSITY	16081320	93 853	21,646	
DANA-FARBER CANCER INSTITUTE	1278001	93 853	250,336	

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			Federal Expenditures	Pass-Through to Subrecipients
DANA-FARBER CANCER INSTITUTE	A9263	93 853	(434)	
DIAGNOSTIC CONSULTING NETWORK	DCN-55972-cyc2	93 853	14,776	
DIAGNOSTIC CONSULTING NETWORK	Sub 20134874 (NS 76359)	93 853	10,383	
DUKE UNIVERSITY	SUB 2034905 (NS092521)	93 853	404,615	
EMMES CORPORATION, THE	Sub none (NS062835)	93 853	3,730	
EMORY UNIVERSITY	T423135-cyc1	93 853	199,402	
GLADSTONE INSTITUTES	1R01NS079725-01A1	93 853	161,209	
GLADSTONE INSTITUTES	31618	93 853	(1,376)	
GLADSTONE INSTITUTES	R01750-A	93 853	18	
GLADSTONE INSTITUTES	R02082-A	93 853	8,517	
GLADSTONE INSTITUTES	R2442-A	93 853	294,945	
GLADSTONE INSTITUTES	R2442-C	93 853	106,458	
GLADSTONE INSTITUTES	R2442-D	93 853	107,452	
GLADSTONE INSTITUTES	R2442-E	93 853	201,169	
GLADSTONE INSTITUTES	Sub R2400-A (NS094342)	93 853	888,414	
GLADSTONE INSTITUTES	Sub R2432-A (NS097976)	93 853	2,784	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	0255-0641-4609	93 853	915,961	
INSTITUTE FOR MOLECULAR MEDICINE, INC. (CALIFORNIA)	UCI-2014-56074-cyc2	93 853	131,875	
INSTITUTE FOR MOLECULAR MEDICINE, INC. (CALIFORNIA)	UCI-2014-56212-cyc2	93 853	96,669	
JOHNS HOPKINS UNIVERSITY	2000767379-6	93 853	3,618	
JOHNS HOPKINS UNIVERSITY	20150311	93 853	3,732	
JOHNS HOPKINS UNIVERSITY	Sub 2002110195 (NS080824)	93 853	3,402	
KAISER PERMANENTE DIVISION OF RESEARCH	115-7290/1514-01	93 853	141,143	
KAISER PERMANENTE DIVISION OF RESEARCH	115-9703/1301-01	93 853	492,823	64,664
KAISER PERMANENTE DIVISION OF RESEARCH	96221	93 853	0	
KITWARE, INC.	79021	93 853	(10)	
LUDWIG INSTITUTE FOR CANCER RESEARCH	233307-05012	93 853	16,724	
LUDWIG INSTITUTE FOR CANCER RESEARCH	59313	93 853	(277)	
MAGNESENSORS, INC.	Sub 3037 (NS077607)	93 853	6,290	
MASSACHUSETTS GENERAL HOSPITAL	20131516	93 853	(1,492)	
MASSACHUSETTS GENERAL HOSPITAL	201604272	93 853	9,618	
MASSACHUSETTS GENERAL HOSPITAL	20164300	93 853	2,298	
MASSACHUSETTS GENERAL HOSPITAL	226396	93 853	23,854	
MASSACHUSETTS GENERAL HOSPITAL	59781	93 853	6,447	
MASSACHUSETTS GENERAL HOSPITAL	63392	93 853	21,820	
MASSACHUSETTS GENERAL HOSPITAL	78482	93 853	203	
MASSACHUSETTS GENERAL HOSPITAL	80240	93 853	(198)	
MASSACHUSETTS GENERAL HOSPITAL	NN103	93 853	41,259	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	5710003857-cyc1	93 853	150,998	
MAYO CLINIC/MAYO FOUNDATION FOR MEDICAL EDUCATION & RESEARCH	87412	93 853	(1,551)	
MAYO CLINIC/MAYO FOUNDATION FOR MEDICAL EDUCATION & RESEARCH	A126507	93 853	8,343	
MAYO CLINIC/MAYO FOUNDATION FOR MEDICAL EDUCATION & RESEARCH	THE-187276-01	93 853	732	

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MEDICAL UNIVERSITY OF SOUTH CAROLINA	MUSC14 -016:04	93 853	11,814	
MOREHOUSE SCHOOL OF MEDICINE	008650	93 853	47,824	
NEURAL ANALYTICS	2R44NS092209-2	93 853	3,927	
NORTHWESTERN UNIVERSITY	1U01NS080818-01A1	93 853	26,865	
NORTHWESTERN UNIVERSITY	60036745 UC-cyc4	93 853	10,128	
NORTHWESTERN UNIVERSITY	60041563 UCI-cyc1	93 853	111,688	
NORTHWESTERN UNIVERSITY	60042630 UCD	93 853	103,747	
NORTHWESTERN UNIVERSITY	82544	93 853	(2,869)	
NORTHWESTERN UNIVERSITY	R01NS080619	93 853	139,159	
NORTHWESTERN UNIVERSITY	Sub 60036745 UCSD (NS080818)	93 853	22,138	
OREGON HEALTH & SCIENCE UNIVERSITY	Sub none (OD011883)	93 853	(1)	
POSIT SCIENCE CORPORATION	20152305	93 853	16,055	
PRINCETON UNIVERSITY	89305	93 853	36,071	
PRINCETON UNIVERSITY	Sub 0000039 (NS090562 )	93 853	3,230	
ROCKEFELLER UNIVERSITY	R01NS083823:1	93 853	180,659	
ROKHAN, LLC	FAIN: R43NS087659	93 853	3,775	
RUSH UNIVERSITY MEDICAL CENTER	15060903-Sub03	93 853	44,302	
SANFORD BURNHAM PREBYS MEDICAL DISCOVERY INSTITUTE	88534	93 853	(315,628)	
SANFORD BURNHAM PREBYS MEDICAL DISCOVERY INSTITUTE	Sub 56642-11822-UCSD- (NS07430	93 853	(5,858)	
SANFORD RESEARCH	SR-2014-25	93 853	61,812	
SCINTILLON INSTITUTE	Sub 22105-203-450 (7 P30 NS076	93 853	180,019	
SEACOAST SCIENCE, INC.	16-1004SC-cyc1	93 853	33,118	
SEPULVEDA RESEARCH CORPORATION	LAI0004_UC01:1	93 853	144,444	
ST. JOSEPH'S HOSPITAL AND MEDICAL CENTER	UCLA32322	93 853	93,507	
STANFORD UNIVERSITY	28361770-3222-E	93 853	1,499	
STANFORD UNIVERSITY	61288309-120633	93 853	40,806	
STANFORD UNIVERSITY	61304878-123178	93 853	15,797	
STANFORD UNIVERSITY	61311381-124387-cyc1	93 853	148,266	
STANFORD UNIVERSITY	61318549-12054-cyc1	93 853	76,700	
STANFORD UNIVERSITY	A9698	93 853	(5,824)	
TEGA THERAPEUTICS INC	Sub 20151510 (R43NS089383 )	93 853	40,145	
THE UNIVERSITY OF ALABAMA (TUSCALOOSA)	000427597-003:A05	93 853	(2,240)	
THE UNIVERSITY OF ALABAMA (TUSCALOOSA)	000508025-001	93 853	35,892	
THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	000510297-005	93 853	56,828	
UNIVERSITY OF BRITISH COLUMBIA	20R22010	93 853	(958)	
UNIVERSITY OF BRITISH COLUMBIA	83308	93 853	233	
UNIVERSITY OF CHICAGO	FP060364-cyc1	93 853	45,563	
UNIVERSITY OF CINCINNATI	(010085-135728)	93 853	78,358	
UNIVERSITY OF CINCINNATI	008822-ADM-CRAMER-CYC1	93 853	73,451	
UNIVERSITY OF CINCINNATI	008822-ADM-SAVER-1	93 853	36,261	
UNIVERSITY OF CINCINNATI	80321	93 853	132	
UNIVERSITY OF CINCINNATI	Sub 00980-002 ( NS094403 )	93 853	78,403	

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UNIVERSITY OF CINCINNATI	SUB 010085-119530 (NS092076)	93 853	12,639	
UNIVERSITY OF CINCINNATI	U01NS091951-133897-cyc3	93 853	58,412	
UNIVERSITY OF FLORIDA	UFDSP00010612-cyc2	93 853	178,815	
UNIVERSITY OF IOWA	80389	93 853	5,918	
UNIVERSITY OF IOWA	SUB 430-23-12A (NS089487)	93 853	(891)	
UNIVERSITY OF IOWA	W000873022	93 853	44,217	
UNIVERSITY OF KENTUCKY/UNIVERSITY OF KENTUCKY RESEARCH FOUNDATION	Sub 3210000405-17-136 (NS09719	93 853	133,721	
UNIVERSITY OF MIAMI	662706:2	93 853	76,635	
UNIVERSITY OF MIAMI	665673-cyc1	93 853	44,278	
UNIVERSITY OF MIAMI	668141	93 853	27,688	
UNIVERSITY OF MIAMI	Sub 664008 (NS092091)	93 853	24,779	
UNIVERSITY OF MICHIGAN	3001413298-PNT	93 853	20,269	17,550
UNIVERSITY OF MICHIGAN	3002348507-SHN:16	93 853	39,496	
UNIVERSITY OF MICHIGAN	3002387269:4	93 853	16,234	
UNIVERSITY OF MICHIGAN	3002987750	93 853	8,532	
UNIVERSITY OF MICHIGAN	3004167516	93 853	201,232	
UNIVERSITY OF MICHIGAN	R01-NS055746	93 853	32,114	
UNIVERSITY OF MICHIGAN	SUBK00004112-ESETT	93 853	24,728	
UNIVERSITY OF MICHIGAN	SUBK00004114-ESETT:19	93 853	17,589	
UNIVERSITY OF MINNESOTA	Sub N000936910 (NS062091)	93 853	30,272	
UNIVERSITY OF MONTANA	PG16-64514-03	93 853	305,013	
UNIVERSITY OF PENNSYLVANIA	566106-cyc2	93 853	20,503	
UNIVERSITY OF PITTSBURGH	0030451 (126270)	93 853	9,401	
UNIVERSITY OF PITTSBURGH	0030451(123192)	93 853	34,083	
UNIVERSITY OF PITTSBURGH	0044484(125590-1)	93 853	169,907	
UNIVERSITY OF PITTSBURGH	Sub 0030451 (123192) (NS081041	93 853	14,436	
UNIVERSITY OF ROCHESTER	415681-G/5-27019	93 853	1,687	
UNIVERSITY OF ROCHESTER	416686:3R	93 853	34,388	
UNIVERSITY OF ROCHESTER	57506	93 853	(774)	
UNIVERSITY OF SOUTHERN CALIFORNIA	84718050	93 853	188,504	
UNIVERSITY OF SOUTHERN CALIFORNIA	Sub 48161201 (NS080655)	93 853	(829)	
UNIVERSITY OF TENNESSEE HEALTH SCIENCE CENTER	NS093009 UCI-cyc1	93 853	6,355	
UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT HOUSTON	0012260C-cyc1	93 853	18,077	
UNIVERSITY OF TEXAS-AUSTIN	A00-0486-004	93 853	141,012	
UNIVERSITY OF TEXAS-AUSTIN	UTA17-000609	93 853	125,459	
UNIVERSITY OF UTAH	10035100-01:1	93 853	165,032	
UNIVERSITY OF VERMONT	27988SUB51551-CYC1	93 853	57,783	
UNIVERSITY OF VIRGINIA	GB10094-147357	93 853	83,569	
UNIVERSITY OF VIRGINIA	GB10094148459	93 853	30,902	
UNIVERSITY OF WASHINGTON	752137	93 853	17,628	
UNIVERSITY OF WASHINGTON	78692	93 853	0	
UNIVERSITY OF WASHINGTON	87435	93 853	(3,598)	

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UNIVERSITY OF WASHINGTON	87626	93 853	470	
UNIVERSITY OF WASHINGTON	88783	93 853	(5,047)	
UNIVERSITY OF WISCONSIN SYSTEM	sub 547K304 (NS083688)	93 853	174,133	
UNIVERSITY OF WISCONSIN-MADISON	SUB 578K325 (NS083514)	93 853	127,002	
WASHINGTON STATE UNIVERSITY	89182	93 853	142	
WASHINGTON UNIVERSITY IN ST. LOUIS	WU-12-20	93 853	(32)	
YALE UNIVERSITY	83343	93 853	36,196	
YALE UNIVERSITY	M14A11621 (A09205)	93 853	13,490	
RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	99-705	93 854	23,520	
ALTRAVAX, INC.	007493	93 855	4,583	4,472
AMERICAN ONCOLOGIC HOSPITAL	A124346	93 855	12,964	
AMERICAN ONCOLOGIC HOSPITAL	SUB CORE B (A102853)	93 855	180,025	
AMERICAN ONCOLOGIC HOSPITAL	SUB PROJECT 4 (A102853)	93 855	354,898	
ANTIGEN DISCOVERY, INC	ADI-203880-cyc1	93 855	(177)	
ARIMA GENOMICS, INC.	Sub 20171427 (R43A124837)	93 855	7,649	
ARISAN THERAPEUTICS	A17-0366-001	93 855	83,442	
ARIZONA STATE UNIVERSITY/TEMPE	16-964	93 855	84,270	
BAYLOR COLLEGE OF MEDICINE	7000000260	93 855	62,223	
BAYLOR COLLEGE OF MEDICINE	Sub 101835723 (A105101)	93 855	95,523	
BENAROYA RESEARCH INSTITUTE AT VIRGINIA MASON	1UM1A1109565-01	93 855	31,591	
BENAROYA RESEARCH INSTITUTE AT VIRGINIA MASON	B2975	93 855	8,213	
BENAROYA RESEARCH INSTITUTE AT VIRGINIA MASON	B3452	93 855	(548)	
BENAROYA RESEARCH INSTITUTE AT VIRGINIA MASON	FY14ITN078	93 855	37,640	
BENAROYA RESEARCH INSTITUTE AT VIRGINIA MASON	FY15109844	93 855	41,503	
BENAROYA RESEARCH INSTITUTE AT VIRGINIA MASON	FY15ITN104	93 855	161,234	
BENAROYA RESEARCH INSTITUTE AT VIRGINIA MASON	FY15ITN160	93 855	54,087	
BENAROYA RESEARCH INSTITUTE AT VIRGINIA MASON	FY16ITN047	93 855	27,516	
BENAROYA RESEARCH INSTITUTE AT VIRGINIA MASON	FY16ITN057	93 855	6,909,477	
BENAROYA RESEARCH INSTITUTE AT VIRGINIA MASON	FY16ITN182	93 855	79,916	
BENAROYA RESEARCH INSTITUTE AT VIRGINIA MASON	FY16ITN186	93 855	669	
BENAROYA RESEARCH INSTITUTE AT VIRGINIA MASON	FY16ITN207	93 855	84,369	
BENAROYA RESEARCH INSTITUTE AT VIRGINIA MASON	FY171TN098	93 855	37,064	
BETH ISRAEL DEACONESS MEDICAL CENTER	01029108	93 855	90,471	
BLOOD SYSTEMS, INC. DBA BLOOD SYSTEMS RESEARCH INSTITUTE	11349UCSF118	93 855	10,114	
BLOOD SYSTEMS, INC. DBA BLOOD SYSTEMS RESEARCH INSTITUTE	11530UCD150	93 855	20,970	
BOSTON MEDICAL CENTER CORPORATION	0371101	93 855	26,246	
BRIGHAM AND WOMEN'S HOSPITAL	109135:04	93 855	3,585	
BRIGHAM AND WOMEN'S HOSPITAL	109925	93 855	236,700	
BRIGHAM AND WOMEN'S HOSPITAL	110007	93 855	11,558	
BRIGHAM AND WOMEN'S HOSPITAL	110008:2	93 855	244,273	
BRIGHAM AND WOMEN'S HOSPITAL	110009	93 855	23,927	
BRIGHAM AND WOMEN'S HOSPITAL	110009:1	93 855	33,023	

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Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	Federal CFDA #	FY 2017	
			Federal Expenditures	Pass-Through to Subrecipients
BRIGHAM AND WOMEN'S HOSPITAL	110237	93 855	8,327	
BRIGHAM AND WOMEN'S HOSPITAL	110238	93 855	19,266	
BRIGHAM AND WOMEN'S HOSPITAL	110256	93 855	(20)	
BRIGHAM AND WOMEN'S HOSPITAL	110668	93 855	27,348	
BRIGHAM AND WOMEN'S HOSPITAL	111669:1	93 855	131,911	
BRIGHAM AND WOMEN'S HOSPITAL	114342	93 855	522	
BRIGHAM AND WOMEN'S HOSPITAL	114868	93 855	121,837	
BRIGHAM AND WOMEN'S HOSPITAL	20143967	93 855	209,701	
BRIGHAM AND WOMEN'S HOSPITAL	2UM1A1068636-08	93 855	6,466	
BRIGHAM AND WOMEN'S HOSPITAL	80501	93 855	(4)	
BRIGHAM AND WOMEN'S HOSPITAL	B6752	93 855	(185)	
BRIGHAM AND WOMEN'S HOSPITAL	Sub 108561 (A1068636)	93 855	23,534	
BRIGHAM AND WOMEN'S HOSPITAL	SUB 110009 (A1068636)	93 855	31,072	
BRIGHAM AND WOMEN'S HOSPITAL	Sub 110080 (A1 068636)	93 855	126,165	
BRIGHAM AND WOMEN'S HOSPITAL	Sub 110206 (A1068636)	93 855	1,011,112	
BRIGHAM AND WOMEN'S HOSPITAL	Sub 110233 (A1068636)	93 855	8,908	
BRIGHAM AND WOMEN'S HOSPITAL	UM1A1068636-HUNT	93 855	23,162	
BROAD INSTITUTE INC.	55035495500000802	93 855	8,923	
BROWN UNIVERSITY	00000979	93 855	17,756	
CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	Sub SA0000338 (A105185)	93 855	(7,345)	
CASE WESTERN RESERVE UNIVERSITY	RES509997-cyc1	93 855	123,726	
CAYETANO HEREDIA UNIVERSITY	R01A1099727:4	93 855	34,455	
CHILD FAMILY HEALTH INTERNATIONAL	SUB HPTN-MGA-REGUC-1 (A1069536	93 855	241,246	219,560
CHILDREN'S HOSPITAL AND RESEARCH CENTER FOUNDATION	128217002	93 855	807	
CHILDREN'S HOSPITAL CORP. (THE), BOSTON, MASS.	B3011	93 855	(279)	
CHILDREN'S HOSPITAL CORP. (THE), BOSTON, MASS.	RSTFD0000593889:6	93 855	(2)	
CHILDREN'S HOSPITAL CORP. (THE), BOSTON, MASS.	RSTFD0000665451:4	93 855	109,084	
CHILDREN'S HOSPITAL LOS ANGELES	Sub P2013-0259 (A106716)	93 855	(22,978)	
CHILDREN'S HOSPITAL LOS ANGELES	Sub p2013-0259-UCSD2_14_1 (A1	93 855	(72,604)	
CHILDREN'S HOSPITAL MEDICAL CENTER OF CINCINNATI	137646	93 855	11,091	
CHILDREN'S HOSPITAL MEDICAL CENTER OF CINCINNATI	Sub 135407 (A117804)	93 855	182,208	
CITY OF HOPE	26615	93 855	(242)	
COLLABORATIVE DRUG DISCOVERY, INC	79640	93 855	73	
COLORADO STATE UNIVERSITY	G-14944-1	93 855	135,441	
COLORADO STATE UNIVERSITY	G-46001-2	93 855	50,500	
COLUMBIA UNIVERSITY	11(GG011896-09)	93 855	114,998	
COLUMBIA UNIVERSITY	14(GG011896-09)	93 855	141,051	
COLUMBIA UNIVERSITY	5 (ACCT# 5-30261)	93 855	32,652	
COLUMBIA UNIVERSITY	7(GG008377-19)	93 855	148,299	
COLUMBIA UNIVERSITY	8(GG011896-09)	93 855	106,180	
CORNELL UNIVERSITY	73829-10836	93 855	5,684	
DANA-FARBER CANCER INSTITUTE	1235902	93 855	63,164	

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			Federal Expenditures	Pass-Through to Subrecipients
DARTMOUTH COLLEGE	1422R109	93 855	33,458	
DUKE UNIVERSITY	20164584	93 855	15,632	
DUKE UNIVERSITY	203-8252	93 855	875,533	
DUKE UNIVERSITY	203-8420	93 855	58,420	
DUKE UNIVERSITY	2032191	93 855	1,135,266	
DUKE UNIVERSITY	2034442	93 855	108,986	
DUKE UNIVERSITY	2035602	93 855	152,461	
DUKE UNIVERSITY	2036057	93 855	116,000	
DUKE UNIVERSITY	2038087	93 855	311,561	
DUKE UNIVERSITY	89192	93 855	(12,473)	
DUKE UNIVERSITY	B1048	93 855	(95,782)	
DUKE UNIVERSITY	B1051	93 855	41,155	
DUKE UNIVERSITY	HHNSN272200900023C:4	93 855	118,787	
DUKE UNIVERSITY	PRM:R01A103315	93 855	(122)	
EMORY UNIVERSITY	Sub P30AI050409 (T686546)	93 855	1,695	
EMORY UNIVERSITY	Sub S899904 (AI090023)	93 855	218,431	
EMORY UNIVERSITY	T487245	93 855	553,656	
EMORY UNIVERSITY	T556863	93 855	140,628	
EMORY UNIVERSITY	T623107	93 855	18,096	
FHI 360	007731	93 855	119,569	
FHI 360	09-487-8337	93 855	1,226,177	1,146,851
FHI 360	20174142	93 855	107,096	
FHI 360	865:14	93 855	18,995	
FHI 360	B3817	93 855	510	495
FHI 360	P016002746	93 855	51,768	
FHI 360	P016002747	93 855	22,400	
FHI 360	PO#15001679:1	93 855	312,409	
FHI 360	PO15001941	93 855	356,208	331,321
FHI 360	PO15002977:01	93 855	67,169	
FHI 360	PO15004412:03	93 855	808,376	
FHI 360	PO16002764	93 855	517,174	76,290
FHI 360	Sub 1600119 (AI068619 )	93 855	130,980	27,060
FHI 360	Sub 952/0100.0141 (AI068619)	93 855	14,978	
FHI 360	Sub FCO 797 (AI068619)	93 855	3,710	3,710
FORSYTH INSTITUTE, THE	01018UCSF-2420	93 855	4,865	
FORSYTH INSTITUTE, THE	B9573	93 855	103,026	
FRED HUTCHINSON CANCER RESEARCH CENTER	0000849597	93 855	30,812	
FRED HUTCHINSON CANCER RESEARCH CENTER	0000854363	93 855	51,512	
FRED HUTCHINSON CANCER RESEARCH CENTER	0000859892	93 855	31,299	
FRED HUTCHINSON CANCER RESEARCH CENTER	81146	93 855	1,999	
FRED HUTCHINSON CANCER RESEARCH CENTER	Sub 0000879576 (AI122978)	93 855	50,138	
GENERAL ELECTRIC COMPANY (INCL GE HEALTHCARE, GE LIGHTING INST)	PO No. 401038186	93 855	215,476	

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			Federal Expenditures	Pass-Through to Subrecipients
GEORGE WASHINGTON UNIVERSITY	16-M55	93 855	2,593	
GEORGETOWN UNIVERSITY	Sub 411316_GR411240-UCSD AWD-7	93 855	167,133	
GEORGIA INSTITUTE OF TECHNOLOGY	85819	93 855	33	
GEORGIA INSTITUTE OF TECHNOLOGY	RE606-G1	93 855	129,640	
GEORGIA STATE UNIVERSITY	SP00012346-05-cyc1	93 855	105,827	
HARVARD UNIVERSITY	008714	93 855	55,427	
HARVARD UNIVERSITY	Sub 160505-1234 (AI060354)	93 855	40,000	
HENRY FORD HEALTH SYSTEM	A120210	93 855	372,316	
HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY MEDICINE	2372	93 855	133,158	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	0254-3241-4609	93 855	400,734	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	0255-1350-4609	93 855	235,225	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	0255-1351-4609:3	93 855	84,787	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	0255-1352-4609	93 855	244,516	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	0255-1352-4609:1	93 855	71,037	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	0255-1359-4609	93 855	282,116	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	0255-1366-4609	93 855	135,161	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	0255-8626-4609	93 855	283,749	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	0255-8632-4609	93 855	10,351	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	0255-8643-4609	93 855	12,540	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	025578414609	93 855	200,417	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	B9447	93 855	345,452	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	SUB 0254-3241-4609 (AI106754)	93 855	306,004	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	Sub 0254-3243-4609 (AI106754)	93 855	839,212	
IMMUNE DEFICIENCY FOUNDATION	2U24AI086037-06	93 855	31,660	
INDIANA UNIVERSITY	IN-4685211-UCSF	93 855	46,028	
INDIANA UNIVERSITY	IN4688381UCB	93 855	8,948	
INDIANA UNIVERSITY	IN4688399 UCSFA	93 855	274,935	
INDIANA UNIVERSITY	IN4688399UCSF B	93 855	81,194	
INTEGRATED BIOTHERAPEUTICS, INC	R56ToxVax-UCSF-Y1	93 855	345,880	
IOWA STATE UNIVERSITY	430-40-01A:05	93 855	165,671	
IOWA STATE UNIVERSITY	430-40-09A	93 855	25,826	
JOHNS HOPKINS UNIVERSITY	1 R01 AI111992-01	93 855	40,250	
JOHNS HOPKINS UNIVERSITY	2001318908:5	93 855	67,041	
JOHNS HOPKINS UNIVERSITY	2001586402:5	93 855	(654)	
JOHNS HOPKINS UNIVERSITY	2002240584	93 855	21,235	
JOHNS HOPKINS UNIVERSITY	2002259596	93 855	10,644	
JOHNS HOPKINS UNIVERSITY	2002292916:02	93 855	27,186	
JOHNS HOPKINS UNIVERSITY	2002292921:02	93 855	29,969	
JOHNS HOPKINS UNIVERSITY	2002292925:02	93 855	10,461	
JOHNS HOPKINS UNIVERSITY	2002320204:02	93 855	12,838	
JOHNS HOPKINS UNIVERSITY	2002347229:1	93 855	2,201	
JOHNS HOPKINS UNIVERSITY	2002425863	93 855	70,350	

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			Federal Expenditures	Pass-Through to Subrecipients
JOHNS HOPKINS UNIVERSITY	2002656257	93 855	38,246	
JOHNS HOPKINS UNIVERSITY	2002797871	93 855	(381)	
JOHNS HOPKINS UNIVERSITY	2003036375	93 855	76,504	
JOHNS HOPKINS UNIVERSITY	2003124717	93 855	31,479	
JOHNS HOPKINS UNIVERSITY	2003151007	93 855	67,800	
JOHNS HOPKINS UNIVERSITY	2003273070(AI068632)	93 855	4,708	
JOHNS HOPKINS UNIVERSITY	20141864 :2	93 855	326,050	
JOHNS HOPKINS UNIVERSITY	20164175	93 855	13,294	
JOHNS HOPKINS UNIVERSITY	B1436	93 855	4,161	
JOHNS HOPKINS UNIVERSITY	LDR 04	93 855	141,171	
JOHNS HOPKINS UNIVERSITY	LDR 05	93 855	289,268	
JOHNS HOPKINS UNIVERSITY	Sub 2000303655(AI069918)	93 855	43,737	
JOHNS HOPKINS UNIVERSITY	SUB 2002263085 (AI068632)	93 855	29,362	
JOHNS HOPKINS UNIVERSITY	Sub 2002283571 (AI068632)	93 855	563,608	
JOHNS HOPKINS UNIVERSITY	SUB 2002432333 (AI068632)	93 855	22,366	
JOHNS HOPKINS UNIVERSITY	Sub 2002438807 (AI068632)	93 855	245,720	
JOHNS HOPKINS UNIVERSITY	UCSF#A117877	93 855	693	
JOHNS HOPKINS UNIVERSITY	UM1AI068632	93 855	31,587	
LA JOLLA INSTITUTE FOR ALLERGY AND IMMUNOLOGY	20025-03-381	93 855	28,436	
LA JOLLA INSTITUTE FOR ALLERGY AND IMMUNOLOGY	Sub 26244-44-382 (AI109976)	93 855	619,824	
LA JOLLA INSTITUTE FOR ALLERGY AND IMMUNOLOGY	SUB 26626-44-381 (AI100275 )	93 855	113,143	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B621111-cyc1	93 855	28,880	
LOS ANGELES BIOMEDICAL RESEARCH INSTITUTE AT HARBOR-UCLA MEDICAL CTR	30685-UCLA	93 855	800,167	
MAGEE-WOMENS HOSPITAL, RESEARCH INSTITUTE AND FOUNDATION	7292:4	93 855	(11,708)	
MAGEE-WOMENS HOSPITAL, RESEARCH INSTITUTE AND FOUNDATION	79787	93 855	(149,378)	
MAGEE-WOMENS HOSPITAL, RESEARCH INSTITUTE AND FOUNDATION	UZ-UCSF CTU	93 855	252,755	
MASSACHUSETTS GENERAL HOSPITAL	227111:1	93 855	3,105	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	5710004135-cyc1	93 855	58,763	
MAVERIX BIOMICS, INC.	A17-0165-001	93 855	31,111	
MAVERIX BIOMICS, INC.	ST003	93 855	33,559	
MBIO DIAGNOSTICS, INC.	88087	93 855	131	
MBIO DIAGNOSTICS, INC.	Sub None (AI093289)	93 855	(2,996)	
MBIO DIAGNOSTICS, INC.	Sub none (AI96189)	93 855	702	
MEMORIAL SLOAN-KETTERING CANCER CENTER	Sub BD21131 (AI128517)	93 855	32,870	
MICROBIOTIX, INC	20160317-1	93 855	49,997	
MOUNT SINAI MEDICAL CENTER	0255-1281-4609	93 855	42,551	
MOUNT SINAI MEDICAL CENTER	0255-1366-4609	93 855	77,312	
MOUNT SINAI MEDICAL CENTER	81106	93 855	269,500	
NANJING MEDICAL UNIVERSITY	NJMU-1322-CYC1	93 855	5,582	
NATIONAL JEWISH HEALTH	Sub 2020096801 (AI117673)	93 855	832,754	
NATIONWIDE CHILDREN'S HOSPITAL	957913	93 855	(26,263)	
NEW YORK UNIVERSITY	15-A0-00-004739-01	93 855	129,576	

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			Federal Expenditures	Pass-Through to Subrecipients
NORTH CAROLINA STATE UNIVERSITY	2010154401	93 855	6,994	
NORTH DAKOTA STATE UNIVERSITY	Sub FAR0026617(AI122152)	93 855	34,101	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	R21AI116218	93 855	151,149	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	SUB SUL1847-04 (AI106987)	93 855	65,610	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	SUL1847-03	93 855	57,707	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	WONG1924-02	93 855	24,877	
NORTHWESTERN UNIVERSITY	60044574(AI117943)	93 855	16,391	
OAK CREST INSTITUTE OF SCIENCE	S14-164UCLA (3)	93 855	58,054	
OAK CREST INSTITUTE OF SCIENCE	Sub S14-164 (AI113048)	93 855	64,210	
OHIO STATE UNIVERSITY	60054601	93 855	5,126	
ONCOIMMUNE, INC	201400133	93 855	106	
OREGON HEALTH & SCIENCE UNIVERSITY	9006527UCDBarry	93 855	165,493	
OREGON HEALTH & SCIENCE UNIVERSITY	Sub 9006862	93 855	3,649	
OSEL INC.	201600537	93 855	46,148	
PARTNERS HEALTHCARE SYSTEM, INC	220299	93 855	(1)	
PARTNERS HEALTHCARE SYSTEM, INC	224471	93 855	47,075	
PENNSYLVANIA STATE UNIVERSITY	4281-UCI-DHHS-9672-cyc7	93 855	655,045	
PENNSYLVANIA STATE UNIVERSITY	5233-UCI-DHHS-0793-cyc2	93 855	24,492	
PROFIL INSTITUTE FOR CLINICAL RESEARCH, INC.	Sub M37-SD-060-0910-4 (AI06864	93 855	630	
PUBLIC HEALTH FOUNDATION ENTERPRISES, INC.	A122745	93 855	597,522	
PUBLIC HEALTH FOUNDATION ENTERPRISES, INC.	UCSF#A120960	93 855	(1,043)	
RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	1R01AI106398-01A1	93 855	2,038	
RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	8127	93 855	49,498	
RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	8250	93 855	11,167	
RXBIO HOLDINGS, INC.	201702285	93 855	15,194	
SANFORD BURNHAM PREBYS MEDICAL DISCOVERY INSTITUTE	57659-12538-UCI-cyc4	93 855	183	
SANFORD BURNHAM PREBYS MEDICAL DISCOVERY INSTITUTE	58295-12468-UCB	93 855	120,106	
SANFORD BURNHAM PREBYS MEDICAL DISCOVERY INSTITUTE	59560-12797-UCLA	93 855	106,727	
SILVER LAKE RESEARCH CORPORATION	036637	93 855	35,358	
SILVER LAKE RESEARCH CORPORATION	041776	93 855	93,948	
SIXAL, INC.	20152343	93 855	210	
SOCIAL AND SCIENTIFIC SYSTEMS, INC.	CRB-SSS-S-15-004631	93 855	199,233	
STANFORD UNIVERSITY	107582 (UCLA):2	93 855	121,591	
STANFORD UNIVERSITY	1U19AI109662-01	93 855	298,777	
STANFORD UNIVERSITY	60230227-104104-A	93 855	99,552	
STANFORD UNIVERSITY	60892242-584	93 855	46,865	
STANFORD UNIVERSITY	61048126-117572	93 855	66,039	
STANFORD UNIVERSITY	61097839-48307	93 855	13,035	
SUSTAINABLE SCIENCES INSTITUTE	IR1200-1	93 855	54,341	
TEXAS A&M RESEARCH FOUNDATION	P01AI095208	93 855	51,359	
TEXAS A&M UNIVERSITY - COLLEGE STATION	85475	93 855	(777)	
TEXAS A&M UNIVERSITY - COLLEGE STATION	99-S130607-cyc4	93 855	65,713	

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TEXAS BIOMEDICAL RESEARCH INSTITUTE (TEXAS BIOMED)	15-4547-003	93 855	42,409	
THE SCRIPPS RESEARCH INSTITUTE	5-23317	93 855	80,401	
THE UNIVERSITY OF ALABAMA (TUSCALOOSA)	000397076-014	93 855	128,032	
THE UNIVERSITY OF ALABAMA (TUSCALOOSA)	000397076-016	93 855	73,682	
THE UNIVERSITY OF ALABAMA (TUSCALOOSA)	Sub 397076-013 (AI067039)	93 855	71,450	
THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	000434775-002	93 855	24,071	
THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	000503356-SP002-020	93 855	69,169	
THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	000510836-005	93 855	368,159	
THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	000510836-007	93 855	266,827	
THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	B7632	93 855	(420)	
THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	P30AI027767	93 855	4,169	
THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	SUB 000503356-SP002-023(AI0277	93 855	191,178	
THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	Sub 510836-004(AI067039)	93 855	297,912	
UNIVERSITY HOSPITAL BASEL	46091199	93 855	27,299	
UNIVERSITY OF ARIZONA	335234	93 855	23,592	
UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	FY16.206.002:FY17.206.008_AMD1	93 855	220,752	
UNIVERSITY OF CONNECTICUT	UCH641200355	93 855	573,175	
UNIVERSITY OF DELAWARE	38795	93 855	(14,144)	
UNIVERSITY OF GEORGIA	RR374-126/S001202-cyc1	93 855	223,775	
UNIVERSITY OF HAWAII AT MANOA	KA1128	93 855	1,075	
UNIVERSITY OF MARYLAND	1600691/14217	93 855	168,235	
UNIVERSITY OF MASSACHUSETTS AMHERST	SUB WA00324479/RFS2016020 (AI1	93 855	145,513	
UNIVERSITY OF MINNESOTA	A7022	93 855	(32,901)	
UNIVERSITY OF MINNESOTA	P004756905	93 855	148,336	
UNIVERSITY OF MINNESOTA	P004756918	93 855	65,534	
UNIVERSITY OF MINNESOTA	P004756920	93 855	23,109	
UNIVERSITY OF NEBRASKA	34-5319-2002-001-cyc3	93 855	6,421	
UNIVERSITY OF NEBRASKA	78481	93 855	(1,154)	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	1R01AI114310-01	93 855	122,232	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5-31534	93 855	(1,165)	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5031553:6	93 855	(3,493)	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5100230	93 855	16,620	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5103294	93 855	40,832	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	531551	93 855	(45)	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	534272	93 855	184,469	
UNIVERSITY OF PENNSYLVANIA	55778:3	93 855	4,566	
UNIVERSITY OF PENNSYLVANIA	560928	93 855	32,067	
UNIVERSITY OF PENNSYLVANIA	564036	93 855	31,138	
UNIVERSITY OF PENNSYLVANIA	566950	93 855	42,454	
UNIVERSITY OF PENNSYLVANIA	Sub 560574 (AI052845)	93 855	46,347	
UNIVERSITY OF PITTSBURGH	0044312	93 855	66,314	
UNIVERSITY OF PITTSBURGH	00507171276751	93 855	62,706	

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**UNIVERSITY OF CALIFORNIA**  
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Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	Federal CFDA #	FY 2017	
			Federal Expenditures	Pass-Through to Subrecipients
UNIVERSITY OF ROCHESTER	SUB 415505-G (AI094511)	93 855	(17,303)	
UNIVERSITY OF SOUTH FLORIDA	008507	93 855	122,439	
UNIVERSITY OF SOUTH FLORIDA	6144-1094-00-A	93 855	127,772	
UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT SAN ANTONIO	159227	93 855	79,246	
UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT SAN ANTONIO	159539/159538-cyc1	93 855	17,813	
UNIVERSITY OF WASHINGTON	006406	93 855	240,383	
UNIVERSITY OF WASHINGTON	008046	93 855	33,227	
UNIVERSITY OF WASHINGTON	11593SUB	93 855	8,254	
UNIVERSITY OF WASHINGTON	UWSC7071-cyc2	93 855	60,818	
UNIVERSITY OF WASHINGTON	UWSC7111:3	93 855	138,928	
UNIVERSITY OF WASHINGTON	UWSC8589	93 855	16,138	
UNIVERSITY OF WASHINGTON	UWSC9531	93 855	108,816	
UNIVERSITY OF WASHINGTON	WU-16-67-cyc2	93 855	82,082	
UNIVERSITY OF WISCONSIN-MADISON	1UM1AI114271-01	93 855	753,414	
UNIVERSITY OF WISCONSIN-MADISON	363K716	93 855	77,538	
UNIVERSITY OF WISCONSIN-MADISON	8721C	93 855	155	
UNIVERSITY OF WISCONSIN-MADISON	Sub 565K025 (AI113580)	93 855	(353)	
UPMC	9278	93 855	35,865	
VANDERBILT UNIVERSITY	89315	93 855	3,050	
VANDERBILT UNIVERSITY	A128173	93 855	11	
VANDERBILT UNIVERSITY MEDICAL CENTER	VUMC 59104	93 855	61,171	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA GUATELLI (AI116194 )	93 855	23,179	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Guatelli 308328 C13A11599	93 855	46,203	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA GUATELLI 313326 ( AI114397	93 855	23,086	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA GUATELLI, JOHN C (C13A1159	93 855	26,743	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA LOONEY (AI104283)	93 855	6,013	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Looney 309176 ( AI036214)	93 855	15,008	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA RAMIREZ 316161 ( AI081668)	93 855	5,479	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Richman 25281-14-3249(AI12	93 855	27,550	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA RICHMAN 302533 (AI096113)	93 855	15,344	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA SPINA 302724 (AI096113)	93 855	(5,584)	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Strain (AI104283)	93 855	19,665	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA STRAIN 314982 (AI104283)	93 855	59,825	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Zuraw (AI070535)	93 855	83,824	
WASHINGTON UNIVERSITY IN ST. LOUIS	WU-13-77	93 855	31,890	
WASHINGTON UNIVERSITY IN ST. LOUIS	WU-17-226	93 855	2,391	
WASHINGTON UNIVERSITY IN ST. LOUIS	WU1719	93 855	113,349	
YALE UNIVERSITY	M13A11463 (A08900)	93 855	222,615	
YALE UNIVERSITY	M15A12208 (A10336)	93 855	25,436	
YALE UNIVERSITY	M16A12284(A10454)-cyc1	93 855	37,599	
YALE UNIVERSITY	M16A12357 (A10542)-cyc1	93 855	130,097	
YALE UNIVERSITY	M16A12429	93 855	31,947	

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			Federal Expenditures	Pass-Through to Subrecipients
YESHIVA UNIVERSITY	Sub 310479 (AI101436)	93 855	200,369	
ALTUM, INCORPORATED	89348	93 856	(4,062)	
BRIGHAM AND WOMEN'S HOSPITAL	Sub 113091 (AI068636 )	93 856	15,255	
DESIGNMEDIX, INC.	20153835 (R41AI118089 )	93 856	46,864	
DETON CORPORATION	88385	93 856	(1,116)	
EMORY UNIVERSITY	Sub T563785 (AI090023 )	93 856	58,514	
NORTHEASTERN UNIVERSITY	Sub 500512-78050 (AI127594)	93 856	2,607	
SCARLESS LABORATORIES, INC	5R43AR063558-02	93 856	5,357	
UNIVERSITY OF MIAMI	Sub 668031(AI088595)	93 856	97,799	
UNIVERSITY OF PENNSYLVANIA	Sub 552499 (AI082020)	93 856	58,008	
UNIVERSITY OF ROCHESTER	416898(AI122126)	93 856	19,966	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA ADV JAK (AG016495)	93 856	6,052	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Beliakova-Bethell 317670 (	93 856	8,160	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Delano-Wood (AG016495)	93 856	6,686	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA GUATELLI (AI116194)	93 856	23,085	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Guatelli 08705004 (AI08166	93 856	4,089	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Guatelli 09473001 (AI12970	93 856	4,089	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Guatelli 09473001(1R01 AI1	93 856	3,309	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA MARTINEZ (AI1042863 )	93 856	28,166	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Richman (AI036214)	93 856	29,493	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Richman(AI126619)	93 856	28,789	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA SCHRIER (AI116194)	93 856	13,475	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Singh (AI081668)	93 856	4,923	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA SPINA ( AI122389)	93 856	22,167	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Spina (4 R33 AI104282-04)	93 856	19,621	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Spina (AI104282)	93 856	12,066	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA STRAIN, MATTHEW CARL(AI104	93 856	50,967	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA(NIH) SINGH (AI110162)	93 856	6,368	
ADVANCED GENETIC SYSTEMS, INC.	R41GM115250	93 859	17,970	
AKONNI BIOSYSTEMS	Sub 8056.1.A ( R44GM103053 )	93 859	191,761	
ARIZONA STATE UNIVERSITY/TEMPE	17-070	93 859	44,313	
ARIZONA STATE UNIVERSITY/TEMPE	1R01GM100471-01 12841	93 859	(41)	
ARIZONA STATE UNIVERSITY/TEMPE	SUB 15-695 (GM106081)	93 859	19,176	
ARIZONA STATE UNIVERSITY/TEMPE	SUB 16-798 (GM113967)	93 859	110,405	
BAYLOR UNIVERSITY	Sub 32050268-02 ( GM052964 )	93 859	15,500	
CAL STATE L.A. UNIVERSITY AUXILIARY SERVICES, INC. (UAS)	UCI231328-cyc1	93 859	5,106	
CALIFORNIA INSTITUTE OF TECHNOLOGY	68-1095554:01	93 859	86,407	
CALIFORNIA INSTITUTE OF TECHNOLOGY	88890	93 859	(10,528)	
CALIFORNIA STATE UNIVERSITY SAN MARCOS CORPORATION	2R01GM075316	93 859	8,201	
CALIFORNIA STATE UNIVERSITY, FRESNO FOUNDATION	SC340435-15-01	93 859	7,737	
CARNEGIE INSTITUTION	6-10375-01	93 859	61,563	
CHILDREN'S HOSPITAL AND RESEARCH CENTER FOUNDATION	12_8036_UCB_01	93 859	103,296	

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			Federal Expenditures	Pass-Through to Subrecipients
CHILDREN'S HOSPITAL AND RESEARCH CENTER FOUNDATION	12_8036_UCLA_01	93 859	381,956	
CHILDREN'S HOSPITAL AND RESEARCH CENTER FOUNDATION	12_8036_UCSF_01	93 859	263,976	
CHILDREN'S HOSPITAL AND RESEARCH CENTER FOUNDATION	1R01GM109030-01	93 859	68,085	
COLORADO STATE UNIVERSITY	G-35013-1	93 859	272,839	
COLUMBIA UNIVERSITY	1GG009648	93 859	10,961	
CORNELL UNIVERSITY	008628	93 859	65,040	
CORNELL UNIVERSITY	69800-10240	93 859	211,822	
CORNELL UNIVERSITY	A00-0525-004	93 859	28,032	
DANA-FARBER CANCER INSTITUTE	1260002	93 859	9,378	
DARTMOUTH COLLEGE	006706	93 859	51,159	
DUKE UNIVERSITY	2034849-cyc1	93 859	59,610	
EMORY UNIVERSITY	SubT445706 (GM114612)	93 859	13,862	
FRED HUTCHINSON CANCER RESEARCH CENTER	0000870436	93 859	20,539	
IOWA STATE UNIVERSITY	430-21-35A	93 859	31,077	
J. CRAIG VENTER INSTITUTE	57535	93 859	(4,332)	
JACKSON LABORATORY, THE	20133882:2	93 859	45,460	
JOHNS HOPKINS UNIVERSITY	R01AR064066	93 859	284	
LASER ASSOCIATED SCIENCES, LLC	LAS-205603-cyc1	93 859	8,353	
LEIDOS BIOMEDICAL RESEARCH, INC.	A7719	93 859	(8,436)	
LOS ALAMOS NATIONAL SECURITY, LLC	57541	93 859	(9,486)	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	Sub 5710003747 (GM082209)	93 859	69,426	
MEDICAL COLLEGE OF WISCONSIN	63257	93 859	(5,190)	
NANOCELLECT BIOMEDICAL, INC.	Sub 20151958 (GM112442)	93 859	99,258	
NATIONAL AUTONOMOUS UNIVERSITY OF MEXICO	201402451	93 859	13,271	
NEOVATIVE, INC.	NV002-cyc1	93 859	15,319	
NEW MEXICO CONSORTIUM, INC.	Sub NMC158-01 (GM105608)	93 859	65,052	
NORTHWESTERN UNIVERSITY	SP0029368-PROJ0007727-cyc1	93 859	70,224	
OHIO STATE UNIVERSITY	Sub 60039870 (GM067153)	93 859	29,332	
PURDUE UNIVERSITY	4102-59359:02	93 859	(77)	
ROCKEFELLER UNIVERSITY	1P41GM109824-01	93 859	326,362	
ROCKEFELLER UNIVERSITY	1R01GM112108-01A1	93 859	89,307	
ROCKEFELLER UNIVERSITY	7R01GM107124-02	93 859	115,211	
RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	5398-cyc2	93 859	1,138	
RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	Sub 0108 (GM118574)	93 859	11,750	
SANFORD BURNHAM PREBYS MEDICAL DISCOVERY INSTITUTE	78635	93 859	(55)	
SANFORD BURNHAM PREBYS MEDICAL DISCOVERY INSTITUTE	Sub 56344-11738-UCSD-01 (GM098	93 859	7,642	
SANFORD BURNHAM PREBYS MEDICAL DISCOVERY INSTITUTE	Sub 56344-11964 UCSD-01 (GM098	93 859	(6,874)	
ST. JUDE CHILDREN'S RESEARCH HOSPITAL	112156010-7660158	93 859	61,801	
STANFORD UNIVERSITY	5U19GM106990-02	93 859	301,744	
STANFORD UNIVERSITY	60411189-38890-C	93 859	29,433	
STANFORD UNIVERSITY	60544676-109623	93 859	32,005	
STANFORD UNIVERSITY	60684362-112326:2	93 859	337,752	

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			Federal Expenditures	Pass-Through to Subrecipients
STANFORD UNIVERSITY	60910571111755	93 859	7,203	
STANFORD UNIVERSITY	61000019-469	93 859	76,425	
STANFORD UNIVERSITY	61124790-121581	93 859	181,684	
STANFORD UNIVERSITY	Sub 60133681 (GM102098)	93 859	93,903	
STANFORD UNIVERSITY	SUB 61009649-108979 (GM106990)	93 859	200,754	
SYLVATICA BIOTECH, INC.	042327	93 859	22,781	
TEMPLE UNIVERSITY	Sub 258162UC (GM110749)	93 859	39,462	
TEXAS A&M RESEARCH FOUNDATION	87236	93 859	(15,592)	
THE SCRIPPS RESEARCH INSTITUTE	Sub 5-50085 (GM100934)	93 859	12,395	
THE SCRIPPS RESEARCH INSTITUTE	Sub 5-50246 (GM094586)	93 859	(3,279)	
THE SCRIPPS RESEARCH INSTITUTE	Sub 5-50419 (GM105766)	93 859	8,828	
THE SCRIPPS RESEARCH INSTITUTE	Sub 5-53043 (GM100934)	93 859	79,827	
THE SCRIPPS RESEARCH INSTITUTE	Sub PO 5-52584 (GM056006)	93 859	49,243	
TUFTS UNIVERSITY	88493	93 859	(430)	
UNIVERSITY OF ARIZONA	57563	93 859	19,215	
UNIVERSITY OF CHICAGO	FP043359-I	93 859	20,480	
UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	1552039/0513.04.0804B	93 859	17,067	
UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	FY15.726.002:1	93 859	58,657	
UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	P01GM105537	93 859	120,400	
UNIVERSITY OF FLORIDA	UFDSP00010870:3	93 859	187,466	
UNIVERSITY OF FLORIDA	UFDSP00010901	93 859	21,734	
UNIVERSITY OF ILLINOIS	083118-15900	93 859	444,592	
UNIVERSITY OF ILLINOIS	2010-00365-05	93 859	152,520	
UNIVERSITY OF MASSACHUSETTS SYSTEM	RFS2015073	93 859	96,370	
UNIVERSITY OF MICHIGAN	3003206498	93 859	34,538	
UNIVERSITY OF MICHIGAN	3003707885	93 859	80,678	
UNIVERSITY OF MICHIGAN	A16-0292-001	93 859	50,153	
UNIVERSITY OF MICHIGAN	Sub 3003094979 (GM094503)	93 859	24,259	
UNIVERSITY OF MINNESOTA	SUB 0904509601 (GM110129)	93 859	29,539	
UNIVERSITY OF MINNESOTA	SUB N002311201 (GM100310)	93 859	130,287	
UNIVERSITY OF MISSISSIPPI	66100920513	93 859	7,631	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5104882	93 859	23,302	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5105472	93 859	10,910	
UNIVERSITY OF PENNSYLVANIA	562336-cyc4	93 859	13,757	
UNIVERSITY OF PITTSBURGH	0026281 (123833-11)-cyc2	93 859	65,143	
UNIVERSITY OF PITTSBURGH	0048589 (127394-3)	93 859	60,682	
UNIVERSITY OF PITTSBURGH	Sub 0048589 (127394-1) (GM1176)	93 859	7,924	
UNIVERSITY OF TEXAS-AUSTIN	SUB uta15-000328 (GM111926)	93 859	121,891	
UNIVERSITY OF TEXAS-AUSTIN	Sub UTA16-000010 (GM104876)	93 859	18,812	
UNIVERSITY OF VIRGINIA	GB10352 153125	93 859	29,313	
UNIVERSITY OF VIRGINIA	GC12130 139092:04	93 859	(8)	
UNIVERSITY OF WASHINGTON	UWSC8727:1	93 859	81,830	

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UNIVERSITY OF WASHINGTON	UWSC8745	93 859	(49,866)	
UNIVERSITY OF WISCONSIN-MADISON	685K226	93 859	48,345	
VALITOR, INC.	R43GM117976	93 859	45,356	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	88157	93 859	(9,516)	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA ADV HEAD ( GM 085179 )	93 859	47,766	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA ADV PATEL ( GM085179 )	93 859	69,783	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA ADV PEARL ( GM085179 )	93 859	11,365	
VIRGINIA COMMONWEALTH UNIVERSITY	Sub PD303431-SC105094 (GM10989	93 859	284,760	
YALE UNIVERSITY	C15A12298	93 859	50,430	
YESHIVA UNIVERSITY	310591	93 859	163,788	
SAN DIEGO COMMUNITY COLLEGE DISTRICT	Sub none ( GM073590)	93 862	1,903	
UNIVERSITY OF VIRGINIA	87334	93 862	(24,639)	
ARKANSAS CHILDREN'S HOSPITAL RESEARCH INSTITUTE	034586	93 865	34,243	
BATTELLE MEMORIAL INSTITUTE	442772	93 865	37,441	
BAYLOR COLLEGE OF MEDICINE	20161462	93 865	14,138	
BAYLOR COLLEGE OF MEDICINE	5600716512:4	93 865	98,775	
BAYLOR COLLEGE OF MEDICINE	SUB 70000000222 (HD083181)	93 865	207,074	
BODIMOJO	R43HD090774	93 865	6,742	
BOSTON UNIVERSITY	85600	93 865	(9,212)	
CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	87943	93 865	(31,089)	
CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	SUB sa0000509 (HD085086 )	93 865	92,295	
CHILDREN'S HOSPITAL LOS ANGELES	8011-RGF009152-00-2	93 865	128,872	
CHILDREN'S HOSPITAL MEDICAL CENTER OF CINCINNATI	130474	93 865	91,864	
CHILDREN'S HOSPITAL MEDICAL CENTER OF CINCINNATI	134198	93 865	5,777	
CHILDREN'S HOSPITAL MEDICAL CENTER OF CINCINNATI	136763	93 865	58,930	
CHILDREN'S HOSPITAL MEDICAL CENTER OF CINCINNATI	138406	93 865	176,130	
CHILDREN'S HOSPITAL MEDICAL CENTER OF CINCINNATI	1R01HD07812701	93 865	300,834	
CHILDREN'S HOSPITAL MEDICAL CENTER OF CINCINNATI	8973A	93 865	100,179	
CHILDREN'S HOSPITAL OF PHILADELPHIA	3017X-cyc3	93 865	106,020	
CHILDREN'S HOSPITAL OF PHILADELPHIA	3210050618	93 865	426	
COLUMBIA UNIVERSITY	3(GG010395-03)	93 865	94,436	
CORNELL UNIVERSITY	15101696-03	93 865	17,593	
DUKE UNIVERSITY	R01HD081044	93 865	166	
DUKE UNIVERSITY	Sub 197946 215519 (HD 076676)	93 865	17,407	
DUKE UNIVERSITY	Sub 203-8493 (HHSN275201000003	93 865	6,586	
DUKE UNIVERSITY	SUB NONE (HD081044)	93 865	3,179	
FARUS, LLC	Sub 015-R44HD082898-UCSD1 (HD0	93 865	51,315	
FLINT REHABILITATION DEVICES	202871-cyc1	93 865	17,538	
FLINT REHABILITATION DEVICES	55769-cyc2	93 865	0	
FLINT REHABILITATION DEVICES	FRD-200966-cyc1	93 865	45,670	
FLORIDA STATE UNIVERSITY	R01776	93 865	141,917	
FLORIDA STATE UNIVERSITY	R01831-cyc1	93 865	57,022	

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FLORIDA STATE UNIVERSITY	R01857-cyc1	93 865	26,697	
GEORGE WASHINGTON UNIVERSITY	13-UCSF-14	93 865	215,638	
GEORGIA INSTITUTE OF TECHNOLOGY	RG230-G1	93 865	147,865	
GLYCOHUB, INC.	Sub 20154025 (HD087077)	93 865	65,187	
HARVARD PILGRIM HEALTH CARE	AH000583	93 865	140,038	
HARVARD UNIVERSITY	114205-1179-5096789:1	93 865	18,494	
HARVARD UNIVERSITY	87417	93 865	487	
HARVARD UNIVERSITY	87418	93 865	6,421	
HARVARD UNIVERSITY	88389	93 865	1,100	
HARVARD UNIVERSITY	Sub 114205-1128-5096796 AMP (H	93 865	357,964	
HARVARD UNIVERSITY	Sub 114205-1130-5096798 SMARTT	93 865	539,249	
HARVARD UNIVERSITY	SUB 114205-1228-5102175(HD0521	93 865	196,530	
HASKINS LABORATORIES, INC	P01HD001994	93 865	6,016	
HASKINS LABORATORIES, INC	R01HD086168	93 865	46,365	
HENRY FORD HEALTH SYSTEM	87645	93 865	266,145	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	0254-3514-4609	93 865	89,045	
INFLEXION, INC.	2R44HD066920-03A1	93 865	21,414	
JOHNS HOPKINS UNIVERSITY	2002294060	93 865	120,483	
JOHNS HOPKINS UNIVERSITY	2002295012:2	93 865	288,143	
JOHNS HOPKINS UNIVERSITY	2003115775-cyc2	93 865	13,634	
JOHNS HOPKINS UNIVERSITY	88749	93 865	19,010	17,416
MAGEE-WOMENS HOSPITAL, RESEARCH INSTITUTE AND FOUNDATION	2625	93 865	283,319	
MAYO CLINIC/MAYO FOUNDATION FOR MEDICAL EDUCATION & RESEARCH	63112599	93 865	4,768	
MAYO CLINIC/MAYO FOUNDATION FOR MEDICAL EDUCATION & RESEARCH	Sub none (HD031476)	93 865	(279)	
MICHIGAN STATE UNIVERSITY	RC106674A-cyc1	93 865	15,593	
MU-JHU CARE LIMITED	R01HD080476	93 865	44,654	
NATIONWIDE CHILDREN'S HOSPITAL	30002425-05:02	93 865	47,497	
NATIONWIDE CHILDREN'S HOSPITAL	30003275-06	93 865	42,754	
NEW YORK UNIVERSITY	F4330-04-cyc1	93 865	34,034	
NORTHWESTERN UNIVERSITY	60043012 UCI-cyc7	93 865	19,661	
NORTHWESTERN UNIVERSITY	SP0021750-PROJ0005526:1	93 865	4,213	
OREGON HEALTH & SCIENCE UNIVERSITY	9009028_UCLA:5	93 865	312,559	
PACIFIC INSTITUTE FOR RESEARCH AND EVALUATION	20153450 ( HD083399)	93 865	53,497	
PENNSYLVANIA STATE UNIVERSITY	4242-UCLA-DHHS-0709:6	93 865	117	
PENNSYLVANIA STATE UNIVERSITY	5581-UCI-DHHS-4807-cyc1	93 865	18,058	
PRINCETON UNIVERSITY	SUB0000136	93 865	71,732	
RADY CHILDREN'S HOSPITAL-SAN DIEGO	SUB 3282-UCSD-S1(HD077693)	93 865	52,648	
RAND CORP	9920150090:02	93 865	30,604	
RTI HEALTH SOLUTIONS	Sub None (HD054214)	93 865	34,127	
RTI INTERNATIONAL	2-312-0214493-52064L	93 865	41,436	
RTI INTERNATIONAL	79809	93 865	217	
RTI INTERNATIONAL	Sub HD069031 (HD054214)	93 865	192,153	136,083

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			Federal Expenditures	Pass-Through to Subrecipients
RTI INTERNATIONAL	Sub none (HD036790)	93 865	248	
SALK INSTITUTE FOR BIOLOGICAL STUDIES	87658	93 865	(9,077)	
SCINTILLON INSTITUTE	22026-206-450-cyc1	93 865	170,220	
SEATTLE CHILDREN'S HOSPITAL, RESEARCH AND FOUNDATION	11192SUB,SAPRIL, A	93 865	33,639	
SEATTLE CHILDREN'S HOSPITAL, RESEARCH AND FOUNDATION	11305SUB	93 865	39,159	
SEATTLE CHILDREN'S HOSPITAL, RESEARCH AND FOUNDATION	11447SUB	93 865	1,302	
SEQUOIA FOUNDATION	9098 UCSF FY15-16	93 865	63,897	
STANFORD UNIVERSITY	61245596-117723	93 865	33,375	
STANFORD UNIVERSITY	61269607120188	93 865	424,106	
STANFORD UNIVERSITY	61269608-120188	93 865	143,784	
STANFORD UNIVERSITY	63512	93 865	(9,467)	
STANFORD UNIVERSITY	A16-0544-001	93 865	57,761	
STATE UNIVERSITY OF NEW YORK	R839463	93 865	11,512	
STELLENBOSCH UNIVERSITY	8729D	93 865	81,486	
STELLENBOSCH UNIVERSITY	S004190 / 55811	93 865	44,513	
THE UNIVERSITY OF ALABAMA (TUSCALOOSA)	000388010-002	93 865	38,297	
THE UNIVERSITY OF ALABAMA (TUSCALOOSA)	000388010-008:A07	93 865	19,051	
THE UNIVERSITY OF ALABAMA (TUSCALOOSA)	000388010-056	93 865	23,694	
THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	Sub 000504713-012 (HD061222)	93 865	174,727	
TULANE UNIVERSITY	59027	93 865	4,285	
TULANE UNIVERSITY	SUB TUL-HSC-553714-15/16 (HD52	93 865	16,271	
TULANE UNIVERSITY	Sub TUL-HSC-553718-15/16 (HD05	93 865	28,292	
TULANE UNIVERSITY	TUL-HSC-553703-15/16	93 865	2,559	
TULANE UNIVERSITY	TUL-HSC-553716-15/16	93 865	19,940	
TULANE UNIVERSITY	TUL-HSC-554713-16/17	93 865	21,415	
UNIVERSITY OF ARIZONA	356680	93 865	48,282	
UNIVERSITY OF ARKANSAS, FAYETTEVILLE	51460	93 865	20,578	
UNIVERSITY OF CAMBRIDGE	RG78257	93 865	255,352	
UNIVERSITY OF CHICAGO	FP036878-03-cyc3	93 865	134,015	
UNIVERSITY OF COLORADO DENVER	FY15.366.001-cyc2	93 865	0	
UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	14-036-002:4	93 865	199,359	
UNIVERSITY OF HAWAII AT MANOA	KA1186 (HD084633)	93 865	7,886	
UNIVERSITY OF KANSAS/KU CENTER FOR RESEARCH, INC.	FY2014-014-M3	93 865	89,046	
UNIVERSITY OF MARYLAND, BALTIMORE	1500173	93 865	38,562	
UNIVERSITY OF MICHIGAN	3002531057	93 865	81,907	
UNIVERSITY OF MICHIGAN	3003317170-cyc3	93 865	49,439	
UNIVERSITY OF MICHIGAN	3003525385	93 865	100,939	
UNIVERSITY OF MICHIGAN	82550	93 865	(207)	
UNIVERSITY OF MICHIGAN	88386	93 865	2,201	
UNIVERSITY OF NEVADA, LAS VEGAS/UNLV RESEARCH FOUNDATION	SUB 17-927H-05(HD087994)	93 865	28,829	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5105032-cyc1	93 865	35,547	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5106150	93 865	13,318	

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			Federal Expenditures	Pass-Through to Subrecipients
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	Sub 5106227 (HD086139)	93 865	14,110	
UNIVERSITY OF NOTRE DAME (INCL GEM)	202180UCD	93 865	65,802	
UNIVERSITY OF OKLAHOMA	RS20130769-05	93 865	1,173	
UNIVERSITY OF PENNSYLVANIA	89091	93 865	(33)	
UNIVERSITY OF PITTSBURGH	0019692 (125895-6)	93 865	164,640	
UNIVERSITY OF PITTSBURGH	0026212 (124361-3)	93 865	153,657	
UNIVERSITY OF PITTSBURGH	0048860 (126874-1)	93 865	156,590	
UNIVERSITY OF SOUTHERN CALIFORNIA	111697-cyc15	93 865	98,999	
UNIVERSITY OF SOUTHERN CALIFORNIA	60664307:1	93 865	40,317	
UNIVERSITY OF SOUTHERN CALIFORNIA	87892310-cyc1	93 865	2,641	
UNIVERSITY OF TENNESSEE	008591	93 865	88,509	
UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT HOUSTON	Sub 0008377B (HD067694)	93 865	9,554	
UNIVERSITY OF TEXAS-SOUTHWESTERN MEDICAL CENTER AT DALLAS	006993	93 865	494,523	
UNIVERSITY OF TEXAS-SOUTHWESTERN MEDICAL CENTER AT DALLAS	GMO 171010	93 865	354,232	
UNIVERSITY OF THE WITWATERSRAND	B6932	93 865	(2,667)	
UNIVERSITY OF UTAH	10034012-UCSF	93 865	55,221	
UNIVERSITY OF UTAH	B5784	93 865	19,220	
UNIVERSITY OF UTAH	B6812	93 865	16,153	
UNIVERSITY OF UTAH	Sub 10034455-UCSD-HALGREN (HD0	93 865	111,787	
VANDERBILT UNIVERSITY	Sub VUMC 58702 (HD084500)	93 865	43,377	
VANDERBILT UNIVERSITY MEDICAL CENTER	VUMC 58697-cyc1	93 865	23,468	
WASHINGTON STATE UNIVERSITY	104536-G003490	93 865	105,076	
WASHINGTON UNIVERSITY IN ST. LOUIS	1R01HD078641-01A1	93 865	(1,462)	
WASHINGTON UNIVERSITY IN ST. LOUIS	WU-15-73	93 865	3,628	
WASHINGTON UNIVERSITY IN ST. LOUIS	WU-16-139	93 865	32,494	
WAYNE STATE UNIVERSITY	SUB WSU17014 (HD089875)	93 865	47,091	
WAYNE STATE UNIVERSITY	WSU11032	93 865	17,176	
WAYNE STATE UNIVERSITY	WSU16014	93 865	38,535	
WESTAT	6101-S059 (Mod #6)	93 865	827,153	
WITS HEALTH CONSORTIUM (PTY) LIMITED	D1404360-01	93 865	64,068	
WRIGHT STATE UNIVERSITY	Sub None (HD059969)	93 865	(1,393)	
YALE UNIVERSITY	B7752	93 865	10,598	
YALE UNIVERSITY	B7756	93 865	769	
YALE UNIVERSITY	M14A11918(A10192	93 865	7,199	
YALE UNIVERSITY	M14A12052 (A10192)	93 865	(2,225)	
YALE UNIVERSITY	M15A12144 (A10236)	93 865	38,257	
YALE UNIVERSITY	M15A12257	93 865	13,283	
YESHIVA UNIVERSITY	310897	93 865	53,694	
AFASCI, INC.	201700586	93 866	107,898	
AMYDIS DIAGNOSTICS	Sub 20162223 ( R43AG050454 )	93 866	90,109	
BOSTON UNIVERSITY	4500001840	93 866	461,309	
BOSTON UNIVERSITY	4500002196	93 866	179,243	

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			Federal Expenditures	Pass-Through to Subrecipients
BRIGHAM AND WOMEN'S HOSPITAL	111014:3	93 866	167,773	
BROWN UNIVERSITY	00000843	93 866	55,993	
BROWN UNIVERSITY	R01AG051170	93 866	23,996	
BUCK INSTITUTE FOR RESEARCH ON AGING	2049	93 866	231,940	
BUCK INSTITUTE FOR RESEARCH ON AGING	SA23061	93 866	66,124	
BUCK INSTITUTE FOR RESEARCH ON AGING	SA31100	93 866	52,345	
BUCK INSTITUTE FOR RESEARCH ON AGING	SA36018	93 866	39,625	
CALIFORNIA PACIFIC MEDICAL CENTER RESEARCH INSTITUTE	280201009-S200	93 866	22,088	
CALIFORNIA PACIFIC MEDICAL CENTER RESEARCH INSTITUTE	2803226-S140	93 866	183,587	
CALIFORNIA PACIFIC MEDICAL CENTER RESEARCH INSTITUTE	2803227-S141	93 866	(1,379)	
CALIFORNIA PACIFIC MEDICAL CENTER RESEARCH INSTITUTE	2803232-S153	93 866	106,907	
COLUMBIA UNIVERSITY	2(GGO10471)-cyc1	93 866	684,915	
COLUMBIA UNIVERSITY	3(GG012904-01)	93 866	2,842	
DIAMIR, LLC	Sub 20152707 (AG044860)	93 866	30,608	
DUKE UNIVERSITY	203-8779	93 866	11,367	
DUKE UNIVERSITY	2035220	93 866	24,965	
DUKE UNIVERSITY	58092	93 866	(1,539)	
EMORY UNIVERSITY	T663031	93 866	177,562	
FRED HUTCHINSON CANCER RESEARCH CENTER	Sub 843415 (AG048209 )	93 866	21,910	
GLADSTONE INSTITUTES	Sub R01709-A (AG011385)	93 866	(11,574)	
HARVARD UNIVERSITY	116546-5061518:3	93 866	19,469	
HEBREW SENIORLIFE INC.	PO10.10.91561	93 866	18,243	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	025499214609	93 866	0	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	025499274609	93 866	354,900	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	0255-1211-4609	93 866	11,104	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	74A71	93 866	0	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	81A05	93 866	70,619	
INDIAN HEALTH COUNCIL, INC.	Sub none (HS008101)	93 866	7,462	
INNOSENSE LLC	IS-203749-cyc1	93 866	63,410	
INSTITUTE FOR MOLECULAR MEDICINE, INC. (CALIFORNIA)	UCI-2015-200641-cyc2	93 866	189,588	
INSTITUTE FOR MOLECULAR MEDICINE, INC. (CALIFORNIA)	UCI-2015-200642-cyc2	93 866	205,064	
JOHNS HOPKINS UNIVERSITY	2002476658:2	93 866	31,702	
KAISER FOUNDATION HEALTH PLAN OF WASHINGTON	SUB 2015168560 (AG006781)	93 866	8,546	
KAISER PERMANENTE DIVISION OF RESEARCH	RNG200560-02UCSF	93 866	49,040	
KAISER PERMANENTE DIVISION OF RESEARCH	RNG200560UCD	93 866	378,229	
MAGEE-WOMENS HOSPITAL, RESEARCH INSTITUTE AND FOUNDATION	5246-cyc1	93 866	46,384	
MASSACHUSETTS GENERAL HOSPITAL	224849:3	93 866	18,086	
MAYO CLINIC/MAYO FOUNDATION FOR MEDICAL EDUCATION & RESEARCH	63788300	93 866	1,016,796	
MINNEAPOLIS MEDICAL RESEARCH FOUNDATION	07292-2	93 866	28,983	
NATIONAL BUREAU OF ECONOMIC RESEARCH, INC	33-4135-06-UCB	93 866	41,849	
NATIONAL BUREAU OF ECONOMIC RESEARCH, INC	84-4008-13-UCLA:3	93 866	122,884	
NATIONAL OPINION RESEARCH CENTER	5845-UCLA:04	93 866	27,978	

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NEW YORK UNIVERSITY	78667	93 866	340	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	1569	93 866	28,229	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	1572	93 866	117,259	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	1578	93 866	48,039	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	1579-cyc4	93 866	18,456	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	87465	93 866	(441,934)	(383,500)
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	WEI1908	93 866	4,698	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	WEI2015-07	93 866	218,239	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	WEI2015-11-cyc1	93 866	4,597	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	WEI2015-18	93 866	5,536	
OHIO STATE UNIVERSITY	Sub 60051415(AG050725)	93 866	30,634	
PACIFIC HEALTH RESEARCH AND EDUCATION INSTITUTE	Sub 21603-02 ( AG053983)	93 866	46,430	
PALO ALTO VETERANS INSTITUTE FOR RESEARCH, INC.	LEE0002-02-cyc2	93 866	553	
PARK NICOLLET INSTITUTE	1R21AG046571-01	93 866	3,455	
PEKING UNIVERSITY	1221101	93 866	53,762	
PENNSYLVANIA STATE UNIVERSITY	5296-UCM-DHHS-2167	93 866	28,050	
RAND CORP	9920150099:03	93 866	164,442	
STANFORD UNIVERSITY	61406760-45510	93 866	119,543	
STANFORD UNIVERSITY	Sub 61089692-112006 (AG047366)	93 866	20,946	
SUTTER WEST BAY HOSPITALS	007915	93 866	68,375	
THE SCRIPPS RESEARCH INSTITUTE	008200	93 866	129,573	
THE SCRIPPS RESEARCH INSTITUTE	88497	93 866	(3,806)	
THE SCRIPPS RESEARCH INSTITUTE	SUB 5-50699 (AG007996)	93 866	264,465	
THE UNIVERSITY OF ALABAMA (TUSCALOOSA)	000410331-004	93 866	74,198	
UNIVERSITY OF ARIZONA	306302	93 866	23,154	
UNIVERSITY OF ARIZONA	310311	93 866	415,014	
UNIVERSITY OF CHICAGO	87862	93 866	120,617	
UNIVERSITY OF CHICAGO	FP056715-C:1	93 866	28,653	
UNIVERSITY OF MASSACHUSETTS MEDICAL SCHOOL	WA00495814/OSP2017110	93 866	11,581	7,307
UNIVERSITY OF MICHIGAN	3002312638	93 866	87	
UNIVERSITY OF MICHIGAN	3002601380:6	93 866	78,592	
UNIVERSITY OF MICHIGAN	3003282032	93 866	15,023	
UNIVERSITY OF MICHIGAN	3003622799-cyc1	93 866	1,683	
UNIVERSITY OF MICHIGAN	36A91	93 866	67,301	
UNIVERSITY OF NORTH TEXAS	Sub RF00016-2017-0033(AG051848	93 866	49,041	
UNIVERSITY OF PENNSYLVANIA	557804	93 866	151	
UNIVERSITY OF PENNSYLVANIA	569213	93 866	209,604	
UNIVERSITY OF PENNSYLVANIA	569366	93 866	17,365	
UNIVERSITY OF PENNSYLVANIA	83202	93 866	25,116	
UNIVERSITY OF PENNSYLVANIA	89075	93 866	2,451	
UNIVERSITY OF PENNSYLVANIA	Sub 569267 (AG044332 )	93 866	285,034	
UNIVERSITY OF PITTSBURGH	0046842 (126362-2):1	93 866	229,485	

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UNIVERSITY OF PITTSBURGH	0050794 (128001-2)	93 866	89,229	
UNIVERSITY OF PITTSBURGH	0052914 (127841-3)	93 866	10,716	
UNIVERSITY OF PITTSBURGH	58063	93 866	153	
UNIVERSITY OF ROCHESTER	416927-cyc1	93 866	25,061	
UNIVERSITY OF SOUTH FLORIDA	1253-1118-00-A-cyc1	93 866	201,218	
UNIVERSITY OF SOUTHERN CALIFORNIA	005075	93 866	1,245	
UNIVERSITY OF SOUTHERN CALIFORNIA	008717	93 866	35,548	
UNIVERSITY OF SOUTHERN CALIFORNIA	54096768:2	93 866	70,279	
UNIVERSITY OF SOUTHERN CALIFORNIA	54826553:01	93 866	457,053	
UNIVERSITY OF SOUTHERN CALIFORNIA	65939453-cyc2	93 866	68,571	
UNIVERSITY OF SOUTHERN CALIFORNIA	65941042:01	93 866	79,308	
UNIVERSITY OF SOUTHERN CALIFORNIA	65945555/10397090	93 866	10,585	
UNIVERSITY OF SOUTHERN CALIFORNIA	75684673-cyc1	93 866	119,738	
UNIVERSITY OF SOUTHERN CALIFORNIA	75696718	93 866	68,625	
UNIVERSITY OF SOUTHERN CALIFORNIA	75696760-cyc1	93 866	37,497	
UNIVERSITY OF SOUTHERN CALIFORNIA	78389953	93 866	14,440	
UNIVERSITY OF SOUTHERN CALIFORNIA	79685690	93 866	28,681	
UNIVERSITY OF SOUTHERN CALIFORNIA	79696	93 866	(416)	
UNIVERSITY OF SOUTHERN CALIFORNIA	80108370	93 866	23,362	
UNIVERSITY OF SOUTHERN CALIFORNIA	CTAADN116	93 866	70,822	
UNIVERSITY OF SOUTHERN CALIFORNIA	CTAADN128-cyc1	93 866	110,537	
UNIVERSITY OF SOUTHERN CALIFORNIA	CTAINI0029-cyc2	93 866	35,758	
UNIVERSITY OF SOUTHERN CALIFORNIA	H40302	93 866	39,614	
UNIVERSITY OF SOUTHERN CALIFORNIA	Sub 66158469 (AG024904)	93 866	31,577	
UNIVERSITY OF SOUTHERN CALIFORNIA	Sub 70855293 ( AG041845)	93 866	34,935	
UNIVERSITY OF SOUTHERN CALIFORNIA	Sub 71082543(AG041845)	93 866	37,547	
UNIVERSITY OF SOUTHERN CALIFORNIA	Sub 79634313 (WEI2015-01)	93 866	200	
UNIVERSITY OF SOUTHERN CALIFORNIA	Sub 80648183(AG037985)	93 866	19,483	
UNIVERSITY OF TEXAS-AUSTIN	UTA16-000684-cyc1	93 866	15,907	
UNIVERSITY OF VERMONT	30340 Sub0002 UCSF	93 866	16,119	
UNIVERSITY OF WASHINGTON	762200	93 866	74,893	
UNIVERSITY OF WASHINGTON	88765	93 866	223,007	
UNIVERSITY OF WASHINGTON	Sub 752710 (AG16976)	93 866	51,871	
UNIVERSITY OF WASHINGTON	UWSC7732-cyc2	93 866	25,537	
UNIVERSITY OF WISCONSIN-MADISON	618K203:1	93 866	(489)	
UNIVERSITY OF WISCONSIN-MADISON	622K510	93 866	160,568	
UNIVERSITY OF WISCONSIN-MADISON	674K660	93 866	94,434	
UNIVERSITY OF WISCONSIN-MADISON	694K573	93 866	46,193	
UNIVERSITY OF WISCONSIN-MADISON	694K606	93 866	219,479	
UNIVERSITY OF WISCONSIN-MADISON	695K715	93 866	196,983	
UNIVERSITY OF WISCONSIN-MADISON	708K363	93 866	48,458	
UNIVERSITY OF WISCONSIN-MADISON	A17-0636-001	93 866	17,718	

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VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Bondi 316850 4 R01 AG01649	93 866	20,182	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Bryan 308279 (AG007996)	93 866	14,827	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA EL-KAREH 316217 ( HS021290	93 866	21,002	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA IX (AG053325)	93 866	1,044	
VIRGINIA COMMONWEALTH UNIVERSITY	FP00001819_SA001	93 866	19,284	
WAKE FOREST UNIVERSITY	88650	93 866	1,722	
WAKE FOREST UNIVERSITY	SUB 110918 (AG044325)	93 866	2,680	
WAKE FOREST UNIVERSITY	WUHS 115068 ( AG044325)	93 866	29,980	
WASHINGTON UNIVERSITY IN ST. LOUIS	57743	93 866	18,796	
WASHINGTON UNIVERSITY IN ST. LOUIS	Sub WU-14-333 (AG032438)	93 866	232,073	
WASHINGTON UNIVERSITY IN ST. LOUIS	Sub WU-15-135 (AG049369)	93 866	1,633,085	
WASHINGTON UNIVERSITY IN ST. LOUIS	WU-15-155	93 866	29,013	
WASHINGTON UNIVERSITY IN ST. LOUIS	WU-17-139	93 866	377,289	
WILLIAM BEAUMONT HOSPITAL	100-2986794	93 866	45,632	
AIVITA BIOMEDICAL, INC.	ABI-207440-cyc1	93 867	230,697	
BAYLOR COLLEGE OF MEDICINE	101991062-cyc4	93 867	19,194	
BAYLOR COLLEGE OF MEDICINE	Sub 101835646 (EY016525)	93 867	1,846	
BECKMAN RESEARCH INSTITUTE OF THE CITY OF HOPE	008636	93 867	33,609	
CALIFORNIA INSTITUTE OF TECHNOLOGY	21B-1097075	93 867	115,962	
CALIFORNIA INSTITUTE OF TECHNOLOGY	58016	93 867	(10,136)	
CARNEGIE MELLON UNIVERSITY	1090339-274246:4	93 867	(4,798)	
CASE WESTERN RESERVE UNIVERSITY	Sub RES507959 (EY023196)	93 867	3,733	
CEDARS-SINAI MEDICAL CENTER	0001135026:1	93 867	7,469	
CHILDREN'S HOSPITAL MEDICAL CENTER OF CINCINNATI	131035	93 867	62,063	
CHILDREN'S HOSPITAL OF PHILADELPHIA	3209850813	93 867	1,489	
COLUMBIA UNIVERSITY	1 (GG006490)-cyc4	93 867	29,843	
CORNELL UNIVERSITY	11091561	93 867	79,916	
CORNELL UNIVERSITY	R01EY027036	93 867	16,009	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	0255-0731-4609	93 867	14,144	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	0255-7713-4609	93 867	42,434	
JAEB CENTER FOR HEALTH RESEARCH, INC.	06002685	93 867	(182)	
JAEB CENTER FOR HEALTH RESEARCH, INC.	1U10EY020797-01A1	93 867	43,863	
JAEB CENTER FOR HEALTH RESEARCH, INC.	201603120	93 867	2,326	
JAEB CENTER FOR HEALTH RESEARCH, INC.	5U10EY11751-20	93 867	27,573	
JAEB CENTER FOR HEALTH RESEARCH, INC.	JAEB-55146-CYC2	93 867	381	
JOHNS HOPKINS UNIVERSITY	2000011278/95351	93 867	29,203	
JOHNS HOPKINS UNIVERSITY	2002473559	93 867	918	
JOHNS HOPKINS UNIVERSITY	2002507432:2	93 867	17,156	
JOHNS HOPKINS UNIVERSITY	2003252076:6	93 867	5,868	
JOHNS HOPKINS UNIVERSITY	88285	93 867	737	
JOHNS HOPKINS UNIVERSITY	Sub none (EY022680)	93 867	67,301	
LEGACY HEALTH SYSTEM	Sub None (EY011610)	93 867	27,999	

The accompanying notes are an integral part of this schedule.

**UNIVERSITY OF CALIFORNIA**  
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			Federal Expenditures	Pass-Through to Subrecipients
NEURO KINETICS, INC.	77808	93 867	113	
NEURO KINETICS, INC.	79047	93 867	(956)	
OPTIKIRA, LLC	R41EY026370	93 867	36,895	
OREGON HEALTH & SCIENCE UNIVERSITY	1003279UCD	93 867	915	
PENNSYLVANIA STATE UNIVERSITY	U10EY023533	93 867	8,468	
PENNSYLVANIA STATE UNIVERSITY	UCDEY023533	93 867	3,369	
PENNSYLVANIA STATE UNIVERSITY	UCLAEY023533	93 867	60,892	
PHOTOSWITCH BIOSCIENCES, INC.	20162022	93 867	98,581	
STANFORD UNIVERSITY	A00-1375-002	93 867	17,930	
STANFORD UNIVERSITY	A00-1442-003	93 867	127,533	
THE SCRIPPS RESEARCH INSTITUTE	Sub 5-52581 (EY022025)	93 867	124,351	
THE SCRIPPS RESEARCH INSTITUTE	Sub PO No. 5-52582 ( EY022025)	93 867	102,277	
UNIVERSITY OF LOUISVILLE RESEARCH FOUNDATION, INC.	ULRF 17-0884-01-cyc1	93 867	41,464	
UNIVERSITY OF MINNESOTA	UCSF #A120468	93 867	13,489	
UNIVERSITY OF OKLAHOMA	SUB RS20151124 (EY025947 )	93 867	142,366	
UNIVERSITY OF PENNSYLVANIA	568279/10035889/18632 00	93 867	19,821	
UNIVERSITY OF PENNSYLVANIA	571042	93 867	353	
UNIVERSITY OF PENNSYLVANIA	88758	93 867	(12,031)	
UNIVERSITY OF SOUTHERN CALIFORNIA	54529007	93 867	36,731	
UNIVERSITY OF SOUTHERN CALIFORNIA	66207998:1	93 867	35,410	
UNIVERSITY OF SOUTHERN CALIFORNIA	72730838-cyc1	93 867	153,959	
UNIVERSITY OF SOUTHERN CALIFORNIA	79508336	93 867	113,048	
UNIVERSITY OF WASHINGTON	UWSC7854	93 867	202,773	
VALITOR, INC.	A128186	93 867	54,236	
WASHINGTON UNIVERSITY IN ST. LOUIS	Sub WU-16-120 (EY025181)	93 867	132,165	
WASHINGTON UNIVERSITY IN ST. LOUIS	sub WU-16-20 (EY025183)	93 867	96,813	
WASHINGTON UNIVERSITY IN ST. LOUIS	WU-15-230-MOD-1	93 867	162,926	
WASHINGTON UNIVERSITY IN ST. LOUIS	WU-16-119	93 867	40,038	
WASHINGTON UNIVERSITY IN ST. LOUIS	WU-16-121	93 867	58,526	
WASHINGTON UNIVERSITY IN ST. LOUIS	WU-16-122	93 867	22,517	
WAYNE STATE UNIVERSITY	WSU14046	93 867	6,273	
YALE UNIVERSITY	M16A12311 (A10507)-cyc1	93 867	154,110	
ARIZONA STATE UNIVERSITY/TEMPE	15-731:01	93 879	121,894	
CHARLES R. DREW UNIVERSITY OF MEDICINE AND SCIENCE	16-17-LO-G0075000-UCLA	93 879	13,073	
COLUMBIA UNIVERSITY	GG007254	93 879	562	
WASHINGTON UNIVERSITY IN ST. LOUIS	SUB-WU-17-344 (P01AG051443)	93 886	22,744	
INDIAN HEALTH COUNCIL, INC.	Sub 102313 (IHS0081-01-00)	93 933	80,643	
PUBLIC HEALTH FOUNDATION ENTERPRISES, INC.	a12U65PS004454	93 939	665,075	
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	15-10840	93 940	692,456	
CITY AND COUNTY OF SAN FRANCISCO	BPHC110000999 / DPHC	93 943	460,079	
PUBLIC HEALTH FOUNDATION ENTERPRISES, INC.	0087.0604	93 944	16,045	
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	1320566	93 945	181,317	

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			Federal Expenditures	Pass-Through to Subrecipients
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	13-10023	93 946	6,875	
LOS ANGELES COUNTY DEPARTMENT OF HEALTH SERVICES	PH-001733:13	93 959	18,846	17,895
CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	Sub SA0000468 (HP28717)	93 969	163,336	
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	13-20458	93 977	114,719	
FHI 360	0080.0214/780:2	93 977	32,263	
EDUARDO MONDLANE UNIVERSITY	Sub C0010 (TW010135)	93 989	71,466	
EDUARDO MONDLANE UNIVERSITY	Sub CC002FUEM2010 (TW008908)	93 989	40,766	
EDUARDO MONDLANE UNIVERSITY	Sub CC003FUEM2010 (TW008910)	93 989	3,469	
GEORGIA INSTITUTE OF TECHNOLOGY	RF135-G1	93 989	325,641	15,133
JOHNS HOPKINS UNIVERSITY	94982	93 989	(30,988)	
NORTHWESTERN UNIVERSITY	60042025UCSF	93 989	13,714	
UNIVERSITY OF SOUTH FLORIDA	1211-1065-00-D	93 989	21,313	
YALE UNIVERSITY	M17A12661 (A11003)	93 989	10,170	
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	16-10016	93 994	1,650,395	609,968
ACCELERATED MEDICAL DIAGNOSTICS, LLC	20130127	93 RD	196	
AKONNI BIOSYSTEMS	88793	93 RD	(8,936)	
AMERICAN ACADEMY OF CHILD & ADOLESCENT PSYCHIATRY	008661	93 RD	5,404	
AMERICAN PSYCHIATRIC ASSOCIATION	008669	93 RD	13,692	
ATOX BIO	ATB-202-cyc1	93 RD	23,666	
BATTELLE MEMORIAL INSTITUTE	37A11	93 RD	39,547	
BIOLINQ, INC.	20150783	93 RD	24,328	
BIOLINQ, INC.	88994	93 RD	36	
BLOOD SYSTEMS, INC. DBA BLOOD SYSTEMS RESEARCH INSTITUTE	10841UCD132	93 RD	29,574	
BLOOD SYSTEMS, INC. DBA BLOOD SYSTEMS RESEARCH INSTITUTE	10841UCSF100	93 RD	26,345	
BRIGHAM AND WOMEN'S HOSPITAL	111558	93 RD	38,184	
BRIGHAM AND WOMEN'S HOSPITAL	88208	93 RD	(16)	
BROAD INSTITUTE INC.	5417070-5500000722	93 RD	(213,983)	
CALIFORNIA ASSOCIATION OF HEALTH FACILITIES	201502630	93 RD	133,107	
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	1820B	93 RD	17,640	
CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	83007	93 RD	(13,949)	
CELLERANT THERAPEUTICS, INC.	79617	93 RD	15,381	
CELLERANT THERAPEUTICS, INC.	88134	93 RD	9,313	
CHILDREN'S HOSPITAL OF PHILADELPHIA	95008021512C	93 RD	24,385	
CHILDREN'S HOSPITAL OF PHILADELPHIA	950010071504C	93 RD	44,440	
CHILDREN'S HOSPITAL OF PHILADELPHIA	A123897	93 RD	12,781	
CHILDREN'S MERCY HOSPITAL, THE	82391	93 RD	6,400	
CNI FEDERAL SERVICES, LLC	Sub CNIIT-711-245-001-1 (HHS-	93 RD	75,048	
COLORADO STATE UNIVERSITY	G-00752-1	93 RD	52,463	
COLUMBIA UNIVERSITY	10GG1189609	93 RD	109,772	
COMMUNITY HEALTH IMPROVEMENT PARTNERS	Sub 5834-122-01 (DP005834)	93 RD	167,926	
DANA-FARBER CANCER INSTITUTE	R01CA172067	93 RD	14,075	
DUKE UNIVERSITY	203-9449 (HHSN275201000003I)	93 RD	15,077	

The accompanying notes are an integral part of this schedule.

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Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	Federal CFDA #	FY 2017	
			Federal Expenditures	Pass-Through to Subrecipients
DUKE UNIVERSITY	88036	93 RD	(2,720)	
DUKE UNIVERSITY	Sub 2039304 (HHSN275201000031i	93 RD	5,537	
DYNUPOL, INC	UCSF#A124840	93 RD	33,982	
EPIGEN BIOSCIENCES, INC.	89181	93 RD	304	
ETHIOPIAN PUBLIC HEALTH ASSOCIATION	Sub none (GH000763)	93 RD	102,481	
FHI 360	PO16001621	93 RD	351,349	310,192
FRED HUTCHINSON CANCER RESEARCH CENTER	0000860512	93 RD	24,346	
GLADSTONE INSTITUTES	83089	93 RD	(4,169)	
HEALTH RESEARCH ASSOCIATES, INC	B7066	93 RD	(23,088)	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	02580512HHSN272201400008C	93 RD	331,135	
JOHNS HOPKINS UNIVERSITY	A9155	93 RD	(47,998)	
KAISER PERMANENTE DIVISION OF RESEARCH	201503226	93 RD	237,545	
LA JOLLA INSTITUTE FOR ALLERGY AND IMMUNOLOGY	88432	93 RD	(777)	
LAMNOTHERAPEUTICS INC.	201500391	93 RD	15,033	
LEIDOS BIOMEDICAL RESEARCH, INC.	15X159	93 RD	537,935	
LEIDOS BIOMEDICAL RESEARCH, INC.	16X114	93 RD	719,866	
LEIDOS, INC.	83772	93 RD	(23,483)	
LP THERAPEUTICS, INC.	201602618	93 RD	25,340	
MANDALMED, INC.	A128262	93 RD	83,852	
MAPP BIOPHARMACEUTICAL, INC.	701501	93 RD	14,470	
MAPP BIOPHARMACEUTICAL, INC.	7021-02	93 RD	9,171	
MASSACHUSETTS GENERAL HOSPITAL	201700020	93 RD	6,822	
MASSACHUSETTS GENERAL HOSPITAL	NN102	93 RD	23,983	
MATHEMATICA, INC	40146S04935	93 RD	29,865	
MAYO CLINIC/MAYO FOUNDATION FOR MEDICAL EDUCATION & RESEARCH	A126667	93 RD	(4,000)	
MENTAL HEALTH SYSTEMS, INC.	83020	93 RD	1,818	
MIRNA THERAPEUTICS, INC.	201503462	93 RD	0	
MITCHELL GROUP, INC.	042565	93 RD	57,130	
N2 BIOMEDICAL	008514	93 RD	97,218	
NATIONAL FRAGILE X FOUNDATION	201603349	93 RD	9,288	
NEWOMICS, INC.	20150766	93 RD	132,123	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	82342	93 RD	(2,016)	(2,016)
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	WEI2015-02	93 RD	121,371	
NORTHROP GRUMMAN CORPORATION	7500128578	93 RD	39,048	
NORTHROP GRUMMAN SYSTEMS CORPORATION	7500133818	93 RD	1,901,472	825,603
OREGON HEALTH & SCIENCE UNIVERSITY	201500026	93 RD	5,931	
OREGON HEALTH & SCIENCE UNIVERSITY	S1320	93 RD	127	
REVERAGEN BIOPHARMA, INC.	201701161	93 RD	2,227	
RXBIO HOLDINGS, INC.	201601959	93 RD	64,288	
SAN DIEGO COUNTY	Sub 544567 (none)	93 RD	56,618	
SANFORD RESEARCH	SR201713	93 RD	5,556	
SOCIAL AND SCIENTIFIC SYSTEMS, INC.	B4163	93 RD	(249)	

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Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	Federal CFDA #	FY 2017	
			Federal Expenditures	Pass-Through to Subrecipients
SOCIAL AND SCIENTIFIC SYSTEMS, INC.	CRB-SSS-S-15-004544	93 RD	426,387	
SOFIE BIOSCIENCES, INC	1R43EB023782-01	93 RD	34,504	
STANFORD UNIVERSITY	22B60	93 RD	94,874	
STANFORD UNIVERSITY	60311550107265A	93 RD	6,707	
STANFORD UNIVERSITY	606464673501922	93 RD	170,335	
STATE OF MARYLAND	17-17509-G	93 RD	64,602	
TELESECURITY SCIENCES, INC.	TSS160003	93 RD	230,301	
THE UNIVERSITY OF ALABAMA (TUSCALOOSA)	502889SP004001	93 RD	310,613	
UNIVERSITY OF FLORIDA	89522	93 RD	30,133	
UNIVERSITY OF FLORIDA	UFDSP00011069	93 RD	215,186	
UNIVERSITY OF IOWA	W000696003	93 RD	289,008	
UNIVERSITY OF MARYLAND	-Z0746001	93 RD	163,092	
UNIVERSITY OF NEVADA, RENO	R01GM101928	93 RD	18,186	
UNIVERSITY OF PENNSYLVANIA	562134	93 RD	28,257	
UNIVERSITY OF ROCHESTER	96124	93 RD	(1)	
UNIVERSITY OF SOUTH FLORIDA	09000015	93 RD	7,299	
UNIVERSITY OF UTAH	1000905008	93 RD	18,529	
UNIVERSITY OF UTAH	10035609	93 RD	1,390	
UNIVERSITY OF UTAH	10035609-UCSF PEACE	93 RD	4,001	
UNIVERSITY OF UTAH	84539	93 RD	(22,035)	
UNIVERSITY OF UTAH	B6060	93 RD	30,204	
UNIVERSITY OF VERMONT	28557SUBUCDavis	93 RD	43,933	
UNIVERSITY OF WASHINGTON	3UH3MH106338	93 RD	44,895	
UNIVERSITY OF WASHINGTON	757148	93 RD	1,173	
UNIVERSITY OF WASHINGTON	762195	93 RD	26,780	
WASHINGTON UNIVERSITY IN ST. LOUIS	87801	93 RD	292	
WASHINGTON UNIVERSITY IN ST. LOUIS	WU117327	93 RD	10,036	
WAVE 80 BIOSCIENCES, INC	UCSF#A126121	93 RD	(2,640)	
WESTAT	SUB S8954 (HHSN271201100027C)	93 RD	502,436	
ZIVA CORPORATION	89361	93 RD	(19)	
ZIVA CORPORATION	Sub 20144161	93 RD	22,613	
Subtotal Pass-Through and Partial Pass-Through Awards			224,785,995	5,287,428
Total Department of Health and Human Services			2,151,321,329	257,707,707
CORPORATION FOR NATIONAL AND COMMUNITY SERVICE				
Pass-Through and Partial Pass-Through				
JUMPSTART FOR YOUNG CHILDREN, INC.	490200-cyc18	94 006	179,999	
JUMPSTART FOR YOUNG CHILDREN, INC.	880200	94 006	71,928	
JUMPSTART FOR YOUNG CHILDREN, INC.	88601	94 006	(1,376)	
JUMPSTART FOR YOUNG CHILDREN, INC.	89057	94 006	24,909	
Subtotal Pass-Through and Partial Pass-Through Awards			275,460	-
Total Corporation for National and Community Service			275,460	-

The accompanying notes are an integral part of this schedule.



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			Federal Expenditures	Pass-Through to Subrecipients	
DEPARTMENT OF HOMELAND SECURITY					
Direct Awards	Various	97 RD	1,199,921	46,250	
Pass-Through and Partial Pass-Through					
THE CENTER FOR RURAL DEVELOPMENT	FY140009203UCDAVIS	97 005	71,031		
THE CENTER FOR RURAL DEVELOPMENT	K0015466EH	97 005	(109)		
HRL LABORATORIES, LLC	14089-503866-DS-cyc4	97 007	94,865		
UNIVERSITY OF SOUTHERN CALIFORNIA	73880521	97 007	131,897		
SKIDMORE COLLEGE	32170-1	97 044	147,845		
GEORGE MASON UNIVERSITY	E2033681-cyc1	97 065	143,442		
PEPPERPRINT	UCB2015-HSHQDC-15-C-B0010	97 077	143,956		
SKYSIGHT TECHNOLOGIES LLC	20152553	97 077	33,957		
UNIVERSITY OF OREGON	251370A:1	97 077	98,650		
APPLIED TECHNOLOGY COUNCIL	785-24-646	97 082	5,007		
UNIVERSITY OF ILLINOIS	2016-01414-01-01:01	97 108	115,300		
FLIR SYSTEMS, INC.	89093	97 RD	(956)		
GEORGE MASON UNIVERSITY	E203053-1-cyc1	97 RD	70,026		
SIGNATURE SCIENCE, LLC	S1020	97 RD	18,140		
Subtotal Pass-Through and Partial Pass-Through Awards			1,073,051	-	
Total Department of Homeland Security			2,272,972	46,250	
AGENCY FOR INTERNATIONAL DEVELOPMENT					
Direct Awards	Various	98 RD	46,340,209	30,365,035	
Pass-Through and Partial Pass-Through					
ASTRAEA NATIONAL LESBIAN ACTION FOUNDATION	GLHRP---15--1	98 001	79,830		
COLLEGE OF WILLIAM AND MARY	740681-T	98 001	59,395		
GEORGE MASON UNIVERSITY	78564	98 001	1,233		
HARVARD UNIVERSITY	88965	98 001	46,617		
INTERNATIONAL BUSINESS & TECHNICAL CONSULTANTS, INC.	15-IBTCI-00027	98 001	297,105		
INTERNATIONAL CROPS RESEARCH INSTITUTE FOR THE SEMI-ARID TROPICS	201502915	98 001	13,500		
INTERNATIONAL PLANNED PARENTHOOD FEDERATION	SIFPO2-SA3-51214010	98 001	49,269		
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	5710003316	98 001	88,679		
METABIOTA, INC	2015-14-USAID	98 001	110,946		
MICHIGAN STATE UNIVERSITY	RC102194FIGIRRI	98 001	40,930		
MICHIGAN STATE UNIVERSITY	RC102194UCDAVIS	98 001	48,897		
MITCHELL GROUP, INC.	86075	98 001	11,616		
MITCHELL GROUP, INC.	TMG/OASIS-SAREL-YEAR 3-2015	98 001	76,972		
NATIONAL ACADEMY OF SCIENCES	2000007143	98 001	23,265		
NATIONAL ACADEMY OF SCIENCES	PGA2000003658	98 001	10,992		
NAVRONGO HEALTH RESEARCH CENTRE	FY16-RFAA02-6011-NHRC-02	98 001	18,438		
NEW YORK UNIVERSITY	F7465-01	98 001	13,182		
OHIO STATE UNIVERSITY	60054302	98 001	29,734		

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			Federal Expenditures	Pass-Through to Subrecipients
PARTNERS IN HOPE (MALAWI)	20171450:1	98 001	519,986	
PARTNERS IN HOPE (MALAWI)	79231	98 001	17,359	
POPULATION COUNCIL - NEW YORK	SH1503	98 001	33,222	
RIGHT TO CARE	20163138	98 001	1,427,334	
RTI INTERNATIONAL	888-13-16-10	98 001	44,250	
SOCIAL IMPACT, INC.	REQ-LAC-11-0000 37	98 001	344	
SUSTAINABLE SCIENCES INSTITUTE	USAID-4100-2	98 001	13,964	
TUFTS UNIVERSITY	201502576	98 001	321,934	71,477
UNIVERSITY OF FLORIDA	UFDSP00011429	98 001	27,476	
UNIVERSITY RESEARCH CO., LLC	041898	98 001	43,162	
HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY MEDICINE	sUB 2997 ( AI099734)	98 855	(609)	
NORTHEASTERN UNIVERSITY	500421-78053	98 865	15,150	
ALLEN INSTITUTE FOR BRAIN SCIENCE	2014-0571	98 RD	185,149	
FHI 360	G000060	98 RD	498,141	367,668
HARVARD UNIVERSITY	106395-5094553	98 RD	38,071	
INTERNATIONAL MAIZE AND WHEAT IMPROVEMENT CENTER	016258	98 RD	889,229	425,268
INTERNATIONAL MAIZE AND WHEAT IMPROVEMENT CENTER	IWYP76FP	98 RD	81,709	
MICHIGAN STATE UNIVERSITY	003844	98 RD	203,860	201,488
MICHIGAN STATE UNIVERSITY	58653	98 RD	386,771	
MICHIGAN STATE UNIVERSITY	58654	98 RD	53,337	
NATIONAL ACADEMY OF SCIENCES	2000006165	98 RD	41,991	
NATIONAL ACADEMY OF SCIENCES	2000007151	98 RD	7,058	
PURDUE UNIVERSITY	14098851-207495	98 RD	18,538	
Subtotal Pass-Through and Partial Pass-Through Awards			5,888,026	1,065,901
Total Agency for International Development			52,228,235	31,430,936
OTHER FEDERAL AGENCIES				
Direct Awards	Various	99 RD	1,253,275	
Pass-Through and Partial Pass-Through				
3E TECHNOLOGIES INTERNATIONAL, INC.	58681	99 RD	4,408	
3E TECHNOLOGIES INTERNATIONAL, INC.	59639	99 RD	27,628	
ADVANCED OXIDE DEVICES, LLC	SB170074	99 RD	22,512	
AECOM TECHNICAL SERVICES	14C-16487-LB23, TASK ORDER 02	99 RD	80,183	
AECOM TECHNICAL SERVICES	A17-0819-001	99 RD	41,633	
AEROSPACE CORPORATION	4600005842	99 RD	22,656	
AFRICAN MEDICAL AND RESEARCH FOUNDATION	37188-1052	99 RD	23,654	
AGNITRON TECHNOLOGY, INC.	SB170018	99 RD	30,994	
ALLIANCE FOR SUSTAINABLE ENERGY, LLC	XHQ-7-70127-01	99 RD	38,000	
ALMOND BOARD OF CALIFORNIA	16.ENTO8.Joyce	99 RD	36,123	
ALMOND BOARD OF CALIFORNIA	A16-0029	99 RD	15,252	
AMPAC, INC.	AMPAC0180-17-012	99 RD	24,487	
ANGSTROM DESIGNS ENGRG SERVS	NASA STTR UCSB - 061016 - UCSB	99 RD	22,822	

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			Federal Expenditures	Pass-Through to Subrecipients
APTITUDE MEDICAL	SB170085	99 RD	12,205	
ARIZONA STATE UNIVERSITY/TEMPE	A16-0487-004	99 RD	17,338	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13352.001-A	99 RD	83	
ATOX BIO	Sub ATB-202 (HHSO1002014000013	99 RD	22,313	
AURORA FLIGHT SCIENCES CORPORATION	63477	99 RD	7,048	
BCN BIOSCIENCES	6T01EP130002-01-04	99 RD	15,032	
BCN BIOSCIENCES	HHSN272201500004C	99 RD	418,176	
BENAROYA RESEARCH INSTITUTE AT VIRGINIA MASON	FY16ITN199	99 RD	33,281	
BIO-WAVES INCORPORATED	872BA	99 RD	(29)	
BODIMOJO	1R43DK105623-01	99 RD	(66)	
BOEING COMPANY, THE	1351956	99 RD	74,934	
BRIGHAM YOUNG UNIVERSITY	A15-0216-002	99 RD	273,159	
BROAD INSTITUTE INC.	A15-0194-003	99 RD	139,047	
BROOKHAVEN NATIONAL LABORATORY/BROOKHAVEN SCIENCE ASSOCIATES, LLC	308538	99 RD	22,378	
BROOKHAVEN NATIONAL LABORATORY/BROOKHAVEN SCIENCE ASSOCIATES, LLC	A00-1382-013	99 RD	340,913	
CALIFORNIA DEPARTMENT OF EDUCATION	CN150380	99 RD	826,580	
CALIFORNIA DEPARTMENT OF HEALTH CARE SERVICES	15-92255	99 RD	82,797	
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	14-10802	99 RD	67,082	
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	MCA8995SC (14-10709 )	99 RD	52,017	
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	Sub 16-10844 (none)	99 RD	41,033	
CALIFORNIA STATE COASTAL CONSERVANCY	15-050	99 RD	4,279	
CALIFORNIA STRAWBERRY COMMISSION	SC-15-04	99 RD	4,968	
CENTER FOR SOCIAL INNOVATION, LLC	HHSS2832012000351	99 RD	6,610	
CH2M HILL	CH2M Hill 10006-7-103221	99 RD	40,257	
CHARLES STARK DRAPER LABORATORY, INC.	Draper SC001-1024	99 RD	214,381	
CHILDREN'S HOSPITAL AND RESEARCH CENTER FOUNDATION	A00-0677-003	99 RD	41,268	
CHROMOLOGIC	HHSN272201700012C	99 RD	19,063	
COGNIONICS, INC.	Sub UCSD062016(N00014-16-C-101	99 RD	127,696	
COLORADO STATE UNIVERSITY	007958	99 RD	80,575	
CREARE INCORPORATED	Creare 83251	99 RD	112,728	
CRYSTAL RESEARCH INC	20160020	99 RD	204,522	
DUKE UNIVERSITY	20134974	99 RD	17,574	
DUKE UNIVERSITY	2034985	99 RD	10,657	
DUKE UNIVERSITY	8735G	99 RD	14,707	
DUKE UNIVERSITY	SUB 20144899 (HHSN-27520100000	99 RD	1,041	
DUKE UNIVERSITY	Sub 20160141 (HHSN275201000003	99 RD	15,429	
DUKE UNIVERSITY	Sub 203-8392 (HHSN275201000003	99 RD	60,391	
DUKE UNIVERSITY	Sub 212079 ( HHSO100201300009C	99 RD	24,727	
DUKE UNIVERSITY	Sub 218708 (HHSN275201000003I)	99 RD	12,473	
DUKE UNIVERSITY	Sub CE01-120 (HHSO100201300009	99 RD	8,890	
EASTERN RESEARCH GROUP, INC.	008192	99 RD	104,341	
EDUCATION, TRAINING & RESEARCH ASSOCIATES	A00-0712-004	99 RD	297,373	

The accompanying notes are an integral part of this schedule.

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Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	Federal CFDA #	FY 2017	
			Federal Expenditures	Pass-Through to Subrecipients
ENGILITY CORP.	873G2	99 RD	169,208	
ENGILITY CORP.	PO-0011431	99 RD	204,750	
ERC, INCORPORATED	PO NO. PS150006	99 RD	80,739	
ERC, INCORPORATED	PO NO. PS150008	99 RD	87,887	
FARUS, LLC	2R44DE021326-02	99 RD	36,489	
FRED HUTCHINSON CANCER RESEARCH CENTER	Sub 0000865653 (HHSN2682016000	99 RD	50,963	
FREEDOM PHOTONICS LLC	S7074-01	99 RD	34,671	
FREEDOM PHOTONICS LLC	SB170070	99 RD	3,912	
GALOIS INC	2015-007	99 RD	433,016	
GENERAL ATOMICS	4500067313	99 RD	8,172	
GENERAL DYNAMICS CORPORATION	40253284	99 RD	53,451	
GLOBAL ALGAE INNOVATIONS	GAI 161159	99 RD	60,857	
GLOBAL ALGAE INNOVATIONS	GAI 20133695	99 RD	423	
HARVARD PILGRIM HEALTH CARE	Sub 20170593 (HHSF22320140030I	99 RD	6,500	
HASS AVOCADO BOARD	20164932	99 RD	34,370	
HEALTH RESEARCH AND EDUCATION TRUST	57229	99 RD	1,948	
HEALTH RESEARCH AND EDUCATION TRUST	77738	99 RD	10,667	
HEALTH RESEARCH AND EDUCATION TRUST	80784:1	99 RD	17,313	
HLS RESEARCH, INC.	HLS 15-1002	99 RD	66,388	
HONEYWELL INTERNATIONAL INC.	3501726764E	99 RD	525,652	
HRL LABORATORIES, LLC	15082-162371-DS	99 RD	111,380	
HYPRES, INC.	89208	99 RD	7	
ILLINOIS APPLIED RESEARCH ASSOCIATES, LLC	20151870	99 RD	49,879	
INCEPTUS MEDICAL, LLC	HHSN268201500007C	99 RD	17,960	
INCORPORATED RESEARCH INSTITUTIONS FOR SEISMOLOGY	14-UCSD-Tajik	99 RD	49,122	
INFERLINK CORPORATION	A16-0279-001	99 RD	50,000	
INFERLINK CORPORATION	W81XWH-13-C-0158	99 RD	19,638	
INFOSCITEX CORPORATION	A16-0500-003	99 RD	32,147	
INSTON, INC	20143232	99 RD	9,430	
INTERNATIONAL BUSINESS MACHINES CORPORATION	79467	99 RD	58,170	
INTERNATIONAL BUSINESS MACHINES CORPORATION	W911NF-16-3-0001	99 RD	64,370	
IQ SOLUTIONS INC.	NIDA/US-Mexico Fellowship	99 RD	1,474	
JET PROPULSION LABORATORY	1385250:013	99 RD	74,652	
JET PROPULSION LABORATORY	1409806:017	99 RD	155,328	
JET PROPULSION LABORATORY	1436227:014	99 RD	52,263	
JET PROPULSION LABORATORY	1459600:006	99 RD	254	
JET PROPULSION LABORATORY	1515694	99 RD	55,963	
JET PROPULSION LABORATORY	1530495	99 RD	21,236	
JET PROPULSION LABORATORY	1531316:001	99 RD	59,711	
JET PROPULSION LABORATORY	1533732:001	99 RD	5,110	
JET PROPULSION LABORATORY	1537305	99 RD	13,299	
JET PROPULSION LABORATORY	1537508	99 RD	6,183	

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			Federal Expenditures	Pass-Through to Subrecipients
JET PROPULSION LABORATORY	1537626	99 RD	11,624	
JET PROPULSION LABORATORY	1537682	99 RD	24,397	
JET PROPULSION LABORATORY	1537756	99 RD	20,561	
JET PROPULSION LABORATORY	1538771	99 RD	43,949	
JET PROPULSION LABORATORY	1538893	99 RD	29,388	
JET PROPULSION LABORATORY	1540430:01	99 RD	1,832	
JET PROPULSION LABORATORY	1541178	99 RD	21,684	
JET PROPULSION LABORATORY	1543035	99 RD	3,341	
JET PROPULSION LABORATORY	1544602	99 RD	58,467	
JET PROPULSION LABORATORY	1545119	99 RD	3,279	
JET PROPULSION LABORATORY	1546731	99 RD	94,163	
JET PROPULSION LABORATORY	1547000	99 RD	29,920	
JET PROPULSION LABORATORY	1553926	99 RD	30,140	
JET PROPULSION LABORATORY	1559252	99 RD	113,080	
JET PROPULSION LABORATORY	1563990	99 RD	47,168	
JET PROPULSION LABORATORY	1564158	99 RD	66,215	
JET PROPULSION LABORATORY	1564163	99 RD	20,584	
JET PROPULSION LABORATORY	1570448	99 RD	30,813	
JET PROPULSION LABORATORY	1573042	99 RD	14,484	
JET PROPULSION LABORATORY	63332	99 RD	797	
JET PROPULSION LABORATORY	A15-0098-001	99 RD	37,204	
JET PROPULSION LABORATORY	A15-0195-001	99 RD	6,655	
JET PROPULSION LABORATORY	A16-0081-001	99 RD	80,220	
JET PROPULSION LABORATORY	A16-0228-001	99 RD	114,704	
JET PROPULSION LABORATORY	A16-0545-001	99 RD	15,879	
JET PROPULSION LABORATORY	A16-0609-001	99 RD	3,222	
JET PROPULSION LABORATORY	A16-0615-001	99 RD	82,978	
JET PROPULSION LABORATORY	RSA No. 1519403	99 RD	4,053	
JET PROPULSION LABORATORY	RSA No. 1519406	99 RD	18,402	
JOHNS HOPKINS UNIVERSITY	118127	99 RD	16,794	
JOHNS HOPKINS UNIVERSITY	127296:2	99 RD	(23)	
LANZATECH	LANZATECH 20142106	99 RD	46,972	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	various	99 RD	303,895	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	57581	99 RD	27,119	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	A16-0536-001	99 RD	16,180	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	A17-0491-001	99 RD	96,388	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	A17-0824-001	99 RD	381	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B615778	99 RD	223	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B618398	99 RD	21,417	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B618798	99 RD	154,036	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B622197	99 RD	493	
LEEDS MANAGEMENT CONSULTING INC	ED-O11-13-C-0073	99 RD	61,732	23,474

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			Federal Expenditures	Pass-Through to Subrecipients
LEIDOS BIOMEDICAL RESEARCH, INC.	63451	99 RD	436,807	
LEIDOS BIOMEDICAL RESEARCH, INC.	79157	99 RD	(3,460)	
LGS INNOVATIONS LLC	LGS141160G	99 RD	290,404	
LOCKHEED MARTIN CORPORATION	4102694117	99 RD	819,843	
LOS ALAMOS NATIONAL SECURITY, LLC	142454-004	99 RD	18,171	
LOS ALAMOS NATIONAL SECURITY, LLC	411352	99 RD	2,157	
LOS ALAMOS NATIONAL SECURITY, LLC	79455	99 RD	3,245	
LOS ALAMOS NATIONAL SECURITY, LLC	A00-0216-006	99 RD	13,852	
LOS ALAMOS NATIONAL SECURITY, LLC	A00-0943-003	99 RD	70,211	
LOS ANGELES COUNTY DEPARTMENT OF HEALTH SERVICES	PH-002511:2	99 RD	20,511	
LOS ANGELES DEPARTMENT OF WATER AND POWER	20686	99 RD	(102,171)	
LOS ANGELES POLICE FOUNDATION	20144647	99 RD	120,504	
MASSACHUSETTS GENERAL HOSPITAL	A15-0163-001	99 RD	17,626	
MASSACHUSETTS GENERAL HOSPITAL	A15-0163-003	99 RD	11,209	
MASSACHUSETTS GENERAL HOSPITAL	Sub 20162263(NS090259)	99 RD	59,306	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	A00-0229-003	99 RD	56	
MAXENTRIC TECHNOLOGIES LLC	Sub UCSD-4313-1 (W911QX-16-C-0	99 RD	228,793	
MEDICAL COLLEGE OF WISCONSIN	58300	99 RD	(2,055)	
MOROCCAN FOUNDATION FOR ADVANCED SCIENCE, INNOVATION AND RESEARCH	SB2FA955016C0029	99 RD	103,794	
MORTON PHOTONICS	MP-UCSB-05	99 RD	51,844	
MORTON PHOTONICS	MP-UCSB-06	99 RD	114,595	
NANOCELECT BIOMEDICAL, INC.	20150601 (HHSN261201400051C)	99 RD	29,927	
NEW ENGLAND RESEARCH INSTITUTE, INC.	U01HL107407	99 RD	402	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444653-84126	99 RD	145,412	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444653-84211	99 RD	70,913	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444653-84228	99 RD	1,162	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444908-84219	99 RD	22,181	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444920-84033	99 RD	8,990	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444920-84214	99 RD	25,190	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444927-84091	99 RD	104,838	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444927-84193	99 RD	125,863	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444951-84053	99 RD	63,307	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444951-84057	99 RD	27,226	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444951-84116	99 RD	54	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444951-84220	99 RD	265,405	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444951-84221	99 RD	43,474	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444988-84014	99 RD	1,256	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444988-84041	99 RD	91,885	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444988-84076	99 RD	88,861	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444988-84098	99 RD	91,472	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444988-84153	99 RD	79,657	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444988-84155	99 RD	(438)	

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Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	Federal CFDA #	FY 2017	
			Federal Expenditures	Pass-Through to Subrecipients
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444988-84162	99 RD	49,964	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444988-84166	99 RD	28,600	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444988-84204	99 RD	46,601	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444988-84215	99 RD	40,701	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444988-84229	99 RD	2,176	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	84009 - 02 - 444988	99 RD	157,620	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	84016 - 02 - 444951	99 RD	(30)	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	84067 - 02 - 444653	99 RD	108,584	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	84068 - 02 - 444988	99 RD	31,544	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	84082 - 02 - 444988	99 RD	89,439	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	84092 - 02 - 444988	99 RD	4,323	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	84097 - 02 - 444653	99 RD	109,226	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	84127 - 02 - 444988	99 RD	180,623	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	84128 - 02 - 444653	99 RD	137,595	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	84132 - 02 - 444988	99 RD	41,427	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	84140 - 02 - 444947	99 RD	47,780	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	84142 - 02 - 444988	99 RD	29,920	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	84151 - 02 - 444949	99 RD	29,116	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	84184 - 02 - 444951	99 RD	52,205	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	84188 - 02 - 444949	99 RD	63,236	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	84195 - 02 - 444988	99 RD	22,977	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	84200 - 01 - 444949	99 RD	9,221	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	84201 - 01 - 557755	99 RD	24,115	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	84205 - 01 - 446306	99 RD	137,180	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	84213 - 01 - 444920	99 RD	115,535	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	84218 - 01 - 444955	99 RD	144,705	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	84222 - 01 - 444956	99 RD	118,844	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	84224 - 01 - 444988	99 RD	80,192	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	84227 - 01 - 444653	99 RD	123,510	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	84235 - 01 - 444956	99 RD	21,860	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	84236 - 01 - 444938	99 RD	177,401	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	84237 - 01 - 558109	99 RD	31,867	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	84238 - 01 - 444957	99 RD	99,198	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	84240 - 01 - 444956	99 RD	30,406	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	84241 - 01 - 444956	99 RD	60,323	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	84244 - 01 - 444805	99 RD	9,971	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	84245 - 01 - 444805	99 RD	32,122	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	84246 - 01 - 444988	99 RD	197,695	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	JPA - CENZER, IRENA	99 RD	809	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	JPA - CHENGCHENG ZHU	99 RD	59,711	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	JPA - COHEN, BETH	99 RD	27,007	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	JPA - HAAN, MARY	99 RD	8,986	

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NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	JPA - HARALDSSON	99 RD	50,919	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	JPA - LEE, SEI	99 RD	63,801	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	JPA - LOEWY, RACHEL	99 RD	5,446	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	JPA - LOVETT, DAVID	99 RD	47,565	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	JPA - MACKIN, ROBERT	99 RD	45,830	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	JPA - MAGUEN	99 RD	23,829	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	JPA - MAKLASHINA	99 RD	182,515	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	JPA - MICHAEL HOPE	99 RD	9,306	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	JPA - MUKHERJEE	99 RD	19,824	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	JPA - OWEN, JULIA	99 RD	(78)	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	JPA - SALONER, DAVID	99 RD	71,165	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	JPA - SARAH KEFAYATI	99 RD	55,535	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	JPA - SUDORE, REBECCA	99 RD	102,772	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	JPA - TANNER	99 RD	38,780	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	JPA - ZHANG, YU	99 RD	4,345	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	JPA - GOLDMAN, SAMUEL	99 RD	123,804	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	JPA - HENDERSON SABES	99 RD	95,459	
NORTHROP GRUMMAN CORPORATION	7600019071	99 RD	(19)	
NORTHROP GRUMMAN CORPORATION	7600020775	99 RD	39,999	
NORTHROP GRUMMAN CORPORATION	79360	99 RD	2,223	
NORTHROP GRUMMAN CORPORATION	PO 8140000803	99 RD	58,824	
NORTHWELL HEALTH INC	UCL1-01-NON-ARRA :4	99 RD	19,560	
NOVATEUR RESEARCH SOLUTIONS LLC	Sub 20152569 (N0014-16-C-1007)	99 RD	49,999	
OAK RIDGE NATIONAL LABORATORY	4000143356	99 RD	15,965	
OAK RIDGE NATIONAL LABORATORY	4000154999	99 RD	613	
OCEANIT LABORATORIES, INC.	FA875016C0225	99 RD	39,182	
OREGON STATE UNIVERSITY	X0164A-A	99 RD	14,769	
PACIFIC NORTHWEST NATIONAL LABORATORIES	various	99 RD	28,602	
PALO ALTO RESEARCH CENTER	Sub 313037 (none)	99 RD	70,664	
PELAGIQUE, LLC	W81XWH-16-C-0146	99 RD	118,373	
PREMITEC	20144132	99 RD	(1,953)	
QUANTUM APPLIED SCIENCE AND RESEARCH, INC.	79922	99 RD	1,093	
QUESTEK INNOVATIONS LLC	008593	99 RD	15,000	
RADIABEAM TECHNOLOGIES, LLC	20154874	99 RD	(4,346)	
RADIABEAM TECHNOLOGIES, LLC	20164153	99 RD	222,698	
RADIABEAM TECHNOLOGIES, LLC	20164239	99 RD	39,639	
RADIABEAM TECHNOLOGIES, LLC	79192	99 RD	10,415	
RADIABEAM TECHNOLOGIES, LLC	PA-12-088	99 RD	5,833	
RAYTHEON BBN TECHNOLOGIES CORP.	79023	99 RD	(70)	
RAYTHEON BBN TECHNOLOGIES CORP.	BBN Ref #144485	99 RD	33,333	
RDRTEC	Sub 20161480 (none)	99 RD	75,264	
SAN DIEGO COUNTY	Sub 554660 (none)	99 RD	831,733	

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			Federal Expenditures	Pass-Through to Subrecipients
SANDIA NATIONAL LABORATORIES	various	99 RD	(5,901)	
SANDIA NATIONAL LABORATORIES	1752703	99 RD	23,275	
SANDIA NATIONAL LABORATORIES	A15-0012-004	99 RD	145,670	
SANDIA NATIONAL LABORATORIES	A16-0441-001	99 RD	103,695	
SANDIA NATIONAL LABORATORIES	A17-0410-001	99 RD	24,286	
SCALE-FREE UNTETHERED NETWORK SYSTEMS TECHNOLOGY	63924	99 RD	19,214	
SCARLESS LABORATORIES, INC	4R44DE024692-03	99 RD	78,167	
SOCIAL AND SCIENTIFIC SYSTEMS, INC.	79263	99 RD	513	
SOCIAL AND SCIENTIFIC SYSTEMS, INC.	89381	99 RD	695	
SOCIAL AND SCIENTIFIC SYSTEMS, INC.	CRB-SSS-S-15-004566	99 RD	1,907	
SOCIAL AND SCIENTIFIC SYSTEMS, INC.	CRB-SSS-S-15-004576	99 RD	58,743	
SOCIAL AND SCIENTIFIC SYSTEMS, INC.	CRB-SSS-S-16-005087	99 RD	76,796	
SOCIAL AND SCIENTIFIC SYSTEMS, INC.	Sub CRB-SSS-S-15-004567 (HHSN2	99 RD	137,022	
SOFIE BIOSCIENCES, INC	20143741	99 RD	45,097	
SOFIE BIOSCIENCES, INC	20144768	99 RD	66,222	
SOITEC SOLAR	20130388 (W912HQ-13-C-0032)	99 RD	119,172	
SOUTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION	SH1606-UCI-00-cyc1	99 RD	3,945	
SOUTHWEST RESEARCH INSTITUTE	H99010MO	99 RD	193,433	
SRI INTERNATIONAL	A16-0013-004	99 RD	(4,069)	
SRI INTERNATIONAL	A17-0607-001	99 RD	12,364	
STANFORD UNIVERSITY	A00-1367-012	99 RD	26,444	
STATE UNIVERSITY OF NEW YORK	SUB 68799(DESC0012583)	99 RD	315,211	
STONE AEROSPACE/PSC, INC.	A16-0296-001	99 RD	17,580	
TELEDYNE TECHNOLOGIES, INC.	PO00130549	99 RD	46,180	
TELESAGE, INC.	20150331	99 RD	15,389	
TETRA TECH, INC.	A16-0580-001	99 RD	6,947	
TETRA TECH, INC.	A16-0598-001	99 RD	17,505	
THE SCRIPPS RESEARCH INSTITUTE	5-52325	99 RD	125,188	
TOCAGEN INC.	20131971	99 RD	11,090	
TOYON RESEARCH CORPORATION	SC16-6989-1	99 RD	49,626	
TRISTAN TECHNOLOGIES	008499	99 RD	42,049	
TULANE UNIVERSITY	TUL-HSC-514-13/14 :4	99 RD	61,861	
TUNITAS THERAPEUTICS	77997	99 RD	(3,731)	
TYVAK NANO-SATELLITE SYSTEMS, INC.	NNX16CC36P	99 RD	55,000	
U.S. HIGHBUSH BLUEBERRY COUNCIL	201700387	99 RD	41,800	38,000
UNITED PURPOSE	63487	99 RD	40,558	
UNIVERSITIES RESEARCH ASSOCIATION (OPERATES FERMILAB)	618150	99 RD	308,664	
UNIVERSITIES RESEARCH ASSOCIATION (OPERATES FERMILAB)	633547	99 RD	129,985	
UNIVERSITIES RESEARCH ASSOCIATION (OPERATES FERMILAB)	PO #596112:13	99 RD	100,731	
UNIVERSITIES SPACE RESEARCH ASSOCIATION	Sub 08600-012 (NNA16BD14C)	99 RD	756	
UNIVERSITIES SPACE RESEARCH ASSOCIATION	USRA-08500-05:77	99 RD	5,456	
UNIVERSITY OF ARIZONA	20152604 (HHSN2612012000311)	99 RD	105,660	

The accompanying notes are an integral part of this schedule.

**UNIVERSITY OF CALIFORNIA**  
**Schedule of Expenditures of Federal Awards**  
**For the Fiscal Year Ended June 30, 2017**

Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	Federal CFDA #	FY 2017	
			Federal Expenditures	Pass-Through to Subrecipients
UNIVERSITY OF ARIZONA	Sub 20160294 (HHSN261201200031	99 RD	42,840	
UNIVERSITY OF IOWA	1001057397:05	99 RD	11,748	
UNIVERSITY OF MEMPHIS	20172095	99 RD	5,312	
UNIVERSITY OF MICHIGAN	3002565073:6	99 RD	259,180	
UNIVERSITY OF MICHIGAN	3003891771UM16-04-cyc1	99 RD	36,639	
UNIVERSITY OF MINNESOTA	A16-0585-001	99 RD	9,431	
UNIVERSITY OF MINNESOTA	X5336545102	99 RD	13,399	
UNIVERSITY OF NEW HAMPSHIRE	17-007:01	99 RD	114,169	
UNIVERSITY OF NEW MEXICO	008256	99 RD	42,936	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5056054	99 RD	11,183	
UNIVERSITY OF NOTRE DAME (INCL GEM)	202809UCSB	99 RD	45,893	24,303
UNIVERSITY OF NOTRE DAME (INCL GEM)	SB160093	99 RD	355,137	
UNIVERSITY OF PITTSBURGH	0024031-5:05	99 RD	178,295	
UNIVERSITY OF SOUTH FLORIDA	A16-0255-001	99 RD	20,626	
UNIVERSITY OF SOUTHERN CALIFORNIA	61207781	99 RD	19,207	
UNIVERSITY OF SOUTHERN CALIFORNIA	67808754	99 RD	233,115	
UNIVERSITY OF SOUTHERN CALIFORNIA	77793929	99 RD	40,566	
UNIVERSITY OF SOUTHERN CALIFORNIA	SUB 77364731(WEI1675-1915)	99 RD	200	
UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT HOUSTON	0012211B	99 RD	91,962	
UNIVERSITY OF TEXAS-AUSTIN	UTA15-000131	99 RD	136,032	
UNIVERSITY OF TEXAS-SOUTHWESTERN MEDICAL CENTER AT DALLAS	008621	99 RD	48,827	
UNIVERSITY OF UTAH	10009050-15CAPITATED:8	99 RD	25,477	
VANDERBILT UNIVERSITY	Sub VUMC 44030 (HHSN2722014000	99 RD	96,905	
VANDERBILT UNIVERSITY MEDICAL CENTER	VUMC 44299	99 RD	17,239	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	8737E	99 RD	87,293	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA 316054 MORLAND ( W81XWH-12	99 RD	49,582	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Rickes 315799 (TNX-CY-P201	99 RD	17,841	
VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY	63925	99 RD	1,326	
WASHINGTON UNIVERSITY IN ST. LOUIS	86789	99 RD	11,906	
WESTAT	6101-S074	99 RD	133,745	
WESTAT	Sub 6410-S-02 (HHSN27120160000	99 RD	165,744	
WOODS HOLE OCEANOGRAPHIC INSTITUTION	A101326	99 RD	173,707	
WORLD VISION INC	ACR2-001	99 RD	9,196	
WYLE LABORATORIES	T73047	99 RD	35,488	
Subtotal Pass-Through and Partial Pass-Through Awards			22,966,500	85,777
Total Other Federal Agencies			24,219,775	85,777
Total Research and Development Cluster			3,534,385,860	423,190,194

**DEPARTMENT OF AGRICULTURE - SUPPLEMENTAL NUTRITION ASSISTANCE PROGRAM (SNAP) CLUSTER**

Pass-Through and Partial Pass-Through

The accompanying notes are an integral part of this schedule.

**UNIVERSITY OF CALIFORNIA**  
**Schedule of Expenditures of Federal Awards**  
**For the Fiscal Year Ended June 30, 2017**

Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	Federal CFDA #	FY 2017	
			Federal Expenditures	Pass-Through to Subrecipients
ALAMEDA COUNTY	31A38	10 551	16,340	
ALAMEDA COUNTY	86A54	10 551	51,296	
TULARE, COUNTY OF	GENT-2016-38	10 551	21,370	
ALPINE, COUNTY OF	EW-2015-01	10 561	1,888	
ALPINE, COUNTY OF	EW-2016-01	10 561	3,555	
CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	15-IA-00006	10 561	2,300,990	194,979
CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	25879	10 561	526,718	133,762
CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	88296	10 561	4,938,196	
CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	88494	10 561	4,294,526	8,723
CONTRA COSTA HEALTH SERVICES	25B72	10 561	20,928	
GLENN, COUNTY OF	EW-2015-09	10 561	1,564	
GLENN, COUNTY OF	EW-2016-09	10 561	50,955	
Subtotal Pass-Through and Partial Pass-Through Awards			12,228,326	337,464
Total Department of Agriculture - Supplemental Nutrition Assistance Program Cluster			12,228,326	337,464
<b>DEPARTMENT OF LABOR - WIA/WIOA CLUSTER</b>				
Pass-Through and Partial Pass-Through				
CALIFORNIA EMPLOYMENT DEVELOPMENT DEPARTMENT	18313	17 258	(571)	
CITY OF LOS ANGELES	20700	17 258	(174,525)	
Subtotal Program-Pass-Through and Partial Pass-Through			(175,096)	-
CITY OF LOS ANGELES	20609	17 259	(2,316)	
CITY OF LOS ANGELES	20719	17 259	(2,783)	
CITY OF LOS ANGELES	20720	17 259	14,578	
CITY OF LOS ANGELES	20739	17 259	(1,073)	
CITY OF LOS ANGELES	20740	17 259	(2,753)	
CITY OF LOS ANGELES	T5954	17 259	1,428,592	
Subtotal Program-Pass-Through and Partial Pass-Through			1,434,245	-
Total Department of Labor - WIA/WIOA Cluster			1,259,149	-
<b>DEPARTMENT OF TRANSPORT - FEDERAL TRANSIT CLUSTER</b>				
Pass-Through and Partial Pass-Through				
DAVIS, CITY OF	201016490	20 500	(34,504)	
Subtotal Program-Pass-Through and Partial Pass-Through			(34,504)	-
DAVIS, CITY OF	CA-2016-101-00	20 507	164,436	
Subtotal Program-Pass-Through and Partial Pass-Through			164,436	-
DAVIS, CITY OF	CA-2016-107-00	20 526	408,968	
Subtotal Program-Pass-Through and Partial Pass-Through			408,968	-

The accompanying notes are an integral part of this schedule.

**UNIVERSITY OF CALIFORNIA**  
**Schedule of Expenditures of Federal Awards**  
**For the Fiscal Year Ended June 30, 2017**

Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	Federal CFDA #	FY 2017	
			Federal Expenditures	Pass-Through to Subrecipients
Total Department of Transportation - Federal Transit Cluster			538,900	-
<b>DEPARTMENT OF TRANSPORT- HIGHWAY SAFETY CLUSTER</b>				
Pass-Through and Partial Pass-Through				
CALIFORNIA OFFICE OF TRAFFIC SAFETY	PS1724	20 600	96,083	
CALIFORNIA OFFICE OF TRAFFIC SAFETY	84562	20 600	(25)	
CALIFORNIA OFFICE OF TRAFFIC SAFETY	PS1615	20 600	23,474	
CALIFORNIA OFFICE OF TRAFFIC SAFETY	PS1616	20 600	55,831	
CALIFORNIA OFFICE OF TRAFFIC SAFETY	PS1625	20 600	59,914	
CALIFORNIA OFFICE OF TRAFFIC SAFETY	PS1721	20 600	535,395	123,384
CALIFORNIA OFFICE OF TRAFFIC SAFETY	PT16155	20 600	134,350	
CALIFORNIA OFFICE OF TRAFFIC SAFETY	PT17129	20 600	604,716	
Subtotal Program-Pass-Through and Partial Pass-Through			1,509,738	123,384
CALIFORNIA DEPARTMENT OF TRANSPORTATION	53-6073F15	20 610	134,820	
CALIFORNIA OFFICE OF TRAFFIC SAFETY	TR1605	20 610	38,672	
Subtotal Program-Pass-Through and Partial Pass-Through			173,492	-
CALIFORNIA OFFICE OF TRAFFIC SAFETY	PS1623	20 616	179,997	
CALIFORNIA OFFICE OF TRAFFIC SAFETY	1826C	20 616	(3,482)	
CALIFORNIA OFFICE OF TRAFFIC SAFETY	AL1607	20 616	308,732	
CALIFORNIA OFFICE OF TRAFFIC SAFETY	DD1604	20 616	86,606	
CALIFORNIA OFFICE OF TRAFFIC SAFETY	DI1724-cyc1	20 616	128,596	
CALIFORNIA OFFICE OF TRAFFIC SAFETY	OP1616	20 616	129,853	
CALIFORNIA OFFICE OF TRAFFIC SAFETY	TR1604	20 616	15,374	
CALIFORNIA OFFICE OF TRAFFIC SAFETY	TR1606	20 616	43,179	
CALIFORNIA OFFICE OF TRAFFIC SAFETY	TR1613	20 616	22,726	
CALIFORNIA OFFICE OF TRAFFIC SAFETY	TR1614	20 616	41,899	
CALIFORNIA OFFICE OF TRAFFIC SAFETY	TR1709	20 616	53,271	
CALIFORNIA OFFICE OF TRAFFIC SAFETY	TR1710	20 616	76,811	
CALIFORNIA OFFICE OF TRAFFIC SAFETY	TR1711	20 616	101,039	
CALIFORNIA OFFICE OF TRAFFIC SAFETY	TR1712	20 616	122,007	
CALIFORNIA OFFICE OF TRAFFIC SAFETY	TR1713	20 616	54,227	
Subtotal Program-Pass-Through and Partial Pass-Through			1,360,835	-
Total Department of Transportation - Highway Safety Cluster			3,044,065	123,384
<b>DEPARTMENT OF EDUCATION - TRIO CLUSTER</b>				
Direct Awards				
DEPARTMENT OF EDUCATION	Various	84 042	2,225,914	
DEPARTMENT OF EDUCATION	Various	84 044	2,561,589	
DEPARTMENT OF EDUCATION	Various	84 047	2,920,626	

The accompanying notes are an integral part of this schedule.

**UNIVERSITY OF CALIFORNIA**  
**Schedule of Expenditures of Federal Awards**  
**For the Fiscal Year Ended June 30, 2017**

Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	FY 2017			Pass-Through to Subrecipients
		Federal CFDA #	Federal Expenditures		
DEPARTMENT OF EDUCATION	Various	84	217	1,075,621	
Sub-Total Direct Awards				8,783,750	-
Pass-Through and Partial Pass-Through					
TEHAMA, COUNTY OF	P044A110708	84	044	27,940	
Subtotal Program-Pass-Through and Partial Pass-Through				27,940	-
STATE CENTER COMMUNITY COLLEGE DISTRICT	28B06	84	047	3,471	
STATE CENTER COMMUNITY COLLEGE DISTRICT	75A77	84	047	1,424	
Subtotal Program-Pass-Through and Partial Pass-Through				4,895	-
Total Pass-Through and Partial Pass-Through Awards				32,835	-
Total Department of Education - TRIO Cluster				8,816,585	-
<b>DEPARTMENT OF EDUCATION - GAIN EARLY AWARENESS AND READINESS FOR UNDERGRADUATE</b>					
Direct Awards					
DEPARTMENT OF EDUCATION	Various	84	334	9,084,511	393,077
Sub-Total Direct Awards				9,084,511	393,077
Pass-Through and Partial Pass-Through					
LOS ANGELES UNIFIED SCHOOL DISTRICT	1200264/4400002260:3	84	334	82,870	
RANCHO SANTIAGO COMMUNITY COLLEGE DISTRICT	DO-14-1517-02-cyc2	84	334	38,264	
Subtotal Program-Pass-Through and Partial Pass-Through				121,134	-
Total Department of Education - GAIN EARLY AWARENESS AND READINESS FOR UNDERGRADUATE				9,205,645	393,077
<b>DEPARTMENT OF HEALTH AND HUMAN SERVICES - AGING CLUSTER</b>					
ADMINISTRATION ON AGING					
Pass-Through and Partial Pass-Through					
COUNTY OF SONOMA	XX-2015-33	93	044	(3,578)	
Subtotal Pass-Through and Partial Pass-Through Awards				(3,578)	-
Total Department of Health and Human Services - Aging Cluster				(3,578)	-
<b>DEPARTMENT OF HEALTH AND HUMAN SERVICES - HEALTH CENTER PROGRAM CLUSTER</b>					
HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION					
Direct Awards					
HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	Various	93	224	1,652,141	
Pass-Through and Partial Pass-Through					
ALTAMED HEALTH SERVICES CORPORATION	79607	93	224	(1,665)	
NORTHEAST VALLEY HEALTH CORPORATION	20141037	93	224	314,773	

The accompanying notes are an integral part of this schedule.

**UNIVERSITY OF CALIFORNIA**  
**Schedule of Expenditures of Federal Awards**  
**For the Fiscal Year Ended June 30, 2017**

Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	Federal CFDA #	Federal Expenditures	FY 2017	
				Pass-Through to Subrecipients	
Subtotal Pass-Through and Partial Pass-Through Awards			313,108	-	
Total Department of Health and Human Services - Health Center Program Cluster			1,965,249	-	
<b>MATERNAL, INFANT, and EARLY CHILDHOOD HOME VISITING CLUSTER</b>					
AFFORDABLE CARE ACT (ACA)					
TEXAS HEALTH AND HUMAN SERVICES COMMISSION	529-12-0138-00001:5	93 505	230,285		
Subtotal Program-Pass-Through and Partial Pass-Through			230,285	-	
Total Department of Health and Human Services - Maternal, Infant, and Early Childhood Home Visiting Cluster			230,285	-	
<b>DEPARTMENT OF HEALTH AND HUMAN SERVICES - TEMPORARY ASSISTANCE FOR NEEDY FAMILIES (TANF) CLUSTER</b>					
ADMINISTRATION FOR CHILDREN AND FAMILIES					
Pass-Through and Partial Pass-Through					
ALAMEDA COUNTY	201602383	93 558	264,402		
ALPINE, COUNTY OF	WK-2016-01	93 558	7,110		
AMADOR, COUNTY OF	EW-2015-02	93 558	(24)		
AMADOR, COUNTY OF	EW-2016-02	93 558	13,035		
BUTTE, COUNTY OF	C000113325	93 558	(1,110)		
BUTTE, COUNTY OF	EW-2016-03	93 558	20,362		
CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	96752	93 558	9		
COLUSA, COUNTY OF	CW-2015-05	93 558	145		
COLUSA, COUNTY OF	EW-2015-05	93 558	677		
COLUSA, COUNTY OF	EW-2016-05	93 558	27,732		
CONTRA COSTA COUNTY	19-699-5	93 558	(1,853)		
CONTRA COSTA COUNTY	19-699-6	93 558	210,743		
COUNTY OF MARIN	89A96	93 558	51,944		
COUNTY OF MARIN	EW-2015-17	93 558	5,885		
COUNTY OF SOLANO	WK-2016-32	93 558	66,360		
COUNTY OF SONOMA	WK-2016-33	93 558	42,660		
DEL NORTE COUNTY	2016-047	93 558	23,700		
EL DORADO, COUNTY OF	EW-2015-07	93 558	42,667		
FRESNO COUNTY	EW-2015-08	93 558	4,720		
FRESNO COUNTY	EW-2016-08	93 558	213,829		
HUMBOLDT COUNTY	EW-2015-10	93 558	169		
HUMBOLDT COUNTY	EW-2016-10	93 558	52,890		
KERN COUNTY	273-2015	93 558	1,813		
KERN COUNTY	955-2016	93 558	171,783		
KINGS, COUNTY OF	16-031	93 558	58,065		
LAKE, COUNTY OF	EW-2015-14	93 558	655		

The accompanying notes are an integral part of this schedule.

**UNIVERSITY OF CALIFORNIA**  
**Schedule of Expenditures of Federal Awards**  
**For the Fiscal Year Ended June 30, 2017**

Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	Federal CFDA #	FY 2017	
			Federal Expenditures	Pass-Through to Subrecipients
LAKE, COUNTY OF	EW-2016-14	93 558	87,166	
MADERA, COUNTY OF	27B40	93 558	29,625	
MADERA, COUNTY OF	CW-2015-16	93 558	318	
MARIPOSA, COUNTY OF	16-313	93 558	28,440	
MARIPOSA, COUNTY OF	EW-2015-18	93 558	(295)	
MERCED, COUNTY OF	38A58	93 558	96,318	
MERCED, COUNTY OF	EW-2015-19	93 558	(7,964)	
MODOC, COUNTY OF	16-58	93 558	43,845	
MODOC, COUNTY OF	EW-2015-20	93 558	1,185	
MODOC, COUNTY OF	WK-2016-20	93 558	9,480	
MONO, COUNTY OF	CW-2016-21	93 558	12,837	
MONO, COUNTY OF	EW-2016-21	93 558	20,145	
MONTEREY COUNTY	84A05	93 558	85,400	
MONTEREY COUNTY	EW-2015-22	93 558	(900)	
NAPA, COUNTY OF	EW-2015-23	93 558	(4,597)	
NAPA, COUNTY OF	EW-2016-23 2131	93 558	39,145	
NEVADA, COUNTY OF	16-263	93 558	80,850	
NEVADA, COUNTY OF	EW-2015-24	93 558	792	
PLACER, COUNTY OF	28B87	93 558	11,850	
PLUMAS, COUNTY OF	28B86	93 558	13,035	
RIVERSIDE COUNTY	AA-03369	93 558	18,688	
RIVERSIDE COUNTY	WK-2015-48	93 558	9,480	
SAN BENITO, COUNTY OF	EW-2016-27	93 558	23,700	
SAN BENITO, COUNTY OF	GENT-2016-27	93 558	(2,963)	
SAN DIEGO COUNTY	EW-2016-51	93 558	90,060	
SAN JOAQUIN COUNTY	A-16-132	93 558	1,185	
SAN JOAQUIN COUNTY	A-16-133	93 558	37,920	
SAN LUIS OBISPO, COUNTY OF	25010703	93 558	30,417	
SAN MATEO COUNTY	EW-2016-43	93 558	30,512	
SANTA BARBARA, COUNTY OF	GENT-2016-54	93 558	23,740	
SANTA CRUZ, COUNTY OF	CW-2015-56	93 558	988	
SANTA CRUZ, COUNTY OF	EW-2015-56	93 558	(1,998)	
SANTA CRUZ, COUNTY OF	EW-2016-56	93 558	158,070	
SHASTA, COUNTY OF	GENT-2015-29	93 558	641	
SIERRA, COUNTY OF	89A94	93 558	21,330	
SIERRA, COUNTY OF	EW-2015-30	93 558	1,560	
SISKIYOU, COUNTY OF	EW-2015-31	93 558	984	
SISKIYOU, COUNTY OF	EW-2016-31	93 558	42,854	
SISKIYOU, COUNTY OF	GENT-2016-31	93 558	2,844	
STANISLAUS, COUNTY OF	27B38	93 558	1,113	
STANISLAUS, COUNTY OF	EW-2015-34	93 558	59,842	
STANISLAUS, COUNTY OF	GENT-2015-34	93 558	31,995	

The accompanying notes are an integral part of this schedule.

**UNIVERSITY OF CALIFORNIA**  
**Schedule of Expenditures of Federal Awards**  
**For the Fiscal Year Ended June 30, 2017**

Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	Federal CFDA #	FY 2017	
			Federal Expenditures	Pass-Through to Subrecipients
SUTTER COUNTY	EW-2015-35	93 558	(132)	
SUTTER COUNTY	EW-2016-35	93 558	42,660	
TEHAMA, COUNTY OF	EW-2015-36	93 558	1,053	
TRINITY, COUNTY OF	EW-2016-37	93 558	16,590	
TULARE, COUNTY OF	EW-2016-38	93 558	26,094	
TUOLUMNE, COUNTY OF	EW-2016-39	93 558	16,590	
YOLO COUNTY	16-178	93 558	28,668	
YUBA COUNTY	CW-2016-41	93 558	3,950	
YUBA COUNTY	EW-2015-41	93 558	777	
YUBA COUNTY	EW-2016-41	93 558	30,285	
YUBA COUNTY	XX-2016-41	93 558	4,740	
Subtotal Pass-Through and Partial Pass-Through Awards			2,579,280	-
Total Department of Health and Human Services - Temporary Assistance for Needy Families (TANF) Cluster			2,579,280	-

**DEPARTMENT OF HEALTH AND HUMAN SERVICES - CHILD CARE AND DEVELOPMENT FUND (CCDF) CLUSTER**

ADMINISTRATION FOR CHILDREN AND FAMILIES				
CALIFORNIA CHILD DEVELOPMENT DIVISION	CN150183	93 575	638,176	
CALIFORNIA DEPARTMENT OF EDUCATION	CCTR-5264	93 575	2,373	
CALIFORNIA DEPARTMENT OF EDUCATION	18855	93 575	23,036	
CALIFORNIA DEPARTMENT OF EDUCATION	18859	93 575	29,324	
CALIFORNIA DEPARTMENT OF EDUCATION	18883	93 575	(10,071)	
CALIFORNIA DEPARTMENT OF EDUCATION	CCTR-5162-cyc1	93 575	(1,191)	
CALIFORNIA DEPARTMENT OF EDUCATION	CCTR-6162-cyc1	93 575	163,676	
CALIFORNIA DEPARTMENT OF EDUCATION	CSPP-6337-cyc1	93 575	74,421	
CALIFORNIA CHILD DEVELOPMENT DIVISION	008396	93 596	203,439	
CALIFORNIA DEPARTMENT OF EDUCATION	CCSP-6527	93 596	28,042	
CALIFORNIA DEPARTMENT OF EDUCATION	CSPP-5510	93 596	183	
CALIFORNIA DEPARTMENT OF EDUCATION	18858	93 596	55,500	
CALIFORNIA DEPARTMENT OF EDUCATION	18882	93 596	(12,267)	
CALIFORNIA DEPARTMENT OF EDUCATION	18887	93 596	248	
CALIFORNIA DEPARTMENT OF EDUCATION	18294	93 596	591	
CALIFORNIA DEPARTMENT OF EDUCATION	A17-0141-001	93 596	173,678	
CALIFORNIA DEPARTMENT OF EDUCATION	18742	93 596	(6,075)	
Subtotal Pass-Through and Partial Pass-Through Awards			1,363,083	-
Total Department of Health and Human Services - Child Care and Development Fund (CCDF) Cluster			1,363,083	-

**DEPARTMENT OF HEALTH AND HUMAN SERVICES - TITLE IV-E FOSTER CARE PROGRAM CLUSTER**

ADMINISTRATION FOR CHILDREN AND FAMILIES

The accompanying notes are an integral part of this schedule.



**UNIVERSITY OF CALIFORNIA**  
**Schedule of Expenditures of Federal Awards**  
**For the Fiscal Year Ended June 30, 2017**

Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	Federal CFDA #	FY 2017	
			Federal Expenditures	Pass-Through to Subrecipients
Pass-Through and Partial Pass-Through				
BUTTE, COUNTY OF	22198	93 658	41,792	
CALAVERAS, COUNTY OF	C000113532	93 658	5,668	
CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	00009523	93 658	2,780	
CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	142009	93 658	2,080,197	
CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	142021	93 658	168,017	
CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	15-IA-00850	93 658	8,593,689	8,567,688
CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	15-IA-01124	93 658	2,508,101	234,535
CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	16-IA-00775	93 658	19,827,743	16,907,592
CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	16-IA-00870	93 658	125,193	
CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	33475	93 658	(1)	
CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	36A00	93 658	2,059,443	
CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	84483	93 658	(1,089)	(1,089)
CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	84533	93 658	(8,963)	(8,963)
CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	16-IA-00870	93 658	500,771	
CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	00008907:01	93 658	25,619	
CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	00009245	93 658	1,221,390	
COUNTY OF MARIN	89A95	93 658	7,900	
COUNTY OF SONOMA	CW-2016-33	93 658	29,625	
GLENN, COUNTY OF	81A39	93 658	170,714	
GLENN, COUNTY OF	C000113218	93 658	10,394	
INYO, COUNTY OF	EW-2016-11	93 658	59,250	
LAKE, COUNTY OF	CW-2016-14	93 658	3,950	
MADERA, COUNTY OF	27B39	93 658	47,400	
MADERA, COUNTY OF	EW-2015-16	93 658	(809)	
MENDOCINO, COUNTY OF	C000113345	93 658	2,127	
MERCED, COUNTY OF	38A59	93 658	55,887	
MERCED, COUNTY OF	CW-2015-19	93 658	(790)	
NAPA, COUNTY OF	CW-2016-23 7420	93 658	5,431	
NEVADA, COUNTY OF	16-442	93 658	12,157	
NEVADA, COUNTY OF	38A85	93 658	(282)	
PLACER, COUNTY OF	CW-2016-25	93 658	15,800	
SACRAMENTO, COUNTY OF	7205000-16-314	93 658	(624)	
SACRAMENTO, COUNTY OF	7205000-16-585	93 658	10,023	
SACRAMENTO, COUNTY OF	7205000-17-314	93 658	93,405	
SACRAMENTO, COUNTY OF	7205000-17-585	93 658	65,796	
SACRAMENTO, COUNTY OF	7205000-17-589	93 658	39,576	
SAN BENITO, COUNTY OF	CW-2016-27	93 658	7,307	
SAN JOAQUIN COUNTY	A-16-129	93 658	66,360	
SAN JOAQUIN COUNTY	A-16-130	93 658	22,293	
SAN LUIS OBISPO, COUNTY OF	WK-2014-52 A1	93 658	1,161	
SANTA CRUZ, COUNTY OF	CW-2016-56	93 658	8,134	

The accompanying notes are an integral part of this schedule.

**UNIVERSITY OF CALIFORNIA**  
**Schedule of Expenditures of Federal Awards**  
**For the Fiscal Year Ended June 30, 2017**

Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	Federal CFDA #	FY 2017	
			Federal Expenditures	Pass-Through to Subrecipients
SHASTA, COUNTY OF	GENT-2016-29	93 658	80,621	
TUOLUMNE, COUNTY OF	CW-2016-39	93 658	1,975	
Subtotal Pass-Through and Partial Pass-Through Awards			37,965,131	25,699,763
Total Department of Health and Human Services - Title IV Foster Care Program Cluster			37,965,131	25,699,763
<b>DEPARTMENT OF HEALTH AND HUMAN SERVICES - MEDICAID CLUSTER</b>				
HCFA CENTERS FOR MEDICARE AND MEDICAID SERVICES				
ALPINE, COUNTY OF	GENT-2015-01	93 778	240	
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	14-10012	93 778	4,847	
COUNTY OF SONOMA	EW-2016-33	93 778	33,180	
SAN JOAQUIN COUNTY	A-16-131	93 778	14,670	
Subtotal Pass-Through and Partial Pass-Through Awards			52,937	-
Total Department of Health and Human Services - Medicaid Cluster			52,937	-
<b>OTHER PROGRAMS</b>				
DEPARTMENT OF AGRICULTURE				
Direct Awards				
DEPARTMENT OF AGRICULTURE	Various	10 001	162,292	
DEPARTMENT OF AGRICULTURE	Various	10 025	922,896	
DEPARTMENT OF AGRICULTURE	Various	10 202	6,050	
DEPARTMENT OF AGRICULTURE	Various	10 202	18,381	
DEPARTMENT OF AGRICULTURE	Various	10 203	1,559,977	
DEPARTMENT OF AGRICULTURE	Various	10 223	3,020	
DEPARTMENT OF AGRICULTURE	Various	10 253	30,000	
DEPARTMENT OF AGRICULTURE	Various	10 303	(48)	
DEPARTMENT OF AGRICULTURE	Various	10 304	323,710	
DEPARTMENT OF AGRICULTURE	Various	10 307	99	
DEPARTMENT OF AGRICULTURE	Various	10 309	102,771	
DEPARTMENT OF AGRICULTURE	Various	10 310	83,234	
DEPARTMENT OF AGRICULTURE	Various	10 311	52	
DEPARTMENT OF AGRICULTURE	Various	10 329	357,192	
DEPARTMENT OF AGRICULTURE	Various	10 406	30,598	
DEPARTMENT OF AGRICULTURE	Various	10 460	20,607	
DEPARTMENT OF AGRICULTURE	Various	10 500	13,876,671	25,250
DEPARTMENT OF AGRICULTURE	Various	10 612	1,883	
DEPARTMENT OF AGRICULTURE	Various	10 680	224,383	
DEPARTMENT OF AGRICULTURE	Various	10 777	71,072	

The accompanying notes are an integral part of this schedule.

**UNIVERSITY OF CALIFORNIA**  
**Schedule of Expenditures of Federal Awards**  
**For the Fiscal Year Ended June 30, 2017**

Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	FY 2017			
		Federal CFDA #	Federal Expenditures	Pass-Through to Subrecipients	
DEPARTMENT OF AGRICULTURE	Various	10 902	1,117		
DEPARTMENT OF AGRICULTURE	Various	10 932	94		
DEPARTMENT OF AGRICULTURE	Various	10 961	2,188		
DEPARTMENT OF AGRICULTURE	Various	10 962	158,822		
DEPARTMENT OF AGRICULTURE	Various	10 UNKNOWN	876,000		
Sub-Total Direct Awards			18,833,061		25,250
Pass-Through and Partial Pass-Through					
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	15-0629-SF	10 025	9,121		
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	25A34	10 025	(7)		
Subtotal Program-Pass-Through and Partial Pass-Through			9,114		-
CALAVERAS UNIFIED SCHOOL DISTRICT	21B60	10 170	6,778		
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	201402716-01	10 170	2,772		
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	26147	10 170	2,746		1,283
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	27230	10 170	3,654		3,531
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB13022	10 170	(27)		
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB15029	10 170	150,621		
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB16031	10 170	40,299		38,178
RANCHO CALIFORNIA WATER DISTRICT	27792	10 170	1,349		
Subtotal Program-Pass-Through and Partial Pass-Through			208,192		42,992
UTAH STATE UNIVERSITY	73A95	10 215	19,088		
Subtotal Program-Pass-Through and Partial Pass-Through			19,088		-
FOOD BANK COALITION OF SAN LUIS OBISPO COUNTY	27B94	10 225	10,014		
Subtotal Program-Pass-Through and Partial Pass-Through			10,014		-
OREGON STATE UNIVERSITY	84135	10 309	(8,351)		
Subtotal Program-Pass-Through and Partial Pass-Through			(8,351)		-
UNIVERSITY OF MARYLAND	32297	10 310	67,211		
UNIVERSITY OF MISSOURI	C000501441	10 310	95,443		31,471
Subtotal Program-Pass-Through and Partial Pass-Through			162,654		31,471
OREGON STATE UNIVERSITY	C0494AB	10 328	38,045		
Subtotal Program-Pass-Through and Partial Pass-Through			38,045		-
KANSAS STATE UNIVERSITY	31A16	10 500	7,505		
KANSAS STATE UNIVERSITY	38A27	10 500	27,198		
KANSAS STATE UNIVERSITY	88A22	10 500	23,865		
PENNSYLVANIA STATE UNIVERSITY	5396-UC-USDA-2628	10 500	4,160		
UNIVERSITY OF WYOMING	24760	10 500	4,000		
UNIVERSITY OF WYOMING	33910	10 500	(4,000)		
WASHINGTON STATE UNIVERSITY	108815G003426	10 500	2,082		
WASHINGTON STATE UNIVERSITY	25B79	10 500	2,156		
WASHINGTON STATE UNIVERSITY	74A65	10 500	33,373		
Subtotal Pass-Through and Partial Pass-Through Awards			100,339		-
CALIFORNIA DEPARTMENT OF EDUCATION	003376	10 558	79,770		
CALIFORNIA DEPARTMENT OF EDUCATION	301466-1A-cyc34	10 558	9,598		

The accompanying notes are an integral part of this schedule.

**UNIVERSITY OF CALIFORNIA**  
**Schedule of Expenditures of Federal Awards**  
**For the Fiscal Year Ended June 30, 2017**

Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	Federal CFDA #	FY 2017		
			Federal Expenditures	Pass-Through to Subrecipients	
CALIFORNIA DEPARTMENT OF EDUCATION	301466-1A-cyc35	10 558	28,088		
Subtotal Program-Pass-Through and Partial Pass-Through			117,456		-
CALIFORNIA DEPARTMENT OF EDUCATION	CN160098	10 560	398,646		
Subtotal Program-Pass-Through and Partial Pass-Through			398,646		-
YOLO COUNTY	201602102	10 575	15,000		
YOLO COUNTY	77A35	10 575	(3,329)		
Subtotal Program-Pass-Through and Partial Pass-Through			11,671		-
WESTAT	31A31	10 585	42		
Subtotal Program-Pass-Through and Partial Pass-Through			42		-
WATERSHED RESEARCH AND TRAINING CENTER	71A82	10 664	77,215		
Subtotal Program-Pass-Through and Partial Pass-Through			77,215		-
CALIFORNIA DEPARTMENT OF FORESTRY AND FIRE PROTECTION	23B20	10 675	83,310		
CALIFORNIA DEPARTMENT OF FORESTRY AND FIRE PROTECTION	82599	10 675	107,628		
Subtotal Program-Pass-Through and Partial Pass-Through			190,938		-
NATIONAL FOREST FOUNDATION	ZH-501	10 682	448,059		
Subtotal Program-Pass-Through and Partial Pass-Through			448,059		-
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	74A13	10 912	4,994	2,000	
Subtotal Program-Pass-Through and Partial Pass-Through			4,994	2,000	
CALIFORNIA DEPARTMENT OF FORESTRY AND FIRE PROTECTION	83755	10 UNKNOWN	109		
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	25B98	10 UNKNOWN	4,933		
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	18353	10 UNKNOWN	(18,887)		
CALIFORNIA EMERGENCY MANAGEMENT AGENCY	AT15011141	10 UNKNOWN	(701)		
COUNTERPART INTERNATIONAL, INC	1028A4	10 UNKNOWN	42,885		
SLOUGHHOUSE RESOURCE CONSERVATION DISTRICT	21B73	10 UNKNOWN	6,460		
STANISLAUS, COUNTY OF	27787	10 UNKNOWN	29,108		
Subtotal Pass-Through and Partial Pass-Through Awards			63,907		-
Total Pass-Through and Partial Pass-Through Awards			1,852,023	76,463	
Total Department of Agriculture			20,685,084	101,713	
DEPARTMENT OF COMMERCE					
Direct Awards					
DEPARTMENT OF COMMERCE	Various	11 008	168,846	2,969	
DEPARTMENT OF COMMERCE	Various	11 020	3,463		
DEPARTMENT OF COMMERCE	Various	11 417	32,880		
DEPARTMENT OF COMMERCE	Various	11 463	85,532	37,090	
DEPARTMENT OF COMMERCE	Various	11 UNKNOWN	27,483	17,523	
Sub-Total Direct Awards			318,204	57,582	
Pass-Through and Partial Pass-Through					
NATIONAL MARINE SANCTUARY FOUNDATION	16-06-B-00071	11 008	25,986		
Subtotal Program-Pass-Through and Partial Pass-Through			25,986		-
NATIONAL MARINE SANCTUARY FOUNDATION	15-11-B-00042	11 011	22,790		
Subtotal Program-Pass-Through and Partial Pass-Through			22,790		-

The accompanying notes are an integral part of this schedule.

**UNIVERSITY OF CALIFORNIA**  
**Schedule of Expenditures of Federal Awards**  
**For the Fiscal Year Ended June 30, 2017**

Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	Federal CFDA #	FY 2017	
			Federal Expenditures	Pass-Through to Subrecipients
BIOACCEL	ED15HDQ0200008-cyc1	11 302	49,000	
Subtotal Program-Pass-Through and Partial Pass-Through			49,000	-
UNIVERSITY OF SOUTHERN CALIFORNIA	007747	11 307	6,918	
UNIVERSITY OF SOUTHERN CALIFORNIA	86561	11 307	34,589	
Subtotal Program-Pass-Through and Partial Pass-Through			41,507	-
Total Pass-Through and Partial Pass-Through Awards			139,283	-
Total Department of Commerce			457,487	57,582
DEPARTMENT OF DEFENSE				
Direct Awards				
DEPARTMENT OF NAVY	Various	12 300	50,235	
DEPARTMENT OF ARMY	Various	12 400	58,529	
DEPARTMENT OF ARMY	Various	12 420	309,952	
DEPARTMENT OF ARMY	Various	12 431	7,382	
DEPARTMENT OF AIR FORCE	Various	12 UNKNOWN	24,192	
SEPARATE AGENCIES	Various	12 900	408,490	
DEPARTMENT OF NAVY	Various	12 UNKNOWN	8,982,512	646,235
Sub-Total Direct Awards			9,841,292	646,235
Pass-Through and Partial Pass-Through				
ARIZONA STATE UNIVERSITY/TEMPE	15-733	12 300	141,280	
COLE ENGINEERING SERVICES, INC.	0348-16-D-0002-001	12 300	233,719	
THE NATIONAL MARINE MAMMAL FOUNDATION	UCD-0580	12 300	25,448	
TOYON RESEARCH CORPORATION	59747	12 300	15	
Subtotal Program-Pass-Through and Partial Pass-Through			400,462	-
MASSACHUSETTS EYE AND EAR INFIRMARY	38037	12 420	2,717	
THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	000507860-014	12 420	58,973	
Subtotal Program-Pass-Through and Partial Pass-Through			61,690	-
INSTITUTE OF INTERNATIONAL EDUCATION	0054-UCLA-10-SSR-280-PO3	12 550	17,860	
INSTITUTE OF INTERNATIONAL EDUCATION	0054-UCLA-10-TT-280-PO4	12 550	1,908	
INSTITUTE OF INTERNATIONAL EDUCATION	PO# 0054-UCLA-10-SSR-280-PO2	12 550	43,450	
INSTITUTE OF INTERNATIONAL EDUCATION	59201	12 550	(105)	
Subtotal Program-Pass-Through and Partial Pass-Through			63,113	-
CARNEGIE MELLON UNIVERSITY	96479	12 800	(8)	
Subtotal Program-Pass-Through and Partial Pass-Through			(8)	-
STANFORD UNIVERSITY	61395568124634	12 910	10,596	
Subtotal Program-Pass-Through and Partial Pass-Through			10,596	-
AMERICAN BURN ASSOCIATION	201015946	12 UNKNOWN	65,169	
AMERICAN BURN ASSOCIATION	201120770	12 UNKNOWN	529,899	
AMERICAN BURN ASSOCIATION	201121873	12 UNKNOWN	(11)	
LOCKHEED MARTIN CORPORATION	4102790434	12 UNKNOWN	387,098	
POWER ANALYTICS CORPORATION	13-C-0064-05(W912HQ-13-C-0064)	12 UNKNOWN	(9,449)	
REAL TIME RESEARCH, INC.	20A78	12 UNKNOWN	2,428	

The accompanying notes are an integral part of this schedule.

**UNIVERSITY OF CALIFORNIA**  
**Schedule of Expenditures of Federal Awards**  
**For the Fiscal Year Ended June 30, 2017**

Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	Federal CFDA #	FY 2017	
			Federal Expenditures	Pass-Through to Subrecipients
Subtotal Program-Pass-Through and Partial Pass-Through			975,134	-
Subtotal Pass-Through and Partial Pass-Through Awards			1,510,987	-
Total Department of Defense			11,352,279	646,235
HOUSING & URBAN DEVELOPMENT				
Pass-Through and Partial Pass-Through				
CITY AND COUNTY OF SAN FRANCISCO	A124764	14 267	182,763	
Subtotal Pass-Through and Partial Pass-Through Awards			182,763	-
Total Housing & Urban Development			182,763	-
DEPARTMENT OF INTERIOR				
Direct Awards				
DEPARTMENT OF INTERIOR	Various	15 231	8,205	
DEPARTMENT OF INTERIOR	Various	15 631	1,299	
DEPARTMENT OF INTERIOR	Various	15 649	5,000	
DEPARTMENT OF INTERIOR	Various	15 656	14,458	
DEPARTMENT OF INTERIOR	Various	15 657	755	
DEPARTMENT OF INTERIOR	Various	15 678	9,235	
DEPARTMENT OF INTERIOR	Various	15 933	149,633	
DEPARTMENT OF INTERIOR	Various	15 945	16,063	
DEPARTMENT OF INTERIOR	Various	15 954	1,976	
DEPARTMENT OF INTERIOR	Various	15 UNKNOWN	2,620,337	
Sub-Total Direct Awards			2,826,961	-
Pass-Through and Partial Pass-Through				
CHUCK & JUDY WHEATLEY	25993	15 631	(8)	
Subtotal Program-Pass-Through and Partial Pass-Through			(8)	-
COASTAL ECOSYSTEMS INSTITUTE OF NORTHERN CALIFORNIA	F15AC01065	15 669	6,752	
Subtotal Program-Pass-Through and Partial Pass-Through			6,752	-
COOPERATIVE ECOSYSTEM STUDIES UNITS	32928	15 945	67,588	
COOPERATIVE ECOSYSTEM STUDIES UNITS	32929	15 945	18,519	
Subtotal Program-Pass-Through and Partial Pass-Through			86,107	-
NATIONAL WRITING PROJECT	92-CA03-NPS2016	15 954	4,766	
Subtotal Program-Pass-Through and Partial Pass-Through			4,766	-
Subtotal Pass-Through and Partial Pass-Through Awards			97,617	-
Total Department of Interior			2,924,578	-
DEPARTMENT OF JUSTICE				
Direct Awards				
DEPARTMENT OF JUSTICE	Various	16 525	238,639	(3,785)
DEPARTMENT OF JUSTICE	Various	16 526	118,410	
DEPARTMENT OF JUSTICE	Various	16 562	20,388	
DEPARTMENT OF JUSTICE	Various	16 734	21,271	

The accompanying notes are an integral part of this schedule.

**UNIVERSITY OF CALIFORNIA**  
**Schedule of Expenditures of Federal Awards**  
**For the Fiscal Year Ended June 30, 2017**

Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	Federal CFDA #	FY 2017	
			Federal Expenditures	Pass-Through to Subrecipients
Sub-Total Direct Awards			398,708	(3,785)
Pass-Through and Partial Pass-Through				
CALIFORNIA EMERGENCY MANAGEMENT AGENCY	RC16 32 1141	16 575	501,249	
CALIFORNIA EMERGENCY MANAGEMENT AGENCY	008613	16 575	85,474	15,616
Subtotal Program-Pass-Through and Partial Pass-Through			586,723	15,616
NATIONAL COUNCIL OF JUVENILE AND FAMILY COURT JUDGES	32514-SR-1	16 585	416	
NATIONAL COUNCIL OF JUVENILE AND FAMILY COURT JUDGES	32615-SR-4	16 585	21,787	
NATIONAL COUNCIL OF JUVENILE AND FAMILY COURT JUDGES	37015-SR-1:1	16 585	37,978	
Subtotal Program-Pass-Through and Partial Pass-Through			60,181	-
CALIFORNIA EMERGENCY MANAGEMENT AGENCY	RC15 31 1141:1	16 588	63,495	
Subtotal Program-Pass-Through and Partial Pass-Through			63,495	-
Subtotal Pass-Through and Partial Pass-Through Awards			710,399	15,616
Total Department of Justice			1,109,107	11,831
DEPARTMENT OF LABOR				
Direct Awards				
DEPARTMENT OF LABOR	Various	17 502	306,723	
Sub-Total Direct Awards			306,723	-
Pass-Through and Partial Pass-Through				
CITY OF LOS ANGELES	20702	17 267	75,071	
CITY OF LOS ANGELES	20703	17 267	72,626	
CITY OF LOS ANGELES	77015	17 267	(7,835)	
CITY OF LOS ANGELES	77018	17 267	(3,206)	
Subtotal Program-Pass-Through and Partial Pass-Through			136,656	-
CITY OF LOS ANGELES ECONOMIC AND WORKFORCE DEVELOPMENT DEPARTMENT	T5897	17 283	41,262	
Subtotal Program-Pass-Through and Partial Pass-Through			41,262	-
CLERGY AND LAITY UNITED FOR ECONOMIC JUSTICE-CALIFORNIA	58652	17 502	(392)	
Subtotal Program-Pass-Through and Partial Pass-Through			(392)	-
Subtotal Pass-Through and Partial Pass-Through Awards			177,526	-
Total Department of Labor			484,249	-
DEPARTMENT OF STATE				
Direct Awards				
DEPARTMENT OF STATE	Various	19 345	255,789	
DEPARTMENT OF STATE	Various	19 700	1,000	
DEPARTMENT OF STATE	Various	19 UNKNOWN	40,573	
Sub-Total Direct Awards			297,362	-
Pass-Through and Partial Pass-Through				
INTERNATIONAL RESEARCH AND EXCHANGES BOARD, INC.	S-ECAGD-15-CA-1125	19 009	48,954	
INTERNATIONAL RESEARCH AND EXCHANGES BOARD, INC.	FY16YALIENUCD01	19 009	105,039	
Subtotal Program-Pass-Through and Partial Pass-Through			153,993	-
INSTITUTE OF INTERNATIONAL EDUCATION	3067UCDAVIS	19 010	534	

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**UNIVERSITY OF CALIFORNIA**  
**Schedule of Expenditures of Federal Awards**  
**For the Fiscal Year Ended June 30, 2017**

Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	FY 2017		
		Federal CFDA #	Federal Expenditures	Pass-Through to Subrecipients
INSTITUTE OF INTERNATIONAL EDUCATION	3223UCDAVIS712016	19 010	252,611	
INSTITUTE OF INTERNATIONAL EDUCATION	3223_UC Davis_4.1.16	19 010	207,503	
INSTITUTE OF INTERNATIONAL EDUCATION	27843	19 010	(534)	
INSTITUTE OF INTERNATIONAL EDUCATION	28B13	19 010	48,912	
Subtotal Program-Pass-Through and Partial Pass-Through			509,026	-
UNITED STATES-INDIA EDUCATIONAL FOUNDATION	USIEF/OSI/2014/03	19 014	64,225	
Subtotal Program-Pass-Through and Partial Pass-Through			64,225	-
WASHINGTON STATE UNIVERSITY	130497G003684	19 040	9,674	
Subtotal Program-Pass-Through and Partial Pass-Through			9,674	-
INSTITUTE OF INTERNATIONAL EDUCATION	20160641:1	19 401	3,014	
INSTITUTE OF INTERNATIONAL EDUCATION	81044	19 401	45,407	
Subtotal Program-Pass-Through and Partial Pass-Through			48,421	-
GLOBAL TIES U.S.	20161491	19 402	14,036	
GLOBAL TIES U.S.	CPG-FY17-163	19 402	16,069	
Subtotal Program-Pass-Through and Partial Pass-Through			30,105	-
INSTITUTE OF INTERNATIONAL EDUCATION	24B22	19 UNKNOWN	29,879	
INTERNATIONAL RESEARCH AND EXCHANGES BOARD, INC.	FY17YALIPMUCD02	19 UNKNOWN	72,185	
Subtotal Program-Pass-Through and Partial Pass-Through			102,064	-
Subtotal Pass-Through and Partial Pass-Through Awards			917,508	-
Total Department of State			1,214,870	-
DEPARTMENT OF TRANSPORT				
Direct Awards				
DEPARTMENT OF TRANSPORT	Various	20 215	113,604	
DEPARTMENT OF TRANSPORT	Various	20 701	52,000	
Sub-Total Direct Awards			165,604	-
Pass-Through and Partial Pass-Through				
APPLIED PAVEMENT TECHNOLOGY, INC.	TOPR115001RR01UCD	20 UNKNOWN	18,058	
APPLIED PAVEMENT TECHNOLOGY, INC.	TOPR215001RR02UCD	20 UNKNOWN	14,381	
APPLIED PAVEMENT TECHNOLOGY, INC.	TOPR315001RR03UCD	20 UNKNOWN	2,793	
DAVIS, CITY OF	201121523	20 UNKNOWN	92,570	
DAVIS, CITY OF	201401317	20 UNKNOWN	6,369	
DAVIS, CITY OF	201502866	20 UNKNOWN	1,612,344	
DAVIS, CITY OF	88297	20 UNKNOWN	55,616	
Subtotal Pass-Through and Partial Pass-Through Awards			1,802,131	-
Total Department of Transportation			1,967,735	-
LIBRARY OF CONGRESS				
Direct Awards				
Total Library of Congress	GA10C0005	42 UNKNOWN	172,221	-
NATIONAL AERONAUTICS & SPACE ADMINISTRATION				

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**UNIVERSITY OF CALIFORNIA**  
**Schedule of Expenditures of Federal Awards**  
**For the Fiscal Year Ended June 30, 2017**

Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	FY 2017		
		Federal CFDA #	Federal Expenditures	Pass-Through to Subrecipients
Direct Awards				
NATIONAL AERONAUTICS & SPACE ADMINISTRATION	Various	43 001	714,467	
NATIONAL AERONAUTICS & SPACE ADMINISTRATION	Various	43 008	63,877	
NATIONAL AERONAUTICS & SPACE ADMINISTRATION	Various	43 012	52,675	
NATIONAL AERONAUTICS & SPACE ADMINISTRATION	Various	43 UNKNOWN	1,989	
Sub-Total Direct Awards			833,008	-
Pass-Through and Partial Pass-Through				
BAY AREA ENVIRONMENTAL RESEARCH INSTITUTE	201602561	43 001	(1,140)	
SOUTHERN ILLINOIS UNIVERSITY EDWARDSVILLE	761582-007	43 001	1,250	
Subtotal Program-Pass-Through and Partial Pass-Through			110	-
SCIENCE MUSEUM OF MINNESOTA	NNX16AC67A	43 002	352,859	
Subtotal Program-Pass-Through and Partial Pass-Through			352,859	-
JET PROPULSION LABORATORY	1473032	43 UNKNOWN	11,341	
JET PROPULSION LABORATORY	1553399	43 UNKNOWN	7,974	
Subtotal Program-Pass-Through and Partial Pass-Through			19,315	-
Subtotal Pass-Through and Partial Pass-Through Awards			372,284	-
Total National Aeronautics & Space Administration			1,205,292	-
NATIONAL FOUNDATION ARTS & HUMANITIES				
Direct Awards				
NATIONAL FOUNDATION ARTS & HUMANITIES	Various	45 024	40,752	
NATIONAL FOUNDATION ARTS & HUMANITIES	Various	45 130	355,708	
NATIONAL FOUNDATION ARTS & HUMANITIES	Various	45 149	266,171	
NATIONAL FOUNDATION ARTS & HUMANITIES	Various	45 161	282,619	5,628
NATIONAL FOUNDATION ARTS & HUMANITIES	Various	45 163	321,433	
NATIONAL FOUNDATION ARTS & HUMANITIES	Various	45 164	31,675	
NATIONAL FOUNDATION ARTS & HUMANITIES	Various	45 169	96,041	
NATIONAL FOUNDATION ARTS & HUMANITIES	Various	45 UNKNOWN	46,948	
INSTITUTE OF MUSEUM AND LIBRARY SERVICES	Various	45 301	134,998	52,631
INSTITUTE OF MUSEUM AND LIBRARY SERVICES	Various	45 312	84,777	
INSTITUTE OF MUSEUM AND LIBRARY SERVICES	Various	45 313	40,391	
Sub-Total Direct Awards			1,701,513	58,259
Pass-Through and Partial Pass-Through				
ARHOOLIE FOUNDATION, THE	20122751	45 149	1,823	
Subtotal Program-Pass-Through and Partial Pass-Through			1,823	-
UNIVERSITY OF MASSACHUSETTS AMHERST	15-008716 A 00	45 169	4,419	
Subtotal Program-Pass-Through and Partial Pass-Through			4,419	-
Subtotal Pass-Through and Partial Pass-Through Awards			6,242	-
Total National Foundation Arts & Humanities			1,707,755	58,259
DEPARTMENT OF HOMELAND SECURITY				
Pass-Through and Partial Pass-Through				

The accompanying notes are an integral part of this schedule.

**UNIVERSITY OF CALIFORNIA**  
**Schedule of Expenditures of Federal Awards**  
**For the Fiscal Year Ended June 30, 2017**

Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	Federal CFDA #	FY 2017	
			Federal Expenditures	Pass-Through to Subrecipients
CALIFORNIA EMERGENCY MANAGEMENT AGENCY	2005-0011 0019 20	97 047	29,335	
CALIFORNIA EMERGENCY MANAGEMENT AGENCY	2005-0011 0020 20	97 047	29,335	
Subtotal Program-Pass-Through and Partial Pass-Through			58,670	-
PURDUE UNIVERSITY	4112-57682	97 UNKNOWN	(8)	
Subtotal Program-Pass-Through and Partial Pass-Through			(8)	-
Total Department of Homeland Security			58,662	-
SMALL BUSINESS ADMINISTRATION (SBA)				
Direct Awards				
SMALL BUSINESS ADMINISTRATION (SBA)	Various	59 007	1,024,502	772,233
SMALL BUSINESS ADMINISTRATION (SBA)	Various	59 037	495,341	267,385
Total Small Business Administration			1,519,843	1,039,618
DEPARTMENT OF VETERANS AFFAIRS				
Direct Awards	Various	64 UNKNOWN	1,877,586	
Total Department of Veterans Affairs			1,877,586	-
ENVIRONMENTAL PROTECTION AGENCY				
Direct Awards				
ENVIRONMENTAL PROTECTION AGENCY	Various	66 514	37,927	
ENVIRONMENTAL PROTECTION AGENCY	Various	66 716	574,388	118,539
ENVIRONMENTAL PROTECTION AGENCY	Various	66 UNKNOWN	1,989,930	1,266,458
Sub-Total Direct Awards			2,602,245	1,384,997
Pass-Through and Partial Pass-Through				
CALIFORNIA DEPARTMENT OF PESTICIDE REGULATION	15-C0052	66 306	210,203	
Subtotal Program-Pass-Through and Partial Pass-Through			210,203	-
HUMBOLDT COUNTY	80A35	66 460	14,625	
Subtotal Program-Pass-Through and Partial Pass-Through			14,625	-
CALIFORNIA DEPARTMENT OF PESTICIDE REGULATION	88A43	66 605	35,000	
Subtotal Program-Pass-Through and Partial Pass-Through			35,000	-
ABT ASSOCIATES INC.	47020	66 UNKNOWN	65,808	
Subtotal Program-Pass-Through and Partial Pass-Through			65,808	-
Subtotal Pass-Through and Partial Pass-Through Awards			325,636	-
Total Environmental Protection Agency			2,927,881	1,384,997
NUCLEAR REGULATORY COMMISSION				
Direct Awards	Various	77 008	91,759	
Total Nuclear Regulatory Commission			91,759	-
DEPARTMENT OF ENERGY				
Direct Awards				
DEPARTMENT OF ENERGY	Various	81 049	254,995	

The accompanying notes are an integral part of this schedule.

**UNIVERSITY OF CALIFORNIA**  
**Schedule of Expenditures of Federal Awards**  
**For the Fiscal Year Ended June 30, 2017**

Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	FY 2017			Pass-Through to Subrecipients
		Federal CFDA #	Federal Expenditures		
DEPARTMENT OF ENERGY	Various	81 121	400,033		
DEPARTMENT OF ENERGY	Various	81 124	54,059		
DEPARTMENT OF ENERGY	Various	81 136	139,738		
DEPARTMENT OF ENERGY	Various	81 UNKNOWN	3,358,007		
Sub-Total Direct Awards			4,206,832		-
Pass-Through and Partial Pass-Through					
SANDIA NATIONAL LABORATORIES	1486765	81 049	(135,701)		
Subtotal Program-Pass-Through and Partial Pass-Through			(135,701)		-
KRELL INSTITUTE	040010	81 112	92		
Subtotal Program-Pass-Through and Partial Pass-Through			92		-
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B599115	81 UNKNOWN	8,706		
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B620069	81 UNKNOWN	45,205		
SANDIA CORPORATION	1778026	81 UNKNOWN	4,170		
SANDIA NATIONAL LABORATORIES	1486765	81 UNKNOWN	35,000		
Subtotal Program-Pass-Through and Partial Pass-Through			93,081		-
Subtotal Pass-Through and Partial Pass-Through Awards			(42,528)		-
Total Department of Energy			4,164,304		-
DEPARTMENT OF EDUCATION					
Direct Awards					
DEPARTMENT OF EDUCATION	Various	84 015	3,124,453		51,671
DEPARTMENT OF EDUCATION	Various	84 021	18,228		
DEPARTMENT OF EDUCATION	Various	84 022	590,632		
DEPARTMENT OF EDUCATION	Various	84 031	1,688,863		
DEPARTMENT OF EDUCATION	Various	84 200	3,238,738		
DEPARTMENT OF EDUCATION	Various	84 229	154,849		
DEPARTMENT OF EDUCATION	Various	84 305	256,507		
DEPARTMENT OF EDUCATION	Various	84 324	57,892		
DEPARTMENT OF EDUCATION	Various	84 335	533,350		
DEPARTMENT OF EDUCATION	Various	84 336	1,827,476		205,062
DEPARTMENT OF EDUCATION	Various	84 365	758,831		87,491
DEPARTMENT OF EDUCATION	Various	84 367	70,550		
DEPARTMENT OF EDUCATION	Various	84 382	195,923		2,236
DEPARTMENT OF EDUCATION	Various	84 407	30,175		
DEPARTMENT OF EDUCATION	Various	84 411	597,172		223,941
DEPARTMENT OF EDUCATION	Various	84 UNKNOWN	583,105		
Sub-Total Direct Awards			13,726,744		570,401
Pass-Through and Partial Pass-Through					
UNIVERSITY OF SOUTHERN CALIFORNIA	55655151:01	84 015	168,835		
UNIVERSITY OF SOUTHERN CALIFORNIA	55655350:01	84 015	116,247		
Subtotal Program-Pass-Through and Partial Pass-Through			285,082		-
CALIFORNIA STATE UNIVERSITY, DOMINGUEZ HILLS FOUNDATION	F16-439	84 031	18,241		

The accompanying notes are an integral part of this schedule.

**UNIVERSITY OF CALIFORNIA**  
**Schedule of Expenditures of Federal Awards**  
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Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	Federal CFDA #	FY 2017	
			Federal Expenditures	Pass-Through to Subrecipients
SAN JOSE CITY COLLEGE	A16-0099-001	84 031	164,585	
SANTA MONICA COLLEGE	A121646NC	84 031	49,941	
SANTA MONICA COLLEGE	A121646NC:4	84 031	231,616	
Subtotal Program-Pass-Through and Partial Pass-Through			464,383	-
UNIVERSITY OF MINNESOTA	A15-0201-002	84 116	35,317	
Subtotal Program-Pass-Through and Partial Pass-Through			35,317	-
SAN BERNARDINO COMMUNITY COLLEGE DISTRICT	006116	84 120	34,038	
SAN MATEO COUNTY	A16-0055	84 120	7,629	
Subtotal Program-Pass-Through and Partial Pass-Through			41,667	-
CALIFORNIA DEPARTMENT OF REHABILITATION	29716	84 126	96,949	
CALIFORNIA DEPARTMENT OF REHABILITATION	UCSF#A121902	84 126	14,445	
Subtotal Program-Pass-Through and Partial Pass-Through			111,394	-
MISSION ECONOMIC DEVELOPMENT AGENCY	A121767	84 215	44,087	
MISSION ECONOMIC DEVELOPMENT AGENCY	A121828	84 215	49,610	
Subtotal Program-Pass-Through and Partial Pass-Through			93,697	-
WESTED	S12-173:4	84 283	478,453	
Subtotal Program-Pass-Through and Partial Pass-Through			478,453	-
EDUCATION DEVELOPMENT CENTER, INC.	11972	84 295	122,197	
PUBLIC BROADCASTING SERVICE	20154615	84 295	427,585	
Subtotal Program-Pass-Through and Partial Pass-Through			549,782	-
AMERICAN EDUCATION SOLUTIONS, INC.	AES2014-01	84 324	296,806	
Subtotal Program-Pass-Through and Partial Pass-Through			296,806	-
CALIFORNIA STATE UNIVERSITY, DOMINGUEZ HILLS FOUNDATION	F15-449	84 336	271,721	
Subtotal Program-Pass-Through and Partial Pass-Through			271,721	-
STANFORD UNIVERSITY	60445465101341C	84 365	167,158	
Subtotal Program-Pass-Through and Partial Pass-Through			167,158	-
YOLO COUNTY OFFICE OF EDUCATION	201402994	84 366	174,883	
Subtotal Program-Pass-Through and Partial Pass-Through			174,883	-
CALIFORNIA DEPARTMENT OF EDUCATION	15-15196-3004-00	84 367	199,870	
CALIFORNIA DEPARTMENT OF EDUCATION	CN150131	84 367	1,019,828	980,297
CALIFORNIA DEPARTMENT OF EDUCATION	CN150131	84 367	8,631	
CALIFORNIA DEPARTMENT OF EDUCATION	NCLB13-CWP-UCM	84 367	104,027	
CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	NCLB12-CHSSP-UCB	84 367	(2,075)	
CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	NCLB13-CHSSP-UCB	84 367	41,808	
CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	NCLB13-CRLP-UCB	84 367	38,950	
CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	NCLB13-CWP-UCB	84 367	16,354	
CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	NCLB12-CMP-UCD	84 367	1,230	
CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	NCLB13-CHSSP-SO	84 367	138,916	
CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	NCLB13-CHSSP-UCD	84 367	45,000	
CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	NCLB13-CMP-UCD	84 367	22,492	
CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	NCLB13-CWP-UCD	84 367	36,315	
CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	008283	84 367	36,099	

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**UNIVERSITY OF CALIFORNIA**  
**Schedule of Expenditures of Federal Awards**  
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Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	FY 2017			
		Federal		Federal	Pass-Through to
		CFDA #		Expenditures	Subrecipients
CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	008838	84	367	36,177	
CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	NCLB13-CMP-UCB	84	367	30,393	
CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	SUB NCLB13-CRLP-UCSD(CN160088)	84	367	43,583	
CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	SUB NCLB13-CSP-UCSD(CN160088)	84	367	35,714	
CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	Sub NCLB13-CWP-UCSD(CN16008)	84	367	36,289	
CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	NCLB13-CMP-UCI-cyc1	84	367	23,000	
CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	NCLB13-CRLP-UCI-cyc1	84	367	43,627	
CALIFORNIA POSTSECONDARY EDUCATION COMMISSION	ITQ097600	84	367	567,608	27,500
CALIFORNIA STATE UNIVERSITY SACRAMENTO/UNIVERSITY ENTERPRISES, INC.	528781D	84	367	24,464	
NATIONAL WRITING PROJECT	92-CA05-SEED2016	84	367	18,324	
NATIONAL WRITING PROJECT	92-CA05-SEED2016-ILI	84	367	14,580	
NATIONAL WRITING PROJECT	92-CA05-SEE	84	367	49	
NATIONAL WRITING PROJECT	92-CA09-SEED2012	84	367	1,881	
NATIONAL WRITING PROJECT	92-CA09-SEED2016	84	367	14,600	
NATIONAL WRITING PROJECT	92-CA09-SEED2016-ILI	84	367	7,378	
NATIONAL WRITING PROJECT	92-CA09-SEED2017-CRWPPD	84	367	119	
NATIONAL WRITING PROJECT	008122	84	367	14,905	
NATIONAL WRITING PROJECT	008930	84	367	3,059	
NATIONAL WRITING PROJECT	92-CA14-SEED2012	84	367	9,249	
NATIONAL WRITING PROJECT	01 CA18 SEED 2016	84	367	6,112	
NATIONAL WRITING PROJECT	01-CA18-SEED2017-CRWPAI	84	367	3,855	
NATIONAL WRITING PROJECT	92-CA03-SEED2012	84	367	4,301	
NATIONAL WRITING PROJECT	A16-0524-001	84	367	18,720	
NATIONAL WRITING PROJECT	A17-0831-001	84	367	600	
OFFICE OF POSTSECONDARY EDUCATION	NCLB13-CSP-UCB	84	367	35,320	
STATE OF CALIFORNIA DEPARTMENT OF JUSTICE	NCLB12-CHSSP-UCI-cyc1	84	367	1,025	
Subtotal Program-Pass-Through and Partial Pass-Through				2,702,377	1,007,797
CALIFORNIA STUDENT AID COMMISSION	18883	84	378	87,859	
Subtotal Program-Pass-Through and Partial Pass-Through				87,859	-
CALIFORNIA CHILD DEVELOPMENT DIVISION	CN120093	84	UNKNOWN	8,433	
CALIFORNIA STUDENT AID COMMISSION	G-09-006	84	UNKNOWN	(52,601)	
SAN DIEGO COUNTY	20851	84	UNKNOWN	1,016,476	
Subtotal Program-Pass-Through and Partial Pass-Through				972,308	-
Subtotal Pass-Through and Partial Pass-Through Awards				6,732,887	1,007,797.00
Total Department of Education				20,459,631	1,578,198
DEPARTMENT OF HEALTH AND HUMAN SERVICES					
Direct Awards					
ADMH PHS (SAMHSA) MENTAL HEALTH - CENTER FOR MENTAL HEALTH SERVICES	Various	93	243	1,234,287	250,397
ADMH PHS (SAMHSA) PREVENTION - CENTER FOR SUBSTANCE ABUSE PREVENTION	Various	93	243	5,209,225	2,521,418
ADMH PHS (SAMHSA) TREATMENT - CENTER FOR SUBSTANCE ABUSE TREATMENT	Various	93	243	411,105	
Subtotal ADMH PHS (SAMHSA)				6,854,617	2,771,815

The accompanying notes are an integral part of this schedule.

**UNIVERSITY OF CALIFORNIA**  
**Schedule of Expenditures of Federal Awards**  
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Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	FY 2017			
		Federal CFDA #	Federal Expenditures	Pass-Through to Subrecipients	
CDC CENTERS FOR DISEASE CONTROL AND PREVENTION	Various	93 067	6,016,885	998,061	
CDC CENTERS FOR DISEASE CONTROL AND PREVENTION	Various	93 068	3,653		
CDC CENTERS FOR DISEASE CONTROL AND PREVENTION	Various	93 262	2,855,775	11,730	
CDC CENTERS FOR DISEASE CONTROL AND PREVENTION	Various	93 270	323,273		
CDC CENTERS FOR DISEASE CONTROL AND PREVENTION	Various	93 283	109,085		
CDC CENTERS FOR DISEASE CONTROL AND PREVENTION	Various	93 542	223,804	188,290	
CDC CENTERS FOR DISEASE CONTROL AND PREVENTION	Various	93 735	1,001,543		
CDC CENTERS FOR DISEASE CONTROL AND PREVENTION	Various	93 738	1,112,431	144,218	
CDC CENTERS FOR DISEASE CONTROL AND PREVENTION	Various	93 833	191,512	781	
CDC CENTERS FOR DISEASE CONTROL AND PREVENTION	Various	93 939	1,020,905	40,857	
CDC CENTERS FOR DISEASE CONTROL AND PREVENTION	Various	93 947	1,087,455		
CDC CENTERS FOR DISEASE CONTROL AND PREVENTION	Various	93 977	1,289,646	363,531	
CDC CENTERS FOR DISEASE CONTROL AND PREVENTION	Various	93 UNKNOWN	383,283		
Subtotal Center for Disease Control and Prevention			15,619,250	1,747,468	
FDA PHS FOOD AND DRUG ADMINISTRATION	Various	93 103	17,800		
FDA PHS FOOD AND DRUG ADMINISTRATION	Various	93 448	353,079		
FDA PHS FOOD AND DRUG ADMINISTRATION	Various	93 UNKNOWN	11,969		
Subtotal PHS Food and Drug Administration			382,848	-	
HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	Various	93 059	(702)		
HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	Various	93 107	1,219,304	957,046	
HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	Various	93 110	2,974,765	151,818	
HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	Various	93 117	602,973		
HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	Various	93 127	260,898	57,646	
HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	Various	93 145	6,404,640	1,191,055	
HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	Various	93 153	752,729	277,521	
HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	Various	93 156	67,901		
HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	Various	93 186	867,711		
HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	Various	93 191	42,303		
HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	Various	93 243	318,465		
HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	Various	93 247	469,714	62,748	
HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	Various	93 253	1,871,872		
HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	Various	93 359	51,165		
HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	Various	93 510	846,731	128,957	
HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	Various	93 846	(233)		
HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	Various	93 884	1,995,813	65,305	
HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	Various	93 888	12,629		
HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	Various	93 928	526,117		
HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	Various	93 969	1,601,933	294,181	
HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	Various	93 UNKNOWN	20,630		
Subtotal PHS Health Resources and Services Administration			20,907,358	3,186,277	
OHDS ADMINISTRATION FOR CHILDREN AND FAMILIES	Various	93 092	363,071	225,361	
OHDS ADMINISTRATION FOR CHILDREN AND FAMILIES	Various	93 551	426,111		

The accompanying notes are an integral part of this schedule.

**UNIVERSITY OF CALIFORNIA**  
**Schedule of Expenditures of Federal Awards**  
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Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	FY 2017			
		Federal		Federal	Pass-Through to
		CFDA #		Expenditures	Subrecipients
OHDS ADMINISTRATION FOR CHILDREN AND FAMILIES	Various	93	600	1,366,123	12,176
OHDS ADMINISTRATION FOR CHILDREN AND FAMILIES	Various	93	604	353,696	
Subtotal Administration for Children and Families				2,509,001	237,537
PHS AGENCY FOR HEALTHCARE RESEARCH AND QUALITY	Various	93	225	1,084,780	
PHS AGENCY FOR HEALTHCARE RESEARCH AND QUALITY	Various	93	226	884,993	74,933
Subtotal Agency for Healthcare Research and Quality				1,969,773	74,933
SEC ADMINISTRATION FOR COMMUNITY LIVING	Various	93	631	144,701	
SEC ADMINISTRATION FOR COMMUNITY LIVING	Various	93	632	1,143,252	13,000
Subtotal Administration for Community Living				1,287,953	13,000
SEC HHS OFFICE OF THE SECRETARY	Various	93	085	53,145	
Subtotal HHS Office of the Secretary				53,145	-
Sub-Total Direct Awards				49,583,945	8,031,030
Pass-Through and Partial Pass-Through					
COUNTY OF SONOMA	XX-2016-33	93	004	50,349	
Subtotal Program-Pass-Through and Partial Pass-Through				50,349	-
AURUM INSTITUTE	A128676	93	067	15,818	
COLUMBIA UNIVERSITY	A126704	93	067	6,115,010	
ELIZABETH GLASER PEDIATRIC AIDS FOUNDATION	CP-05-9-170-04073-5-00	93	067	106,793	
MAKERERE UNIVERSITY	METS-A-01	93	067	919,391	32,238
MAKERERE UNIVERSITY	METS-C-01	93	067	(96)	
MAKERERE UNIVERSITY	METS-D-01	93	067	(131)	
MAKERERE UNIVERSITY	METS-B-01	93	067	(114)	
POPULATION COUNCIL - NEW YORK	SH1619	93	067	70,019	3,414
TB/HIV CARE ASSOCIATION	A128731	93	067	169,495	104,084
Subtotal Program-Pass-Through and Partial Pass-Through				7,396,185	139,736
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	1321081	93	070	65,194	
Subtotal Program-Pass-Through and Partial Pass-Through				65,194	-
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	15-10250	93	074	2,336,222	
COUNTY OF LOS ANGELES	H-75761:2	93	074	577	
Subtotal Program-Pass-Through and Partial Pass-Through				2,336,799	-
CENTER FOR COMPREHENSIVE CARE & DIAGNOSIS OF INHERITED BLOOD DISORDERS	CIBDIX2015CDCUCD	93	080	43,577	
Subtotal Program-Pass-Through and Partial Pass-Through				43,577	-
NATIONAL COUNCIL FOR BEHAVIORAL HEALTH	2390.0005	93	098	92,807	
Subtotal Program-Pass-Through and Partial Pass-Through				92,807	-
CENTER FOR COMPREHENSIVE CARE & DIAGNOSIS OF INHERITED BLOOD DISORDERS	CIBDIX2012HRSA-UCSF	93	110	227,678	
Subtotal Program-Pass-Through and Partial Pass-Through				227,678	-
RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	8196	93	145	222,379	
Subtotal Program-Pass-Through and Partial Pass-Through				222,379	-
CITY AND COUNTY OF SAN FRANCISCO	BPHC11000126	93	157	759,950	266,535
CITY AND COUNTY OF SAN FRANCISCO	DPHC16000677	93	157	582,095	128,538
Subtotal Program-Pass-Through and Partial Pass-Through				1,342,045	395,073
CENTER FOR COMPREHENSIVE CARE & DIAGNOSIS OF INHERITED BLOOD DISORDERS	CIBDIX2011CDC-UCSF-1	93	184	42,498	

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			Federal Expenditures	Pass-Through to Subrecipients
Subtotal Program-Pass-Through and Partial Pass-Through			42,498	-
CALIFORNIA DEPARTMENT OF HEALTH CARE SERVICES	15-92030	93 217	6,928	
ESSENTIAL ACCESS HEALTH	2495-5320-71209-14	93 217	131,722	
ESSENTIAL ACCESS HEALTH	1324-5320-71219-16-17	93 217	90,814	
Subtotal Program-Pass-Through and Partial Pass-Through			229,464	-
SEATTLE CHILDREN'S HOSPITAL, RESEARCH AND FOUNDATION	11500SUB	93 226	18,320	
Subtotal Program-Pass-Through and Partial Pass-Through			18,320	-
MOUNT SINAI MEDICAL CENTER	0253-6142-4609	93 242	13,397	
PUBLIC HEALTH FOUNDATION ENTERPRISES, INC.	0176.0103	93 242	9,454	
Subtotal Program-Pass-Through and Partial Pass-Through			22,851	-
AMERICAN ACADEMY OF ADDICTION PSYCHIATRY INC	PCSSMAT-16-7	93 243	9,628	
AZUSA PACIFIC UNIVERSITY	S-1H79T1026021-1	93 243	45,656	
RAND CORP	9920130076:04	93 243	98,948	
Subtotal Program-Pass-Through and Partial Pass-Through			154,232	-
CALIFORNIA STATE UNIVERSITY SAN MARCOS CORPORATION	Sub 14-35DB (HP26952-01-00)	93 247	90,749	
Subtotal Program-Pass-Through and Partial Pass-Through			90,749	-
UNIVERSITY OF MISSOURI - KANSAS CITY	0074255/00056301	93 260	44,973	
Subtotal Program-Pass-Through and Partial Pass-Through			44,973	-
UNIVERSITY OF WASHINGTON	759280 PRIOR 751195	93 266	215,601	
Subtotal Program-Pass-Through and Partial Pass-Through			215,601	-
UNIVERSITY OF NEW MEXICO	028349-873N:1	93 273	3,279	
Subtotal Program-Pass-Through and Partial Pass-Through			3,279	-
AMERICAN ACADEMY OF CHILD & ADOLESCENT PSYCHIATRY	20164307	93 279	123,470	
Subtotal Program-Pass-Through and Partial Pass-Through			123,470	-
LOMA LINDA UNIVERSITY (INCL NATL MEDICAL TECHNOLOGY TESTBED, INC.)	63181	93 286	1	
Subtotal Program-Pass-Through and Partial Pass-Through			1	-
PUBLIC HEALTH FOUNDATION ENTERPRISES, INC.	0350.0102	93 307	16,460	
Subtotal Program-Pass-Through and Partial Pass-Through			16,460	-
BOSTON COLLEGE	5101962-9	93 310	25,387	
CALIFORNIA STATE UNIVERSITY, SAN FRANCISCO STATE UNIVERSITY	1RL5MD009599-01	93 310	326,001	
CALIFORNIA STATE UNIVERSITY, SAN FRANCISCO STATE UNIVERSITY	S16-0016	93 310	53,982	
UNIVERSITY OF MINNESOTA	N005259906	93 310	17,754	
Subtotal Program-Pass-Through and Partial Pass-Through			423,124	-
PUBLIC HEALTH FOUNDATION ENTERPRISES, INC.	201600514	93 323	18,790	
Subtotal Program-Pass-Through and Partial Pass-Through			18,790	-
ALTAMED HEALTH SERVICES CORPORATION	20143247	93 359	114,112	
FAMILY HEALTH CENTERS OF SAN DIEGO, INC	Sub none(HP29857)	93 359	18,454	
WOMENS COMMUNITY CLINIC	UCSF#A124307	93 359	1,174	
Subtotal Program-Pass-Through and Partial Pass-Through			133,740	-
CENTER FOR COMPREHENSIVE CARE & DIAGNOSIS OF INHERITED BLOOD DISORDERS	57443	93 365	183,606	
Subtotal Program-Pass-Through and Partial Pass-Through			183,606	-
DANA-FARBER CANCER INSTITUTE	B7463	93 395	396	

The accompanying notes are an integral part of this schedule.



**UNIVERSITY OF CALIFORNIA**  
**Schedule of Expenditures of Federal Awards**  
**For the Fiscal Year Ended June 30, 2017**

Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	Federal CFDA #	FY 2017	
			Federal Expenditures	Pass-Through to Subrecipients
INDIANA UNIVERSITY	59749	93 395	944	
ST. JUDE CHILDREN'S RESEARCH HOSPITAL	B4164	93 395	221	
UNIVERSITY OF SOUTHERN CALIFORNIA	86620293	93 395	30,317	
Subtotal Program-Pass-Through and Partial Pass-Through			31,878	-
LUDWIG INSTITUTE FOR CANCER RESEARCH	270703-05003	93 398	24,003	
UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT SAN ANTONIO	158716/158715	93 398	14,794	
Subtotal Program-Pass-Through and Partial Pass-Through			38,797	-
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	23534	93 507	(2,392)	
Subtotal Program-Pass-Through and Partial Pass-Through			(2,392)	-
CALIFORNIA DEPARTMENT OF INSURANCE	8209sc	93 511	31,767	
Subtotal Program-Pass-Through and Partial Pass-Through			31,767	-
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	1110674	93 521	94,024	
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	16-10002	93 521	2,594,520	10,302
Subtotal Program-Pass-Through and Partial Pass-Through			2,688,544	10,302
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	1210097	93 566	78,698	
Subtotal Program-Pass-Through and Partial Pass-Through			78,698	-
AMERICAN ACADEMY OF PEDIATRICS	719150 UCLA	93 600	790,759	242,242
CALIFORNIA MEDICAL CENTER	20111273:6	93 600	182,517	
UNIVERSITY OF MASSACHUSETTS AMHERST	20160127	93 600	442,002	
UNIVERSITY OF MASSACHUSETTS AMHERST	90HC0011-01-00	93 600	233,974	
UNIVERSITY OF MASSACHUSETTS AMHERST	81284	93 600	156,845	
UNIVERSITY OF MASSACHUSETTS AMHERST	81289	93 600	230,752	
UNIVERSITY OF MASSACHUSETTS AMHERST	81291	93 600	4,127	
UNIVERSITY OF MASSACHUSETTS AMHERST	81292	93 600	22,429	
Subtotal Program-Pass-Through and Partial Pass-Through			2,063,405	242,242
CALIFORNIA DEPARTMENT OF HEALTH CARE SERVICES	27491	93 609	(21,392)	
Subtotal Program-Pass-Through and Partial Pass-Through			(21,392)	-
CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	23366	93 624	(84,461)	
Subtotal Program-Pass-Through and Partial Pass-Through			(84,461)	-
SISKIYOU, COUNTY OF	CW-2015-31	93 645	(490)	
TEHAMA, COUNTY OF	CSA/SIP-2016-01	93 645	13,808	
TEHAMA, COUNTY OF	EW-2016-036	93 645	(243)	
TEHAMA, COUNTY OF	XX-2016-036	93 645	2,370	
Subtotal Program-Pass-Through and Partial Pass-Through			15,445	-
TEHAMA, COUNTY OF	26A57	93 659	(376)	
Subtotal Program-Pass-Through and Partial Pass-Through			(376)	-
CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	15-IA-00965	93 667	67,483	
LASSEN, COUNTY OF	CW-2016-15	93 667	9,875	
LASSEN, COUNTY OF	EW-2015-15	93 667	268	
LASSEN, COUNTY OF	EW-2016-15	93 667	21,182	
SISKIYOU, COUNTY OF	CW-2016-31	93 667	13,825	
SISKIYOU, COUNTY OF	XX-2016-31	93 667	4,740	

The accompanying notes are an integral part of this schedule.

**UNIVERSITY OF CALIFORNIA**  
**Schedule of Expenditures of Federal Awards**  
**For the Fiscal Year Ended June 30, 2017**

Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	Federal CFDA #	FY 2017	
			Federal Expenditures	Pass-Through to Subrecipients
Subtotal Program-Pass-Through and Partial Pass-Through			117,373	-
CITY AND COUNTY OF SAN FRANCISCO	2002-08/09	93 670	90,342	
Subtotal Program-Pass-Through and Partial Pass-Through			90,342	-
TOIYABE INDIAN HEALTH PROJECT INC.	35A33	93 738	8,825	
Subtotal Program-Pass-Through and Partial Pass-Through			8,825	-
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	16-10506	93 758	28,885	
Subtotal Program-Pass-Through and Partial Pass-Through			28,885	-
ALZHEIMER'S ASSOCIATION CALIFORNIA SOUTHLAND CHAPTER	90AL0002-01-00	93 763	25,754	
Subtotal Program-Pass-Through and Partial Pass-Through			25,754	-
MERCATOR MEDSYSTEMS, INC	B5584	93 837	8,393	
THE UNIVERSITY OF ALABAMA (TUSCALOOSA)	UCSF#A120725-MASTER	93 837	6,844	
THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	000503570-007	93 837	9,058	
UNIVERSITY OF UTAH	NO. 10035946-UCSF	93 837	1,812	
Subtotal Program-Pass-Through and Partial Pass-Through			26,107	-
MASSACHUSETTS GENERAL HOSPITAL	A126302	93 838	26,008	
UNIVERSITY OF PENNSYLVANIA	B1332	93 838	(281)	
Subtotal Program-Pass-Through and Partial Pass-Through			25,727	-
AUGUSTA UNIVERSITY	3083524	93 847	22,757	
AUGUSTA UNIVERSITY	308352503482	93 847	30,553	
UNIVERSITY HEALTH NETWORK	1	93 847	1	
Subtotal Program-Pass-Through and Partial Pass-Through			53,311	-
UNIVERSITY OF WASHINGTON	57611	93 853	(1,300)	
YALE UNIVERSITY	A6866	93 853	199	
Subtotal Program-Pass-Through and Partial Pass-Through			(1,101)	-
CHILDREN'S HOSPITAL CORP. (THE), BOSTON, MASS.	B1213	93 855	(713)	
DUKE UNIVERSITY	B2262	93 855	12,017	
FHI 360	PO16002756	93 855	84,017	
PUBLIC HEALTH FOUNDATION ENTERPRISES, INC.	UCSF#A120764	93 855	(11,169)	
UNIVERSITY OF MINNESOTA	A9034	93 855	52,889	
UNIVERSITY OF TEXAS-SOUTHWESTERN MEDICAL CENTER AT DALLAS	Sub GMO 160606 (AI097403)	93 855	60,297	
Subtotal Program-Pass-Through and Partial Pass-Through			197,338	-
AMERICAN SOCIETY FOR CELL BIOLOGY	201502283	93 859	12,071	
THOMAS JEFFERSON UNIVERSITY	63345	93 859	32	
Subtotal Program-Pass-Through and Partial Pass-Through			12,103	-
CHILDREN'S HOSPITAL MEDICAL CENTER OF CINCINNATI	130474-MENDELSON	93 865	(5,197)	
CHILDREN'S HOSPITAL MEDICAL CENTER OF CINCINNATI	5K12HD000850-30	93 865	101,482	
WASHINGTON UNIVERSITY IN ST. LOUIS	WU-17-239	93 865	115,337	
Subtotal Program-Pass-Through and Partial Pass-Through			211,622	-
AMERICAN FEDERATION-AGING RESEARCH	A124460	93 886	10,163	
Subtotal Program-Pass-Through and Partial Pass-Through			10,163	-
COUNTY OF LOS ANGELES	H-705762:2	93 889	255,033	
COUNTY OF LOS ANGELES	20604	93 889	954	

The accompanying notes are an integral part of this schedule.

**UNIVERSITY OF CALIFORNIA**  
**Schedule of Expenditures of Federal Awards**  
**For the Fiscal Year Ended June 30, 2017**

Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	Federal CFDA #	FY 2017	
			Federal Expenditures	Pass-Through to Subrecipients
COUNTY OF LOS ANGELES	20652	93 889	1,561	
Subtotal Program-Pass-Through and Partial Pass-Through			257,548	-
CITY AND COUNTY OF SAN FRANCISCO	BPHC11000128	93 914	213,381	
CITY AND COUNTY OF SAN FRANCISCO	DPHC1600794	93 914	39,208	
CITY AND COUNTY OF SAN FRANCISCO	BPHC10000131	93 914	1,853,549	
CITY AND COUNTY OF SAN FRANCISCO	B9897	93 914	206,168	
LOS ANGELES COUNTY DEPARTMENT OF HEALTH SERVICES	PH-002389	93 914	781,646	
Subtotal Program-Pass-Through and Partial Pass-Through			3,093,952	-
DEMOCRACY COUNCIL OF CALIFORNIA	S-LMAQM-15-GR-1051	93 928	4,643	
Subtotal Program-Pass-Through and Partial Pass-Through			4,643	-
INDIAN HEALTH COUNCIL, INC.	Narch 5	93 933	129,769	
Subtotal Program-Pass-Through and Partial Pass-Through			129,769	-
FHI 360	953/0080.0142:7	93 936	24,831	
Subtotal Program-Pass-Through and Partial Pass-Through			24,831	-
AIDS PROJECT LOS ANGELES	20164271	93 939	168,014	
Subtotal Program-Pass-Through and Partial Pass-Through			168,014	-
CITY AND COUNTY OF SAN FRANCISCO	BPHC12000084	93 940	530,626	
Subtotal Program-Pass-Through and Partial Pass-Through			530,626	-
NATIONAL FAMILY PLANNING & REPRODUCTIVE HEALTH ASSOCIATION INC.	FPRPA006059	93 974	73,789	
Subtotal Program-Pass-Through and Partial Pass-Through			73,789	-
DARTMOUTH COLLEGE	1265	93 989	32,030	
JOHNS HOPKINS UNIVERSITY	2002590467	93 989	4,668	
Subtotal Program-Pass-Through and Partial Pass-Through			36,698	-
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	1410332	93 991	383,320	
Subtotal Program-Pass-Through and Partial Pass-Through			383,320	-
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	16-10190	93 UNKNOWN	3,364,195	
CITY AND COUNTY OF SAN FRANCISCO	DPHC15001030	93 UNKNOWN	240,065	
MINNEAPOLIS MEDICAL RESEARCH FOUNDATION	A126633	93 UNKNOWN	(294)	
SUPERIOR COURT OF CALIFORNIA, COUNTY OF SAN FRANCISCO	15-029	93 UNKNOWN	58,458	
THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	R24AI067039	93 UNKNOWN	1,265	
ASSOCIATION OF MATERNAL AND CHILD HEALTH PROGRAMS	201602918	93 UNKNOWN	7,711	
CALIFORNIA DEPARTMENT OF HEALTH CARE SERVICES	23544	93 UNKNOWN	(970)	
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	1312010	93 UNKNOWN	137,234	
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	83913	93 UNKNOWN	(2,397)	
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	11-10828	93 UNKNOWN	5,029,454	
CENTER FOR COMPREHENSIVE CARE & DIAGNOSIS OF INHERITED BLOOD DISORDERS	CIBDIX2012HRSAUCD5	93 UNKNOWN	48,091	
HUMBOLDT COUNTY	201702673	93 UNKNOWN	14,436	
LEIDOS, INC.	201400268	93 UNKNOWN	488	
NATIONAL ASSOCIATION OF HEALTH DATA ORGANIZATIONS	27618	93 UNKNOWN	476	
OMNIOX INC.	27994	93 UNKNOWN	41	
ORANGE COUNTY	MA-063-16011090	93 UNKNOWN	116,495	
SACRAMENTO, COUNTY OF	71A40	93 UNKNOWN	28,440	

The accompanying notes are an integral part of this schedule.

**UNIVERSITY OF CALIFORNIA**  
**Schedule of Expenditures of Federal Awards**  
**For the Fiscal Year Ended June 30, 2017**

Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	Federal CFDA #	FY 2017	
			Federal Expenditures	Pass-Through to Subrecipients
SAN JOAQUIN COUNTY	21B72	93 UNKNOWN	5,616	
SOUTH AFRICAN NATIONAL AIDS COUNCIL TRUST	A128879	93 UNKNOWN	12,629	
STANFORD UNIVERSITY	60687621104939	93 UNKNOWN	512,072	
Subtotal Program-Pass-Through and Partial Pass-Through			9,573,505	-
Subtotal Pass-Through and Partial Pass-Through Awards			33,421,228	787,353
Total Department of Health and Human Services			83,005,173	8,818,383
 CORPORATION FOR NATIONAL AND COMMUNITY SERVICE				
Pass-Through and Partial Pass-Through				
CALIFORNIAN VOLUNTEERS	008330	94 006	214,060	
JUMPSTART FOR YOUNG CHILDREN, INC.	900200	94 006	147,079	
JUMPSTART FOR YOUNG CHILDREN, INC.	59724	94 006	(638)	
SUPERIOR COURT OF LOS ANGELES	20171242	94 006	12,079	
Subtotal Program-Pass-Through and Partial Pass-Through			372,580	-
CORPORATION FOR NATIONAL AND COMMUNITY SERVICE	06VSPCA001	94 013	247,354	
Subtotal Program-Pass-Through and Partial Pass-Through			247,354	-
NEW PROFIT, INC.	UCB 2015 - 2016	94 019	3,191	
Subtotal Program-Pass-Through and Partial Pass-Through			3,191	-
Total Corporation for National and Community Service			623,125	-
 SOCIAL SECURITY ADMINISTRATION				
Pass-Through and Partial Pass-Through				
DEL NORTE COUNTY	2016-046	96 UNKNOWN	1,975	
Total Social Security Administration			1,975	-
 AGENCY FOR INTERNATIONAL DEVELOPMENT				
Direct Awards	Various	98 001	7,369,437	4,688,775
Sub-Total Direct Awards			7,369,437	4,688,775
Pass-Through and Partial Pass-Through				
INTERNATIONAL AIDS VACCINE INITIATIVE INC.	2092	98 001	22,311	
INTERNATIONAL AIDS VACCINE INITIATIVE INC.	2395	98 001	234,875	
KANSAS STATE UNIVERSITY	S15115	98 001	1,292,281	406,932
MANAGEMENT SCIENCES FOR HEALTH, INC	A295-2013-001	98 001	132,623	
UCP WHEELS FOR HUMANITY	WFH-2015-010-UKRTEAM	98 001	61,528	
Subtotal Program-Pass-Through and Partial Pass-Through			1,743,618	406,932
ARCADIA BIOSCIENCE, INC.	201300322	98 UNKNOWN	90,638	
DEVELOPMENT ALTERNATIVES, INC.	22A70	98 UNKNOWN	7,156	
INTERNATIONAL MAIZE AND WHEAT IMPROVEMENT CENTER	201400223	98 UNKNOWN	949,437	608,567
KNCV TUBERCULOSIS FOUNDATION	1.00.708.1	98 UNKNOWN	668,661	
MICHIGAN STATE UNIVERSITY	RC102095	98 UNKNOWN	54,535	
NATIONAL ACADEMY OF SCIENCES	2000006396	98 UNKNOWN	2,667	
PURDUE UNIVERSITY	38A34	98 UNKNOWN	1,565	

The accompanying notes are an integral part of this schedule.

**UNIVERSITY OF CALIFORNIA**  
**Schedule of Expenditures of Federal Awards**  
**For the Fiscal Year Ended June 30, 2017**

Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	Federal CFDA #	FY 2017		
			Federal Expenditures	Pass-Through to Subrecipients	
THE NATIONAL ACADEMIES	201702123	98 UNKNOWN	10,942		
UNIVERSITY OF ILLINOIS	20140623001	98 UNKNOWN	587,262	61,748	
Subtotal Program-Pass-Through and Partial Pass-Through			2,372,863	670,315	
Total Agency for International Development			11,485,918	5,766,022	
OTHER FEDERAL AGENCIES					
Direct Awards					
ACTION	PC158043	99 UNKNOWN	36,760		
ACTION	PC-16-8-006	99 UNKNOWN	22,573		
Sub-Total Direct Awards			59,333	-	
Pass-Through and Partial Pass-Through					
AMERICAN EDUCATION SOLUTIONS, INC.	57404	99 UNKNOWN	(14)		
ANTHROTRONIX, INC.	UCLACRESST-06022016	99 UNKNOWN	10,954		
CALIFORNIA DEPARTMENT OF EDUCATION	A17-0142-001	99 UNKNOWN	44,927		
CALIFORNIA DEPARTMENT OF HEALTH CARE SERVICES	14-90487	99 UNKNOWN	901,653		
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	15-10047	99 UNKNOWN	1,610,892	565,353	
CALIFORNIA DEPARTMENT OF REHABILITATION	29891	99 UNKNOWN	587,369		
CALIFORNIA EMPLOYMENT DEVELOPMENT DEPARTMENT	M7105788	99 UNKNOWN	586		
CITY OF LOS ANGELES	C-127200:1	99 UNKNOWN	62,624		
COUNCIL OF CHIEF STATE SCHOOL OFFICERS	ELPA21:1	99 UNKNOWN	22,253		
LOS ANGELES COUNTY DEPARTMENT OF HEALTH SERVICES	20771	99 UNKNOWN	(6,211)		
LOS ANGELES UNIFIED SCHOOL DISTRICT	77104	99 UNKNOWN	(3,972)		
LOS ANGELES UNIFIED SCHOOL DISTRICT	77131	99 UNKNOWN	(4,756)		
NATIONAL INSTITUTE FOR CHILDREN'S HEALTH QUALITY, INC	57712	99 UNKNOWN	(907)		
NEAR EAST SOUTH ASIA CENTER FOR STRATEGIC STUDIES	20171534	99 UNKNOWN	231,348		
NEAR EAST SOUTH ASIA CENTER FOR STRATEGIC STUDIES	77044	99 UNKNOWN	361,127		
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	84232 - 01 - 404958	99 UNKNOWN	137,733		
OAKLAND UNIFIED SCHOOL DISTRICT	P1509363	99 UNKNOWN	49,026		
RTI INTERNATIONAL	Sub 59-312-0210637-52575L ( 20	99 UNKNOWN	1,134		
SAN DIEGO COUNTY	Sub 554608 (none)	99 UNKNOWN	172,337		
SAN DIEGO COUNTY	Sub 554626 (none)	99 UNKNOWN	206,842		
VA BOSTON HEALTHCARE SYSTEM	IPA for Frank Meng	99 UNKNOWN	23,119		
Subtotal Program-Pass-Through and Partial Pass-Through			4,408,064	565,353	
Total Other Federal Agencies			4,467,397	565,353	
Total Other Programs			174,146,674	20,028,191	
Total Federal Award Expenditures			\$ 5,549,148,617	\$ 469,772,073	

The accompanying notes are an integral part of this schedule.

**UNIVERSITY OF CALIFORNIA**  
Notes to Schedules of Expenditures of Federal Awards  
Year Ended June 30, 2017

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**1. General**

The accompanying Schedules of Expenditures of Federal Awards (SEFA) present the activity of all federal financial assistance programs of the University of California (the University), a component unit of the State of California, except for the University's Benioff Children's Hospital and Research Center Oakland, which is separately reported.

Consistent with the provisions of Title 2 U.S. Code of Federal Regulations Part 200, Uniform Administrative Requirements for Federal Awards (Uniform Guidance), the accompanying Summary Schedule of Expenditures of Federal Awards and Schedule of Expenditures of Federal Awards does not include the expenditures of the Lawrence Berkeley National Laboratory – a major Department of Energy (DOE) national laboratory operated and managed by the University under contracts with DOE, as it represents a government-owned, contractor operated facility.

**2. Basis of Accounting**

The accompanying SEFA are presented on a cash basis as year-end accruals for financial statement purposes are performed in aggregate and not allocated to individual awards. Amounts expended for loan programs are reflected at the value of new loans made or received during the audit period plus the beginning of the audit period balance of loans from previous years for which the federal government imposes continuing compliance requirements. The information in these schedules is presented in accordance with the requirements of the Uniform Guidance. Negative amounts represent adjustments in the normal course of business to amounts reported in a prior year.

**3. CFDA Numbers**

Research and Development direct awards are presented on the SEFA by federal agency and major subdivision within the federal agency, when applicable. Since Catalog of Federal Domestic Assistance (CFDA) numbers for federal programs are numerous, expenditures have been grouped by federal agency followed by the "RD" designation.

Pass-through and partial pass-through awards have been presented by pass-through entity, CFDA number, sponsors' award number, when available, or by the University assigned identifier. When the CFDA number is not available, the federal award is presented by agency number and the suffix "RD." When the federal agency and the federal identification number are not available, "99 unknown" is used.

**UNIVERSITY OF CALIFORNIA**  
Notes to Schedules of Expenditures of Federal Awards  
Year Ended June 30, 2017

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**4. Commingled Assistance**

The University has included, within the SEFA, amounts received from pass-through entities, which include funds from federal and non-federal sources because the pass through entity is unable to determine the federal portion. Those funds are referred to as partial pass-through funds on the SEFA.

The California Student Aid Commission (CSAC) administers the State Cal Grant A and B Programs, selects the student recipients of these grant awards, and provides funds to participating institutions for disbursement. Federal Temporary Assistance for Needy Families (TANF) funds, CFDA number 93.558, from the United States Department of Health and Human Services may comprise up to approximately 25% of the total funding for these Cal Grant awards.

In fiscal year 2017, the University paid Cal Grant A and B funds in the amount of \$888,427,172; however, CSAC is unable to determine the exact amount of TANF funds, if any, represented in those awards. Therefore, the Schedules of Expenditures of Federal Awards do not include State Grant A and B awards.

**5. Outstanding Balances on Loan Programs**

Outstanding balances on federal loans programs as of June 30, 2017 are as follows:

	CFDA	Principal Outstanding
Federal Perkins Loan Program	84.038	\$207,627,156
Health Professions Student Loans, Loans for Disadvantaged Students, Primary Care Loans	93.342	\$55,331,182
Nursing Student Loans	93.364	\$1,453,909
Nurse Faculty Loans	93.264	\$988,966
ARRA - Nursing Faculty Loans	93.408	\$115,192

**6. Facilities and Administrative Costs**

The University uses its negotiated indirect costs rates instead of the 10% de minimis rate allowed by the Uniform Guidance.

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**Report of Independent Auditors on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with *Government Auditing Standards***

To the Regents of the University of California

We have audited, in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of University of California (the "University"), a component unit of the State of California, its aggregate discretely presented component units, the University of California Retirement System (the "Plans") and the University of California Retiree Health Benefit Trust (the "Trust"), which comprise the University's Statements of Net Position and the Statements of Plans' and Trust's Fiduciary Net Position at June 30, 2017, the University's Statements of Revenues, Expenses and Changes in Net Position, the Statements of Changes in Plans' and Trust's Fiduciary Net Position and the University's Statement of Cash Flows for the year ended June 30, 2017 and the related notes to the financial statements and have issued our report thereon dated October 12, 2017. The financial statements of the University's discretely presented component units were not audited in accordance with *Government Auditing Standards*, and accordingly, this report does not include reporting on internal control over financial reporting or instances of reportable noncompliance associated with the University's discretely presented component units.

***Internal Control Over Financial Reporting***

In planning and performing our audit of the financial statements, we considered the University's internal control over financial reporting ("internal control") to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the University's internal control. Accordingly, we do not express an opinion on the effectiveness of the University's internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies and therefore, material weaknesses or significant deficiencies may exist that were not identified. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified. We did identify a deficiency in internal control described in the accompanying Schedule of Findings and Questioned Costs as finding 2017-001 concerning IT access that we consider to be a significant deficiency.





### ***Compliance and Other Matters***

As part of obtaining reasonable assurance about whether University's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

### ***The University's Response to Findings***

The University's response to the finding identified in our audit is described in the accompanying management's views and corrective action plan. The University's response was not subjected to the auditing procedures applied in the audit of the financial statements and, accordingly, we express no opinion on it.

### ***Purpose of this Report***

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

*PricewaterhouseCoopers LLP*

San Francisco, California  
October 12, 2017



**Report of Independent Auditors on Compliance with Requirements  
That Could Have a Direct and Material Effect on Each Major Program and on Internal  
Control Over Compliance in Accordance with the Uniform Guidance**

To the Regents of the University of California

***Report on Compliance for Each Major Federal Program***

We have audited the University of California's (the "University's"), a component unit of the State of California, compliance with the types of compliance requirements described in the *OMB Compliance Supplement* that could have a direct and material effect on each of the University's major federal programs for the year ended June 30, 2017. The University's major federal programs are identified in the summary of auditor's results section of the accompanying schedule of findings and questioned costs.

The University's basic financial statements include the operations of the University's Benoiff Children's Hospital & Research Center Oakland, which expended \$17,356,539 in federal awards that is not included in the University's schedule of expenditures of federal awards during the year ended June 30, 2017. Our audit, described below, did not include the federal expenditures of University's Benoiff Children's Hospital & Research Center Oakland because a discrete report in *accordance with Title 2 U.S. Code of Federal Regulations Part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards (Uniform Guidance)* is issued for this entity.

***Management's Responsibility***

Management is responsible for compliance with federal statutes, regulations and the terms and conditions of its federal awards applicable to its federal programs.

***Auditors' Responsibility***

Our responsibility is to express an opinion on compliance for each of the University's major federal programs based on our audit of the types of compliance requirements referred to above. We conducted our audit of compliance in accordance with auditing standards generally accepted in the United States of America; the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States; and the audit requirements of Title 2 U.S. Code of Federal Regulations Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (Uniform Guidance). Those standards and the Uniform Guidance require that we plan and perform the audit to obtain reasonable assurance about whether noncompliance with the types of compliance requirements referred to above that could have a direct and material effect on a major federal program occurred. An audit includes examining, on a test basis, evidence about the University's compliance with those requirements and performing such other procedures as we considered necessary in the circumstances.

We believe that our audit provides a reasonable basis for our opinion on compliance for each major federal program. However, our audit does not provide a legal determination of the University's compliance.





### ***Opinion on Each Major Federal Program***

In our opinion, the University of California complied, in all material respects, with the types of compliance requirements referred to above that could have a direct and material effect on each of its major federal programs for the year ended June 30, 2017.

### ***Other Matters***

The results of our auditing procedures disclosed instances of noncompliance, which are required to be reported in accordance with the Uniform Guidance and which are described in the accompanying schedule of findings and questioned costs as items 2017-002, 2017-003, 2017-004, 2017-005, 2017-006, 2017-007, and 2017-009. Our opinion on each major federal program is not modified with respect to these matters.

The University's response to the noncompliance findings identified in our audit is described in the accompanying management's views and corrective action plan. The University's response was not subjected to the auditing procedures applied in the audit of compliance and, accordingly, we express no opinion on the response.

### ***Report on Internal Control Over Compliance***

Management of the University is responsible for establishing and maintaining effective internal control over compliance with the types of compliance requirements referred to above. In planning and performing our audit of compliance, we considered the University's internal control over compliance with the types of requirements that could have a direct and material effect on each major federal program to determine the auditing procedures that are appropriate in the circumstances for the purpose of expressing an opinion on compliance for each major federal program and to test and report on internal control over compliance in accordance with the Uniform Guidance, but not for the purpose of expressing an opinion on the effectiveness of internal control over compliance. Accordingly, we do not express an opinion on the effectiveness of the University's internal control over compliance.

A *deficiency in internal control over compliance* exists when the design or operation of a control over compliance does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, noncompliance with a type of compliance requirement of a federal program on a timely basis. A *material weakness in internal control over compliance* is a deficiency, or combination of deficiencies, in internal control over compliance, such that there is a reasonable possibility that material noncompliance with a type of compliance requirement of a federal program will not be prevented, or detected and corrected, on a timely basis. A *significant deficiency in internal control over compliance* is a deficiency, or a combination of deficiencies, in internal control over compliance with a type of compliance requirement of a federal program that is less severe than a material weakness in internal control over compliance, yet important enough to merit attention by those charged with governance.

Our consideration of internal control over compliance was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control over compliance that might be material weaknesses or significant deficiencies and therefore, material weaknesses or significant deficiencies may exist that were not identified. We did not identify any deficiencies in internal control over compliance that we consider to be material weaknesses. However, we identified certain deficiencies in internal control over compliance, as described in the accompanying



schedule of findings and questioned costs as items 2017-004 and 2017-007 that we consider to be significant deficiencies.

The University's response to the internal control over compliance findings identified in our audit is described in the accompanying management's views and corrective action plan. The University's response was not subjected to the auditing procedures applied in the audit of compliance and, accordingly, we express no opinion on the response.

The purpose of this report on internal control over compliance is solely to describe the scope of our testing of internal control over compliance and the results of that testing based on the requirements of the Uniform Guidance. Accordingly, this report is not suitable for any other purpose.

*PriceWaterhouseCoopers LLP*

San Francisco, California  
February 12, 2018

**University of California**  
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**Year Ended June 30, 2017**

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**SECTION I – SUMMARY OF AUDITOR’S RESULTS**

**Financial Statements**

Type of auditor’s report issued: Unmodified

Internal control over financial reporting:

- Material weakness(es) identified? No
- Significant deficiency(ies) identified that are not considered to be material weaknesses Yes

Noncompliance material to the financial statements noted? No

**Federal Awards**

Internal control over major programs:

- Material weakness(es) identified? No
- Significant deficiency(ies) identified that are not considered to be material weaknesses Yes

Type of auditor’s report issued on compliance for major programs Unmodified

Any audit findings that are required to be reported in accordance with 2 CFR 200.516(a)? Yes

Identification of major programs:

<b>Program Name</b>	<b>CFDA Number</b>
Research and Development Cluster	Various
Student Financial Assistance Cluster	84.Variou s & 93.Variou s
Title IV Foster Care Cluster	93.658
Gear-Up Cluster	83.334

Dollar threshold used to distinguish between type A and type B programs: \$16,647,446

Auditee qualified as a low-risk auditee? Yes

# **University of California**

## **Schedule of Findings and Questioned Costs**

### **Year Ended June 30, 2017**

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#### **SECTION II – FINANCIAL REPORTING FINDINGS**

##### **Finding 2017-001: IT Privileged Access (Significant Deficiency)**

**Program:** All Federal Programs

**Sponsor Award Number:** All Sponsor Award Numbers

**Sponsoring Agency:** All Sponsoring Agencies

**CFDA Number:** All

**Institute Award Number:** None

**Award Period:** 2016 – 2017

##### **Observation:**

As part of our prior year testing over Information Technology General Controls (“ITGCs”) across ten in scope IT locations including the Office of the President, three campuses and five academic medical centers, we evaluated the design and operating effectiveness of a variety of access to programs and data controls. Our evaluation of the design and operating effectiveness was limited to systems that we deemed to be “in-scope” for purposes of our audit and did not represent all financial or information technology systems and was not intended to comment on the potential for system intrusion in general. However, for the financial systems we included in scope, we evaluated whether: 1) IT professional and application users are assessed on a periodic basis to ensure that access rights are commensurate with existing roles and responsibilities; 2) Management performs monitoring of database administrator's access and/or their related activity to ensure that changes are consistent with their job responsibilities and appropriate. As communicated in our prior year report, we observed that the access to programs and data controls procedures noted above varied in their level of performance and were not performed consistently or not formally documented. There were 28 access to programs and data control related findings noted across in-scope locations: Office of the President, medical centers, and campuses. Findings are related to the absence of formal documentation of the access review, inconsistent performance of the controls, lack of formalized evidence of direct access to data monitoring, and the completeness and accuracy of the user listings reviewed. While IT control exceptions were deemed to be “Control Deficiencies” at each of the individual locations, given the pervasiveness and heightened risk around IT Privileged Access, we determined that these exceptions in the aggregate, required the attention of those charged with governance and therefore included in the Regents’ Letter. The absence of formally performed and documented periodic user access reviews, direct data access monitoring, and developer access to migrate changes to production may increase the risk of unauthorized access or unauthorized changes to data and systems.

##### **Recommendation:**

In the prior year, we recommended IT Management formally perform, document, and demonstrate evidence that a periodic review of user accounts (IT Professional or Application) has been performed to certify that user access is commensurate with existing roles and responsibilities. Inappropriate users identified through the review process should be evaluated and removed, and an assessment should be performed to identify whether the user had performed inappropriate functions that may need to be reversed. Management should retain documentation evidencing the periodic review of users (IT Professional or Application), including user access reports and supporting evidence that the reports have been reviewed. We recommended that management perform a direct access to data risk assessment to

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determine whether the risks necessitate logging and periodic review of the database administrator activity. As part of the assessment, IT and business management should collaborate to assess the risks at each business process (and respective application supporting each process); as well as assess the individuals with direct access to financial data. Documentation evidencing the assessment and/or periodic review of direct data access should be retained and the assessment should be updated on a periodic basis. We recommended that users with the ability to migrate changes to production should not have access to develop changes. If developers retain access to promote changes into production, we recommend that IT Management logs activities performed by developers (with the ability to migrate changes into the production environment). This activity should be periodically reviewed and documented by an independent individual to ensure that unauthorized changes to the datasets or data are not made.

For the current year, our recommendation is to complete the corrective actions developed by management as set forth in its corrective action plan.

**Management's Views and Corrective Action Plan:**

Management's response is reported in "Management's Response and Corrective Action Plan" included at the end of this report.

# **University of California**

## **Schedule of Findings and Questioned Costs**

### **Year Ended June 30, 2017**

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#### **SECTION III – FEDERAL AWARD FINDINGS AND QUESTIONED COSTS**

##### **2017-002 –The Return of Title IV funds – Refund to the ED**

**Program:** Student Financial Assistance Cluster

**Sponsor Award Number:** Federal Parent PLUS Loan Program; Federal Subsidized Loan Program and Federal Unsubsidized Loan Program;

**Sponsoring Agency:** Department of Education(ED)

**CFDA Number:** 84.268 – Federal Direct Student Loans

**Institute Award Number:** None

**Award Period:** 2016 - 2017

**Condition:**

In testing the University's conformity with the compliance requirements around the return of Title IV funds, we selected 10 of 75 total students who received Title IV assistance but then dropped out, withdrew or never began attendance. For each student we tested whether the Title IV fund return determination was in conformity with Title IV requirements as well as if any Title IV funds were returned to the ED and the return was timely. For 2 of the students sampled, totaling \$9,933, the return to the ED was not initiated within 30 days of the University becoming aware that the student would not begin attendance.

**Citation:**

34 CFR 668.22

**Criteria:**

The institution must return Title IV funds to the respective Title IV, Higher Education Act program as soon as possible, but no later than 30 days after the date that the institution becomes aware that the student will not or has not begun attendance.

**Questioned Cost:**

There are no questioned costs as the funds were returned; the finding relates to the timeliness of the return only.

**Cause:**

The institution underwent a system change that resulted in netting all refunds related to Title IV with the next available reimbursement bill issued to the ED for all Title IV program funds.

**Effect:**

ED did not timely receive Title IV program funds that were credited to the student's account.

**Recommendation:**

Management should implement a policy to review Title IV refunds on a regular basis, to initiate timely return of Title IV funds to the ED.

**Management's Views and Corrective Action Plan:**

Management's response is reported in "Management's Response and Corrective Action Plan" included at the end of this report.



# **University of California**

## **Schedule of Findings and Questioned Costs**

### **Year Ended June 30, 2017**

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#### **2017-003 – Student Loan Repayments – Exit Interviews**

**Program:** Student Financial Assistance Cluster

**Sponsor Award Number:** Federal Perkins Loan Program

**Sponsoring Agency:** Department of Education

**CFDA Number:** 84.038- Federal Perkins Loan Program

**Institute Award Number:** None

**Award Period:** 2016 – 2017

**Condition:**

In testing the University's conformity with the compliance requirements for Student Loan Repayments, at one campus we selected 25 students who received Federal Perkins Loans and entered the repayment period. For each student, we tested if the student signed a Promissory Note, which includes the repayment plan, as well as if the student received an exit interview. For 4 of the students sampled, there was not documentation that exit interviews were conducted or follow-up email notifications were sent.

**Citation:**

34 CFR 674.42

**Criteria:**

The institution must exercise due care and diligence in the collection of loans and perform due diligence procedures, such as conducting an exit interview with the borrower before he or she leaves the institution and to contact the borrower a minimum of three times during the initial grace period for loans with 9-month grace periods or two times for loans with 6-month grace periods.

**Questioned Cost:**

None.

**Cause:**

This particular campus transitioned from a legacy mainframe system to a new integrated student information system at the start of the 2016-17 academic year. In July 2016, an exit file was produced from the legacy mainframe system, which included all students who had graduated or withdrawn from the campus, and those students who exited. When this file was produced, it did not include students potentially eligible for graduation in the spring 2016 term who were not marked as degreed in the legacy system at the time the exit file was produced. Based on an established process in the legacy system, these students would have been selected for the exit file once identified as degreed in the legacy system; which typically happens with the September exit process. Due to the system transition, this group of students was not captured in either batch.

**Effect:**

Students were not informed about their responsibility for making timely repayments as well as the overall repayment process.

**Recommendation:**

Management should implement procedures or controls over the transition process when legacy system data is moved to a new system to ensure the completeness of data transfer, in particular the exit files.

**Management's Views and Corrective Action Plan:**

Management's response is reported in "Management's Response and Corrective Action Plan" included at the end of this report.

# University of California

## Schedule of Findings and Questioned Costs

### Year Ended June 30, 2017

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#### **2017-004 – Enrollment Reporting (Significant Deficiency)**

**Program:** Student Financial Assistance Cluster

**Sponsor Award Number:** Federal Perkins Loan Program; Federal Direct Loans;

**Sponsoring Agency:** Department of Education

**CFDA Number:** 84.038- Federal Perkins Loan Program; 84.063- Federal Pell Grants, 84.268- Federal Direct Loans

**Institute Award Number:** None

**Award Period:** 2016 – 2017

#### **Condition:**

In testing the University's conformity with compliance requirements for enrollment reporting, we sampled 120 students across three campuses. For approximately 12.5% of the students sampled, the date reported as received by the National Student Loan Data System (NSLDS) was beyond 60 days from the effective date transmitted by the institution. For approximately 23% of the students sampled, the status effective date did not agree to the reported date per the NSLDS.

In addition, we noted that three campuses from the prior year, which were not subject to testing in the current year, had commenced but not fully completed implementation of planned corrective actions to address late reporting issues identified. Please refer to finding 2016-008 for details of the issues identified by the prior year audit.

#### **Citation:**

34 CFR section 690.83(b)(2); 34 CFR section 674.19; 34 CFR 685.309

#### **Criteria:**

An institution shall submit, in accordance with deadline dates established by the Secretary, through publication in the Federal Register, other reports and information the Secretary requires and shall comply with the procedures the Secretary finds necessary to ensure that the reports are correct

Enrollment reporting process. (1) Upon receipt of an enrollment report from the Secretary, an institution must update all information included in the report and return the report to the Secretary— (i) In the manner and format prescribed by the Secretary; and (ii) Within the timeframe specified by the Secretary.

#### **Questioned Cost:**

None.

#### **Cause:**

All campuses utilize the services of National Student Clearinghouse (NSC) to assist in the reporting of enrollment status changes to NSLDS. NSC generally requires approximately 45 days to submit information provided to them by institutions to NSLDS. In certain instances, the reporting of enrollment status changes was untimely, while in other instances the reporting was timely but appears to have been untimely due to the convention used in selecting the effective date. Per discussion with management, both campuses with exceptions implemented new student account information systems during the year which was the primary reason for untimely or incorrect NSLDS reporting, as the batches had not yet been set up to run consistently.

#### **Effect:**

Changes in student statuses may not be updated timely or accurately.

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#### **Recommendation:**

We recommend that each of the affected campuses review their procedures to ensure timely and accurate reporting to the NSC to ensure that information reported to NSLDS is not delayed. We recommend that the campuses review the data included on the NSLDS site to confirm that the information is both accurate and timely. We also recommend that the affected campuses perform an integration review to ensure all students are being appropriately reported to the NSLDS.

#### **Management's Views and Corrective Action Plan:**

Management's response is reported in "Management's Response and Corrective Action Plan" included at the end of this report.

# **University of California**

## **Schedule of Findings and Questioned Costs**

### **Year Ended June 30, 2017**

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#### **2017-005 –Equipment Additions and Inventory**

**Program:** Research & Development Cluster

**Sponsor Award Number:** 1R01GM109069

**Sponsoring Agency:** Health and Human Services – National Institute of General Medical Science

**CFDA Number:** 93.859

**Institute Award Number:** 141458 Fund 212C2A

**Award Period:** 2016 – 2017

#### **Condition:**

In testing the University's conformity with the compliance requirements for equipment management, we selected 25 assets from the detailed listing provided. In order to test whether the entity maintained proper records for equipment, we compared the information per the entity equipment records to information per the vendor invoice and entity purchase order for each item within our selections. We noted one asset out of the 25 selections, which was over capitalized by \$418 due to a tax adjustment. Additionally, the asset's improper capitalization was not discovered during management's review, as the review is done on a sample basis and this particular asset was not selected for review.

Noted no indication that the equipment was unallowable.

#### **Citation:**

2 CFR 200.313 (d)(1)

#### **Criteria:**

Property records must be maintained that include a description of the property, a serial number or other identification number, the source of funding for the property (including the FAIN), who holds title, the acquisition date, and cost of the property, percentage of Federal participation in the project costs for the Federal award under which the property was acquired, the location, use and condition of the property, and any ultimate disposition data including the date of disposal and sale price of the property.

#### **Questioned Cost:**

None.

#### **Cause:**

Although the Equipment Management team performs a review of the equipment purchases to ensure proper capitalization, the review is done on a sample basis, and this particular asset was not selected for review. Therefore the review did not detect the fact that the asset was improperly capitalized at the wrong amount.

#### **Effect:**

Equipment was capitalized at the wrong amount and was recorded wrong in the equipment management system.

#### **Recommendation:**

The campus should enhance their monthly review and reconciliation process and improve training on equipment costing and reconciliation for the Equipment Management staffs to ensure all assets information entered into the system is included and accurate.

#### **Management's Views and Corrective Action Plan:**

Management's response is reported in "Management's Response and Corrective Action Plan" included at the end of this report.

# **University of California**

## **Schedule of Findings and Questioned Costs**

### **Year Ended June 30, 2017**

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#### **2017-006 Cash Management Timing of Reimbursement Requests**

**Program:** Research & Development Cluster

**Sponsor Award Number:** Various

**Sponsoring Agency:** All Research & Development

**CFDA Number:** Various

**Institute Award Number:** Various

**Award Period:** 2016 – 2017

**Condition:**

In testing the University's conformity with the compliance requirements for cash management at one campus, we identified that the campus did not have a process in place to ensure that all expenditures are paid prior to requesting reimbursement. This was noted as a design deficiency in the prior year and management has since implemented corrective action; however, such corrective action was not in place for the current year under audit ended June 30, 2017.

**Citation:**

2 CFR 200.305 (b)(3) & (b)(4)

**Criteria:**

Reimbursement is the preferred method when the requirements in paragraph (b) cannot be met, when the Federal awarding agency sets a specific condition per §200.207 Specific conditions, or when the non-Federal entity requests payment by reimbursement.

If a recipient cannot meet the criteria for advance payments and the Federal awarding agency has determined that reimbursement is not feasible because the recipient lacks sufficient working capital, the Federal awarding agency may provide cash on a working capital advance basis. Under this procedure, the Federal awarding agency shall advance cash to the recipient to cover its estimated disbursement needs for an initial period generally geared to the awardee's disbursing cycle. Thereafter, the Federal awarding agency shall reimburse the recipient for its actual cash disbursements.

**Questioned Cost:**

None.

**Cause:**

The campus requests funds on the reimbursement method which requires that any reimbursement request be only for costs that have been incurred and paid. Management's process for determining reimbursement requests is to utilize the expense detail included in the general ledger. Expenses included in the ledger detail occur when the invoices are entered into the system; however payments of those invoices do not occur until the invoices come due per their payment terms. Therefore, management's current process does not ensure that expenses have in fact been paid at the time the relevant reports are submitted to the applicable federal agency.

**Effect:**

Drawdown reimbursements may include expenses which have not been paid as of the date of the request.

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**Recommendation:**

We understand that the campus has implemented a control to ensure that future drawdowns are based upon expenditures paid at the time of the request subsequent to June 30, 2017. We will plan to test the implementation of the corrective action in connection with the 2018 audit.

**Management's Views and Corrective Action Plan:**

Management's response is reported in "Management's Response and Corrective Action Plan" included at the end of this report.

# University of California

## Schedule of Findings and Questioned Costs

### Year Ended June 30, 2017

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#### **2017-007 Key Personnel Monitoring (Significant Deficiency)**

**Program:** Research & Development Cluster

**Sponsor Award Number:** Various

**Sponsoring Agency:** Department of Agriculture; Department of Housing and Urban Development; Department of the Interior; Department of Justice; Department of State; National Aeronautics and Space Administration; National Science Foundation; Environmental Protection Agency; Department of Energy; Department of Education; Department of Health and Human Services

**CFDA Number:** 10.Variou; 11.Variou; 14.Variou; 15.Variou; 16.Variou; 19.Variou; 43.Variou; 47.Variou; 66.Variou; 81.Variou; 84.Variou; 93.Variou

**Institute Award Number:** Various

**Award Period:** 2016-2017

#### **Condition:**

In testing the University's conformity with the compliance requirements for monitoring key personnel, it was noted that at select campuses there was not a centralized process in place to monitor changes in key personnel. Instead of a centralized process, reliance was placed upon the individual principal investigator's (PI) monitoring of the award and key provisions thereof. In our prior year testing, we noted instances in which changes in key personnel were not communicated timely as required. As a result of our prior year finding, management undertook corrective action during the year to enhance processes and training. However, such corrective actions were not fully implemented for the year ended June 30, 2017. Although our current year sample yielded no instances of untimely reporting of changes, we have repeated this finding as all corrective actions were not fully implemented for the period under audit.

#### **Citation:**

2 CFR 200.308

#### **Criteria:**

The approved budget for the Federal award summarizes the financial aspects of the project or program as approved during the Federal award process. It may include either the Federal and non-Federal share (see §200.43 Federal share) or only the Federal share, depending upon Federal awarding agency requirements. It must be related to performance for program evaluation purposes whenever appropriate.

Recipients are required to report deviations from budget or project scope or objective, and request prior approvals from Federal awarding agencies for budget and program plan revisions, in accordance with this section.

For non-construction Federal awards, recipients must request prior approvals from Federal awarding agencies for one or more of the following program or budget-related reasons: (1) Change in the scope or the objective of the project or program (even if there is no associated budget revision requiring prior written approval). (2) Change in a key person specified in the application or the Federal award. (3) The disengagement from the project for more than three months, or a 25 percent reduction in time devoted to the project, by the approved project director or principal investigator. (4) The inclusion, unless waived by the Federal awarding agency, of costs that require prior approval.

#### **Questioned Cost:**

None.

#### **Cause:**

Select campuses operate in a decentralized environment with no standardized process to ensure adequate control for the monitoring of key personnel changes. If reliance is to be placed upon a decentralized process, additional training and monitoring are needed.

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**Effect:**

Changes in key personnel may not be identified timely and appropriate approvals might not be obtained as required.

**Recommendation:**

Campus management should complete its corrective actions as set forth in its corrective action plan from the prior year.

**Management's Views and Corrective Action Plan:**

Management's response is reported in "Management's Response and Corrective Action Plan" included at the end of this report.



# **University of California**

## **Schedule of Findings and Questioned Costs**

### **Year Ended June 30, 2017**

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#### **2017-008: IT Privileged Access**

**Program:** All Programs

**Sponsor Award Number:** All Sponsors

**Sponsoring Agency:** All Agencies

**CFDA Number:** All CFDA Numbers

**Institute Award Number:** All Awards

**Award Period:** 2016 – 2017

#### **Observation:**

As discussed in Financial Statement Finding 2017-001, certain deficiencies exist related to privileged access which we assessed related to our financial audit reporting scope. The majority (approximately 75%) of these findings related to in-scope medical centers which do not administer federal awards. However, a lesser number of control deficiencies were also noted for four campuses related to access, and some of which affected systems that impact federal awards, including procurement, payroll and the general ledger. Please refer to Finding 2017-001 for additional detail.

#### **Management's Views and Corrective Action:**

Management's response is reported in "Management's Response and Corrective Action Plan" included at the end of this report.

# **University of California**

## **Schedule of Findings and Questioned Costs**

### **Year Ended June 30, 2017**

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#### **2017-009 – Service Centers**

**Program:** Research & Development Cluster

**Sponsor Award Number:** Various

**Sponsoring Agency:** Health and Human Services – National Center for Advancing Translational Sciences, NIH – National Heart, Lung, and Blood Institute

**CFDA Number:** 93.350 and 93.839

**Institute Award Number:** Various

**Award Period:** 2016 – 2017

#### **Condition:**

In testing the University's conformity with the compliance requirements for service centers, we selected 20 Service Centers for testing. In order to test that the entity's recharge activities were operated on a no-gain/no-loss basis, we requested the latest rate charge review for the selected service centers to ensure that any surplus or deficit was corrected by an adjustment of rates to achieve a break-even balance in the following year. Of the 20 selections we discovered that four of the service centers did not have evidence of having performed a rate review and therefore did not adjust their rates biennially as required.

However, the majority of the tested service centers were within a reasonable amount, either above or below the break-even point, and we noted no indication that the service center charges were unallowable.

#### **Citation:**

2 CFR 200.405 (d) and University of California – Policy BFDB A-47 III.4.D.4 & UCOP Recharge Guidelines

#### **Criteria:**

In accordance with University of California policy, all recharge activities shall publish a schedule of rates and prices which shall be reviewed and approved by the Chancellor or his/her delegate. Rates must be reviewed and adjusted if necessary at least biennially, and must take into consideration over/under applied costs of the previous periods.

#### **Questioned Cost:**

None.

#### **Cause:**

Although a rate review is required biennially to determine rate adjustments, the service centers failed to meet this requirement and therefore did not take into consideration over/under applied costs of the previous periods.

#### **Effect:**

Previous period surplus and deficits were not taken into consideration when applying rates to the current period.

#### **Recommendation:**

The campus should implement an annual audit process whereby the Financial Analysis Office performs a sample of independent verifications of the service centers to ensure the rates were reviewed within the last two years.

#### **Management's Views and Corrective Action Plan:**

Management's response is reported in "Management's Response and Corrective Action Plan" included at the end of this report.

# **University of California**

## **Schedule of Prior Audit Findings**

### **Year Ended June 30, 2017**

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#### **Finding 2016-001: IT Privileged Access**

**Program:** All Federal Programs

**Sponsor Award Number:** All Sponsor Award Numbers

**Sponsoring Agency:** All Sponsoring Agencies

**CFDA Number:** All

**Institute Award Number:** None

**Award Period:** 2015 – 2016

#### **Observation:**

As part of testing over Information Technology General Controls (ITGC) across ten in scope IT locations including the Office of the President, three campuses and six academic medical centers, it was determined that the access to programs and data controls procedures noted varied in their level of performance and were not performed consistently or not formally documented. There were 28 access to programs and data control related findings noted across in-scope locations: Office of the President, medical centers, and campuses. Findings related to the absence of formal documentation of the access review, inconsistent performance of the controls, lack of formalized evidence of direct access to data monitoring, and the completeness and accuracy of the user listings reviewed. While IT control exceptions were deemed to be "Control Deficiencies" at each of the individual locations, given the pervasiveness and heightened risk around IT Privileged Access, it was determined that these exceptions in the aggregate, required the attention of those charged with governance. The absence of formally performed and documented periodic user access reviews, direct data access monitoring, and developer access to migrate changes to production may increase the risk of unauthorized access or unauthorized changes to data and systems.

#### **Status:**

Refer to Management's Views and Corrective Action for finding 2017-001: IT Privileged Access for a status update and action taken for the current year.

**University of California**  
**Schedule of Prior Audit Findings**  
**Year Ended June 30, 2017**

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**2016-002 – Disbursements to and on Behalf of Students - Notifications**

**Program:** Student Financial Assistance Cluster

**Sponsor Award Number:** Federal Perkins Loan Program; Federal Direct Loans

**Sponsoring Agency:** Department of Education

**CFDA Number:** 84.038- Federal Perkins Loan Program; 84.268- Federal Direct Loans

**Institute Award Number:** None

**Award Period:** 2015 – 2016

**Condition:**

In testing the University's conformity with the compliance requirements for Federal Loans disbursements, the notification of the right to cancel for the winter quarter was not sent for 33 of 50 students who received Federal Loans disbursements. All students received the notification in a timely manner for other quarters. The school must send this notification to the borrower no earlier than 30 days before, and no later than 30 days after, crediting the borrower's account.

**Action Taken:**

The following corrective actions were completed by the affected campus:

Financial Aid and Scholarships Office at the affected campus is working with their IT to create interdependencies between disbursements and the right to cancel/disbursement notification programs. In order to mitigate the risk, a business decision has been made not to process financial aid disbursements on holidays at this campus, thereby eliminating the need to manage a holiday program schedule and ensuring that the notification job is always scheduled to run on the same day as disbursements. In addition, this campus also run ad hoc reports to validate that the job is operating sufficiently and conduct periodic reviews.

# **University of California**

## **Schedule of Prior Audit Findings**

### **Year Ended June 30, 2017**

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#### **2016-003 – Disbursements to and on Behalf of Students – Credit Balances**

**Program:** Student Financial Cluster

**Sponsor Award Number:** Federal Supplemental Educational Opportunities Grant; Federal Work Study; Federal Perkins Loan Program; Federal Pell Grants; Federal Direct Loans

**Sponsoring Agency:** Department of Education

**CFDA Number:** 84.007- Federal Supplemental Educational Opportunities Grant; 84.033- Federal Work Study; 84.038- Federal Perkins Loan Program; 84.063- Federal Pell Grants; 84.268- Federal Direct Loans

**Institute Award Number:** None

**Award Period:** 2015 – 2016

#### **Condition:**

In testing one campus' conformity with the compliance requirements for disbursement testing, two students of 40 tested were identified whose credit balances, totaling \$10,060, extended longer than the 14-day regulatory time frame. One student credit balance existed for 20 days, 6 days past the permitted timeline, and the other student credit balance existed for 26 days, 12 days past the permitted timeline.

#### **Action Taken:**

The following corrective actions were completed by the affected campus:

The Student Business Services (SBS) and the Financial Aid and Scholarship Office (FAS) at the affected campus have implemented an immediate solution by manually identifying and issuing late quarter aid during periods between quarters. After each batch disbursement runs of financial aid, FAS identifies the students paid late in the quarter by Direct Loan, Pell Grant, Perkins Loan and/or SEOG. The list of students who will be off cycle is then provided to SBS who reviews the list and processes the refunds. SBS and FAS have established monthly meetings to ensure compliance with this requirement.

This campus is also working on a more automated solution which includes upgrade to their new Student Aid Management system and the assignment of a reference to term specific financial aid disbursements released into ISIS (Integrated Student Information System), making it clear which quarter a disbursement is matched to. In addition, SBS is evaluating the functionality in the current student business processes online tools that allows pending Direct Loans to be incorporated into the online student account detail, offsetting the amount due from a student at the time of quarterly payment. The automation of the current manual refunds process has being considered as part of a future new Student Aid Management system upgrade expected by spring 2018 quarter.

# **University of California**

## **Schedule of Prior Audit Findings**

### **Year Ended June 30, 2017**

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#### **2016-004 –Equipment Additions and Inventory**

**Program:** Research & Development Cluster

**Sponsor Award Number:** 5P51RR000169-50

**Sponsoring Agency:** National Institutes of Health (NIH) – NIH National Center for Research Resources

**CFDA Number:** 93.389

**Institute Award Number:** 790404 Fund Number: 82449

**Award Period:** 2015 – 2016

#### **Condition:**

In testing the University's conformity with the compliance requirements for equipment management, one asset of 25 tested, valued at \$8,576, could not be observed during a physical inspection. This selection could not be observed as it was consumable supplies rather than an inventoriable and capitalizable asset. As the supplies are not tangible personal property with a useful life of more than one year, the supplies should not have been capitalized. Noted no indication that the supplies were unallowable.

#### **Action taken:**

The following corrective action was completed by the affected campus:

In June 2017, upon completion of selected department's physical inventory counts, the Equipment Management team of this campus began selecting a sample of equipment to verify existence through performing physical inspection of the selected equipment.

# University of California

## Schedule of Prior Audit Findings

### Year Ended June 30, 2017

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#### **2016-005 –Cash Management timing of reimbursement requests**

**Program:** Research & Development Cluster

**Sponsor Award Number:** Various

**Sponsoring Agency:** Department of Agriculture; Department of Housing and Urban Development; Department of the Interior; Department of Justice; Department of State; National Aeronautics and Space Administration; National Science Foundation; Environmental Protection Agency; Department of Energy; Department of Education; Department of Health and Human Services

**CFDA Number:** 10.Variou; 11.Variou; 14.Variou; 15.Variou; 16.Variou; 19.Variou; 43.Variou; 47.Variou; 66.Variou; 81.Variou; 84.Variou; 93.Variou

**Institute Award Number:** Various

**Award Period:** 2015 – 2016

**Condition:** In testing the University's conformity with the compliance requirements for cash management at one campus, it was determined that management did not have a process in place to ensure that all expenditures are paid prior to requesting reimbursement.

#### **Action Taken:**

The following corrective action was completed by the affected campus:

As of October 1, 2017, the affected campus has fully implemented a new business process to calculate the daily cash draw for expense reimbursement in which only actual disbursements excluding any amounts not yet paid to vendors are included in the draw. The only exception is for final grant draws, where the final report has been filed with the agency and documents expenses not yet disbursed. This practice allows timely reporting while preserving the ability to draw funds prior to the agencies' closeout of the award.

Corrective actions completed after June 30, 2017 because remediation involved multiple departments, and systems and process changes which required additional time.

# University of California

## Schedule of Prior Audit Findings

### Year Ended June 30, 2017

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#### **2016-006 –Key Personnel Monitoring**

**Program:** Research & Development Cluster

**Sponsor Award Number:** 5R01MH084794-05; 5P30MH062512-13; 5R01DA027797-05; 5R01DA028692-05; 5UL1TR000100-05; 5R01HL073355-09; 5U01AI082229-05; HHSO100201000029C

**Sponsoring Agency:** National Institutes of Health (NIH): NIH Mental Health, National Institute of (NIMH); NIH Mental Health, National Institute of (NIMH); NIH Drug Abuse, National Institute of; NIH Drug Abuse, National Institute of; NIH National Center for Advancing Translational Sciences; NIH National Heart, Lung & Blood Institute; NIH National Institute of Allergy and Infectious Diseases; Department of Health and Human Services: Office of the Secretary (SEC HHS Office of the Secretary)

**CFDA Number:** 93.RD (93.242); 93.RD (93.242); 93.RD (93.279); 93.RD (93.279); 93.RD (93.350); 93.RD (93.837); 93.RD (93.855); 93.RD (93.Unknown)

**Institute Award Number:** 25701A; 31547A; 25357A; 27922B; 27630A; 28717A; 25447A; 25861A

**Award Period:** 2013-2015; 2015-2016; 2014-2015; 2015-2016; 2014-2015; 2014-2015; 2014-2015; 2013-2015

#### **Condition:**

In testing the University's conformity with the compliance requirements for monitoring key personnel, it was noted that at select campuses there was not a centralized process in place to monitor changes in key personnel. Instead of a centralized process, reliance was placed upon the individual principal investigator's (PI) monitoring of the award and key provisions thereof. While a centralized process is not required, such a process would allow for standardization in order to ensure that a consistent approach is applied by campus departments and PIs to ensure that the monitoring of key personnel is performed regularly and that the necessary approvals are obtained timely and appropriately evidenced. For 17 of 60 selections tested, there was no evidence of having obtained the appropriate approvals beyond the PI's explanation that verbal approval had been obtained.

#### **Action Taken:**

The following corrective actions were completed by the affected campuses:

The current key personnel monitoring at the first affected campus is decentralized. While each department manages and monitors the identification of all key personnel, this campus has now implemented a new standardized process at the central offices to capture all the key personnel named in the Notices of Awards in their database system of record for contracts and grants activity beginning with new awards received after December 1, 2017. This central office will monitor key personnel changes with active awards by sending quarterly reminders to campus departments to document the review of the required effort and obtain approvals if there will be any reduction in effort for key personnel by more than 25%. In addition, this campus is developing a reporting tool to capture all key personnel data recorded in the database. This tool is expected to be completed by March 2018.



**University of California**  
**Schedule of Prior Audit Findings**  
**Year Ended June 30, 2017**

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In September 2017, the second affected campus implemented process and system changes to centrally capture key personnel commitments in the online system at the time of award setup. Using this data, this campus will monitor key personnel engagement by selecting a sample of funds on a quarterly basis to ensure that there have been direct payroll charges to the award for all key personnel identified in the online system. For funds without direct charges or cost share entries recorded for named key personnel, the PI will be requested to provide verification of engagement or if necessary, written approval from the relevant agency that the key personnel change was approved.

Corrective actions completed after June 30, 2017 because remediation involved multiple departments, and systems and process changes which required additional time.

# **University of California**

## **Schedule of Prior Audit Findings**

### **Year Ended June 30, 2017**

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#### **2016-007 –IT Privileged Access over Federal Awards**

**Program:** All programs

**Sponsor Award Number:** All sponsors

**Sponsoring Agency:** All agencies

**CFDA Number:** All CFDA Numbers

**Institute Award Number:** All awards

**Award Period:** 2015 – 2016

#### **Condition:**

As discussed in Financial Statement Finding 2016-001, certain deficiencies exist related to privileged access which were assessed related to the financial audit reporting scope. The majority (approximately 75%) of these findings related to in-scope medical centers which do not administer federal awards. However, a lesser number of control deficiencies were also noted for four campuses related to access, and some of which affected systems that impact federal awards, including procurement, payroll and the general ledger. Please refer to Finding 2016-001 for additional detail.

#### **Action Taken:**

Management has made significant progress in the current year to remediate the issues identified in the prior year and plans are in place to remediate all prior year issues. Based upon the issues identified in the prior year, management performed an independent analysis to understand each finding, determine the root cause and modify controls or related processes to begin remediating these control deficiencies. This effort was led centrally out of University of California, Office of the President (UCOP) facilitating and tracking remediation efforts with the various CIOs (or IT Lead proxies) across each UC location. In 2016, 71 total IT related deficiencies were identified across the in scope IT locations which included IT related deficiencies related to IT professional and application users and monitoring of database administrator access. In 2017, 57 total IT related deficiencies were identified of which 21 were remediated during the year, 22 remaining were still in process of being remediated and 14 new deficiencies were identified (primarily driven by additional locations or applications brought into scope). For further details refer to the Management's Response and Corrective Action Plan to Financial Statement Finding 2017-001.

Expected full implementation is after June 30, 2017 because remediation involved multiple campuses, departments, and systems and process changes which required additional time.

# University of California

## Schedule of Prior Audit Findings

### Year Ended June 30, 2017

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#### **2016-008 –Enrollment Reporting**

**Program:** Student Financial Cluster

**Sponsor Award Number:** Federal Perkins Loan Program; Federal Pell Grants; Federal Direct Loans  
**Sponsoring Agency:** Department of Education

**Sponsoring Agency:** Department of Education

**CFDA Number:** 84.038- Federal Perkins Loan Program; 84.063- Federal Pell Grants, 84.268- Federal Direct Loans

**Institute Award Number:** None

**Award Period:** 2015 – 2016

#### **Condition:**

In testing the University's conformity with compliance requirements for enrollment reporting for approximately 50% of 160 students sampled, the date reported as received by the NSLDS was beyond 60 days from the effective date transmitted by the institution. In addition it was noted that one campus from the prior year, which was not subject to testing in the current year, had partially implemented a corrective action to address late reporting issues identified. This campus was not able to fully implement the corrective action in order to ensure timely and accurate reporting.

#### **Action Taken:**

In September 2017, campuses have jointly developed an enrollment reporting best practices to follow to assure that enrollment changes are reported appropriately through the NSC and the NSLDS.

Campuses continues to provide enrollment and degree reporting according to the frequency and timeliness required by National Student Loan Data System (NSLDS). The University maintains the same robust and rigorous reporting for all student populations including those enrolled in irregular calendars terms.

Corrective actions completed after June 30, 2017 because remediation involved multiple campuses, organizations, and systems and process changes which required additional time.



OFFICE OF THE EXECUTIVE VICE PRESIDENT—  
CHIEF FINANCIAL OFFICER

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February 9, 2018

## **MANAGEMENT'S RESPONSE AND CORRECTIVE ACTION PLAN**

### **REPORT ON AUDIT OF FINANCIAL STATEMENTS AND ON FEDERAL AWARD PROGRAMS IN ACCORDANCE WITH 2 CFR 200, UNIFORM GUIDANCE, FOR THE YEAR ENDED JUNE 30, 2017**

#### **2017-001 – IT Privileged Access**

Management agrees that the findings related to timely and consistent user access reviews, monitoring of direct access to data, and managing developer access to production are important aspects of Information Technology General Controls (ITGCs). While there are numerous information systems across both our campuses and health systems and recent years has seen a significant expansion of systems, especially in our health systems, management recognizes this challenge and is committed to taking the necessary steps to address these deficiencies in order to achieve consistent and coordinated compliance across the University.

Management at locations will implement periodic user access reviews for the relevant applications to ensure that the access for all information technology professionals is appropriate and commensurate with employee job roles and responsibilities. Management will also strengthen change control processes for relevant applications through programmatic and process improvements to ensure the integrity of the changes.

While in some cases technical architecture and implementation complexity necessitates developer access to production, there is commitment from management to monitor access to ensure inappropriate changes do not occur. Multiple compensating controls, including monitoring of access logs, restricting developer access to read-only in production environments, and restricting migration of changes to production environments, will be implemented. These control enhancements, in addition to existing activity monitoring in development and production environment for elevated privileged personnel, will address the noted deficiencies.

Management believes that, while there are opportunities to improve, the ongoing efforts and compensating controls across the University mitigate the risk that weaknesses in the ITGCs could result in inaccurate financial data. Due to the decentralized nature of the University operations, we

believe it unlikely the inaccurate financial data from multiple locations would simultaneously occur, and the University's ability to prepare accurate financial statements would not be affected.

Management has made significant progress in the current year to remediate the issues identified in the prior year and plans are in place to remediate all prior year issues. Based upon the issues identified in the prior year, management performed an independent analysis to understand each finding, determine the root cause and modify controls or related processes to begin remediating these control deficiencies. This effort was led centrally out of University of California, Office of the President (UCOP) facilitating and tracking remediation efforts with the various CIOs (or IT Lead proxies) across each UC location.

In 2016, 71 total IT related deficiencies were identified across the in scope IT locations which included IT related deficiencies related to IT professional and application users and monitoring of database administrator access. In 2017, 57 total IT related deficiencies were identified of which 21 were remediated during the year, 22 remaining were still in process of being remediated and 14 new deficiencies were identified (primarily driven by additional locations or applications brought into scope). We expect all affected locations to complete remediation by Fall 2018.

While IT control exceptions were deemed to be "Control Deficiencies" at each of the individual locations, significant progress was made, given the number of IT related deficiencies, pervasiveness and heightened risk around IT privileged access.

#### **2017-002 – Return of Title IV funds – Refund to the Department of Education**

The affected campus converted to a new integrated student information system during the audit period evaluated. During the implementation period, system limitations prevented the timely extraction of the data needed to identify students who dropped out, withdrew or never began attendance after receiving Title IV assistance. The subsequent development of on-demand system reports has allowed for the appropriate and timely identification of this population of students. In addition, as of August 2017, this campus has instituted a process to review the system reports and to manually reverse aid for which the students are no longer eligible, ensuring that returns are made within 30 days of the term cancellation. Once disbursement for the term begins, the system reports are run on a daily basis through the first week of the term. After that, the reports are run on a weekly basis and coordinated with other withdrawal monitoring processes.

#### **2017-003 – Student Loan Repayments – Exit Interviews**

During the audit period evaluated the affected campus converted from the legacy mainframe system to a new integrated student information system. The exit interview exception resulted from a timing gap during the conversion period. As of November 2017, remediation action has been completed to address all exits identified as impacted by the timing gap. With the new student information system, a new process has been instituted in conjunction with our new loan servicer (ECSI) to ensure student enrollment status is updated regularly, exit notifications are sent timely, and exit completions are tracked. Additionally, this campus has identified appropriate system reports for monitoring and instituted a regular monthly review process based on the new structure and reporting.

#### **2017-004 – Enrollment Reporting**

There were two campuses affected by this finding. The enrollment findings were primarily a result of these campuses transitioning to new student information systems.

Over the last year, these campuses have worked to better understand delivered enrollment reporting functionality and to stabilize the reporting process to NSLDS via the new systems. In addition, to minimize risk of compliance errors, procedures were developed to update NSC to match the student information system when necessary, understand the dates used by NSC for the effective date of graduation, analyze submission schedules to ensure appropriate buffer room for NSC and NSLDS processing time, and explore the possibility of modifying the enrollment report delivered in the student information system to better capture the correct effective date. The affected campuses are also enhancing the auditing process to ensure it is structured to maximize its ability to identify errors. We expect to complete these steps by March 2018.

#### **2017-005 – Equipment Additions**

At the affected campus the cost of newly acquired inventorial equipment is currently determined by monthly review and reconciliation of the vendor invoice, and accounts payable system. This campus has instituted an improved training program on equipment costing and reconciliation for all Equipment Management staff. Additionally the review of the reconciliation performed monthly will include a sample set of 10% of the newly capitalized equipment and biannually will include a second sample set of 2% of all newly acquired equipment. This campus is evaluating increased automation in the reconciliation process using the accounts payable system to establish the actual equipment costs. A permanent solution is expected to be implemented by September 30, 2018.

#### **2017-006 – Cash Management – Timing of reimbursement requests**

This finding is being repeated as all corrective actions were not fully implemented for the period under audit.

As of October 1, 2017, the affected campus has fully implemented a new business process to calculate the daily cash draw for expense reimbursements resulting from actual disbursements. Expenses, for which amounts have not yet been disbursed to vendors, will be excluded from the draw. The only exception is for final grant draws, where the final report has been filed with the agency and documents expenses not yet disbursed. This practice allows timely reporting while preserving the ability to draw funds prior to the agencies' closeout of the award.

#### **2017-007 – Key Personnel Monitoring**

Although no exceptions were noted in current year audit, this finding is being repeated because not all corrective actions were fully implemented for the year ended June 30, 2017.

The affected campus operates in a decentralized environment in which each department tracks and monitors key personnel and obtains the written approval as needed.

Management's Response and Corrective Action Plan  
February 9, 2018

This campus has now implemented a standardized process at the central offices to capture all the key personnel named in the Notices of Awards for all new awards effective December 1, 2017. In this new standardized process this campus will record all key personnel named on the Notice of Awards in their database system of record for contracts and grants activity beginning with new award received after December 1, 2017. Additionally, the central offices will monitor key personnel changes with active awards by sending quarterly reminders to campus departments to document the review of the required effort and obtain approvals if there will be any reduction in effort for key personnel by more than 25%.

This campus is also developing a reporting tool to capture all key personnel data recorded in their database. This reporting tool is expected to be completed by March 2018.

**2017-008 – IT Privileged Access over Federal Awards**

For Management Response and Corrective Action Plan, refer to Financial Statement Finding 2017-001.

**2017-009 – Service Center**

The affected campus agrees with the finding that some service center rates were not reviewed within the prior two years as stated in our internal guidelines. This campus will (1) review the policies on service center classifications and rate review procedures, (2) develop a responsibility matrix and action plan to ensure appropriate review requirements and timelines are met by service centers, (3) develop protocols to escalate and support rate review submissions as necessary, (4) review all recharge organizations to ensure they are appropriately identified with an appropriate fund assignment.

We expect to complete these steps by September 30, 2018.

For questions or additional information regarding the above please contact me at (510) 987-9844 or email [joao.pires@ucop.edu](mailto:joao.pires@ucop.edu).



Joao Pires  
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