# The University of California

Report on Audited Financial Statements and Expenditures of Federal Awards in Accordance with OMB Uniform Guidance For the Year Ended June 30, 2016

<u>Location</u>	<u>EIN</u>
Office of the President	94-3067788
Berkeley	94-6002123
Davis	94-6036494
Irvine	95-2226406
Los Angeles	95-6006143
Merced	27-0093858
Riverside	95-6006142
San Diego	95-6006144
San Francisco	94-6036493
Santa Barbara	95-6006145
Santa Cruz	94-1539563

# The 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 year ended June 30, 2016, and the related notes to the financial statements which collectively comprise the University's basic financial statements as listed in index.

## 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 audit. We conducted our audit 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 opinion.

## **Opinion**

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, 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 presents certain fair value hierarchy disclosures related to investments and the manner in which it accounts for certain components as blended components in fiscal 2016. Our opinions are 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 to 22 and the required supplemental information on pages 88 through 93 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 historical 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 audit 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 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 schedule of expenditures of federal awards, the accompanying schedule of expenditures of federal awards was 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, 2016 on our consideration of the 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 for the year ended June 30, 2016. The purpose of that report is 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 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.

San Francisco, California

Pricewaterhouse Cooper 22P

October 12, 2016

# 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, 2016, with selected comparative information for the years ended June 30, 2015 and 2014. 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 (2014, 2015, 2016 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 \$31.2 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.

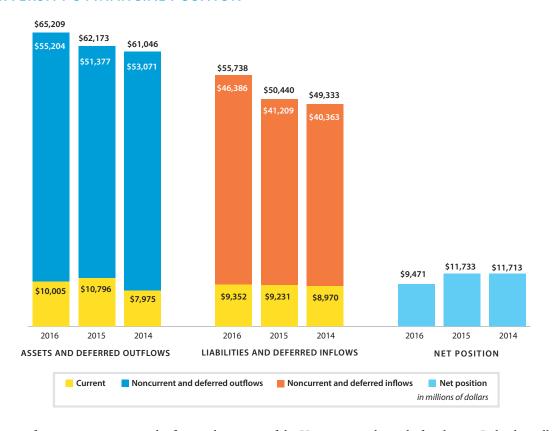
*Law schools.* The University has law schools at Berkeley, Davis, Irvine and Los Angeles. Also, the Hastings College of the Law in San Francisco is affiliated with the University, although not included in the financial reporting entity.

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



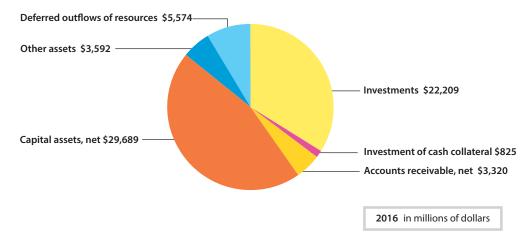
The statement of net position presents the financial position of the University at the end of each year. It displays all of the University's assets, deferred outflows, liabilities and deferred inflows. The difference between assets, deferred outflows, liabilities and deferred inflows is net position.

The major components of the assets, deferred outflows, liabilities, deferred inflows and net position as of June 30, 2016, 2015 and 2014 are as follows:

(in	mil	linne	of do	llare)

	2016	2015	2014
ASSETS			
Investments	\$22,209	\$22,493	\$21,749
Investment of cash collateral	825	775	1,218
Accounts receivable, net	3,320	3,281	3,038
Capital assets, net	29,689	28,643	27,645
Other assets	3,592	3,500	3,691
Total assets	59,635	58,692	57,341
DEFERRED OUTFLOWS OF RESOURCES	5,574	3,481	3,705
LIABILITIES			
Debt, including commercial paper	19,951	19,021	18,031
Securities lending collateral	825	775	1,218
Net pension liability	15,125	10,671	7,725
Obligations for retiree health benefits	10,457	9,390	8,440
Other liabilities	7,648	7,426	6,811
Total liabilities	54,006	47,283	42,225
DEFERRED INFLOWS OF RESOURCES	1,732	3,157	7,108
NET POSITION			
Net investment in capital assets	12,816	12,138	12,167
Restricted:			
Nonexpendable	1,148	1,111	1,081
Expendable	6,546	7,206	6,975
Unrestricted	(11,039)	(8,722)	(8,510)
Total net position	\$9,471	\$11,733	\$11,713

## The University's Assets and Deferred Outflows



The University's total assets and deferred outflows of resources have grown to \$65.2 billion in 2016, compared to \$62.2 billion in 2015 and \$61.0 billion in 2014. Capital assets have increased due to continued investments in facilities and investments changed due to financial market returns. Deferred outflows increased due to changes in the University's net pension liability.

#### 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. As a result of continued low interest rates, the University increased its use of TRIP to enhance investment returns, while still maintaining sufficient funds in STIP to meet operational 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 negative return of 3.4 percent in 2016, and positive returns of 7.2 percent and 19.0 percent in 2015 and 2014, respectively. TRIP had positive returns of 0.3 percent, 2.6 percent and 14.7 percent in 2016, 2015 and 2014, respectively. STIP had positive returns of 1.3 percent, 1.4 percent and 1.6 percent in 2016, 2015 and 2014, respectively. Short-term investments were held at the end of 2015 to facilitate the execution of asset allocation changes in the investment portfolios, resulting in a decrease of \$1.3 billion in 2016 and an increase of \$2.9 billion in 2015 in short-term investments.

## 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

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 2016 was the Jacobs Medical Center in San Diego. The largest project in 2015 was the Mission Bay Hospital in San Francisco. Total additions of capital assets were \$3.0 billion in 2016 as compared to \$2.8 billion in 2015 and \$2.9 billion in 2014.

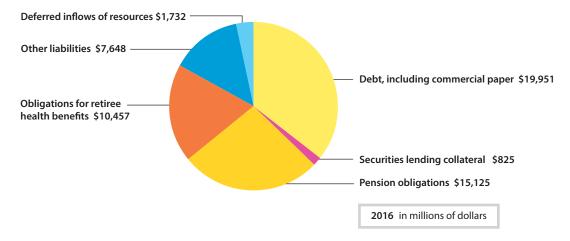
#### Other assets

Other assets include cash, investments held by trustees, pledge receivables, note and mortgage receivables, inventories and a receivable from the DOE. The noncurrent receivable from the DOE, which fluctuates with the net pension liability due to the DOE's continuing responsibility to contribute for retired and terminated vested members of LLNS and LANL, decreased by \$41.1 million in 2016 as compared to 2015 and decreased by \$178.8 million in 2015 as compared to 2014.

## 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 liability are reported as deferred outflows of resources. In both 2016 and 2015, deferred outflows increased due to lower than expected investment returns in the University of California Retirement Plan (UCRP) portfolio. In 2015, deferred outflows also increased due to changes in the net pension liability as a result of changes in assumptions for mortality and expected investment returns.

## The University's Liabilities and Deferred Inflows



The University's liabilities and deferred inflows of resources increased to \$55.7 billion in 2016 as compared to \$50.4 billion in 2015 and \$49.3 billion in 2014. The increase in both 2016 and 2015 was primarily related to the issuance of additional debt to finance capital projects and the increases in the liabilities for net pension liability and retiree health benefits offset by a reduction in deferred inflows of resources.

#### 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 \$931.0 million and \$990.0 million in 2016 and 2015, respectively. A summary of the activity follows:

	2016	2015
ADDITIONS TO OUTSTANDING DEBT		
General Revenue Bonds	\$813	\$1,679
Limited Project Revenue Bonds	532	1,671
Capital leases	67	43
Other borrowings	200	
Blended Component Unit Revenue Bonds	283	
Commercial paper		91
Bond premium, net	195	242
Additions to outstanding debt	2,090	3,726
REDUCTIONS TO OUTSTANDING DEBT		
Refinancing and prepayments	(528)	(2,325)
Scheduled principal payments	(340)	(336)
Payments on other borrowings	(180)	(26)
Commercial paper	(47)	
Other <sup>1</sup>	(64)	(49)
Reductions to outstanding debt	(1,159)	(2,736)
Net increase in outstanding debt	\$931	\$990

<sup>1</sup>Amortization of bond premium.

The University's debt, which is used to primarily finance capital assets, includes \$1.0 billion, \$1.1 billion and \$1.0 billion of commercial paper outstanding at the end of 2016, 2015 and 2014, respectively. Total debt outstanding was \$20.0 billion at the end of 2016 compared to \$19.0 billion and \$18.0 billion at the end of 2015 and 2014, respectively.

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 primarily 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. In August 2016, subsequent to year-end, Medical Center Pooled Revenue Bonds totaling \$1.0 billion were issued and a standby bond purchase agreement for \$70.9 million of tax-exempt variable-rate demand bond was terminated.

In 2015, \$3.4 billion of debt was issued. The University issued General Revenue Bonds totaling \$1.7 billion and Limited Project Revenue Bonds totaling \$1.7 billion to primarily finance and refinance certain facilities and projects of the University. Reductions to outstanding debt in 2015 were \$2.7 billion, including \$2.3 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 \$276.0 million. The General Revenue Bonds issued included \$500.0 million of bonds maturing in 2115 to finance capital projects of the University or for such other purposes as authorized by The Regents.

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 \$47.1 million in 2016 as compared to 2015, and increased by \$91.3 million in 2015 compared to 2014. 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 \$1.2 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 \$15.1 billion, \$10.7 billion and \$7.7 billion in 2016, 2015 and 2014, respectively. The change in net pension liability for 2016 was primarily driven by lower than expected investment returns on the UCRP investment portfolio. The change in net pension liability for 2015 was primarily driven by changes in assumptions from the experience study and lower than expected returns on the UCRP investment portfolio. UCRP's total investment rate of return was negative 2.0 percent in 2016, positive 4.5 percent in 2015 and positive 17.4 percent in 2014. The discount rate used to estimate the net pension liability was 7.25 percent in 2016, 7.25 percent in 2015 and 7.5 percent in 2014.

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 \$974.7 million, \$1.0 billion and \$1.2 billion for 2016, 2015 and 2014, respectively, representing the DOE's share of the net pension liability.

The University's obligation for retiree health benefits is based upon an actuarial determination of the annual retiree health benefit expense. The University funds the retiree health expense through UCRHBT based upon a projection of benefits on a pay-as-you-go basis. The increases of \$1.1 billion and \$950.0 million in 2016 and 2015, respectively, in the obligation for retiree health benefits is due to the impact of amortizing the University's unfunded obligation. The unfunded liability for the campuses and medical centers as of the July 1, 2015 actuarial valuation was \$17.3 billion.

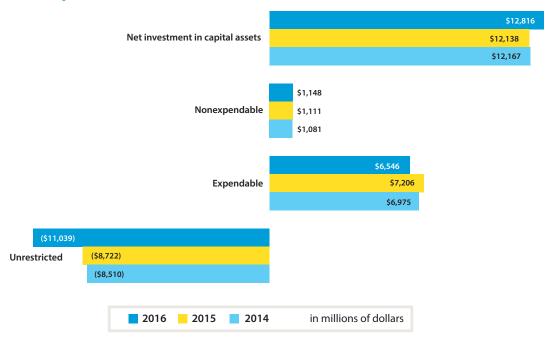
#### Other liabilities

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 liability. In March 2016, the University sold the rights to receive future royalty payments to a third-party and received \$520.2 million in net proceeds. The proceeds are reported as deferred inflows of resources and will be recognized through the expiration of the patents in 2027. Deferred inflows of resources decreased in 2016 by \$1.4 billion due to lower than expected investment returns on the UCRP portfolio offset by sales of certain future royalty revenues. Deferred inflows of resources decreased in 2015 by \$4.0 billion due to changes in net pension liability as a result of changes in assumptions for inflation and lower than expected returns on the UCRP investment portfolio.

#### 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. The University's net position was \$9.5 billion in 2016 compared to \$11.7 billion in 2015 and 2014. 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 \$12.8 billion in 2016 compared to \$12.1 billion and \$12.2 billion for the years ended June 30, 2015 and 2014, respectively. The University continues to invest in its physical facilities to support the growth in the University.

#### 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 2016 and 2015, 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 reserves. 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. As of June 30, 2016 and 2015, unrestricted net position is in a deficit position. The increases in the deficit in 2016 and 2015 are primarily due to increases in the net pension liability and retiree health benefit obligations.

#### 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. A summarized comparison of the operating results for 2016, 2015 and 2014, 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)

		2016			2015			2014	
	OPERATING	NONOPERATING	TOTAL	OPERATING	NONOPERATING	TOTAL	OPERATING	NONOPERATING	TOTAL
REVENUES									
Student tuition and fees, net	\$4,132		\$4,132	\$3,784		\$3,784	\$3,586		\$3,586
State educational appropriations		\$3,048	3,048		\$2,792	2,792		\$2,638	2,638
Federal Pell Grants		376	376		376	376		316	316
Grants and contracts, net	5,273		5,273	5,205		5,205	5,118		5,118
Medical centers, net	10,236	15	10,251	9,477	22	9,499	8,414	2	8,416
Educational activities, net	2,973		2,973	2,740		2,740	2,378		2,378
Auxiliary enterprises, net	1,430		1,430	1,394		1,394	1,316		1,316
Department of Energy laboratories	1,260		1,260	1,235		1,235	1,251		1,251
Private gifts, net		1,092	1,092		971	971		891	891
Investment income, net		311	311		319	319		337	337
Other revenues	962	51	1,013	911	38	949	733	84	817
Revenues supporting core activities	26,266	4,893	31,159	24,746	4,518	29,264	22,796	4,268	27,064
EXPENSES									
Salaries and benefits	14,021		14,021	13,109		13,109	12,262		12,262
Pension benefits	2,687		2,687	1,515		1,515	1,292		1,292
Other employee benefits	4,272		4,272	3,941		3,941	3,714		3,714
Scholarships and fellowships	652		652	547		547	577		577
Utilities	283		283	273		273	290		290
Supplies and materials	3,109		3,109	2,876		2,876	2,585		2,585
Depreciation and amortization	1,804		1,804	1,698		1,698	1,740		1,740
Department of Energy laboratories	1,253		1,253	1,228		1,228	1,244		1,244
Interest expense		693	693		662	662		617	617
Other expenses	4,411	46	4,457	4,157	17	4,174	3,729	3	3,732
Expenses associated with core activities	32,492	739	33,231	29,344	679	30,023	27,433	620	28,053
Income (loss) from core activities	\$(6,226)	\$4,154	\$(2,072)	\$(4,598)	\$3,838	\$(759)	\$(4,637)	\$3,648	\$(989
OTHER NONOPERATING ACTIVITIES					· · · · · · · · · · · · · · · · · · ·				
Net appreciation (depreciation) in fair value of investments			(473)			544			1,831
Income (loss) before other changes in net position			(2,545)			(215)			842
OTHER CHANGES IN NET POSITION									
State capital appropriations			4			21			45
Capital gifts and grants, net			249			187			474
Permanent endowments			30			27			20
Increase (decrease) in net position			(2,262)			20			1,381
NET POSITION									
Beginning of year, as previously reported			11,733			11,713			9,913
Cumulative effect of accounting and reporting entity changes									419
Beginning of year, restated			11,733			11,713			10,332
End of year			\$9,471			\$11,733			\$11,713

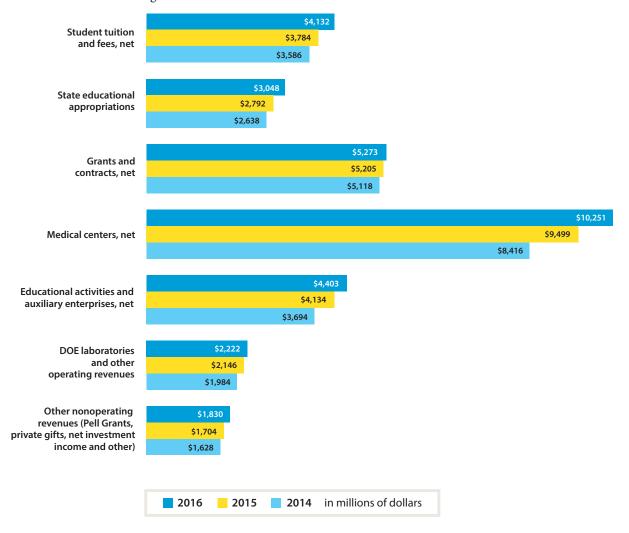
## Revenues supporting core activities

Revenues to support the University's core activities, including those classified as nonoperating revenues, were \$31.2 billion, \$29.3 billion and \$27.1 billion in 2016, 2015 and 2014, respectively. These diversified sources of revenue increased by \$1.9 billion in 2016 and increased by \$2.2 billion in 2015.

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.

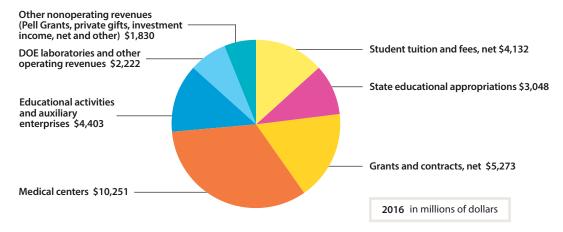
Gifts to the University allow crucial flexibility to faculty for support of their fundamental activities or new academic initiatives. Other significant revenues are from medical centers, educational activities and auxiliary enterprises such as student housing, food service operations and parking.

Revenues in the various categories have increased and decreased 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 2016 are as follows:



#### Student tuition and fees, net

Net student tuition and fees were \$4.1 billion, \$3.8 billion and \$3.6 billion in 2016, 2015 and 2014, 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 \$1.1 billion and \$1.2 billion in 2016 and 2015, respectively, were netted against student tuition and fees. Student tuition and fees, net of scholarship allowances, increased by \$348.3 million and \$198.2 million in 2016 and 2015, respectively.

In 2016, enrollment grew by 2.1 percent and in 2015 enrollment grew by 3.3 percent. Mandatory tuition and fees for resident undergraduates were not changed in 2016 and 2015. Certain nonresident undergraduates and resident and nonresident graduate students experienced increases in mandatory tuition and fees. Professional degree supplemental tuition varies by discipline; no increases were approved for 2016 and 2015.

## State educational appropriations

Educational appropriations from the state of California were \$3.0 billion, \$2.8 billion and \$2.6 billion in 2016, 2015 and 2014, respectively. State educational appropriations increased in 2016 and 2015 by \$256.7 million and \$153.8 million, respectively.

The budget framework agreed to with the governor called for base budget adjustments of four percent annually over the next four years, 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 service fee increased five percent in 2016 and each year thereafter, 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 2016 and 2017 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 for the next four years. The framework provided \$25.0 million in one-time funding for deferred maintenance and \$96.0 million in one-time funds for UCRP in 2016.

State educational appropriations increased in 2015 as a result of state tax initiatives approved by the voters in California in 2012. In connection with the passage of these tax initiatives, the University did not raise resident tuition from 2013 through 2015.

#### Grants and contracts, net

Revenue from federal, state, private and local government grants and contracts — including an overall facilities and administration cost recovery of \$1.0 billion, \$993.5 million and \$978.4 million in 2016, 2015 and 2014, respectively — were \$5.3 billion, \$5.2 billion and \$5.1 billion in 2016, 2015 and 2014, respectively.

In 2016, federal grants and contracts revenue increased \$37.2 million, or 1.2 percent, as compared to 2015. In 2015, federal grants and contracts revenue increased \$10.1 million, or 0.3 percent, as compared to 2014. Federal grants and contracts include federal facilities and administrative cost recovery of \$745.6 million, \$720.3 million and \$709.6 million in 2016, 2015 and 2014,

respectively. Expiring federal grants and 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)

	2016	2015	2014
Department of Health and Human Services	\$1,917	\$1,847	\$1,922
National Science Foundation	469	498	469
Department of Education	83	70	124
Department of Defense	258	259	256
National Aeronautics and Space Administration	135	137	102
Department of Energy (excluding national laboratories)	104	100	109
Other federal agencies	279	296	215
Federal grants and contracts net revenue	\$3,245	\$3,207	\$3,197

#### Medical centers, net

Medical center revenues, including state hospital fee grants and net of allowances, increased \$752.2 million, or 7.9 percent, in 2016 and increased \$1.1 billion, or 12.9 percent, in 2015. Revenues increased in 2016 due to improved collections and higher inpatient and outpatient utilization at all of the medical centers. The new UCSF Mission Bay facility, which opened in February 2015, was open for all of 2016, contributing to a significant portion of the growth in revenues. Revenues increased in 2015 due to higher patient volumes, a continuing increase in the complexity of cases, slight improvements in payor mix and higher reimbursement rates. In response to health care reform and increasing employee costs, the medical centers continue to invest in expanding services.

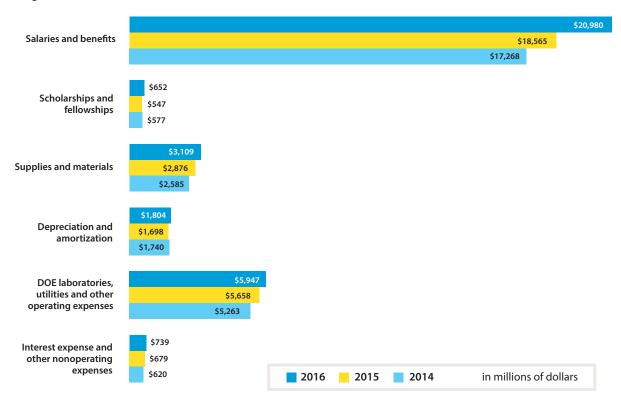
#### Educational activities and auxiliary enterprises, net

Revenue from educational activities, primarily medical professional fees, net of allowances, grew by \$232.6 million, or 8.5 percent, in 2016 and \$361.7 million, or 15.2 percent, in 2015. The growth is generally associated with an expanded patient base and improved collections.

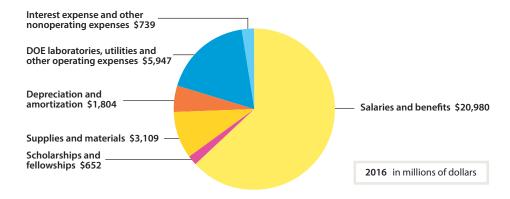
Auxiliary enterprises include housing, food service, parking, bookstores, student centers and unions, childcare centers and certain athletic programs. Revenue from auxiliary enterprises, net of allowances, grew by \$35.9 million, or 2.6 percent, in 2016 and \$77.6 million, or 5.9 percent in 2015.

## Expenses associated with core activities

Expenses associated with the University's core activities, including those classified as nonoperating expenses, were \$33.2 billion, \$30.0 billion and \$28.1 billion in 2016, 2015 and 2014, respectively. Expenses increased in 2016 by \$3.2 billion and in 2015 by \$1.9 billion, primarily due to growth in the University's operations, principally at the medical centers, and due to higher pension expenses as a result of significantly lower than 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 2016 are as follows:



#### Salaries and benefits

Approximately 63.0 percent of the University's expenses were related to salaries and benefits. There were 153,400 full-time equivalent (FTE) employees in the University in April 2016, excluding employees who were associated with LBNL whose salaries and benefits were included as laboratory expenses, as compared to 147,600 FTEs in April 2015.

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, 3.9 percent due to an increase in the number of FTEs and 3.0 percent due to an increase in the average salary per FTE. Employee benefits, excluding pension and post-retirement health care benefits, increased by 5.9 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.

Salaries and benefits increased by 7.5 percent in 2015 due to growth in the University's operations. In 2015, salaries increased by 6.9 percent, 2.6 percent due to an increase in the number of FTEs and 4.2 percent due to an increase in the average salary per FTE. Employee benefits, excluding pension and post-retirement health care benefits, increased by 6.8 percent in 2015, due to higher health insurance costs. Pension expense increased by 17.0 percent due to lower than expected investment returns and assumption changes.

## 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 \$2.0 billion in 2016 and 2015 and \$1.9 billion in 2014. Scholarships and fellowships, representing payments of financial aid made directly to students and reported as an operating expense were \$651.6 million, \$547.1 million and \$577.2 million in 2016, 2015 and 2014, 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 \$34.2 million, or 1.7 percent, in 2016 as compared to 2015.

#### Supplies and materials

During 2016 and 2015, supplies and materials costs increased by \$232.5 million, or 8.1 percent and \$291.5 million, or 11.3 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 research activity and increased 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 \$6.2 billion, \$4.6 billion and \$4.6 billion in 2016, 2015 and 2014, respectively. The operating losses in 2016, 2015 and 2014 were partially offset by \$4.1 billion, \$3.8 billion and \$3.6 billion, respectively, of net nonoperating revenue that clearly supports core operating activities of the University. Expenses associated with core activities in 2016, 2015 and 2014 exceeded revenue available to support core activities by \$2.1 billion, \$0.8 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 2016, the University recognized net depreciation in the fair value of investments of \$473.3 million, as compared to net appreciation of \$543.6 million and \$1.8 billion during 2015 and 2014, respectively. The University's portfolio experienced declines in 2016 principally due to declines in the equity markets, as compared to a positive performance in previous years due to returns in both the equity and bond 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's enrollment growth requires new facilities, in addition to continuing needs for renewal, modernization and seismic correction of existing facilities. Capital appropriations, representing proceeds from bond measures approved by California voters decreased by \$16.6 million and \$24.2 million in 2016 and 2015, respectively. Capital gifts and grants increased by \$61.9 million in 2016 from 2015 and decreased by \$286.6 million in 2015 from 2014 due to large gifts received in 2014 for the construction of the San Francisco Medical Center at Mission Bay.

#### 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, 2016, 2015 and 2014 are as follows:

(in millions of dollars)			
	2016	2015	2014
ASSETS			
Investments	\$7,115	\$7,085	\$6,497
Investment of cash collateral	42	37	51
Accounts receivable, net	33	79	8
Pledges receivable, net	842	823	861
Other assets	221	224	203
Total assets	8,253	8,248	7,620
LIABILITIES			
Accounts payable and other current liabilities	71	247	75
Securities lending collateral	42	37	51
Obligation under life income agreements and funds held for others	382	370	380
Other noncurrent liabilities	221	42	19
Total liabilities	715	696	525
DEFERRED INFLOWS OF RESOURCES	1	2	
NET POSITION			
Restricted:			
Nonexpendable	3,700	3,422	3,156
Expendable	3,742	4,030	3,820
Unrestricted	95	98	120
Total net position	\$7,537	\$7,550	\$7,095

Investments were flat in 2016 and increased in 2015 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 Committee on Investments 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 \$1.6 billion, \$1.3 billion and \$1.4 billion of the campus foundations' investments at the end of 2016, 2015 and 2014, 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 and deferred outflows 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 net appreciation in the fair value of investments were the primary reasons for the changes in value in 2016 and 2015.

## 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 2016, 2015 and 2014 is as follows:

2016	2015	2014
\$792	\$767	\$793
792	767	793
915	852	980
915	852	980
(123)	(85)	(187)
53	65	71
(225)	207	674
4	(5)	17
(291)	182	575
278	274	274
(13)	456	849
7,550	7,094	6,245
\$7,537	\$7,550	\$7,094
	\$792 792 915 915 (123) 53 (225) 4 (291) 278 (13)	\$792 \$767 <b>792 767</b> 915 852 <b>915 852 (123) (85)</b> 53 65 (225) 207 4 (5) (291) 182  278 274 (13) 456  7,550 7,094

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 (PERS-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 PERS-VERIP. At June 30, 2016, UCRS' assets were \$83.3 billion, liabilities \$8.7 billion and net position held in trust for pension benefits \$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 2016, 2015 and 2014 are as follows:

(in millions of dollars)			
	2016	2015	2014
ASSETS			
Investments	\$73,197	\$71,596	\$68,748
Participants' interests in mutual funds	2,768	4,948	5,044
Investment of cash collateral	6,751	5,177	6,563
Other assets	571	516	464
Total assets	83,287	82,237	80,819
LIABILITIES			
Securities lending collateral	6,750	5,178	6,562
Other liabilities	1,955	1,645	1,359
Total liabilities	8,705	6,823	7,921
NET POSITION HELD IN TRUST FOR PENSION BENEFITS			
Members' defined benefit plan benefits	54,225	55,123	52,854
Participants' defined contribution plan benefits	20,357	20,291	20,044
Total net position held in trust for pension benefits	\$74,582	\$75,414	\$72,898

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 2016, 2015 and 2014 is as follows:

(in millions of dollars)			
	2016	2015	2014
ADDITIONS			
Contributions	\$4,551	\$4,459	\$3,216
Net appreciation (depreciation) in fair value of investments	(2,300)	1,320	9,137
Investment and other income, net	1,318	1,326	1,347
Total additions	3,569	7,105	13,700
DEDUCTIONS			
Benefit payments and participant withdrawals	4,342	4,534	3,953
Plan expenses	59	55	46
Total deductions	4,401	4,589	3,999
Increase (decrease) in net position held in trust for pension benefits	\$(832)	\$2,516	\$9,701

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 loss based upon unit values for UCRS was negative 2.0 percent in 2016 as compared to investment gains of 4.5 percent in 2015 and 14.0 percent in 2014.

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 2016, 2015 and 2014 were \$4.6 billion, \$4.5 billion and \$3.2 billion, respectively. In 2016, contributions increased due to \$96.0 million received from the state of California under the budget agreement. Contributions include additional deposits of \$563.6 million and \$700.0 million made by the University to UCRP in 2016 and 2015, respectively. University contribution rates to UCRP were 14.0 percent of covered payroll in 2016, 2015 and 2014. Employee contribution rates ranged between 7.0 percent and 9.0 percent in 2016, 2015 and 2014.

Benefit payments and participant withdrawals were \$192.1 million less in 2016 than in 2015 and \$581.0 million more in 2015 than in 2014. Payments from UCRP increase each year due to a growing number of retirees receiving payments and cost-of-living adjustments. Benefit payments from UCRSP fluctuate based upon member withdrawals. Participant withdrawals decreased by \$320.6 million, or 20.7 percent, in 2016 as compared to 2015, and increased by \$291.8 million, or 23.1 percent, in 2015 as compared to 2014. As of June 30, 2016, there were 70,000 retirees and beneficiaries receiving payments from UCRS as compared to 67,300 as of June 30, 2015 and 64,200 as of June 30, 2014.

The net pension liability for UCRP was \$15.1 billion in 2016, \$10.6 billion in 2015 and \$7.7 billion in 2014. 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 increase in net pension liability for 2015 of \$2.9 billion was primarily due to lower than expected investment returns on the UCRP investment portfolio and assumption changes, including longer mortality and lower inflation. The ratio of plan net position to total pension liability was 78.3 percent in 2016, 83.8 percent in 2015 and 87.2 percent in 2014.

Additional information on the retirement plans can be obtained from the 2016 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 all of 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 2016, 2015 and 2014 are as follows:

(in millions of dollars)			
	2016	2015	2014
ASSETS			
Investments	\$54	\$24	\$37
Other assets	34	39	39
Total assets	88	63	76
LIABILITIES			
Total liabilities	15	12	11
NET POSITION HELD IN TRUST FOR RETIREE HEALTH BENEFITS			
Total net position held in trust for retiree health benefits	\$73	\$51	\$65

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 2016, 2015 and 2014 are as follows:

(in millions of dollars)			
	2016	2015	2014
ADDITIONS			
Contributions	\$376	\$316	\$343
Total additions	376	316	343
DEDUCTIONS			
Insurance premiums and payments	350	327	318
Plan expenses	4	3	4
Total deductions	354	330	322
Increase (decrease) in net position held in trust for retiree health benefits	\$22	\$(14)	\$21

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 unfunded actuarial accrued liability for eligible participants as of July 1, 2015, the date of the latest actuarial valuation, was \$17.8 billion.

#### 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 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.

Effective July 1, 2016, UCRP was amended to provide a new tier of pension benefits applicable to eligible employees hired (or becoming eligible), on or after July 1, 2016. The new tier would provide future UC employees a choice between two retirement benefits options (1) the current UCRP pension benefit capped at the California Public Employees' Pension Reform Act (PEPRA) salary limit (currently \$117,020) plus a supplemental contribution for eligible employees to a defined contribution plan on pay up to the Internal Revenue Service limit (currently \$265,000); or (2) a defined contribution benefit option for eligible employee pay up to the Internal Revenue Service limit (currently \$265,000). Under the budget framework, the University will receive \$438.0 million in one-time funds for UCRP as a result of making these benefit changes. The funds are being paid over three years, \$96.0 million was received in 2016, and \$171.0 million each year in 2017 and 2018.

Currently, the University does not pre-fund retiree health benefits and provides for benefits on a pay-as-you-go basis. The unfunded liability for the campuses and medical centers as of the July 1, 2016 actuarial valuation was \$21 billion based upon using a discount rate of 2.85 percent. The University's retiree health benefit obligations reported in the financial statements are expected to increase as a result of new accounting pronouncements that will be effective in the future.

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

At June 30, 2016 (in thousands of dollars)	UNIVERSITY OF CALIFORNIA	CAMPUS FOUNDATIONS
ASSETS		
Cash and cash equivalents	\$266,565	\$194,912
Short-term investments	4,944,611	479,410
Investment of cash collateral	680,838	34,641
Investments held by trustees	85,467	
Accounts receivable, net	3,319,518	32,562
Pledges receivable, net	17,056	217,971
Notes and mortgages receivable, net	52,672	6
Inventories	214,680	
Department of Energy receivable	94,307	
Other current assets	328,932	5,945
Current assets	10,004,646	965,447
Investments	17,264,156	6,635,868
Investment of cash collateral	144,093	7,332
Investments held by trustees	765,417	
Pledges receivable, net	30,050	624,452
Notes and mortgages receivable, net	327,169	1,014
Department of Energy receivable	1,268,771	
Capital assets, net	29,688,815	
Other noncurrent assets	141,505	19,471
Noncurrent assets	49,629,976	7,288,137
Total assets	59,634,622	8,253,584
DEFERRED OUTFLOWS OF RESOURCES	5,573,864	
LIABILITIES		
Accounts payable	1,623,237	18,485
Accrued salaries	995,235	
Employee benefits	440,270	
Unearned revenue	1,172,308	921
Collateral held for securities lending	824,677	41,973
Commercial paper	1,037,857	11,573
Current portion of long-term debt	1,413,265	
Funds held for others	327,429	251,472
Department of Energy laboratories' liabilities	78,862	231,772
Other current liabilities	1,438,527	51,875
Current liabilities	9,351,667	364,726
		30-1,720
Federal refundable loans	243,913	
Self-insurance	558,158	120 214
Obligations under life income agreements	32,021	130,314
Long-term debt	17,500,165	
Net pension liability	15,124,690	
Obligations for retiree health benefits	10,456,840	222.224
Other noncurrent liabilities	737,355	220,234
Noncurrent liabilities	44,653,142	350,548
Total liabilities	54,004,809	715,274
DEFERRED INFLOWS OF RESOURCES	1,732,279	1,460
NET POSITION		
Net investment in capital assets	12,816,190	
Restricted:		
Nonexpendable: Endowments and gifts	1,111,083	3,700,049
Nonexpendable: Minority interests	36,766	
Expendable: Endowments and gifts	6,084,997	3,741,932
Expendable: Other, including debt service, loans, capital projects and appropriations	461,402	
Unrestricted	(11,039,040)	94,869
Total net position	\$9,471,398	\$7,536,850

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

Year ended June 30, 2016 (in thousands of dollars)	UNIVERSITY OF CALIFORNIA	CAMPUS FOUNDATIONS
OPERATING REVENUES		
Student tuition and fees, net	\$4,132,352	
Grants and contracts, net:		
Federal	3,244,529	
State	443,194	
Private	1,284,753	
Local	300,119	
Medical centers, net	10,235,900	
Educational activities, net	2,972,830	
Auxiliary enterprises, net	1,429,985	
Department of Energy laboratories	1,259,768	
Campus foundation private gifts		\$780,983
Other operating revenues, net	962,394	11,492
Total operating revenues	26,265,824	792,475
OPERATING EXPENSES		
Salaries and wages	14,021,131	
Pension benefits	2,686,688	
Retiree health benefits	1,448,105	
Other employee benefits	2,823,986	
Supplies and materials	3,108,907	
Depreciation and amortization	1,804,046	
Department of Energy laboratories	1,252,842	
Scholarships and fellowships	651,565	
Utilities	282,692	
Campus foundation grants		889,278
Other operating expenses	4,410,718	25,890
Total operating expenses	32,490,680	915,168
Operating loss	(6,224,856)	(122,693)
NONOPERATING REVENUES (EXPENSES)	(,, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	, , , , , , ,
State educational appropriations	3,048,384	
State hospital fee grants	15,137	
Build America Bonds federal interest subsidies	58,550	
Federal Pell Grants	376,264	
Private gifts, net	1,091,519	
Investment income:	1,051,515	
Short Term Investment Pool and other, net	233,232	
Endowment, net	71,761	
Securities lending, net	6,282	415
Campus foundations	0,202	52,826
Net appreciation (depreciation) in fair value of investments	(473,308)	(225,237)
Interest expense	(693,027)	(35)
Loss on disposal of capital assets	(47,070)	(33)
Other nonoperating revenues (expenses)	(7,406)	3,168
other honoperating revenues (expenses)	3,680,318	(168,863)
Net nononerating revenues (expense)	5,000,510	
Net nonoperating revenues (expense)	(2.544.538)	
Loss before other changes in net position	(2,544,538)	(291,556)
Loss before other changes in net position OTHER CHANGES IN NET POSITION		(291,556)
Loss before other changes in net position OTHER CHANGES IN NET POSITION Capital gifts and grants, net	248,705	(291,556)
Loss before other changes in net position OTHER CHANGES IN NET POSITION Capital gifts and grants, net State capital appropriations	248,705 4,156	
Loss before other changes in net position OTHER CHANGES IN NET POSITION Capital gifts and grants, net State capital appropriations Permanent endowments	248,705 4,156 30,008	278,077
Loss before other changes in net position OTHER CHANGES IN NET POSITION Capital gifts and grants, net State capital appropriations	248,705 4,156	278,077
Loss before other changes in net position OTHER CHANGES IN NET POSITION Capital gifts and grants, net State capital appropriations Permanent endowments Decrease in net position NET POSITION	248,705 4,156 30,008 (2,261,669)	278,077 (13,479)
Loss before other changes in net position OTHER CHANGES IN NET POSITION Capital gifts and grants, net State capital appropriations Permanent endowments Decrease in net position NET POSITION Beginning of year, as previously reported	248,705 4,156 30,008 (2,261,669) 11,201,530	278,077 (13,479) 8,081,866
Loss before other changes in net position OTHER CHANGES IN NET POSITION Capital gifts and grants, net State capital appropriations Permanent endowments Decrease in net position NET POSITION	248,705 4,156 30,008 (2,261,669)	278,077 (13,479)

#### UNIVERSITY OF CALIFORNIA

## STATEMENTS OF CASH FLOWS

Year ended June 30, 2016 (in thousands of dollars)	UNIVERSITY OF CALIFORNIA	CAMPUS FOUNDATIONS
CASH FLOWS FROM OPERATING ACTIVITIES		
Student tuition and fees	\$4,131,891	
Grants and contracts	5,822,944	
Medical centers	10,227,768	
Educational activities	3,018,794	
Auxiliary enterprises	1,432,083	
Collection of loans from students and employees	73,285	
Campus foundation private gifts		\$679,092
Payments to employees	(14,048,211)	
Payments to suppliers and utilities	(7,552,418)	
Payments for pension benefits	(2,609,177)	
Payments for retiree health benefits	(325,493)	
Payments for other employee benefits	(2,837,415)	
Payments for scholarships and fellowships	(651,600)	
Loans issued to students and employees	(69,701)	
Payments to campuses and beneficiaries		(918,027)
Other receipts	696,852	17,955
Net cash used by operating activities	(2,690,398)	(220,980)
CASH FLOWS FROM NONCAPITAL FINANCING ACTIVITIES		
State educational appropriations	3,051,306	
Federal Pell Grants	375,675	
State hospital fee grants	15,137	
Gifts received for other than capital purposes:	15,157	
Private gifts for endowment purposes	31,395	234,005
Other private gifts	1,065,909	234,003
Receipt of retiree health contributions from UCRP	60,769	
Payment of retiree health contributions to UCRHBT	(60,123)	
Receipts from UCRHBT	336,708	
Payments for retiree health benefits made on behalf of UCRHBT		
Student direct lending receipts	(345,613)	
Student direct lending receipts  Student direct lending payments	762,127 (762,102)	
	(762,103)	
Commercial paper financing: Proceeds from issuance	12,300	
Payments of principal	,	
, ,	(20,670)	(6,000)
Other receipts (payments)	528,614	(6,909)
Net cash provided by noncapital financing activities  CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES	5,051,431	227,096
Commercial paper financing:		
Proceeds from issuance	676,700	
Payments of principal	(715,395)	(970)
		(970)
Interest paid	(3,457)	
State capital appropriations	5,319	
State financing appropriations	445	
Build America Bonds federal interest subsidies	58,438	
Capital gifts and grants	131,012	
Proceeds from debt issuance	2,045,061	
Proceeds from the sale of capital assets	46,037	
Purchase of capital assets	(2,669,898)	
Refinancing or prepayment of outstanding debt	(527,882)	
Scheduled principal paid on debt and capital leases	(518,713)	
Interest paid on debt and capital leases	(811,520)	
Net cash used by capital and related financing activities	\$(2,283,853)	\$(970)

#### UNIVERSITY OF CALIFORNIA

## **STATEMENTS OF CASH FLOWS** continued

Year ended June 30, 2016 (in thousands of dollars)	UNIVERSITY OF CALIFORNIA	CAMPUS FOUNDATIONS
CASH FLOWS FROM INVESTING ACTIVITIES		
Proceeds from sales and maturities of investments	\$104,492,954	\$1,706,275
Purchase of investments	(104,786,465)	(1,763,467)
Investment income, net of investment expenses	323,973	48,682
Net cash provided (used) by investing activities	30,462	(8,510)
Net increase (decrease) in cash and cash equivalents	107,642	(3,364)
Cash and cash equivalents, beginning of year	158,923	198,276
Cash and cash equivalents, end of year	\$266,565	\$194,912
RECONCILIATION OF OPERATING LOSS TO NET CASH USED BY OPERATIN	IG ACTIVITIES	
Operating loss	\$(6,224,856)	\$(122,693)
Adjustments to reconcile operating loss to net cash used by operating activities:		
Depreciation and amortization expense	1,804,046	
Noncash gifts		(83,350)
Allowance for uncollectible accounts	268,673	6,591
Loss on impairment of capital assets	10,127	
Change in assets and liabilities:		
Investments held by trustees	(10,247)	
Accounts receivable	(319,228)	754
Pledges receivable		(32,875)
Inventories	(7,223)	
Other assets	(100,322)	(681)
Accounts payable	132,482	5,681
Accrued salaries	(78,293)	
Employee benefits	(25,244)	
Unearned revenue	107,436	1,219
Department of Energy	66,348	
Self-insurance	76,621	
Obligations to under life income agreements		(8,533)
Net pension liability	506,299	
Obligations for retiree health benefits	1,066,760	
Other liabilities	36,223	12,907
Net cash used by operating activities	\$(2,690,398)	\$(220,980)
SUPPLEMENTAL NONCASH ACTIVITIES INFORMATION		
Capital assets acquired through capital leases	\$67,030	
Capital assets acquired with a liability at year-end	66,386	
Change in fair value of interest rate swaps classified as hedging derivatives	(61,030)	
Gifts of capital assets	111,836	
Other noncash gifts	31,132	\$131,084

## UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM AND RETIREE HEALTH BENEFIT TRUST

## STATEMENTS OF PLANS' AND TRUST'S FIDUCIARY NET POSITION

At June 30, 2016 (in thousands of dollars)	UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM (UCRS)	UNIVERSITY OF CALIFORNIA RETIREE HEALTH BENEFIT TRUST (UCRHBT)	TOTAL UCRS AND UCRHBT
ASSETS			
Investments	\$73,196,935	\$53,604	\$73,250,539
Participants' interests in mutual funds	2,767,673		2,767,673
Investment of cash collateral	6,751,492		6,751,492
Participant 403(b) loans	178,664		178,664
Accounts receivable:			
Contributions from University and affiliates	118,246	19,297	137,543
Investment income	95,610		95,610
Securities sales and other	178,454	24	178,478
Prepaid insurance premiums		15,277	15,277
Total assets	83,287,074	88,202	83,375,276
LIABILITIES			
Payable to University		15,661	15,661
Payable for securities purchased	1,658,231		1,658,231
Member withdrawals, refunds and other payables	297,089		297,089
Collateral held for securities lending	6,749,519		6,749,519
Total liabilities	8,704,839	15,661	8,720,500
NET POSITION HELD IN TRUST			
Members' defined benefit plan benefits	54,225,589		54,225,589
Participants' defined contribution plan benefits	20,356,646		20,356,646
Retiree health benefits		72,541	72,541
Total net position held in trust	\$74,582,235	\$72,541	\$74,654,776

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

Year ended June 30, 2016 (in thousands of dollars)	UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM (UCRS)	UNIVERSITY OF CALIFORNIA RETIREE HEALTH BENEFIT TRUST (UCRHBT)	TOTAL UCRS AND UCRHBT
<u> </u>			
ADDITIONS (REDUCTIONS)  Contributions:			
Members and employees	\$2,020,972		\$2,020,972
Retirees	\$2,020,972	\$65,705	65,705
State	96,000	\$05,705	96,000
University	2,434,180	310,320	2,744,500
Total contributions	4,551,152	376,025	4,927,177
	4,551,152	370,023	7,321,111
Investment income (expense), net:	(0.000.000)		(0.000.000)
Net (depreciation) in fair value of investments	(2,300,033)		(2,300,033)
Interest, dividends and other investment income	1,272,141	155	1,272,296
Securities lending income	60,415		60,415
Securities lending fees and rebates	(16,440)		(16,440)
Total investment income, net	(983,917)	155	(983,762)
Interest income from contributions receivable	1,771		1,771
Total additions	3,569,006	376,180	3,945,186
DEDUCTIONS			
Benefit payments:			
Retirement payments	2,170,775		2,170,775
Member withdrawals	136,249		136,249
Cost-of-living adjustments	430,795		430,795
Lump sum cash outs	285,780		285,780
Preretirement survivor payments	46,835		46,835
Disability payments	30,769		30,769
Death payments	9,377		9,377
Participant withdrawals	1,231,279		1,231,279
Total benefit payments	4,341,859		4,341,859
Insurance premiums:			
Insured plans		209,180	209,180
Self-insured plans		131,637	131,637
Medicare Part B reimbursements		9,724	9,724
Total insurance premiums, net		350,541	350,541
Other deductions:			
Plan administration	48,381	3,743	52,124
Other	10,434	J,1 TJ	10,434
Total other deductions	58,815	3,743	62,558
Total deductions	4,400,674	354,284	4,754,958
Increase (decrease) in net position held in trust	(831,668)	21,896	(809,772)
NET POSITION HELD IN TRUST			
Beginning of year	75,413,903	50,645	75,464,548
End of year	\$74,582,235	\$72,541	\$74,654,776

UNIVERSITY OF CALIFORNIA

## Notes to Financial Statements

Year ended June 30, 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 fiduciary responsibility 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.

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 GASB requirements as discretely presented component units 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.

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) that includes two defined benefit plans, the University of California Retirement Plan (UCRP) and the University of California Public Employees' Retirement System (PERS) Voluntary Early Retirement Incentive Plan (PERS-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). The UCRHBT statements of trust's fiduciary net position and changes in trust's fiduciary net position are shown separately 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 Governmental Accounting Standards Board (GASB).

In February 2015, the GASB issued Statement No. 72, *Fair Value Measurement and Application*, effective for the University's fiscal year beginning July 1, 2015. This Statement establishes standards for accounting and financial reporting for fair value measurements. The Statement requires investments to be measured at fair value and permits the use of net asset value as the fair value when an investment does not have a readily determinable fair value. Fair value is defined 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. Implementation of Statement No. 72 resulted in additional disclosures of investments and other assets reported at fair value within the fair value hierarchy.

In June 2015, the GASB issued Statement No. 73, Accounting and Financial Reporting for Pensions and Related Assets That Are Not within the Scope of GASB Statement 68, and Amendments to Certain Provisions of GASB Statements 67 and 68, effective for the University's fiscal year beginning July 1, 2015. This Statement establishes requirements for those pensions and pension plans that were not covered by Statements 67 and 68, specifically those not administered through a trust meeting specified criteria. Implementation of Statement No. 73 had no impact on the financial statements for the year ended June 30, 2016.

In June 2015, the GASB issued Statement No. 76, The Hierarchy of Generally Accepted Accounting Principles for State and Local Governments, effective for the University's fiscal year beginning July 1, 2015. This Statement reduces the GAAP hierarchy to two categories of authoritative GAAP from the four categories under GASB Statement No. 55, The Hierarchy of Generally Accepted Accounting Principles for State and Local Governments. The first category of authoritative GAAP consists of GASB Statements of Governmental Accounting Standards. The second category comprises GASB Technical Bulletins and Implementation Guides, as well as guidance from the American Institute of Certified Public Accountants that is cleared by the GASB. Implementation of Statement No. 76 had no impact on the financial statements for the year ended June 30, 2016.

In August 2015, the GASB issued Statement No. 77, *Tax Abatement Disclosures*, effective for the University's fiscal year beginning July 1, 2016. This Statement requires governments to disclose information about their own tax abatements separately from information about tax abatements that are entered into by other governments that reduce the reporting government's tax revenues. The purpose of this Statement is to increase transparency in regards to tax abatements governments enter into and make the impact of these agreements more apparent to users of the financial statements. Implementation of Statement No. 77 had no impact on the financial statements for the year ended June 30, 2016.

In December 2015, the GASB issued Statement No. 79, *Certain External Investment Pools and Pool Participants*, effective for the University's fiscal year beginning July 1, 2015. This Statement establishes criteria for an external investment pool to qualify for making the election to measure all of its investments at amortized cost for financial reporting purposes. Implementation of Statement No. 79 had no impact on the financial statements for the year ended June 30, 2016.

GASB Statement No. 80, Blending Requirements for Certain Component Units — An Amendment of GASB Statement No. 14, was adopted by the University during the year ended June 30, 2016. Statement No. 80 amends the blending requirements established in paragraph 53 of amended Statement No. 14, The Financial Reporting Entity, for the financial statement presentation of component units of all state and local governments. The additional criterion requires blending of a component unit incorporated as a not-for-profit corporation in which the primary government is the sole corporate member. The additional criterion does not apply to component units included in the financial reporting entity pursuant to the provisions of Statement No. 39, Determining Whether Certain Organizations are Component Units — An Amendment of GASB Statement No. 14. CHRCO, combined with its foundation, was previously reported as a discretely presented component unit of the University and with the accounting change became a blended component used unit of the University. The cumulative effect of this accounting change increased the net position at the beginning of the year for the University by \$531.5 million and decreased the net position at the beginning of the year for the University's discretely presented component units by the same amount. The adoption of Statement No. 80 did not result in any adjustments to the financial statements of UCRS or UCRHBT.

In April 2016, the GASB issued Statement No. 82, *Pension Issues — An Amendment of GASB Statements No. 67, No. 68, and No. 73*, effective for the University's fiscal year beginning July 1, 2016. The University has elected to early implement this Statement, effective July 1, 2015. This Statement clarifies or amends Statements No. 67, 68 and 73 and specifically addresses the issues of presentation of payroll related measures in required supplementary information, the selection of assumptions and the treatment of deviations from guidance in Actuarial Standards of Practice for financial reporting purposes, and classification of payments made by employers to satisfy plan member contribution requirements. Implementation of Statement No. 82 had no impact on the financial statements.

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 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, 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. Securities in these investment pools are included in the University's security lending program. Accordingly, the campus foundation's 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 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 for services.

*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 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 fair value at the date of donation in the case of gifts. Estimates of fair 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 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 revalued 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, 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 applies 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 remaining life of the old debt, or the new debt, whichever is shorter.

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 not included in pension expense are reported as deferred outflows of resources or deferred inflows of resources. Employer contributions subsequent to the measurement date of the net pension liability 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, are 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 are 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 are classified as expendable net position.

*Unrestricted.* The net position that is not subject to externally imposed restrictions governing their use are 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.

Expenses are charged to either restricted or unrestricted net position based upon a variety of factors, including 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 reserves.

*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 year ended June 30, 2016 are as follows:

Scholarship allowances	\$1,365,753
Other operating revenues	26,408
Auxiliary enterprises	215,049
Student tuition and fees	\$1,124,296
(in thousands of dollars)	

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, 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 plan's fiduciary net position. 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 and is reimbursed by the DOE based upon rates authorized by The Regents. 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 expense and revenue, respectively, in the statement of revenues, expenses and changes in net position.

Retiree health benefits and obligations for retiree health benefits. The University's cost for campus and medical center retiree health benefits expense is based upon the annual required contribution to the retiree health plan, as actuarially determined. Campus and medical center contributions toward retiree health benefits, at rates determined by the University, are made to UCRHBT and reduce the obligation for retiree health benefits in the statement of net position.

LBNL participates in the University's retiree health plans. The annual required contribution for LBNL is actuarially determined independently from the University's campuses and medical centers, and is included with the DOE laboratory expense in the statement of revenues, expenses and changes in net position. 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. These contributions, in the form of direct payments, also reduce the University's obligation for retiree health benefits in the statement of net position. The reimbursement from the DOE is 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 obligation for retiree health benefits attributable to LBNL. The University does not have any obligation 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 who previously worked at a campus or medical center. 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 Section 501(c)(3). CHRCO and its component unit, the Children's Hospital and Research Center Foundation, are exempt under Section 501(c)(3). Income received by UCRHBT is tax-exempt under 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 June 2015, the GASB issued Statement No. 74, Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans, effective for the University's fiscal year beginning July 1, 2016. This Statement addresses the financial reports of defined benefit other postemployment benefits (OPEB) plans that are administered through trusts that meet specified criteria. The Statement follows the framework for financial reporting of defined benefit OPEB plans in Statement No. 45 by requiring a statement of fiduciary net position and a statement of changes in fiduciary net position. The Statement requires note disclosures and required supplementary information (RSI) related to the measurement of the OPEB liabilities for which assets have been accumulated, including information about the annual money-weighted rates of return on plan investments. Additionally, Statement No. 74 sets forth note disclosure requirements for defined contribution OPEB plans. Statement No. 74 will affect the information presented in the footnotes to the financial statements and required supplementary information for UCRHBT. The University is evaluating the effect that Statement No. 74 will have on its financial statements.

In June 2015, the GASB issued Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*, effective for the University's fiscal year beginning July 1, 2017. 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 benefit liability, less the amount of the UCRHBT's fiduciary net position. The total retiree health benefit 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 benefit liability be included in retiree health benefit expense in the period of change. As of June 30, 2016, the University reported a retiree health benefit obligation of \$10.5 billion. Under Statement No. 75, the University's OPEB obligation is expected to increase. The University is evaluating the effect that Statement No. 75 will have on its financial statements.

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, to exclude pensions provided to employees of state or local governmental employers through a cost-sharing multiple-employer defined benefit pension plan that (1) is not a state or local governmental pension plan, (2) is used to provide defined benefit pensions both to employees of state or local governmental employers and to employees of employers that are not state or local governmental employers, and (3) has no predominant state or local governmental employer (either individually or collectively with other state or local governmental employers that provide pensions through the pension plan). This Statement establishes requirements for recognition and measurement of pension expense, expenditures and liabilities; note disclosures; and required supplementary information for pensions that have the characteristics described above. The University is evaluating the effect that Statement No. 78 will have on its financial statements.

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.

#### 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. In 2012, ratings for one of the University's banks were lowered below these thresholds. The University approved an exception for this institution and continues to monitor the institution's financial condition. At June 30, 2016, the carrying amount of the University's demand deposits, generally held in five nationally recognized banking institutions, was \$266.6 million, compared to bank balances of \$230.5 million. 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 \$5.1 million at June 30, 2016.

The carrying amount of the campus foundations' cash and cash equivalents at June 30, 2016 was \$194.9 million, compared to bank balances of \$162.9 million. 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 \$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 \$6.7 million in excess of the FDIC limits at June 30, 2016. 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 Committee on Investments 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 is not managed by the Chief Investment Officer and totaled \$2.8 billion at June 30, 2016.

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 28 days at June 30, 2016. The fair value of UCRHBT's investment in this portfolio was \$53.6 million at June 30, 2016. These are measured at net asset value as of June 30, 2016.

	UNIVERSITY OF CALIFORNIA	UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS	UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEN	
Equity securities:				
Domestic	\$1,979,452	\$294,314	\$15,490,564	
Foreign	1,306,340	24,487	7,855,227	
Equity securities	3,285,792	318,801	23,345,791	
Fixed- or variable-income securities:				
U.S. government-guaranteed:				
U.S. Treasury bills, notes and bonds	443,380	299,286	1,886,713	
U.S. Treasury strips	292,098	235	568,605	
U.S. TIPS	315,226		2,655,968	
U.S. government-backed securities		42		
U.S. government-backed - asset-backed securities	20,749	1,240	8,253	
U.S. government-guaranteed	1,071,453	300,803	5,119,539	
Other U.S. dollar-denominated:				
Corporate bonds	4,659,480	27,170	4,155,499	
Commercial paper	2,812,619		143,139	
U.S. agencies	1,946,581	300	4,256,013	
U.S. agencies - asset-backed securities	532,609	55,592	2,814,309	
Corporate - asset-backed securities	386,261	52,182	1,636,572	
Supranational/foreign	1,301,968	7,755	1,961,695	
Other	66,731	814	28,382	
Other U.S. dollar-denominated	11,706,249	143,813	14,995,609	
Foreign currency-denominated: Corporate			3,890	
Foreign currency-denominated			3,890	
<u> </u>			2,010	
Commingled funds:  Absolute return funds	2 160 124	1,878,461	4,626,070	
	3,168,124			
Non-U.S. equity funds	2,883,950	838,113	7,502,378	
Private equity	1,180,827	621,712	2,822,693	
Money market funds	505,489	754,942 574,231	4,589,358	
U.S. equity funds	507,587	574,231	3,281,925	
Real estate investment trusts	9,439	95,519	515,960	
Real assets	182,861	100 206	960,923	
U.S. bond funds	32,747	109,386	1,677,872	
Non-U.S. bond funds	44,720	29,452		
Balanced funds	182,516	1,051,146	25 077 170	
Commingled funds Investment derivatives	<b>8,698,260</b> 8,227	<b>5,952,962</b> 2,776	<b>25,977,179</b>	
Publicly traded real estate investment trusts		2,770	25,921 750,056	
Mortgage loans	100,606 319,038		730,050	
3 3		116 526	2.070.050	
Real estate	937,421	116,536	2,978,950	
Other investments	13,786	279,587		
Campus foundations' investments with the University	(1,604,216)			
UCRS investment in the STIP	(2,327,849)	7 115 370	\$72 106 025	
Total investments	22,208,767	7,115,278	\$73,196,935	
Less: Current portion	(4,944,611)	(479,410)	-	
Noncurrent portion	\$17,264,156	\$6,635,868		

#### **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 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. Effective September 2008, Fannie Mae and Freddie Mac were placed under the conservatorship of the Federal Housing Finance Agency. At the same time, the U.S. Treasury put in place a set of financing agreements to ensure Fannie Mae and Freddie Mac have the ability to fulfill their obligations to holders of bonds that they have issued or guaranteed.

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 34.9% corporate bonds and 22.2% mortgage/asset-backed bonds, all of which carry some degree of credit risk. The remaining 42.9% 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 through May 2016 mandate that no more than 10 percent of the market value of fixed-income securities may be invested in issues with credit ratings below investment grade, and thereafter, new guidelines were approved that limit the amount below investment grade to 15 percent. 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, 2016 is as follows:

(in thousands of dollars)

	UNIVERSITY OF CALIFORNIA	UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS	UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM
Fixed- or variable-income securities:			
U.S. government-guaranteed	\$1,071,453	\$300,803	\$5,119,539
Other U.S. dollar-denominated:			
AAA	293,301	14,341	1,176,010
AA	930,816	39,837	3,419,468
A	1,894,608	5,289	1,040,084
BBB	2,737,919	20,048	2,606,436
BB	562,163	3,259	1,192,376
В	254,948	4,945	872,055
CCC or below	55,117	24,023	358,512
A-1 / P-1/ F-1	12,536		1,949
Not rated	4,964,841	32,071	4,328,719
Foreign currency-denominated:			
Not rated			3,890
Commingled funds:			
U.S. bond funds: Not rated	32,747	109,386	1,677,872
Non-U.S. bond funds: Not rated	44,720	29,452	
Money market funds: Not rated	505,489	754,942	4,589,358
Mortgage loans: Not rated	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 are 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, 2016 are as follows:

(in thousands of dollars)	
	UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS
Bayside Partners, LP	\$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 limit weighted average effective duration to the effective duration of the benchmarks (Barclays Capital US Aggregate Index), plus or minus 10 percent. Similarly, portfolio guidelines for the fixed-income portion of UCRS and GEP limit weighted average effective duration to the effective duration of their benchmarks (Barclay's 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 to be 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, 2016 are as follows:

	UNIVERSITY OF CALIFORNIA	UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS	UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM
Fixed- or variable-income securities:			
U.S. government-guaranteed:			
U.S. Treasury bills, notes and bonds	1.2	3.0	1.7
U.S. Treasury strips	7.5	19.3	7.8
U.S. TIPS	4.7		4.7
U.S. government-backed securities		0.7	
U.S. government-backed - asset-backed securities	1.5	4.2	1.9
Other U.S. dollar-denominated:			
Corporate bonds	2.9	2.8	6.1
U.S. agencies	2.1	7.3	1.7
U.S. agencies - asset-backed securities	2.9	3.8	2.5
Corporate - asset-backed securities	4.5	0.4	2.5
Supranational/foreign	2.9	2.7	5.8
Other	17.4	2.8	16.2
Foreign currency-denominated:			
Corporate	7.8		4.3
Commingled funds:			
U.S. bond funds*	4.1	4.8	3.7
Non-U.S. bond funds	7.2	6.0	
Money market funds**		1.3	

<sup>\*</sup>The University considers the modified durations for commingled funds.

<sup>\*\*</sup>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, 2016 the fair values of such investments are as follows:

(in thousands o	of dollars)
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	UNIVERSITY OF CALIFORNIA	UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS	UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM
Mortgage-backed securities	\$635,961	\$50,366	\$3,076,953
Collateralized mortgage obligations	173,385	32,583	507,526
Other asset-backed securities	92,843	21,758	718,940
Variable-rate securities	59,738		69,273
Callable bonds	1,892,892		5,882,116
Total	\$2,854,819	\$104,707	\$10,254,808

*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, 2016 the effective durations for these securities are as follows:

	UNIVERSITY OF CALIFORNIA	UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS	UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM
Mortgage-backed securities	4.0	3.8	2.8
Collateralized mortgage obligations	2.4	1.1	2.2
Other asset-backed securities	2.2	(0.4)	1.4
Variable-rate securities	1.8		3.0
Callable bonds	3.7		3.8

#### 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, 2016 the foreign currency risk expressed in U.S. dollars, organized by currency denomination and investment type, are as follows:

	UNIVERSITY OF CALIFORNIA	UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS	UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM
Equity securities:			
Euro	\$361,718		\$2,175,068
British pound	244,974	\$1,388	1,473,068
Japanese yen	215,890	, , , , , , ,	1,298,182
Canadian dollar	77,602	7,556	466,630
Swiss franc	96,146		578,144
Australian dollar	57,003	46	342,768
Hong Kong dollar	27,517		165,462
Swedish krona	33,033		198,633
Singapore dollar	10,836		65,158
Danish kone	14,184		85,287
Norwegian krone	8,340		50,152
South Korean won	48,976	14,140	294,499
Indian rupee	25,057		150,671
New Taiwan dollar	20,720		124,590
Other	64,344	1,357	386,915
Subtotal	1,306,340	24,487	7,855,227
Fixed-income securities:			
Euro			1,779
Other			2,111
Subtotal			3,890
Commingled funds (various currency denominations):			
Non-U.S. equity funds	2,883,950	547,487	7,502,378
Balanced funds		238,192	
U.S. bond funds		2,709	
Non-U.S. bond funds	44,720	3,229	
Real estate investment trusts		17,103	
Real assets	9,145		51,820
Subtotal	2,937,815	808,720	7,554,198
Investment derivatives:			
Australian dollar	1,439		64
Canadian dollar	33		266
British pound	2,263		17,058
Japanese yen	(893)		64
Hong Kong dollar	(2,142)		203
Other	259		1,219
Subtotal	959		18,874
Private equity:			
Euro		44,844	93,095
Other		8,698	22,382
Publicly traded real estate investment trusts:			
Australian dollar	6,562		44,160
Euro	5,851		39,377
British pound	4,106		27,632
Japanese yen	4,388		29,527
South African rand	1,097		7,381
Singapore dollar	810		5,454
Canadian dollar	881		5,927
Mexican peso	446		3,004
Other	559		3,764
Subtotal	24,700	53,542	281,703
Total exposure to foreign currency risk	\$4,269,814	\$886,749	\$15,713,892

## 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, 2016:

(in thousands of dollars)			
	UNIVERSITY OF CALIFORNIA	UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS	UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM
Absolute return funds	\$3,168,124	\$1,878,461	\$4,626,070
Private equity funds	1,180,827	621,712	2,822,693
Real estate funds	937,421	116,536	2,978,950
Real assets funds	182,861		960,923
Total	\$5,469,233	\$2,616,709	\$11,388,636

## The University's Investment Pools

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

	UNIVERSITY OF CALIFORNIA				
	STIP	TRIP	GEP	OTHER	TOTAL
Equity securities:					
Domestic		\$1,146,426	\$727,457	\$105,569	\$1,979,452
Foreign		545,738	725,650	34,952	1,306,340
Fixed- or variable-income securities:					
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	2,484,288	4,529,132	226,744	7,334,572
Investment derivatives		28	8,176	23	8,227
Publicly traded real estate investment trusts		50,082	45,861	4,663	100,606
Private equity		106,170	1,063,638	11,019	1,180,827
Mortgage loans	319,038				319,038
Real assets			182,861		182,861
Real estate		373,354	528,850	35,217	937,421
Other investments				13,786	13,786
Subtotal	8,301,982	8,657,247	8,717,132	464,471	26,140,832
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)
Total investments	\$5,280,974	\$8,637,849	\$7,931,617	\$358,327	\$22,208,767

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 year ended June 30, 2016, were 0.3 percent for TRIP, (3.4) percent for GEP and (2.0) percent 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 investments 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, 2016 are as follows:

(in thousands of dollars)	
STIP	\$693,159
TRIP	19,398
GEP	785,515
Other investment pools	106,144
Campus foundations' investments with the University	1,604,216
Classified as cash and cash equivalents by campus foundations	(28,183)
Classified as investments by campus foundations	\$1,576,033

Endowment 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 \$18.3 million for the year ended June 30, 2016.

#### **UCRS**

UCRS had \$2.3 billion invested in STIP at June 30, 2016. 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 \$30.1 million for the year ended June 30, 2016.

#### 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, 2016 are as follows:

Funds held for others	\$327,429
Total agency assets	\$327,429
Other investment pools	16,432
GEP	224,821
STIP	\$86,176
Short-term investments:	
(in thousands of dollars)	

The composition of the net position at June 30, 2016 for STIP and GEP are as follows:

(in thousands of dollars)	STIP	GEP
Investments	\$8,301,982	\$8,717,132
Investment of cash collateral	38,760	356,794
Securities lending collateral	(38,748)	(356,764)
Other assets, net	2,428,681	211,974
Net position	\$10,730,675	\$8,929,136

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

The changes in net position for STIP and GEP for the year ending June 30, 2016 are as follows:

(in thousands of dollars)	STIP	GEP
Net position, beginning of year	\$12,258,256	\$8,921,362
Investment income	141,298	77,911
Net appreciation (depreciation) in fair value of investments	3,724	(382,996)
Transfer to TRIP	(1,768,504)	
Participant contributions (withdrawals), net	95,901	312,859
Net position, end of year	\$10,730,675	\$8,929,136

#### 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, 2016, the securities in these pools had a weighted average maturity of

34 days. 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, 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, 2016 are as follows:

	UNIVERSITY OF CALIFORNIA	UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS	UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM
SECURITIES LENT			
For cash collateral:			
Equity securities:			
Domestic	\$428,032		\$3,910,177
Foreign	35,420		124,796
Fixed-income securities:	337.23		1 = 1,1 = 1
U.S. government-guaranteed	120,898		990,162
Other U.S. dollar-denominated	270,848		1,639,228
Foundations' share	(41,973)	\$41,973	1,033,222
Lent for cash collateral	813,225	41,973	6,664,363
For securities collateral:	0.0,220	,	0,000.,000
Equity securities:			
Domestic	215,992		1,823,980
Foreign	148,851		667,413
Fixed-income securities:			0077.1.0
U.S. government-guaranteed	111,328		2,526,750
Other U.S. dollar-denominated	134,092		510,090
Lent for securities collateral	610,263		5,528,233
Total securities lent	\$1,423,488	\$41,973	\$12,192,596
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COLLATERAL RECEIVED			
Cash	\$866,650		\$6,749,519
Foundations' share	(41,973)	\$41,973	
Total cash collateral received	824,677	41,973	6,749,519
Securities	655,859		5,941,271
Total collateral received	\$1,480,536	\$41,973	\$12,690,790
INVESTMENT OF CASH COLLATERAL			
Fixed-income securities:			
Other U.S. dollar-denominated:			
Corporate bonds	\$105,385		\$820,737
Repurchase agreements	194,582		1,515,418
Corporate - asset-backed securities	71,220		554,664
Certificates of deposit/time deposits	459,963		3,582,215
Supranational/foreign	35,716		278,161
Other assets (liabilities), net*	38		297
Foundations' share	(41,973)	\$41,973	27,
Investment of cash collateral	824,931	41,973	\$6,751,492
Less: Current portion	(680,838)	(34,641)	7-7-0-1,100
Noncurrent portion	\$144,093	\$7,332	

 $<sup>{}^*\,</sup>Other\,assets\,(liabilities),\,net\,is\,comprised\,of\,pending\,settlements\,of\,cash\,collateral\,investments.$ 

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, 2016 are as follows:

(in thousands of dollars)			
	UNIVERSITY OF CALIFORNIA	UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS	UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM
Securities lending income	\$8,840	\$581	\$60,415
Securities lending fees and rebates	(2,558)	(166)	(16,440)
Securities lending investment income, net	\$6,282	\$415	\$43,975

#### **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, 2016 are as follows:

	UNIVERSITY OF CALIFORNIA	UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS	UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM
Fixed- or variable-income securities:			
Other U.S. dollar-denominated:			
AAA	\$89,504		\$697,065
AA+	19,936		155,262
AA-	104,931		817,206
A+	145,590		1,133,866
A	61,267		477,147
A-	37,911		295,251
A-1 / A-2 / P-1/ F-1	213,144		1,659,981
Commingled funds:			
Other assets (liabilities) net*: Not rated	38		297
Campus foundations' share	(41,973)	\$41,973	

 $<sup>{\</sup>it *Other assets (liabilities)}, net {\it is comprised of pending settlements of cash collateral investments}.$ 

#### **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, 2016 are as follows:

(in thousands of dollars)	UNIVERSITY OF CALIFORNIA	UNIVERSITY OF CALIFORNIA RETIREMENT
Svenska Handelsbanken AB	\$56,331	\$438,705

#### 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, 2016 are as follows:

	UNIVERSITY OF CALIFORNIA	UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM
Fixed- or variable-income securities:		
Other U.S. dollar-denominated:		
Corporate bonds	44	44
Repurchase agreements	8	8
Corporate-asset-backed securities	18	18
Certificates of deposit/time deposits	46	46
Supranational/foreign	26	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, 2016 the fair value of investments that are considered to be highly sensitive to changes in interest rates are as follows:

(in thousands of dollars)		UNIVERSITY OF	UNIVERSITY OF
	UNIVERSITY OF CALIFORNIA	CALIFORNIA CAMPUS FOUNDATIONS	CALIFORNIA RETIREMENT SYSTEM
Other asset-backed securities	\$89,504		\$697,064
Variable-rate investments	536,906		4,181,454
Campus foundations' share	(31,125)	\$31,125	
Total	\$595,285	\$31,125	\$4,878,518

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

#### 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 has 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 \$40.0 million at June 30, 2016.

The fair value balances and notional amounts of derivative instruments outstanding at June 30, 2016, 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	CLASSIFICATION	FAIR VALUE-POSITIVE (NEGATIVE)	CLASSIFICATION	CHANGES IN FAIR VALUE
INVESTMENT DERIVATIVES					
Futures contracts:					
Domestic equity futures:					
Long positions	267	Investments	\$7,256	Net appreciation (depreciation)	\$24,093
Short positions		Investments		Net appreciation (depreciation)	(2)
Foreign futures:					
Long positions	82	Investments	714	Net appreciation (depreciation)	(7,560)
Short positions	(13,377)	Investments	7,982	Net appreciation (depreciation)	12,942
Futures contracts, net			15,952		29,473
Foreign currency exchange contracts	s, net*:				
Long positions	242,859	Investments	742	Net appreciation (depreciation)	2,430
Short positions	(18,428,479)	Investments	(8,576)	Net appreciation (depreciation)	(10,835)
Futures currency exchange contracts, net			(7,834)		(8,405)
Swaps:					
Credit default swaps		Investments		Net appreciation (depreciation)	(2)
Fixed interest rate swaps		Investments		Net appreciation (depreciation)	10
Swaps, net					8
Stock rights/warrants	710	Investments	109	Net appreciation (depreciation)	248
Total investment derivatives			\$8,227		\$21,324
CASH FLOW HEDGES					
Effective interest rate swaps:					
Pay fixed, receive variable	845,655	Other assets (liabilities)	\$(152,123)	Deferred inflows (outflows)	\$(61,030)

 $<sup>*</sup>Notional\ amount\ reported\ in\ local\ currency.$ 

## **University of California Campus Foundations**

CATEGORY	NOTIONAL AMOUNT	CLASSIFICATION	FAIR VALUE-POSITIVE (NEGATIVE)	CLASSIFICATION	CHANGES IN FAIR VALUE
INVESTMENT DERIVATIVES					
Options/swaptions	6,902	Investments	\$247	Net appreciation (depreciation)	\$247
Swaps	179,812		2,529		2,529
Total investment derivatives			\$2,776		\$2,776

## University of California Retirement System

CATEGORY	NOTIONAL AMOUNT	CLASSIFICATION	FAIR VALUE-POSITIVE (NEGATIVE)	CLASSIFICATION	CHANGES IN FAIR VALUE
INVESTMENT DERIVATIVES					
Futures contracts:  Domestic equity futures:					
Long positions	195	Investments	\$6,886	Net appreciation (depreciation)	\$50,218
Short positions	(8,312)	Investments	133	Net appreciation (depreciation)	229
Foreign equity futures:					
Long positions	25,039	Investments	(15,237)	Net appreciation (depreciation)	(43,302)
Short positions		Investments		Net appreciation (depreciation)	(328)
Futures contracts, net			(8,218)		6,817
Foreign currency exchange contracts, net	*:				
Long positions	34,426,314	Investments	16,277	Net appreciation (depreciation)	(19,710)
Short positions	(4,500,715)	Investments	17,189	Net appreciation (depreciation)	127,570
Foreign currency exchange contracts, net			33,466		107,860
Swaps:					
Credit default swaps		Investments		Net appreciation (depreciation)	(37)
Swaps, net					(37)
Stock rights/warrants	4,704	Investments	673	Net appreciation (depreciation)	284
Options/swaptions		Investments		Net appreciation (depreciation)	1
Total investment derivatives			\$25,921		\$114,925

<sup>\*</sup>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, 2016 along with the credit rating of the associated counterparty, are as follows:

ТҮРЕ	OBJECTIVE	NOTIONAL AMOUNT	EFFECTIVE DATE	MATURITY DATE	CASH PAID OR RECEIVED	TERMS	COUNTERPARTY CREDIT RATING	FAIR VALUE
UNIVERSITY OF C	ALIFORNIA							
Pay fixed, receive variable interest rate swap	Hedge of changes in cash flows on variable-rate Medical Center Pooled Revenue Bonds	70,880	2007	2032	None	Pay fixed 3.5897%; receive 58% of 1-Month LIBOR* plus 0.48%	A1/A	\$(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	2008	2030 through 2043	None	Pay fixed 4.6359%; receive 67% of 3-Month LIBOR* plus 0.69%**	Baa2/BBB+	(57,603)
Pay fixed, receive variable interest rate swap	Hedge of changes in cash flows on variable-rate General Revenue Bonds	400,000	2013	2023	None	Pay fixed 1.8982%; receive 70% of 1-Month LIBOR*	Aa2/AA-	(32,588)
Pay fixed, receive variable interest rate swap	Hedge of changes in cash flows on variable-rate General Revenue Bonds	100,000	2013	2023	None	Pay fixed 1.9057%; receive 70% of 1-Month LIBOR*	Aa2/AA-	(8,199)
Pay fixed, receive variable interest rate swap	Hedge of changes in cash flows on variable-rate General Revenue Bonds	100,000	2013	2023	None	Pay fixed 1.8980%; receive 70% of 1-Month LIBOR*	Aa2/AA-	(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	2013	2045	None	Pay fixed 4.741%; receive 67% of 3-Month LIBOR* +0.79%**	Baa2/BBB+	(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	2013	2047	None	Pay fixed 4.741%; receive 67% of 3-Month LIBOR* +0.79%**	Baa2/BBB+	(16,498)
Interest rate swaps	, net	845,655						\$(152,123)

<sup>\*</sup> London Interbank Offered Rate (LIBOR)

## **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 \$70.9 million notional amount. Depending on the fair value related to the swaps with the combined \$174.8 million notional amount, the University may be entitled to receive collateral from the counterparty to the extent the positive fair value exceeds \$15.0 million, or be obligated to provide collateral to the counterparty if the negative fair value of the swap exceeds \$125.0 million or the cash and investments held by the medical centers fall below \$250.0 million.

<sup>\*\*</sup>Weighted average spread

Depending on the fair value related to the swaps with the counterparty that is currently rated Aa2/AA- with a combined notional amount of \$500.0 million and the swap with the counterparty that is currently rated Aa2/AA- with a notional amount of \$100.0 million, the University may be entitled to receive collateral from each counterparty to the extent the positive fair value of the swap or swaps with each counterparty exceeds \$30.0 million. As of June 30, 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 \$70.9 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.

#### Subsequent Event

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 \$43.5 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 fixed rate on each of the swaps was off-market and the University received an up-front payment. As such, the swaps consist of an at-the-market swap derivative instrument and a borrowing, represented by the up-front payment. The new counterparty's credit rating is Aa2/AA- upon the date of the transaction. There are no collateral requirements related to these new interest rate swaps.

#### 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, 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)	
Total investments	\$22,208,767	\$3,954,011	\$12,722,761	\$912,071	\$8,551,887	\$(3,931,963)	
Securities lending investments of cash collateral	\$824,931		\$739,724	\$85,171		\$36	
Investments held by trustees	\$850,884	\$54,769		\$5,642	\$752,618	\$37,855	

(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	\$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	
Total investments	\$7,115,278	\$887,204	\$455,304	\$219,970	\$5,486,565	\$66,235	
Securities lending investments of cash collateral	\$41,973		\$37,638	\$4,333		\$2	

(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	\$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					
Insurance contracts	750,056	750,056						
Real estate	2,978,950			1,600,803	1,378,147			
Total investments	\$73,196,935	\$27,407,316	\$20,209,139	\$2,290,346	\$23,252,218	\$37,916		
Securities lending investments of cash collateral	\$6,751,492		\$6,054,131	\$697,064		\$297		

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

(in thousands of dollars)	UNIVERSITY OF CALIFORNIA					
Investment Type	Unfunded Fair Value 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	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	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	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**

Investments held by trustees for self-insurance programs include separate trusts for the workers' compensation and professional medical and hospital liability programs. Securities are held by the trustees in the name of the University. The trust agreements permit the trustees to invest in equity securities, long-term and short-term debt securities, commercial paper and other securities including any common or commingled trust funds.

The composition of cash and investments and the modified duration associated with fixed-income securities for self-insurance programs at June 30, 2016 are as follows:

(in thousands of dollars)		
	INVESTMENTS AT FAIR VALUE	MODIFIED DURATION
Cash	\$37,855	
Commingled funds:		
U.S. bond funds	532,759	6.0
Money market funds	80,790	
U.S. equity funds	106,919	
Total	\$758,323	

Self-insurance investments are held in externally managed commingled funds with underlying credit ratings ranging from B to AAA, where applicable.

#### Subsequent Events

In July 2016, the University liquidated investments held by trustees for self-insurance programs and transferred to STIP \$696.6 million to its captive and the funds were invested in STIP by the captive.

## 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 \$22.8 million at June 30, 2016. 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 \$8.5 million at June 30, 2016.

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 \$58.1 million at June 30, 2016. 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						
	STATE AND FEDERAL GOVERNMENT	MEDICAL CENTERS	INVESTMENT INCOME	PRIVATE GRANTS AND CONTRACTS	MEDICAL PROFESSIONAL FEES	OTHER	TOTAL	UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS
At June 30, 2016								
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)	
Accounts receivable, net	\$588,520	\$1,634,338	\$53,426	\$357,016	\$224,226	\$461,992	\$3,319,518	\$32,562

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.

The expense for uncollectible accounts have either increased (decreased) the following revenues for the year ended June 30, 2016:

(in thousands of dollars)	
Student tuition and fees	\$(1,748)
Grants and contracts:	
Federal	928
State	329
Private	(11,519)
Local	144
Medical centers	(235,526)
Educational activities	(21,516)
Auxiliary enterprises	(796)
Other operating revenues	1,031
Expense for uncollectible accounts	\$(268,673)

## **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 the year ended June 30, 2016, under the terms of these agreements, the state of California contributed \$5.3 million, including interest at 8.5 percent. At June 30, 2016, the remaining amount owed to UCRP by the state was \$17.4 million. 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, 2016 are summarized as follows:

	UNIVERSITY OF CALIFORNIA	UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS	
Total pledges receivable outstanding	\$64,846	\$1,060,609	
Less: Unamortized discount to present value	(1,384)	(145,318)	
Allowance for uncollectible pledges	(16,356)	(72,868)	
Total pledges receivable, net	47,106	842,423	
Less: Current portion of pledges receivable	(17,056)	(217,971)	
Noncurrent portion of pledges receivable	\$30,050	\$624,452	

Future receipts under pledge agreements for each of the five fiscal years subsequent to June 30, 2016 and thereafter are as follows:

(in	thousands	of	dol	lars)

	UNIVERSITY OF CALIFORNIA	UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS
Year Ending June 30		
2017	\$32,203	\$249,008
2018	12,381	131,287
2019	6,724	105,246
2020	8,625	74,049
2021	1,603	44,294
2022-2026	2,560	194,444
Beyond 2026	750	262,281
Total payments on pledges receivable	\$64,846	\$1,060,609

Adjustments to the allowance for uncollectible pledges for the University have increased the following revenues for the year ended June 30, 2016:

(in thousands of dollars)	
Private gifts	\$1,359

#### 9. NOTES AND MORTGAGES RECEIVABLE

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

١	(in	thousands	of dollars,	)

		UNIVERSITY OF CALIFORNIA				UNIVERSITY OF CALIFORNIA			
		NONCURRENT			CAMPUS FOUNDATIONS				
	CURRENT	NOTES	MORTGAGES	TOTAL	CURRENT	NONCURRENT	TOTAL		
At June 30, 2016									
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)					
Notes and mortgages receivable, net	\$52,672	\$302,887	\$24,282	\$327,169	\$6	\$1,014	\$1,020		

#### 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 year ended June 30, 2016, the University recorded \$11.8 million, as its equity in the current earnings of LANS and received \$10.5 million 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 as of June 30, 2016. For the year ended June 30, 2016, the University recorded \$ 12.2 million, as its equity in the current earnings of LLNS and received \$11.6 million in cash distributions.

#### 11. CAPITAL ASSETS

The University's capital asset activity for the year ended June 30, 2016 is as follows:

(in thousands	of dol	lars)
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(in thousands of dollars)				
	2015	ADDITIONS	DISPOSALS	2016
ORIGINAL COST				
Land	\$972,954	\$191,276	\$(1,135)	\$1,163,095
Infrastructure	647,114	16,759		663,873
Buildings and improvements	33,751,460	1,732,566	(55,433)	35,428,593
Equipment, software and intangibles	6,963,627	574,325	(366,460)	7,171,492
Libraries and collections	3,931,840	152,265	(23,996)	4,060,109
Special collections	384,221	50,687	(170)	434,738
Construction in progress	2,826,673	238,356		3,065,029
Capital assets, at original cost	\$49,477,889	\$2,956,234	\$(447,194)	\$51,986,929
	2015	DEPRECIATION AND AMORTIZATION	DISPOSALS	2016
ACCUMULATED DEPRECIATION AND AMORTIZATION				
Infrastructure	\$326,367	\$22,238		\$348,605
Buildings and improvements	13,101,858	1,083,003	\$(27,410)	14,157,451
Equipment, software and intangibles	4,527,627	567,743	(294,867)	4,800,503
Libraries and collections	2,879,258	131,062	(18,765)	2,991,555
Accumulated depreciation and amortization	\$20,835,110	\$1,804,046	\$(341,042)	\$22,298,114
Capital assets, net	\$28,642,779			\$29,688,815

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 and other liabilities at June 30, 2016 are as follows:

(in thousands of dollars)

	UNIVERSITY OF	CALIFORNIA	UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS		
	CURRENT	NONCURRENT	CURRENT	NONCURRENT	
Self-insurance programs	\$228,751	\$558,158			
Obligations under life income agreements	1,346	\$32,021	\$16,718	\$130,314	
Other liabilities:					
Compensated absences	567,736	\$294,842			
UCRP*	3,833	13,558			
Accrued interest	95,860				
Fair value of interest rate swaps		152,123			
Other	541,001	276,832	35,157	\$220,234	
Total	\$1,438,527	\$737,355	\$51,875	\$220,234	

 $<sup>* \</sup>textit{UCRP has an equivalent amount recorded as a contribution receivable from the \textit{University in its statement of fiduciary net position}. \\$ 

## **Self-Insurance Programs**

Changes in liabilities for self-insurance or insured through a wholly owned captive or third party insurance company changed as follows for the years ended June 30:

(in thousands of dollars)

	MEDICAL MALPRACTICE	WORKERS' COMPENSATION	EMPLOYEE & STUDENT HEALTH CARE	GENERAL LIABILITY	TOTAL
Year Ended June 30, 2016					
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)	(27,153)	(824,504)
Liabilities at June 30, 2016	\$198,440	\$391,440	\$88,510	\$108,518	\$786,908
Discount rate	5.0%	5.0%	Undiscounted	2.0%	
Year Ended June 30, 2015					
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)
Liabilities at June 30, 2015	\$187,236	\$353,138	\$75,433	\$94,481	\$710,288
Discount rate	5.0%	5.0%	Undiscounted	2.0%	

## **Obligations Under Life Income Agreements**

Changes in current and noncurrent obligations under life income agreements for the year ended June 30, 2016 are as follows:

	UNIVERSITY OF CALIFORNIA			OF CALIFORNIA OUNDATIONS
	ANNUITIES	LIFE BENEFICIARIES	ANNUITIES	LIFE BENEFICIARIES
Year Ended June 30, 2016				
Balance at June 30, 2015	\$14,878	\$17,699	\$49,779	\$103,268
New obligations to beneficiaries and change in liability, net	1,926	1,128	5,241	5,082
Payments to beneficiaries	(1,216)	(1,048)	(6,122)	(10,216)
Obligations under life income agreements at June 30, 2016	15,588	17,779	48,898	98,134
Less: Current portion	(763)	(583)	(5,902)	(10,816)
Noncurrent portion at June 30, 2016	\$14,825	\$17,196	\$42,996	\$87,318

#### **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, 2016 is as follows:

(in thousands of dollars)

	WEIGHTED AVERAGE INTEREST RATE	INTEREST RATE RANGE	MATURITY YEARS	2016
INTERIM FINANCING:				
Commercial paper		0.4 - 0.6%	2016	\$1,037,857
LONG-TERM FINANCING:				
University of California General Revenue Bonds				
Fixed Rate	4.7%	0.8 - 7.6%	2017-2115	9,033,015
Variable Rate	0.6%	0.4 - 1.0%	2037-2048	1,250,000
University of California Limited Project Revenue Bonds	4.8%	0.7 - 6.3%	2017-2051	3,783,230
University of California Medical Center Pooled Revenue Bonds				
Fixed Rate	5.7%	3.0 - 6.6%	2017-2049	2,445,435
Variable Rate	0.9%	0.3 - 1.2%	2017-2047	251,205
University of California Medical Center Revenue Bonds	5.0%	5.0 - 5.5%	2017-2039	42,560
Unamortized bond premium				881,814
University of California revenue bonds	4.5%			17,687,259
Capital lease obligations		0.0 - 6.0%	2016-2042	176,753
Other University borrowings		Various	2016-2049	356,847
Blended component unit revenue bonds, net	5.7%	4.0 - 6.5%	2016-2049	692,571
Total outstanding debt				19,951,287
Less: Commercial paper				(1,037,857)
Current portion of outstanding debt				(1,413,265)
Noncurrent portion of outstanding debt				\$17,500,165

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 year ended June 30, 2016 was \$747.8 million. Interest expense, net of investment income, totaling \$54.8 million was capitalized during the year ended June 30, 2016. The remaining \$693.0 million 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 year ended June 30, 2016 is as follows:

• • • • • • • • • • • • • • • • • • • •					
	UNIVERSITY REVENUE BONDS	CAPITAL LEASE OBLIGATIONS	OTHER UNIVERSITY BORROWINGS	BLENDED COMPONENT UNIT REVENUE BONDS	TOTAL
Year Ended June 30, 2016					
Long-term debt and capital leases 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)
Long-term debt and capital leases at June 30, 2016	17,687,259	176,753	356,847	692,571	18,913,430
Less: Current portion	(1,245,038)	(29,008)	(111,904)	(27,315)	(1,413,265)
Noncurrent portion at June 30, 2016	\$16,442,221	\$147,745	\$244,943	\$665,256	\$17,500,165

#### **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, 2016 is as follows:

(in thousands of dollars)		
	INTEREST RATES	OUTSTANDING
Taxable	0.39-0.60%	\$1,037,857
Total outstanding		\$1,037,857

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, 2016, the University has two revolving credit agreements totaling \$700.0 million. There were no borrowings against the revolving credit lines as of June 30, 2016.

## 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 year ended June 30, 2016 were \$15.3 billion. 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 year ended June 30, 2016 were \$1.3 billion.

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 non-operating 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 year ended June 30, 2016 were \$10.4 billion.

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 requires 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 Indentures for the Medical Center Pooled Revenue Bonds and the Medical Center Revenue Bonds and certain interest rate swap agreements. The pledge of medical center revenues under Medical Center Pooled Revenue Bonds is subordinate to the specific Medical Center Revenue Bonds.

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

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

#### 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 at 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 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, dining, 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 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 Indentures 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.

#### **Capital Leases**

Capital leases entered into with other lessors, typically for equipment, totaled \$67.0 million for the year ended June 30, 2016.

## 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 December 5, 2017, totaled \$415.0 million at June 30, 2016. Outstanding borrowings under these bank lines totaled \$300.0 million at June 30, 2016.

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 \$40.0 million at June 30, 2016.

#### **Blended Component Unit Revenue Bonds**

## Student Housing

The University has entered into ground leases with a legally separate, non-profit 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 and 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, 2016, the LLC, through its conduit issuer, has outstanding Student Housing LLC Revenue Bonds totaling \$370.9 million. The bonds mature at various dates through 2040 and have a weighted average interest rate of 5.1 percent.

#### **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, non-profit 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 non-profit 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 non-profit 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, non-profit 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 \$56.2 million. The bonds mature at various dates through 2040 and have a weighted average interest rate of 5.0 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, 2016, 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.

	COMMERCIAL PAPER	UNIVERSITY REVENUE BONDS	CAPITAL LEASES	OTHER UNIVERSITY BORROWINGS	BLENDED COMPONENT UNIT REVENUE BONDS	TOTAL PAYMENTS	PRINCIPAL	INTEREST
Year Ending June 30								
2017	\$1,038,656	\$1,083,744	\$34,499	\$112,280	\$59,071	\$2,328,250	\$1,531,850	\$796,400
2018		1,076,327	29,862	204,280	44,532	1,355,001	572,934	782,067
2019		1,081,439	26,753	3,490	44,535	1,156,217	388,000	768,217
2020		1,370,659	25,062	2,102	44,526	1,442,349	692,099	750,250
2021		1,310,650	20,008	1,331	48,091	1,380,080	648,672	731,408
2022-2026		5,309,277	23,251	7,093	240,580	5,580,201	2,296,219	3,283,982
2027-2031		4,995,553	26,701	7,326	239,298	5,268,878	2,618,022	2,650,856
2032-2036		4,586,842	32,488	7,409	236,206	4,862,945	2,881,399	1,981,546
2037-2041		4,263,569	39,525	7,037	173,996	4,484,127	3,232,675	1,251,452
2042-2046		2,724,936	5,545	4,863	70,430	2,805,774	2,132,809	672,965
2047-2051		1,009,810		335	39,416	1,049,561	673,140	376,421
2052-2116		5,433,947				5,433,947	1,360,000	4,073,947
Total future debt service	1,038,656	34,246,753	263,694	357,546	1,240,681	37,147,330	\$19,027,819	\$18,119,511
Less: Interest component of future payments	(799)	(17,441,308)	(85,196)	(699)	(591,509)	(18,119,511)		
Principal portion of future payments	1,037,857	16,805,445	178,498	356,847	649,172	19,027,819		
Adjusted by:								
Unamortized bond premium		881,814			43,399	925,213		
Present value of net minimum leases included in long-term debt			(1,745)			(1,745)		
Total debt	\$1,037,857	\$17,687,259	\$176,753	\$356,847	\$692,571	\$19,951,287		

Long-term debt does not include \$3.1 billion of defeased liabilities at June 30, 2016. 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, 2016.

Medical Center Pooled Revenue Bonds of \$102.2 million are variable-rate demand bonds which give the debt holders the ability to tender the bonds back to the University upon demand. In connection with \$70.1 million of these outstanding variable-rate demand bonds, the University has entered into a bank standby bond purchase agreement to provide funds for the purchase of the bonds that have been tendered and not remarketed. The standby bond purchase agreement is scheduled to terminate on June 30, 2017. The University is required to repurchase any bonds held by the bank on the termination date of the agreement. The University has classified \$102.2 million of these bonds as current liabilities as of June 30, 2016.

As rates vary, variable-rate bond interest payments and net swap payments will vary. Although not a prediction by the University of the future interest cost of the variable-rate bonds or the impact of the interest rate swaps, using rates as of June 30, 2016, combined debt service requirements of the variable-rate debt and net swap payments are as follows:

(in thousands of dollars)

	VARIABLE-RATE BONDS		INTEREST DATE SWAP NET	TOTAL PAYMENTS	
	PRINCIPAL	INTEREST	INTEREST RATE SWAP, NET	TOTAL PAYMENTS	
Year Ending June 30					
2017	\$3,340	\$4,375	\$17,645	\$25,360	
2018	3,465	4,364	17,548	25,377	
2019	3,590	4,352	17,448	25,390	
2020	3,725	4,351	17,349	25,425	
2021	3,860	4,327	17,236	25,423	
2022-2026	35,890	21,206	58,530	115,626	
2027-2031	47,710	19,766	29,881	97,357	
2032-2036	33,275	18,075	22,741	74,091	
2037-2041	42,765	16,304	17,098	76,167	
2042-2046	403,160	12,006	7,423	422,589	
2047-2051	270,425	1,512	16	271,953	
Total	\$851,205	\$110,638	\$222,915	\$1,184,758	

#### 14. DEFERRED OUTFLOWS AND INFLOWS OF RESOURCES

The composition of deferred outflows and inflows of resources at June 30, 2016 are summarized as follows:

(in thousands of dollars)

	SERVICE CONCESSION ARRANGEMENTS	NET PENSION LIABILITY	LOSS ON DEBT REFUNDING	INTEREST RATE SWAP AGREEMENTS	ROYALTY SALE	TOTAL
At June 30, 2016						
Deferred outflows of resources		\$5,034,519	\$387,222	\$152,123		\$5,573,864
Deferred inflows of resources	\$70,759	1,163,694			\$497,826	1,732,279

In March 2016, the University sold 95.4 percent of future royalty payments to a third-party for \$1.1 billion plus a residual interest in the payments contingent on exceeding certain milestones. The sales proceeds were shared with the group of inventors and a third-party involved with the discovery. The University's share of the net proceeds, after transactions fees, totaled \$520.2 million. The royalty payments from January 2016 through the expiration of the related patents and license agreement in August 2027 were sold. Proceeds from the sale have been reported as deferred inflows of resources and will be recognized on a straight-line basis through the expiration of the patents. The present value of the estimated royalty income stream sold was \$1.5 billion using a 12 percent discount rate.

# 15. THE UNIVERSITY OF CALIFORNIA RETIREMENT SYSTEM (UCRS)

Most University employees participate in UCRS. UCRS consists of UCRP, a defined benefit plan funded with University and employee contributions; UCRSP, which includes defined contribution plans with options to participate in internally or externally managed investment portfolios generally funded with employee non-elective and elective contributions; PERS-VERIP, a defined benefit plan for University employees who were members of PERS and who elected early retirement; and the CHRCO Pension Plan, a defined benefit plan fully funded with CHRCO contributions. The Regents has the authority to establish and amend the benefit plans except for the CHRCO Pension Plan. Administration authority with respect to UCRS plans is vested with the President of the University as plan administrator and the President has redelegated that authority within UCRS to the Vice President — Human Resources. CHRCO administers the CHRCO Pension Plan as the Sponsor and plan assets are held by US Bank (the Trustee).

Condensed financial information related to each plan in UCRS and the changes in pension liability for UCRP, PERS-VERIP and the CHRCO Pension Plan for the year ended June 30, 2016 is as follows:

(in thousands of dollars)

	UNIVERSITY OF CALIFORNIA					
	UNIVERSITY OF CALIFORNIA RETIREMENT PLAN	UNIVERSITY OF CALIFORNIA PERS-VERIP	SUBTOTAL	UNIVERSITY OF CALIFORNIA RETIREMENT SAVINGS PROGRAM	TOTAL	CHILDREN'S HOSPITA & RESEARCH CENTE AT OAKLAND PENSION PLAN
CONDENSED STATEMENT OF PLAN FIDUCIARY NET	POSITION					
Investments at fair value	\$55,283,722	\$62,601	\$55,346,323	\$17,850,612	\$73,196,935	\$353,446
Participants' interests in mutual funds				2,767,673	2,767,673	
Investment of cash collateral	3,735,547	4,222	3,739,769	3,011,723	6,751,492	
Other assets	305,772	160	305,932	265,042	570,974	
Total assets	59,325,041	66,983	59,392,024	23,895,050	83,287,074	353,446
Collateral held for securities lending	3,734,455	4,221	3,738,676	3,010,842	6,749,518	
Other liabilities	1,426,054	1,706	1,427,760	527,561	1,955,321	
Total liabilities	5,160,509	5,927	5,166,436	3,538,403	8,704,839	
Net position held in trust	\$54,164,532	\$61,056	\$54,225,588	\$20,356,647	\$74,582,235	\$353,446
CONDENSED STATEMENT OF CHANGES IN PLANS' F	IDUCIARY NET POSITION	ON				
Contributions	\$3,367,719		\$3,367,719	\$1,183,433	\$4,551,152	\$24,000
Net appreciation (depreciation) in fair value of investments	(1,937,245)	\$(2,519)	(1,939,764)	(360,269)	(2,300,033)	
Investment and other income, net	832,590	1,094	833,684	484,203	1,317,887	214
Total additions	2,263,064	(1,425)	2,261,639	1,307,367	3,569,006	24,214
Benefit payment and participant withdrawals	3,105,641	4,937	3,110,578	1,231,281	4,341,859	9,509
Other deductions	48,341	7	48,348	10,467	58,815	1,816
Total deductions	3,153,982	4,944	3,158,926	1,241,748	4,400,674	11,325
Increase in net position held in trust	(890,918)	(6,369)	(897,287)	65,619	(831,668)	12,889
Net position held in trust						
Beginning of year	55,055,450	67,425	55,122,875	20,291,028	75,413,903	340,557
End of year	\$54,164,532	\$61,056	\$54,225,588	\$20,356,647	\$74,582,235	\$353,446
CHANGES IN TOTAL PENSION LIABILITY						
Service cost	\$1,710,241		\$1,710,241			\$10,410
Interest	4,784,904	\$2,533	4,787,437			27,782
Difference between expected and actual experience	136,167	(650)	135,517			24
Changes of benefit terms						(3,690)
Changes of assumptions or other inputs						3,613
Benefits paid, including refunds of employee contributions	(3,105,641)	(4,937)	(3,110,578)			(9,509)
Net change in total pension liability	3,525,671	(3,054)	3,522,617			28,630
Total pension liability						
Beginning of year	65,705,091	38,062	65,743,153			391,232
End of year	\$69,230,762	\$35,008	\$69,265,770			\$419,862
Net pension liability (asset), end of year	\$15,066,230	\$(26,048)	\$15,040,182			\$66,416

Additional information on the retirement plans can be obtained from the 2015-2016 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. Annual cost-of-living adjustments (COLAs) 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, 2016:

	CAMPUSES AND MEDICAL CENTERS	DOE NATIONAL LABORATORIES	UNIVERSITY OF CALIFORNIA
Retirees and beneficiaries receiving benefits	56,950	13,127	70,077
Inactive members entitled to , but not receiving benefits	70,808	10,787	81,595
Active members:			
Vested	73,612	1,686	75,298
Nonvested	52,295	920	53,215
Total active members	125,907	2,606	128,513
Total membership	253,665	26,520	280,185

#### **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 and is reimbursed by the DOE based upon rates authorized by The Regents. 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, deferred inflows of resources and deferred outflows of resources that will be reimbursed under DOE contracts, a receivable from the DOE is recorded. As of June 30, 2016, the University reported \$974.7 million, as other non-current Department of Energy receivables for pension liabilities. Contributions of \$413.9 million, reported as DOE laboratory revenue and expense in the statement of revenues, expenses and changes in net position, were deposited into UCRP on behalf of the DOE for the year ended June 30, 2016.

## **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:

(in thousands of dollars)	CAMPUSES AND MEDICAL CENTERS	DOE NATIONAL LABORATORIES	UNIVERSITY OF CALIFORNIA	
At June 30, 2016				
UCRP net position	\$46,127,486	\$8,037,046	\$54,164,532	
Total pension liability	59,779,748	9,451,014	69,230,762	
Net pension liability	\$13,652,262	\$1,413,968	\$15,066,230	

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:

Inflation	3.0%
Investment rate of return	7.25
Projected salary increases	3.8 - 6.2
Cost-of-living adjustments	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 2016 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
Total	100.0%	5.6%

### **Discount Rate**

The discount rate used to estimate the net pension liability as of June 30, 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 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. The projections also include STIP transfers of \$480.0 million in 2016-17 and \$392.0 million in 2017-18. In addition, State funding contributions of \$171.0 million are included in both 2016-17 and 2017-18. UCRP was projected to have assets sufficient to make projected benefit payments for current members for all future years as of June 30, 2016.

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

The following presents the June 30, 2016 net pension liability of the University calculated using the June 30, 2016 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:

(in thousands of dollars)	1% DECREASE (6.25%)	CURRENT DISCOUNT (7.25%)	1% INCREASE (8.25%)
UCRP	\$23,767,277	\$15,066,230	\$7,764,507
PERS-VERIP	(24,137)	(26,048)	(27,794)

# 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:

(in thousands of dollars)	CAMPUSES AND MEDICAL CENTERS	DOE NATIONAL LABORATORIES	TOTAL UCRP	PERS-VERIP	TOTAL
At June 30, 2016					
DEFERRED OUTFLOWS OF RESOURCES					
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
Total	\$4,533,710	\$450,700	\$4,984,410	\$3,299	\$4,987,709
DEFERRED INFLOWS OF RESOURCES					
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
Total	\$1,147,736	\$11,422	\$1,159,158		\$1,159,158

The net amount of deferred outflows of resources and deferred inflows of resources as of June 30, 2016 related to pensions that will be recognized in pension expense during the next five years are as follows:

(in thousands of dollars)	CAMPUSES AND MEDICAL CENTERS	DOE NATIONAL LABORATORIES	TOTAL UCRP	PERS-VERIP	TOTAL
2017	\$539,654	\$4,052	\$543,706	\$(93)	\$543,613
2018	301,821	69,111	370,932	442	371,374
2019	1,503,455	214,052	1,717,507	1,726	1,719,233
2020	1,020,799	152,063	1,172,862	1,224	1,174,086
2021	20,245		20,245		20,245
Total	\$3,385,974	\$439,278	\$3,825,252	\$3,299	\$3,828,551

#### **Defined Contribution Plan**

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 \$4.9 million or the year ended June 30, 2016.

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 year ended June 30, 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 \$1.5 million for the year ended June 30, 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 year ended June 30, 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 PERS-VERIP

The University of California PERS-VERIP 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, 2016, there are 553 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 year ended June 30, 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, 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 \$21.4 million and \$10.3 million for the years ended June 30, 2016 and 2015, respectively.

Mortality rates were based on the RP-2015 mortality with fully generational projected mortality improvements using modified scale MP-2015. The MP 2015 projection scale as 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, 2016:

Retirees and beneficiaries receiving benefits	794
Inactive members entitled to, but not yet receiving benefits	1,102
Active members	1,849
Total membership	3,745

## **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, 2016, and the total pension liability was determined by an actuarial valuation as of January 1, 2016 rolled forward to June 30, 2016. The actuarial assumptions used in the June 30, 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	PROJECTED REAL RATE OF RETURN
Asset class		
U.S. Equity	51.6%	5.9%
Developed International Equity	1.7	6.9
Emerging Market Equity	3.6	10.3
Core Fixed Income	43.1	1.6
Total	100.0%	

## **Discount Rate**

The discount rate used to measure the total pension liability was 7.0 percent for June 30, 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, 2016 net pension liability calculated using the June 30, 2016 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:

(in thousands of dollars)	1% DECREASE (6.0%)	CURRENT DISCOUNT (7.0%)	1% INCREASE (8.0%)
Net pension liability	\$126,691	\$66,416	\$16,708

# Deferred Outflows of Resources and Deferred Inflows of Resources

As of June 30, 2016 deferred outflows of resources and deferred inflows of resources were as follows:

(in thousands of dollars)	
Deferred Outflows of Resources	
Difference between expected and actual experience	\$3,528
Changes of benefit terms	254
Changes of assumptions	27,877
Net difference between projected and actual earnings on pension plan investments	13,103
Total	\$44,762
Deferred Inflows of Resources	
Net difference between projected and actual earnings on pension plan investments	\$3,030
Total	\$3,030

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:

(in thousands of dollars)	
Year Ending June 30	_
2017	\$5,571
2018	8,256
2019	13,569
2020	11,209
2021	3,127
Total	\$41,732

# **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, 2015: 15,810 retired members and beneficiaries, 5,091 inactive members, 21,525 active members.

#### **Contributions**

Contribution rates for OCERS are set by the Board of Trustees.

# **Net Pension Liability**

The University's proportionate share of the net pension liability was \$18.1 million, or 0.3 percent. The net pension liability for OCERS and the total pension liability was determined by an actuarial valuation as of December 31, 2015 and rolled forward to June 30, 2016. The actuarial assumptions used in the December 31, 2015 valuation were based on the results of an experience review conducted during 2013.

The net pension liability for the Plan was calculated based upon the following assumptions as of June 30, 2016: 3.0 percent inflation, 7.25 percent investment rate of return, 4.25-13.5 percent projected salary increases through 2017 and 3.0 percent cost-of-living adjustments. Additional information on OCERS can be obtained from the 2015-2016 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	
Asset class			
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	
Total	100.0%		

#### **Discount Rate**

The discount rate used to measure the total pension liability was 7.25 percent for June 30, 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, 2016 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:

(in thousands of dollars)	ORANGE CO	ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM			
	1% DECREASE (6.25%)	CURRENT DISCOUNT RATE (7.25%)	1% INCREASE (8.25%)		
Net pension liability	\$26,352	\$18,092	\$11,296		

# Deferred Outflow of Resources and Deferred Inflows of Resources

As of June 30, 2016 deferred outflow of resources and deferred inflows of resources were as follows:

(in thousands of dollars)	
Deferred Outflows of Resources	
Difference between expected and actual experience	\$499
Net difference between projected and actual earnings on pension plan investments	1,549
Total	\$2,048
Deferred Inflows of Resources	
Difference between expected and actual experience	\$582
Changes in assumptions	925
Total	\$1,507

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:

Total	\$541
Thereafter	5
2020	34
2019	379
2018	41
2017	41
2016	\$41
Year Ending June 30	
(in thousands of dollars)	

#### 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 (retirees) of the University of California and its affiliates. The Regents has the authority to establish and amend the plans.

Membership in UCRP is required to become eligible for retiree health benefits. Participation in the retiree health benefit Plans consisted of the following at July 1, 2015, the date of the latest actuarial valuation:

	CAMPUSES AND MEDICAL CENTERS	LBNL	UNIVERSITY OF CALIFORNIA
Retirees who are currently receiving benefits	39,774	1,777	41,551
Employees who may receive benefits at retirement	121,298	3,019	124,317
Total membership	161,072	4,796	165,868

# **Contribution Policy**

The contribution requirements of the University and eligible retirees are established and may be amended by the University. The contribution requirements are 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.

Contributions toward medical and dental benefits are shared between the University and the retiree. Contributions toward wellness benefits are made by the University. 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.

Active employees do not make any contributions toward the retiree health benefit plans. Retirees pay the excess, if any, of the premium over the applicable portion of the University's contribution.

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.

# Retiree Health Benefit Expense and Obligation for Retiree Health Benefits

The University's retiree health benefit expense is independently calculated for the campuses and medical centers and LBNL based upon the actuarially determined annual required contribution. The annual required contribution represents the level of funding that, if paid on an ongoing basis, is projected to cover the normal cost each year and amortize unfunded actuarial liabilities over a period of up to 30 years.

The University's annual retiree health benefit expense and related information for the year ended June 30, 2016, segregated between the University and the DOE responsibility, is as follows:

	CAMPUSES AND MEDICAL CENTERS	LBNL	UNIVERSITY OF CALIFORNIA
Actuarial valuation date	July 1, 2015	July 1, 2015	July 1, 2015
Annual required contribution	\$2,074,273	\$61,270	\$2,135,543
Interest on obligations for retiree health benefits	410,457	12,099	422,556
Adjustment to annual required contribution	(1,036,625)	(30,478)	(1,067,103
Annual retiree health benefit cost	1,448,105	42,891	1,490,996
University contributions:			
To UCRHBT	(309,592)		(309,592
To health care insurers and administrators		(13,294)	(13,294
Implicit subsidy	(97,002)	(4,347)	(101,349
Total contributions	(406,594)	(17,641)	(424,235
Increase in obligations for retiree health benefits	1,041,511	25,250	1,066,761
Obligations for retiree health benefits			
Beginning of year	9,121,249	268,830	9,390,079
End of year	\$10,162,760	\$294,080	\$10,456,840
Retiree health care reimbursement from the DOE during the year		\$13,294	\$13,294
DOE receivable for obligations for retiree health benefits:			
Noncurrent		294,080	294,080
Total		\$294,080	\$294,080

The annual retiree health benefit cost, percentage of the annual retiree health benefit cost contributed to the retiree health benefit plan and the net obligation for retiree health benefits for the University for the year ended June 30, 2016, and the preceding years are as follows:

(in thousands of dollars)			
	CAMPUSES AND MEDICAL CENTERS	DOE NATIONAL LABORATORIES	UNIVERSITY OF CALIFORNIA
Annual retiree health benefit cos	st:		
June 30, 2016	\$1,448,105	\$42,891	\$1,490,996
June 30, 2015	1,274,218	42,726	1,316,944
June 30, 2014	1,216,648	42,938	1,259,586
Percentage of annual cost contri	ibuted:		
June 30, 2016	28.1%	41.1%	28.5%
June 30, 2015	27.5%	39.7%	27.9%
June 30, 2014	31.2%	38.6%	31.6%
Net obligation to the health ben	efit plan:		
June 30, 2016	\$10,162,760	\$294,080	\$10,456,840
June 30, 2015	9,121,249	268,830	9,390,079
June 30, 2014	8,197,230	243,073	8,440,303

#### **Funded Status**

Actuarial valuations represent a long-term perspective and involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment, mortality, investment return and health care cost trends. The projection of benefits does not explicitly incorporate the potential effects of the results of collective bargaining discussions on the contribution rate. Actuarially determined amounts are subject to periodic revisions as actual rates are compared with past expectations and new estimates are made about the future.

The funded status of the plan as of July 1, 2015 was as follows:

(in thousands of dollars)			
	CAMPUSES AND MEDICAL CENTERS	LBNL	UNIVERSITY OF CALIFORNIA
Actuarial value of plan assets	\$50,645		\$50,645
Actuarial accrued liability	(17,320,301)	\$(569,383)	(17,889,684)
Unfunded actuarial accrued liability	\$(17,269,656)	\$(569,383)	\$(17,839,039)
Value of the implicit subsidy included in the actuarial accrued liability	\$3,824,303	\$125,827	\$3,950,130
Funded ratio	0.3%	0.0%	0.3%
Covered payroll	9,659,652	268,182	9,927,834
Unfunded actuarial accrued liability as a percentage of covered payroll	(178.8)%	(212.3)%	(179.7)%

The schedule of funding progress, presented as required supplementary information following the notes to the financial statements, includes multi-year trend information about whether the actuarial value of plan assets is increasing or decreasing over time relative to the actuarial accrued liabilities for benefits.

## **Actuarial Methods and Assumptions**

Projections of benefits for financial reporting purposes are based upon the plan as understood by the University and plan members, and include the types of benefits provided at the time of each valuation and the historical cost pattern of sharing of benefit costs between the University and plan members to that point. The actuarial methods and assumptions used include techniques that are designed to reduce short-term volatility in actuarial accrued liabilities and the actuarial value of assets, consistent with the long-term perspective of the calculations.

Significant actuarial methods and assumptions used in the valuation were:

- assumed return on investment of 4.5 percent per year, representing the return on the University's assets expected to be used to finance benefits;
- market value of assets smoothed over a five-year period;
- health care cost trend rate ranging from 7.1 to 9.5 percent for non-Medicare and 6.4 to 8.0 percent for Medicare initially, depending on the type of plan, reduced by increments to an ultimate rate of 5.0 percent over 15 years;
- projected inflation at 3.0 percent;
- amortization of the initial unfunded actuarial accrued liability over 30 years as a flat dollar amount on a closed basis;
- amortization of future actuarial gains and losses over 15 years as a flat dollar amount on a closed basis;
- amortization of the effects of changes in the plan design, or changes in assumptions, over 30 years as a flat dollar amount on a closed basis;
- entry age normal level-dollar actuarial cost method;
- future life expectancy based upon recent group mortality experience; and
- assumed retirement ages, employee turnover and disability rates based on actual plan experience and future expectations.

### 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, 2016 are as follows:

(in thousands of dollars)

	UNIVERSITY OF CALIFORNIA			
	RESTRICTED NONEXPENDABLE	RESTRICTED EXPENDABLE	UNRESTRICTED	TOTAL
At June 30, 2016				
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
University endowments and gifts	\$1,111,083	\$6,084,997	\$2,926,928	\$10,123,008

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 \$2.1 billion at June 30, 2016.

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 \$260.5 million for the year ended June 30, 2016. The portion of this annual income distribution from accumulated capital gains, in addition to the dividend and interest income earned during the year, was \$240.4 million for the year ended June 30, 2016. Accumulated endowment income available for spending in the future, including the annual income distribution, was \$595.6 million at June 30, 2016.

## **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, 2016 are as follows:

(in thousands of dollars)

	UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS							
	RESTRICTED NONEXPENDABLE	RESTRICTED EXPENDABLE	UNRESTRICTED	TOTAL				
At June 30, 2016								
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				
Campus foundations' endowments and gifts	\$3,700,049	\$3,741,932	\$94,869	\$7,536,850				

# 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, 2016 is as follows:

(in thousands of dollars)

	UNIVERSITY OF CALIFORNIA MEDICAL CENTERS						
	DAVIS	IRVINE	LOS ANGELES	SAN DIEGO	SAN FRANCISCO		
Year Ended June 30, 2016							
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		
CONDENSED STATEMENT OF NET POSITION							
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		
Total assets	1,848,696	1,196,141	3,432,854	2,266,083	3,726,647		
Total deferred outflows of resources	329,360	157,583	445,456	216,217	542,005		
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	1,108,165	559,500	1,389,227	723,104	1,608,933		
Total liabilities	1,751,452	1,067,296	2,648,039	1,642,647	2,948,623		
Total deferred inflows of resources	84,896	50,051	87,526	57,712	118,254		
Net investment in capital assets	701,366	446,355	959,252	749,527	1,475,111		
Restricted			11,360		63,785		
Unrestricted	(359,658)	(209,978)	172,133	32,414	(337,121)		
Total net position	\$341,708	\$236,377	\$1,142,745	\$781,941	\$1,201,775		

		UNIVERSITY OF CALIFORNIA MEDICAL CENTERS					
	DAVIS	IRVINE	LOS ANGELES	SAN DIEGO	SAN FRANCISCO		
CONDENSED STATEMENT OF REVENUES, EXPENSES AND CHA	ANGES IN NET POSITIO	)N					
Operating revenues	\$1,935,274	\$1,009,651	\$2,364,038	\$1,544,658	\$3,567,317		
Operating expenses	(1,797,223)	(918,913)	(2,095,729)	(1,384,789)	(3,482,411)		
Depreciation expense	(79,291)	(68,706)	(134,100)	(58,391)	(205,146)		
Operating income (loss)	58,760	22,032	134,209	101,478	(120,240)		
Nonoperating revenues (expenses), net	(461)	(20,450)	(24,398)	16	(15,663)		
Income (loss) before other changes in net position	58,299	1,582	109,811	101,494	(135,903)		
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		
Increase (decrease) in net position	9,239	(58,910)	(60,231)	52,831	(156,842)		
Net position - beginning of year	332,469	295,287	1,202,976	729,110	1,358,617		
Net position - June 30, 2016	\$341,708	\$236,377	\$1,142,745	\$781,941	\$1,201,775		
CONDENSED STATEMENT OF CASH FLOWS							
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		
Net increase (decrease) in cash and cash equivalents	55,654	(29,425)	168,840	63,544	(1,641)		
Cash and cash equivalents* – June 30, 2015	409,254	282,757	734,777	402,045	452,342		
Cash and cash equivalents* – June 30, 2016	\$464,908	\$253,332	\$903,617	\$465,589	\$450,701		

<sup>\*</sup>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 their separately issued 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. 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, 2016 is as follows:

(in thousands of dollars)

	1	UNIVERSITY OF CALIFORNIA CAMPUS FOUNDATIONS					
	BERKELEY	SAN FRANCISCO	LOS ANGELES	ALL OTHER	TOTAL		
CONDENSED STATEMENT OF NET POSITION							
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		
Total assets	1,916,970	1,649,836	2,688,821	1,997,957	8,253,584		
Current liabilities	15,950	46,269	246,519	55,988	364,726		
Noncurrent liabilities	72,976	221,977	29,430	26,165	350,548		
Total liabilities	88,926	268,246	275,949	82,153	715,274		
Total deferred inflows of resources			1,460		1,460		
Net investment of capital assets							
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		
Total net position	\$1,828,044	\$1,381,590	\$2,411,412	\$1,915,804	\$7,536,850		
CONDENSED STATEMENT OF REVENUES, EXPENSES AN	D CHANGES IN NET POSITI	ON	-				
Operating revenues	\$127,301	\$180,801	\$258,641	\$225,732	\$792,475		
Operating expenses	(188,917)	(232,835)	(263,898)	(229,518)	(915,168)		
Operating loss	(61,616)	(52,034)	(5,257)	(3,786)	(122,693		
Nonoperating revenues	(34,417)	(32,548)	(62,363)	(39,535)	(168,863)		
Loss before other changes in net position	(96,033)	(84,582)	(67,620)	(43,321)	(291,556		
Permanent endowments	88,469	39,538	70,138	\$79,932	278,077		
Other							
Increase (decrease) in net position	(7,564)	(45,044)	2,518	36,611	(13,479)		
Net position – June 30, 2015	1,835,608	1,426,634	2,408,894	1,879,193	7,550,329		
Net position – June 30, 2016	\$1,828,044	\$1,381,590	\$2,411,412	\$1,915,804	\$7,536,850		
CONDENSED STATEMENT OF CASH FLOWS							
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)		
Net increase (decrease) in cash and cash equivalents	989	(7,045)	1,478	1,214	(3,364)		
Cash and cash equivalents – June 30, 2015	2,668	159,072	4,098	32,438	198,276		
Cash and cash equivalents – June 30, 2016	\$3,657	\$152,027	\$5,576	\$33,652	\$194,912		

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

#### 20. COMMITMENTS AND CONTINGENCIES

## **Contractual Commitments**

Amounts committed but unexpended for construction projects totaled \$673.8 million at June 30, 2016. 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 year ended June 30, 2016 were \$236.0 million. The terms of operating leases extend through December 2040.

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

(in thousands of dollars)	
	UNIVERSITY OF CALIFORNIA
Year Ending June 30	
2017	\$219,001
2018	195,555
2019	161,739
2020	136,043
2021	110,305
2022-2026	207,029
2027-2031	61,501
2032-2036	5,023
2037-2041	3,692
Total	\$1,099,888

# 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.

As of June 30, 2016, CHRCO had no amounts outstanding under its revolving credit facility for \$25.0 million. The interest rate on the credit facility is 1.2 percent as of June 30, 2016 and the facility expires on August 31, 2018.

## Subsequent Event

In August 2016, the University entered into an agreement with a developer, with minimum contractual payments of \$585.0 million to design, construct, finance, operate and maintain certain auxiliary, administrative, academic and research facilities of one of its campuses.

# 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:

(in thousands of dollars)	2016	2015	2014	2013	2012
TOTAL PENSION LIABILITY					
Service cost	\$1,710,241	\$1,589,267	\$1,519,183	\$1,456,761	\$1,531,094
Interest on the total pension liability	4,784,904	4,538,846	4,316,728	4,112,461	3,871,146
Difference between expected and actual experience	136,167	(112,155)	(320,624)	(183,253)	(212,758)
Changes of assumptions or other inputs		2,136,793		(3,312,815)	4,923,778
Benefits paid, including refunds of employee contributions	(3,105,641)	(2,976,992)	(2,687,540)	(2,487,369)	(2,273,071)
Net change in total pension liability	3,525,671	5,175,759	2,827,747	(414,215)	7,840,189
Total pension liability - beginning of year	65,705,091	60,529,332	57,701,585	58,115,800	50,275,611
Total pension liability - end of year	69,230,762	65,705,091	60,529,332	57,701,585	58,115,800
PLAN NET POSITION					
Contributions - employer	2,426,683	2,510,046	1,580,876	810,056	1,851,460
Contributions - member	845,036	793,012	577,466	415,641	272,420
Contributions - state	96,000				
Net investment income	(1,104,655)	1,993,801	8,009,980	4,833,339	115,863
Benefits paid, including refunds of employee contributions	(3,105,641)	(2,976,993)	(2,687,540)	(2,487,369)	(2,273,071)
Administrative expense	(48,341)	(48,283)	(37,641)	(37,426)	(32,839)
Net change in plan net position	(890,918)	2,271,583	7,443,141	3,534,241	(66,167)
Plan net position - beginning of year	55,055,450	52,783,867	45,340,726	41,806,485	41,872,652
Plan net position - end of year	54,164,532	55,055,450	52,783,867	45,340,726	41,806,485
Net pension liability - end of year	\$15,066,230	\$10,649,641	\$7,745,465	\$12,360,859	\$16,309,315

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

(in thousands of dollars)	2016	2015	2014	2013	2012
Total pension liability	\$69,230,762	\$65,705,091	\$60,529,332	\$57,701,585	\$58,115,800
Plan net position	54,164,532	55,055,450	52,783,867	45,340,726	41,806,485
Net pension liability	\$15,066,230	\$10,649,641	\$7,745,465	\$12,360,859	\$16,309,315
Ratio of plan net position to total pension liability	78.2%	83.8%	87.2%	78.6%	71.9%
Covered-employee payroll	\$10,689,424	\$10,047,570	\$9,372,583	\$8,921,077	\$8,594,147
Net pension liability as a percentage of covered-employee payroll	140.9%	106.0%	82.6%	138.6%	189.8%

(in thousands of dollars)

Year Ended June 30	Actuarially Determined Contributions	Contributions in Relation to Actuarial Contributions	Contribution Deficiency (Excess)	Covered-Employee Payroll	Contributions as a Percentage of Covered-Employee Payroll
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	(42,254)	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	
2007		23,934	(23,934)	8,258,985	

#### **Notes to Schedule**

Valuation date:

Actuarially calculated contribution rates are calculated as of July 1, two years prior to the end of the fiscal year in which contributions are reported.

Methods and assumptions used to determine contributions rates:

Actuarial cost method Entry age actuarial cost method.

Amortization method Level dollar, closed.

22.67 years as of July 1, 2014.

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 will be 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 will be 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

females.

fixed (closed) 20-year period.

Remaining amortization period The market value of assets less unrecognized returns in each of the last five years. An 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.

June 30, 2014 valuation date June 30, 2015 valuation date Inflation 3.50%. 3.00%. Investment rate of return 7.5%, net of investment expenses, includes inflation. 7.25%, net of investment expenses, includes inflation. Projected salary increases 4.30 - 6.75%, includes inflation. 3.75 - 6.15%, includes inflation. Cost-of-living adjustments 2.00%. 2.00% Healthy: RP-2014 White Collar Healthy Annuitant Mortality Healthy: RP-2000 Combined Healthy Mortality Table projected Mortality with scale AA to 2025, set back two years. Table projected with the two-dimensional MP-2014 projection scale to 2029, set forward one year. Disabled: RP-2000 Disabled Retiree Mortality Table projected Disabled: RP-2014 Disabled Retiree Mortality Table projected with the two-dimensional MP-2014 projection scale to 2029, with scale AA to 2025, set back two years for males. set back one year for males and set forward five years for

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

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

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

(in thousands of dollars)	2016	2015	2014	2013	2012
Total pension liability	\$35,008	\$38,062	\$38,360	\$41,108	\$43,575
Plan net position	61,056	67,425	69,962	64,102	62,243
Net pension asset	\$(26,048)	\$(29,363)	\$(31,602)	\$(22,994)	\$(18,668)
Ratio of plan net position to total pension liability (asset)	174.4%	177.1%	182.4%	155.9%	142.8%

The University is not required to make contributions to the PERS-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:

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

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

(in thousands of dollars)	2016	2015	2014
Total pension liability	\$419,862	\$391,232	\$331,276
Plan net position	353,446	340,557	320,064
Net pension liability	\$66,416	\$50,675	\$11,212
Ratio of plan net position to total pension liability	84.2%	87.0%	96.6%
Covered-employee payroll	\$165,672	\$177,986	\$175,189
Net pension liability as a percentage of covered-employee payroll	40.1%	28.5%	6.4%

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

(in thousands of dollars)	2016	2015	2014
Actuarially calculated employer contributions	\$7,823	\$12,200	\$21,300
Contributions in relation to the actuarially calculated employer contribution	24,000	18,000	14,500
Annual contribution deficiency (excess)	\$(16,177)	\$(5,800)	\$6,800
Covered-employee payroll Actual contributions as a percentage of covered-employee payroll	\$165,672 14.5%	\$177,986 10.1%	\$175,189 8.3%

#### Notes to schedule

Methods and assumptions used to determine contribution rates:

• Note that a 10-year history is not available as the organization was not required to report under GASB prior to FY 2014.

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, 2016 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. For 2016, this represents the period from July 1, 2015 through June 30,2016.
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-2000 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-EMPLOYEE PAYROLL	PROPORTIONATE SHARE OF THE NET PENSION LIABILITY AS A PERCENTAGE OF ITS COVERED-EMPLOYEE PAYROLL	PLAN FIDUCIARY NET POSITION AS A PERCENTAGE OF THE TOTAL PENSION LIABILITY
2016	0.3%	\$18,092	\$285	6347.5%	34.8%

# Retiree Health Plan

(in thousands of dollars)

ACTUARIAL VALUATION DATE	ACTUARIAL VALUE OF ASSETS	ACTUARIAL ACCRUED LIABILITY	(DEFICIT)	FUNDED RATIO	COVERED PAYROLL	(DEFICIT) PAYROLL	IMPLICIT SUBSIDY INCLUDED IN ACTUARIAL ACCRUED LIABILITY
University of California							
July 1, 2015	\$50,646	\$17,889,684	\$(17,839,038)	0.3%	\$9,927,834	(179.7)%	\$3,950,130
July 1, 2014	65,184	14,583,920	(14,518,736)	0.4	9,299,817	(156.1)	2,811,375
July 1, 2013	44,300	13,725,248	(13,680,948)	0.3	8,836,770	(154.8)	2,666,877
Campuses and Medical Cent	ters						
July 1, 2015	\$50,646	\$17,320,301	\$(17,269,655)	0.3%	\$9,659,652	(178.8)%	\$3,824,303
July 1, 2014	65,184	14,093,786	(14,028,602)	0.5	9,034,755	(155.3)	2,713,867
July 1, 2013	44,300	13,253,215	(13,208,915)	0.3	8,569,794	(154.1)	2,571,587
DOE National Laboratories							
July 1, 2015		\$569,383	\$(569,383)	0.0%	\$268,182	(212.3)%	\$125,827
July 1, 2014		490,134	(490,134)	0.0	265,062	(184.9)	97,508
July 1, 2013		472,033	(472,033)	0.0	266,976	(176.8)	95,290

# Summary Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

Stummary of Expenditures           STUDENT FINANCIAL ASSISTANCE CLUSTER:         \$ 1,793,051,790           RESEARCH AND DEVELOPMENT CLUSTER:			al Expenditures 2016
RESEARCH AND DEVELOPMENT CLUSTER: Federal Agency Direct Awards Expended 3,031,150,164 Pass-Through Funds Expended 423,926,171 Partial Pass-Through Funds Expended 226,319,534 Total Research and Development Cluster 3,481,395,899  DEPARTMENT OF AGRICULTURE - COOPERATIVE EXTENSION CLUSTER Federal Agency Direct Awards Expended 12,381,954 Pass-Through Funds Expended 123,7263 Total Department of Agriculture - Cooperative Extension Cluster 12,519,217  DEPARTMENT OF AGRICULTURE - SUPPLEMENTAL NUTRITION ASSISTANCE PROGRAM (SNAP) CLUSTER Pass-Through Funds Expended 10,326,355 Total Department of Agriculture - Supplemental Nutrition Assistance Program Cluster 10,326,355  DEPARTMENT OF LABOR - WIAWIOA CLUSTER Pass-Through Funds Expended 66 Total Department of Labor - WIAWIOA Cluster 66	Summary of Expenditures		
Federal Agency Direct Awards Expended 3,031,150,164 Pass-Through Funds Expended 423,926,171 Partial Pass-Through Funds Expended 26,319,534 Total Research and Development Cluster 3,481,395,869  DEPARTMENT OF AGRICULTURE - COOPERATIVE EXTENSION CLUSTER Federal Agency Direct Awards Expended 12,381,954 Pass-Through Funds Expended 137,263 Total Department of Agriculture - Cooperative Extension Cluster 12,519,217  DEPARTMENT OF AGRICULTURE - SUPPLEMENTAL NUTRITION ASSISTANCE PROGRAM (SNAP) CLUSTER Pass-Through Funds Expended 10,326,355 Total Department of Agriculture - Supplemental Nutrition Assistance Program Cluster 10,326,355  DEPARTMENT OF LABOR - WIAWWIOA CLUSTER Pass-Through Funds Expended 66 Total Department of Labor - WIAWWIOA Cluster 66	STUDENT FINANCIAL ASSISTANCE CLUSTER:	\$	1,793,051,790
Pass-Through Funds Expended423,926,171Partial Pass-Through Funds Expended26,319,534Total Research and Development Cluster3,481,395,869DEPARTMENT OF AGRICULTURE - COOPERATIVE EXTENSION CLUSTER12,381,954Federal Agency Direct Awards Expended12,381,954Pass-Through Funds Expended137,263Total Department of Agriculture - Cooperative Extension Cluster12,519,217DEPARTMENT OF AGRICULTURE - SUPPLEMENTAL NUTRITION ASSISTANCE PROGRAM (SNAP) CLUSTER Pass-Through Funds Expended10,326,355Total Department of Agriculture - Supplemental Nutrition Assistance Program Cluster10,326,355DEPARTMENT OF LABOR - WIAWIOA CLUSTER Pass-Through Funds Expended66Total Department of Labor - WIAWIOA Cluster66DEPARTMENT OF TRANSPORTATION - FEDERAL TRANSIT CLUSTER66	RESEARCH AND DEVELOPMENT CLUSTER:		
Partial Pass-Through Funds Expended 26,319,534 Total Research and Development Cluster 3,481,395,869  DEPARTMENT OF AGRICULTURE - COOPERATIVE EXTENSION CLUSTER Federal Agency Direct Awards Expended 12,381,954 Pass-Through Funds Expended 137,263 Total Department of Agriculture - Cooperative Extension Cluster 12,519,217  DEPARTMENT OF AGRICULTURE - SUPPLEMENTAL NUTRITION ASSISTANCE PROGRAM (SNAP) CLUSTER Pass-Through Funds Expended 10,326,355 Total Department of Agriculture - Supplemental Nutrition Assistance Program Cluster 10,326,355  DEPARTMENT OF LABOR - WIAWWIOA CLUSTER Pass-Through Funds Expended 66 Total Department of Labor - WIAWWIOA Cluster 66  DEPARTMENT OF TRANSPORTATION - FEDERAL TRANSIT CLUSTER	Federal Agency Direct Awards Expended		3,031,150,164
Total Research and Development Cluster 3,481,395,869  DEPARTMENT OF AGRICULTURE - COOPERATIVE EXTENSION CLUSTER Federal Agency Direct Awards Expended 12,381,954 Pass-Through Funds Expended 137,263  Total Department of Agriculture - Cooperative Extension Cluster 12,519,217  DEPARTMENT OF AGRICULTURE - SUPPLEMENTAL NUTRITION ASSISTANCE PROGRAM (SNAP) CLUSTER Pass-Through Funds Expended 10,326,355  Total Department of Agriculture - Supplemental Nutrition Assistance Program Cluster 10,326,355  DEPARTMENT OF LABOR - WIAWIOA CLUSTER Pass-Through Funds Expended 66  Total Department of Labor - WIAWIOA Cluster 66  DEPARTMENT OF TRANSPORTATION - FEDERAL TRANSIT CLUSTER	Pass-Through Funds Expended		423,926,171
DEPARTMENT OF AGRICULTURE - COOPERATIVE EXTENSION CLUSTER Federal Agency Direct Awards Expended 12,381,954 Pass-Through Funds Expended 137,263 Total Department of Agriculture - Cooperative Extension Cluster 12,519,217  DEPARTMENT OF AGRICULTURE - SUPPLEMENTAL NUTRITION ASSISTANCE PROGRAM (SNAP) CLUSTER Pass-Through Funds Expended 10,326,355 Total Department of Agriculture - Supplemental Nutrition Assistance Program Cluster 10,326,355  DEPARTMENT OF LABOR - WIAWIOA CLUSTER Pass-Through Funds Expended 66 Total Department of Labor - WIAWIOA Cluster 66  DEPARTMENT OF TRANSPORTATION - FEDERAL TRANSIT CLUSTER	Partial Pass-Through Funds Expended		26,319,534
Federal Agency Direct Awards Expended 12,381,954 Pass-Through Funds Expended 137,263  Total Department of Agriculture - Cooperative Extension Cluster 12,519,217  DEPARTMENT OF AGRICULTURE - SUPPLEMENTAL NUTRITION ASSISTANCE PROGRAM (SNAP) CLUSTER Pass-Through Funds Expended 10,326,355  Total Department of Agriculture - Supplemental Nutrition Assistance Program Cluster 10,326,355  DEPARTMENT OF LABOR - WIA/WIOA CLUSTER Pass-Through Funds Expended 66  Total Department of Labor - WIA/WIOA Cluster 66  DEPARTMENT OF TRANSPORTATION - FEDERAL TRANSIT CLUSTER	Total Research and Development Cluster		3,481,395,869
Pass-Through Funds Expended 137,263 Total Department of Agriculture - Cooperative Extension Cluster 12,519,217  DEPARTMENT OF AGRICULTURE - SUPPLEMENTAL NUTRITION ASSISTANCE PROGRAM (SNAP) CLUSTER Pass-Through Funds Expended 10,326,355 Total Department of Agriculture - Supplemental Nutrition Assistance Program Cluster 10,326,355  DEPARTMENT OF LABOR - WIA/WIOA CLUSTER Pass-Through Funds Expended 66 Total Department of Labor - WIA/WIOA Cluster 66  DEPARTMENT OF TRANSPORTATION - FEDERAL TRANSIT CLUSTER	DEPARTMENT OF AGRICULTURE - COOPERATIVE EXTENSION CLUSTER		
Total Department of Agriculture - Cooperative Extension Cluster 12,519,217  DEPARTMENT OF AGRICULTURE - SUPPLEMENTAL NUTRITION ASSISTANCE PROGRAM (SNAP) CLUSTER  Pass-Through Funds Expended 10,326,355  Total Department of Agriculture - Supplemental Nutrition Assistance Program Cluster 10,326,355  DEPARTMENT OF LABOR - WIAWIOA CLUSTER  Pass-Through Funds Expended 66  Total Department of Labor - WIA/WIOA Cluster 66  DEPARTMENT OF TRANSPORTATION - FEDERAL TRANSIT CLUSTER	Federal Agency Direct Awards Expended		12,381,954
DEPARTMENT OF AGRICULTURE - SUPPLEMENTAL NUTRITION ASSISTANCE PROGRAM (SNAP) CLUSTER Pass-Through Funds Expended  Total Department of Agriculture - Supplemental Nutrition Assistance Program Cluster  DEPARTMENT OF LABOR - WIA/WIOA CLUSTER Pass-Through Funds Expended  Total Department of Labor - WIA/WIOA Cluster  DEPARTMENT OF TRANSPORTATION - FEDERAL TRANSIT CLUSTER	Pass-Through Funds Expended		137,263
Pass-Through Funds Expended 10,326,355  Total Department of Agriculture - Supplemental Nutrition Assistance Program Cluster 10,326,355  DEPARTMENT OF LABOR - WIA/WIOA CLUSTER Pass-Through Funds Expended 66  Total Department of Labor - WIA/WIOA Cluster 66  DEPARTMENT OF TRANSPORTATION - FEDERAL TRANSIT CLUSTER	Total Department of Agriculture - Cooperative Extension Cluster		12,519,217
Total Department of Agriculture - Supplemental Nutrition Assistance Program Cluster  DEPARTMENT OF LABOR - WIA/WIOA CLUSTER  Pass-Through Funds Expended  Total Department of Labor - WIA/WIOA Cluster  DEPARTMENT OF TRANSPORTATION - FEDERAL TRANSIT CLUSTER	DEPARTMENT OF AGRICULTURE - SUPPLEMENTAL NUTRITION ASSISTANCE PROGRAM (SNAP) CLUSTER		
DEPARTMENT OF LABOR - WIA/WIOA CLUSTER  Pass-Through Funds Expended 66  Total Department of Labor - WIA/WIOA Cluster 66  DEPARTMENT OF TRANSPORTATION - FEDERAL TRANSIT CLUSTER	Pass-Through Funds Expended		10,326,355
Pass-Through Funds Expended 66  Total Department of Labor - WIA/WIOA Cluster 66  DEPARTMENT OF TRANSPORTATION - FEDERAL TRANSIT CLUSTER	Total Department of Agriculture - Supplemental Nutrition Assistance Program Cluster		10,326,355
Total Department of Labor - WIA/WIOA Cluster  66  DEPARTMENT OF TRANSPORTATION - FEDERAL TRANSIT CLUSTER	DEPARTMENT OF LABOR - WIA/WIOA CLUSTER		
DEPARTMENT OF TRANSPORTATION - FEDERAL TRANSIT CLUSTER	Pass-Through Funds Expended		66
	Total Department of Labor - WIA/WIOA Cluster		66
Pass-Through Funds Expended41,346	DEPARTMENT OF TRANSPORTATION - FEDERAL TRANSIT CLUSTER		
	Pass-Through Funds Expended		41,346
Total Department of Transportation - Federal Transit Cluster 41,346	Total Department of Transportation - Federal Transit Cluster		41,346

# Summary Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

Summary of Expenditures	Total Expenditures 2016
DEPARTMENT OF TRANSPORTATION - HIGHWAY SAFETY CLUSTER	
Pass-Through Funds Expended	293,813
Total Department of Transportation - Highway Safety Cluster	293,813
DEPARTMENT OF EDUCATION - TRIO CLUSTER	
Federal Agency Direct Awards Expended	7,873,789
Pass-Through Funds Expended	201,753
Total Department of Education - TRIO Cluster	8,075,542
DEPARTMENT OF HEALTH AND HUMAN SERVICES - AGING CLUSTER	
Pass-Through Funds Expended	45,500
Total Department of Health and Human Services - Aging Cluster	45,500
DEPARTMENT OF HEALTH AND HUMAN SERVICES - HEALTH CENTER PROGRAM CLUSTER	
Federal Agency Direct Awards Expended	1,283,248
Pass-Through Funds Expended	418,752
Total Department of Health and Human Services - Health Center Program Cluster	1,702,000
DEPARTMENT OF HEALTH AND HUMAN SERVICES - TEMPORARY ASSISTANCE FOR NEEDY FAMILIES (TANF) CLUSTER	
Pass-Through Funds Expended	2,161,358
Total Department of Health and Human Services - Temporary Assistance for Needy Families (TANF) Cluster	2,161,358

# Summary Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

Summary of Expenditures	Total	Expenditures 2016
Canimary of Exponential Co		
DEPARTMENT OF HEALTH AND HUMAN SERVICES - CHILD CARE AND DEVELOPMENT FUND (CCDF) CLUSTER		
Pass-Through Funds Expended		740,086
Partial Pass-Through Funds Expended		702
Total Department of Health and Human Services - Child Care and Development Fund (CCDF) Cluster		740,788
DEPARTMENT OF HEALTH AND HUMAN SERVICES - TITLE IV-E FOSTR CARE PROGRAM CLUSTER		
Pass Through Funds Expended		7,588,297
Partial Pass Through Funds Expended		25,425,638
Total Department of Health and Human Services - Foster Care Title IV-E Program		33,013,935
DEPARTMENT OF HEALTH AND HUMAN SERVICES - MEDICAID CLUSTER		
Pass Through Funds Expended		263,991
Total Department of Health and Human Services - Medicaid Cluster		263,991
OTHER PROGRAMS		
Federal Agency Direct Awards Expended		106,568,678
Pass-Through Funds Expended		40,349,073
Partial Pass-Through Funds Expended		6,836,430
Total Other Programs		153,754,181
Total Federal Awards Expended	\$	5,497,385,751

# Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

				FY 2	016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier		Federal A Number	Total Federal Expenditures	Pass-Through to Subrecipients
STUDENT FINANCIAL ASSISTANCE CLUSTER:	or other identifier	OI D	A Number	Experialtures	Subrecipients
DEPARTMENT OF EDUCATION					
Direct Awards					
FEDERAL SUPPLEMENTAL EDUCATIONAL OPPORTUNITIES GRANT	Various	84	007	\$ 9,509,361	
FEDERAL WORK-STUDY PROGRAM	Various	84	033	15,692,210	
FEDERAL PELL GRANTS	Various	84	063	377,040,049	
FEDERAL DIRECT STUDENT LOAN PROGRAM	Various	84	268	1,063,967,776	
FEDERAL PERKINS LOAN PROGRAM	Various	84	038	255,817,613	
FEDERAL PERKINS LOAN PRINCIPAL CANCELLATION	Various	84	037	740,207	
FEDERAL PERKINS LOAN PROGRAM ADMINISTRATIVE COST ALLOWANCE	Various	84	038	2,505,418	
TEACHER EDUCATION ASSISTANCE FOR COLLEGE AND HIGHER EDUCATION GRANTS (TEACH)	Various	84	379	298,833	
Total Department of Education				1,725,571,467	-
DEPARTMENT OF HEALTH AND HUMAN SERVICES					
Direct Awards					
SCHOLARSHIPS FOR STUDENTS FROM DISADVANTAGED BACKGROUND	Various	93	925	1,935,000	
HEALTH PROFESSIONS STUDENT LOAN PROGRAM/LOANS FOR DISADVANTAGED STUDENTS/PRIMARY CARE LOAN PROGRAM	Various	93	342	62,222,883	
NURSING STUDENT LOAN PROGRAM	Various	93	364	1,895,398	
NURSING FACULTY LOAN PROGRAM	Various	93	264	1,225,424	
ARRA- NURSING FACULTY LOAN PROGRAM	Various	93	408	201,618	
Total Department of Health and Human Services				67,480,323	-
Total Student Financial Assistance Cluster				1,793,051,790	-
RESEARCH AND DEVELOPMENT CLUSTER:					
DEPARTMENT OF AGRICULTURE					
Direct Awards	Various	10	RD	55,678,976	12,592,0
Pass-Through and Partial Pass-Through					
BIOSYNESIS, INC.	A15-0048	10	001	56,684	
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	CALIFORNIA DEPARTMENT OF PUBLI-14-1	10	001	961,998	
INTERNATIONAL CROPS RESEARCH INSTITUTE FOR THE SEMI-ARID TROPICS	201503623	10	001	976	
MICHIGAN STATE UNIVERSITY	RC105306	10	001	53,635	
NATIONAL ACADEMY OF SCIENCES	2000006101	10	001	5,668	
RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	2012-CA001-ARS	10	001	38,966	
RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	5802082165	10	001	24,600	
RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	USDA-ARS SPA 58-0208-2-165	10	001	31,800	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	007580	10	025	45,682	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	150415SF	10	025	64,683	
CITRUS RESEARCH PROGRAM	007093	10	025	27,782	
CITRUS RESEARCH PROGRAM	007094	10	025	83,877	
TEXAS A&M UNIVERSITY - COLLEGE STATION	007660	10	025	18,360	
UNIVERSITY OF FLORIDA					

# Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

		·	FY 2	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	006502	10 170	96,026	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	007095	10 170	152,159	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	007861	10 170	84,137	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	14SCBGPCA0006	10 170	70,555	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	201502786-01	10 170	367	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	CALIFORNIA DEPARTMENT OF FO-2013025	10 170	5,549	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	CALIFORNIA DEPARTMENT OF FO-2013025	10 170	9,577	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	CALIFORNIA DEPARTMENT OF FO-2013025	10 170	18,885	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	CALIFORNIA DEPARTMENT OF FOOD-SCB14	10 170	108,604	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	CALIFORNIA DEPARTMENT OF FO-2014027	10 170	2,591	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	CALIFORNIA DEPARTMENT OF FOOD-SCB14	10 170	63,578	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	CALIFORNIA DEPARTMENT OF FOOD-ADVAN	10 170	100,087	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	CALIFORNIA DEPARTMENT OF FOOD-SCB15	10 170	43,298	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	CALIFORNIA DEPARTMENT OF FOOD-SCB15	10 170	12,131	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	CALIFORNIA DEPARTMENT OF FOOD-SCB15	10 170	9,309	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	CALIFORNIA DEPARTMENT OF FOOD-SCB15	10 170	3,203	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	CALIFORNIA DEPARTMENT OF FOOD-SCB14	10 170	86,848	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	CALIFORNIA DEPARTMENT OF FO-2014027	10 170	4,070	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	CALIFORNIA DEPARTMENT OF FO-2014027	10 170	7,620	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB12038	10 170	10,958	8,147
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB12039	10 170	(1,513)	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB12050	10 170	(110)	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB12052	10 170	377	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB12064	10 170	66,833	66,833
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB12066	10 170	7,730	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB12067	10 170	414	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB12068	10 170	696	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB13013	10 170	11,244	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB13019	10 170	3,626	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB13048	10 170	150,911	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB13049	10 170	169,448	65,445
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB13052	10 170	85,221	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB13055	10 170	234,242	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB13056	10 170	189,172	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB13057	10 170	196,148	32,538
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB13058	10 170	136,008	136,008
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB13059	10 170	56,717	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB13060	10 170	135,777	135,777
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB13061	10 170	56,241	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB13062	10 170	95,441	95,441
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB13063	10 170	188,584	188,584
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB13064	10 170	88,197	88,197
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB14007	10 170	68,690	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB14027	10 170	41,131	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB14035	10 170	107,925	

# Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

				2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB14036	10 170	121,945	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB14037	10 170	128,728	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB14040	10 170	91,111	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB14048	10 170	100,631	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB15014	10 170	2,086	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB15021	10 170	56,537	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB15026	10 170	3,481	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB15033	10 170	32,621	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB15035	10 170	59,954	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB15037	10 170	23,696	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB15040	10 170	62,427	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB15050	10 170	61,904	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB15058	10 170	12,067	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE/MISCELLANEOUS AGENCIES	SCB12046	10 170	(1,180)	
CALIFORNIA SUSTAINABLE WINEGROWING ALLIANCE	SCB14038	10 170	14,252	
CENTER FOR PRODUCE SAFETY	2015CPS13	10 170	218,342	69,737
CENTER FOR PRODUCE SAFETY	2015CPS14	10 170	148,234	
CENTER FOR PRODUCE SAFETY	2016CPS11	10 170	37,884	
MICHIGAN STATE UNIVERSITY	RC104577	10 170	7,561	
PROJECT APIS M.	201400979	10 170	16,553	
SUSTAINABLE CONSERVATION	SCB14028	10 170	72,650	
YOLO COUNTY	2013168	10 170	307	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB14015	10 170	82,753	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB14023	10 170	92,552	
COLORADO STATE UNIVERSITY	COLORADO STATE UNIVERSITY-G-14961-1	10 200	13,300	
COLORADO STATE UNIVERSITY	COLORADO STATE UNIVERSITY-G-14961-2	10 200	15,420	
COLORADO STATE UNIVERSITY	COLORADO STATE UNIVERSITY-G-21026-1	10 200	353	
OREGON STATE UNIVERSITY	C0452A-A	10 200	127,550	
RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	2014-34383-22362	10 200	7,562	
RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	RUTGERS, THE STATE UNIVER-5778-SWD-	10 200	9,525	
RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	5704-VM-Nino	10 200	2,639	
RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	5766-AF36-Michailides	10 200	14,480	
THE TEXAS A&M UNIVERSITY SYSTEM	06S130666	10 200	17,263	
UNIVERSITY OF FLORIDA	008150	10 200	3,351	
UNIVERSITY OF WASHINGTON	2012-38500-19657	10 200	1,929	
UNIVERSITY OF WASHINGTON	20123850019657	10 200	85	
UNIVERSITY OF WASHINGTON	U OF WASHINGTON/ NIFA 201223515	10 200	122	
UNIVERSITY OF WASHINGTON	U Washington/ NIFA 201223517	10 200	6,713	
UNIVERSITY OF WASHINGTON	748624	10 200	24,781	
UNIVERSITY OF WASHINGTON	748625	10 200	30,736	
UNIVERSITY OF WASHINGTON	755632	10 200	(950)	
UNIVERSITY OF WASHINGTON	UWSC8213	10 200	20,342	
UNIVERSITY OF WASHINGTON	UWSC8976	10 200	1,221	
IOWA STATE UNIVERSITY	4134495A			
APPLIED NANOTECH, INC.	201500994	10 203	13,285	
AFFLIED NANOTEON, INC.	201000994	10 212	25,000	

# Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY 2	
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
DIGITAL ARTEFACTS, LLC	20124041 (1R4MH099964-01)	10 212	(698)	
MAXENTRIC TECHNOLOGIES LLC	T11.01-9737 (NNX14CG59C)	10 212	103,015	
NOVAFLORA INC.	201121204	10 212	17,688	
US DEPARTMENT OF THE INTERIOR/MISCELLANEOUS AGENCIES	120833001	10 215	145,213	
UTAH STATE UNIVERSITY	130676001	10 215	77,776	
UTAH STATE UNIVERSITY	130676024	10 215	2,273	
UTAH STATE UNIVERSITY	Utah State 12083306	10 215	5,904	
UTAH STATE UNIVERSITY	Utah State 120833004	10 215	5,074	
UTAH STATE UNIVERSITY	UTAH ST 1100892007 SHENNAN 2/16	10 215	3,454	
UTAH STATE UNIVERSITY	A001880S001	10 215	7,898	
PURDUE UNIVERSITY	PURDUE UNIVERSITY-8000067575	10 217	10,542	
PURDUE UNIVERSITY	UCD2014G36	10 217	718	
COLUMBIA UNIVERSITY	1(GG009382)	10 250	15,966	
IOWA STATE UNIVERSITY	58-3000-1-0046	10 250	14,544	
JOHNS HOPKINS UNIVERSITY	JHU 2003005239 DINAR 7/17	10 250	5,003	
UNIVERSITY OF KENTUCKY/UNIVERSITY OF KENTUCKY RESEARCH FOUNDATION	3048111062-14-168	10 250	20,903	
UNIVERSITY OF KENTUCKY/UNIVERSITY OF KENTUCKY RESEARCH FOUNDATION	3048111062-14-169	10 250	28,869	
UNIVERSITY OF MARYLAND	A16-0574-001	10 250	17,007	
UNIVERSITY OF OREGON	Sub 2407VOA (58-5000-1-0050)	10 250	6,362	
UNIVERSITY OF KENTUCKY CENTER FOR POVERTY RESEARCH	3048110944-16-034	10 253	9,994	
UNIVERSITY OF KENTUCKY/UNIVERSITY OF KENTUCKY RESEARCH FOUNDATION	3048110944-15-202	10 253	19,441	
OREGON STATE UNIVERSITY	OREGON STATE UNIVERSITY-C0477A-B	10 303	26,611	
UNIVERSITY OF GEORGIA	RC293636/S000870	10 307	136	
WASHINGTON STATE UNIVERSITY	007902	10 307	15,465	
UNIVERSITY OF GEORGIA	RR722-418/5054566	10 308	816	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	CALIFORNIA DEPARTMENT OF FOOD-SCB15	10 309	51,331	
CITRUS RESEARCH AND DEVELOPMENT FOUNDATION, INC.	006137	10 309	126,289	
CITRUS RESEARCH AND DEVELOPMENT FOUNDATION, INC.	13002NU781	10 309	251,801	16,17
CLEMSON UNIVERSITY	20145118122372	10 309	87,491	
CLEMSON UNIVERSITY	CALIFORNIA DEPARTMENT O-1759-207-20	10 309	36,551	
CORNELL UNIVERSITY	7640110608	10 309	139,500	
KANSAS STATE UNIVERSITY	S15193	10 309	62,162	
MICHIGAN STATE UNIVERSITY	2014-51181-22378	10 309	15,964	
MICHIGAN STATE UNIVERSITY	RC102039H	10 309	15,216	
MICHIGAN STATE UNIVERSITY	RC102039I	10 309	381,327	
NEW MEXICO CONSORTIUM, INC.	NMCI NMC20150383.02 ROOSE 1/18	10 309	12,508	
NORTH CAROLINA STATE UNIVERSITY	2016022807	10 309	59,754	
UNIVERSITY OF ARKANSAS, FAYETTEVILLE	UAAES9111101	10 309	7,120	
UNIVERSITY OF FLORIDA	UFDSP00011008	10 309	23,763	
UNIVERSITY OF MARYLAND	Z546704	10 309	567,622	
CALIFORNIA HEALTH AND WELFARE/MISCELLANEOUS AGENCIES	UNIVERSITY OF MARYLAND-ADVANCE	10 310	(10,236)	
COLORADO STATE UNIVERSITY	20146800621842	10 310	17,492	
COLORADO STATE UNIVERSITY	G-9191-1	10 310	27,235	
DESERT BOTANICAL GARDEN	UCSB 03012015	10 310	96,905	

# Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY 2	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
KANSAS STATE UNIVERSITY	S12256	10 310	74,660	
KANSAS STATE UNIVERSITY	S16114	10 310	14,035	
LOUISIANA STATE UNIVERSITY AND AGRICULTURAL AND MECHANICAL COLLEGE	87460	10 310	57,106	
NORTH CAROLINA STATE UNIVERSITY	NORTH CAROLINA STATE UNIVERSIT-ADVA	10 310	23,985	
NORTH DAKOTA UNIVERSITY SYSTEM	FAR0022074	10 310	51,493	
OREGON STATE UNIVERSITY	C0471A-B	10 310	87,913	
OREGON STATE UNIVERSITY	C0486A-B	10 310	11,772	
PENNSYLVANIA STATE UNIVERSITY	PENN CLIMATE CHNG WESTERLING 8/16 4	10 310	20,441	
PURDUE UNIVERSITY	12-67017-30159	10 310	14,307	
PURDUE UNIVERSITY	20146701721831	10 310	54,575	
RECOMBINETICS, INC	201403217	10 310	40,739	
TEXAS A&M UNIVERSITY - COLLEGE STATION	S110075	10 310	341,220	
TEXAS A&M UNIVERSITY - COLLEGE STATION	S150693	10 310	41,298	
UNIVERSITY OF FLORIDA	UFDSP00010608-cyc1	10 310	437	
UNIVERSITY OF GEORGIA	UNIVERSITY OF GEORGIA-RC398-139/S00	10 310	8,313	
UNIVERSITY OF ILLINOIS	007414	10 310	12,713	
UNIVERSITY OF MARYLAND	32470Z5768002	10 310	280	
UNIVERSITY OF MARYLAND	33587Z5763001	10 310	117,202	
UNIVERSITY OF MINNESOTA	H004373401	10 310	47,380	
UNIVERSITY OF MISSOURI	U MISSOURI MKT IMPACT CAMPBELL 8/16	10 310	31,612	
UNIVERSITY OF MISSOURI	C000292561	10 310	8,666	
UNIVERSITY OF NEBRASKA	25-0511-0110-002	10 310	28,967	
UNIVERSITY OF WASHINGTON	727152	10 310	563,820	50,842
UNIVERSITY OF WYOMING	1001061A	10 310	58,597	
WASHINGTON STATE UNIVERSITY	115320 G002931	10 310	29,600	
WASHINGTON STATE UNIVERSITY	123791G003453	10 310	47,584	
UNIVERSITY OF ARIZONA	007394	10 329	18,112	
UNIVERSITY OF ARIZONA	UNIVERSITY OF ARIZONA-316302	10 330	144	
UTAH STATE UNIVERSITY	120834004	10 500	10,299	
UTAH STATE UNIVERSITY	UTAH STATE UNIVERSIT-130677008	10 500	42,168	
WASHINGTON STATE UNIVERSITY	108815G003426	10 500	43,012	
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	8075SC	10 557	11,024	
CALIFORNIA DEPARTMENT OF EDUCATION	CALIFORNIA DEPARTMENT OF EDUCA-CN15	10 560	398,429	
CALIFORNIA DEPARTMENT OF HEALTH CARE SERVICES	15-92188	10 561	595,880	
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	1210111	10 561	27,385	
SAN DIEGO COUNTY	SUB 543298 (NONE)	10 561	1,868,716	
WESTAT	WESTAT-8967.02-S03	10 585	14,146	
WESTAT	WESTAT-8967.03-S03	10 585	6,341	
WESTAT	WESTAT-8967.01-S05	10 585	23,439	
BAYLOR COLLEGE OF MEDICINE	101854810	10 586	26,756	24,083
BAYLOR COLLEGE OF MEDICINE	BAYLOR COLLEGE OF MEDICINE-10220909	10 586	5,294	
BAYLOR COLLEGE OF MEDICINE	WICNEI12TX	10 586	116,711	
ADMINISTRATIVE COMMITTEE FOR PISTACHIOS	ADMINISTRATIVE COMMITTEE FO-2015031	10 604	72,600	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	008095	10 604	20,525	
CITRUS RESEARCH PROGRAM	007294	10 604	24,082	
		007	24,002	

# Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

				FY 2	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal		Total Federal	Pass-Through to
	or Other Identifier	CFD	A Number	Expenditures	Subrecipients
CITRUS RESEARCH PROGRAM	007295	10	604	108,484	
CITRUS RESEARCH PROGRAM	007797	10	604	71,345	
CITRUS RESEARCH PROGRAM	5000005	10	604	19	
CITRUS RESEARCH PROGRAM	5050010B	10	604	91,115	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB15051	10	612	19,729	
CALIFORNIA STRAWBERRY NURSERYMEN ASSOCIATION	201500492	10	612	60,900	
OHIO STATE UNIVERSITY	S0049674	10	680	7,600	
TAHOE RESOURCE CONSERVATION DISTRICT	201302654	10	690	25,561	
TAHOE RESOURCE CONSERVATION DISTRICT	201401003	10	690	9,967	
THE XERCES SOCIETY	034409	10	912	74,710	
THE XERCES SOCIETY	201223562	10	912	39,867	
ALMOND BOARD OF CALIFORNIA	ALMOND BOARD OF CALIFORNIA-LH 13-02	10	UNKNOWN	(15)	
ALMOND BOARD OF CALIFORNIA	ALMOND BOARD OF CALIFORNIA-SCB15041	10	UNKNOWN	26,248	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	120444SA	10	UNKNOWN	19,341	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	CALIFORNIA DEPARTMENT OF FOOD-SCB14	10	UNKNOWN	18,205	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	CAL FOO-14-0383-KENT DA-12/14	10	UNKNOWN	(33)	
CALIFORNIA DEPARTMENT OF FORESTRY AND FIRE PROTECTION	007127	10	UNKNOWN	97,541	
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	AA CA DHS08-85181	10	UNKNOWN	514	
CALIFORNIA STATE UNIVERSITY, FRESNO FOUNDATION	CA STATE UNIV, FRESNO; 11-1-007-13	10	UNKNOWN	2,475	
CLEMSON UNIVERSITY	18322152021022	10	UNKNOWN	2,987	
HUMMINGBIRD MONITORING NETWORK	201502980	10	UNKNOWN	5,000	
KANSAS STATE UNIVERSITY	S15181	10	UNKNOWN	2,693	
OAK RIDGE NATIONAL LABORATORY	005934	10	UNKNOWN	113,231	
PUBLIC HEALTH INSTITUTE	PUBLIC HEALTH INSTITUTE-1019880	10	UNKNOWN	6	
RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	2004CA001	10	UNKNOWN	808	
RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	RUTGERS UNIV IR-4; 2004CA001	10	UNKNOWN	925	
TEXAS A&M RESEARCH FOUNDATION	TEXAS A&M RESEARCH FOUNDATION-20122	10	UNKNOWN	211	
UNIVERSITY OF FLORIDA	PRIVATE RESTRICTED GRANTS FFT SUMMA	10	UNKNOWN	1,398	
UNIVERSITY OF MINNESOTA	Advance Account	10	UNKNOWN	26,703	
UNIVERSITY OF NEBRASKA	25623902350306	10	UNKNOWN	99,854	
CALIFORNIA DEPARTMENT OF FINANCE	STATE GOV'T FFT SUMMARY FUND	10	UNKNOWN	197,763	
DAVIS, CITY OF	LOCAL GOV'T FFT SUMMARY	10	UNKNOWN	3,210	
UNIVERSITY OF FLORIDA	59996	10	UNKNOWN	11,764	
Subtotal Pass-Through and Partial Pass-Through Awards				15,022,720	977,800
Total Department of Agriculture				70,701,696	13,569,859
DEPARTMENT OF COMMERCE					
Direct Awards	Various	11	RD	32,241,553	2,174,953
Pass-Through and Partial Pass-Through					
NATIONAL MARINE SANCTUARY FOUNDATION	20142599	11	011	11,552	
MONTEREY BAY AQUARIUM RESEARCH INSTITUTE	1111340	11	012	353,270	
MONTEREY BAY AQUARIUM RESEARCH INSTITUTE	A00-1096-009	11	012	115,647	
MONTEREY BAY AQUARIUM RESEARCH INSTITUTE	PO-1111249:07	11	012	28,093	
SOUTHERN CALIFORNIA COASTAL WATER RESEARCH PROJECT	10050	11	012	37,585	
UNIVERSITY OF WASHINGTON	762824	11	012	50,909	

# Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

				FY 2	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	F	ederal	Total Federal	Pass-Through to
	or Other Identifier	CFD	A Number	Expenditures	Subrecipients
UNIVERSITY OF WASHINGTON	763223	11	012	55,881	
SOUTHEASTERN UNIVERSITY'S RESEARCH ASSOCIATION	2013-013-001	11	012	58,083	
UNIVERSITY OF SOUTHERN CALIFORNIA	007747	11	307	48,493	
PEPPERDINE UNIVERSITY	SB150118	11	417	11,900	
UNIVERSITY OF SOUTHERN CALIFORNIA	47674072:2	11	417	12,119	
UNIVERSITY OF SOUTHERN CALIFORNIA	61207738	11	417	53,573	
UNIVERSITY OF SOUTHERN CALIFORNIA	61207777	11	417	41,061	
CALIFORNIA STATE UNIVERSITY, SAN FRANCISCO STATE UNIVERSITY	CSU, SAN FRANCISCO STATE UNIVE S11-	11	419	(1,047)	
SONOMA COUNTY WATER AGENCY	SONOMA COUNTY WATER AGENCY-SCWA 141	11	419	25,105	
GLOBAL SCIENCES & TECHNOLOGY, INC.	SA14-UOC01-006-001-cyc2	11	431	82,671	
ECS FEDERAL, INC	209023	11	432	60,000	
NORTH CAROLINA STATE UNIVERSITY	2014-2918-03-cyc1	11	432	136,432	
UNIVERSITY OF SOUTHERN CALIFORNIA	53335748	11	432	30,066	
UNIVERSITY OF WASHINGTON	PO764680	11	432	16,142	
PACIFIC STATES MARINE FISHERIES COMMISSION	1618G	11	437	425	
PACIFIC STATES MARINE FISHERIES COMMISSION	1629G	11	437	30,174	
NORTH PACIFIC RESEARCH BOARD	A16-0378-001	11	439	40,548	
NORTH CAROLINA STATE UNIVERSITY	F/NC ST 2009-1380-01 SOROSHIAN J535	11	440	691	
TEXAS A&M UNIVERSITY - COLLEGE STATION	15-04	11	452	(113)	
SONOMA COUNTY WATER AGENCY	TW 1415-102	11	463	17,657	
NATIONAL FISH AND WILDLIFE FOUNDATION	NFWF 300214046675 RAIMONDI 1/18	11	463	91,690	
UNIVERSITY OF CONNECTICUT	85234	11	468	17,628	
ATLANTIC STATES MARINE FISHERIES COMMISSION	15-0102	11	469	41,369	
ATLANTIC STATES MARINE FISHERIES COMMISSION	ASMFC 150105 PALKOVACS 12/16	11	469	33,196	
CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE	P1570004	11	472	303,659	
NATURE CONSERVANCY	SB150073	11	472	125,085	
NORTH PACIFIC RESEARCH BOARD	1303	11	472	21,437	
NORTH PACIFIC RESEARCH BOARD	1406	11	472	99,161	
NORTH PACIFIC RESEARCH BOARD	1408	11	472	24,191	
NORTH PACIFIC RESEARCH BOARD	1416	11	472	65,210	
PRINCE WILLIAM SOUND SCIENCE CENTER	12-81-01	11	472	360,949	
H.T. HARVEY & ASSOCIATES ECOLOGICAL CONSULTANTS	A15-0207-001	11	472	50,838	
NATIONAL FISH AND WILDLIFE FOUNDATION	Sub 9916.14.046701 (none)	11	473	2,436	
APPLIED TECHNOLOGY COUNCIL	1061-24-770 ( SB1341-13-CQ-000	11	609	8,355	
APPLIED TECHNOLOGY COUNCIL	HRP-TO 32.01 (SB134107CQ00019)	11	609	3,074	
IOWA STATE UNIVERSITY	426-17-02B-cyc1	11	619	249,530	
COUNTY OF SONOMA	1415039	11	UNKNOWN	194	
SPECTRAL SCIENCES, INC.	F/FIBRWRAP FC-47470 FENG 06/15	11	UNKNOWN	3,072	
Subtotal Pass-Through and Partial Pass-Through Awards			0	2,817,991	
Total Department of Commerce				35,059,544	2,174,9
DEPARTMENT OF DEFENSE					
Direct Awards					
DEPARTMENT OF AIR FORCE	Various	12	RD	33,281,376	8,227,8
DEPARTMENT OF ARMY	Various	12	RD	81,249,030	17,554,78

# Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

		·	FY	FY 2016	
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to	
	or Other Identifier	CFDA Number	Expenditures	Subrecipients	
DEPARTMENT OF NAVY	Various	12 RD	85,647,056	10,504,381	
SEPARATE AGENCIES	Various	12 RD	48,558,681	9,748,362	
Subtotal Direct Awards			248,736,143	46,035,382	
Pass-Through and Partial Pass-Through					
LUNA INNOVATIONS INCORPORATED	007882	12 001	81,718		
DCS CORPORATION	APX03-S012 Task Order 0014	12 114	632,494		
MORTON PHOTONICS	MORTON PHOTONICS(DOD)BOWERS515	12 114	(1,087)		
PHYSICAL OPTICS CORPORATION	SB150124	12 114	226,290		
WESTON SOLUTIONS, INC.	ROY WESTON(DOD/FP) HERBST 1215	12 114	106,250		
CALIFORNIA PARKS AND RECREATION, DEPARTMENT OF	C1370032	12 114	811,257		
BROWN UNIVERSITY	00000502	12 300	129,387		
CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	SA0000447	12 300	2,801		
CARNEGIE MELLON UNIVERSITY	1141221-320624	12 300	42,045		
CHARLES RIVER ANALYTICS	SC1315901	12 300	369,206	59,200	
COLUMBIA UNIVERSITY	Sub 1(GG012351) N00014-15-1-26	12 300	6,061		
CORNELL UNIVERSITY	65291-9851	12 300	(8,403)		
DUKE UNIVERSITY	09-ONR-1114	12 300	(87)		
DUKE UNIVERSITY	09-ONR-1115	12 300	76		
DUKE UNIVERSITY	13-ONR-1111	12 300	196,807		
DUKE UNIVERSITY	15-HDR-1018	12 300	5,326		
DUKE UNIVERSITY	383-8476	12 300	303,652		
DYNCORP SYSTEM AND SOLUTIONS	DSS DYN0212 MULCHANDANI 12/16	12 300	16,699		
FREEDOM PHOTONICS LLC	SB150098	12 300	158,403		
GENERAL ENGINEERING & RESEARCH, LLC	Sub 20125266 (N00173-14-1-G016	12 300	131,080		
GEORGIA INSTITUTE OF TECHNOLOGY	RE023-G2	12 300	26,935		
GEORGIA INSTITUTE OF TECHNOLOGY	RE866-G1	12 300	512,388		
GEORGIA STATE UNIVERSITY	SP00011356-03	12 300	168,993		
HIGH-TEST LABORATORIES, INC.	SUB 2103-001 (NONE)	12 300	136,383		
IRIS TECHNOLOGY	Sub 20150789 (none)	12 300	8,878		
JOHNS HOPKINS UNIVERSITY	2002694585	12 300	118,522		
LEHIGH UNIVERSITY	42549-78002 (N00014-11-1-0678)	12 300	225,524		
LEIDOS, INC.	DOD/SAIC SUB 20120748 MC CUTCHAN 54	12 300	185		
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	5710002646	12 300	201,987		
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	5710002996	12 300	274,817		
NEW YORK UNIVERSITY	F7112-01:04	12 300	114,152		
NOKIA USA INC.	033983	12 300	386,555		
NORTH CAROLINA STATE UNIVERSITY	SUB 2015-1959-03 (N00014-15-1-	12 300	583,198		
NORTHEASTERN UNIVERSITY	503340-78050	12 300	(2,230)		
NORTHWESTERN UNIVERSITY	SP0028970-PROJ0007989:1	12 300	250,665		
OBJECTVIDEO, INC.	FINDER-7212-UCB-090113	12 300	237,079		
PALO ALTO RESEARCH CENTER	PALO ALTO RESEARCH CENTER WANG 8917	12 300	450		
QUANTITATIVE MORPHOLOGY CONSULTING	QMC 2012-FEB-1-3000(ONR)KRYSL	12 300	3,672		
QUANTITATIVE MORPHOLOGY CONSULTING	Sub 2013-Nov-27-3001 ( NONE)	12 300	648		
QUANTITATIVE MORPHOLOGY CONSULTING	Sub 2015-5001 (N00014-12-1-051	12 300	45,298		
QUESTEK INNOVATIONS LLC	1092	12 300	95,577		

# Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

		Federal	FY 2016	
deral Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number		Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
QUINSTAR TECHNOLOGY, INC	48032	12 300	9,799	
ROI DEFENSE ASSOCIATES LLC	TA 150303 (N00178-05-D-4538 D.	12 300	5,942	
ROI DEFENSE ASSOCIATES LLC	TA 150601 (N00178-05-D-4538 D.	12 300	25,496	
STANFORD UNIVERSITY	091-50618-A (N00014-11-1-0276)	12 300	1,928	
STANFORD UNIVERSITY	60744755-114407-UCB	12 300	343,285	
THE TEXAS A&M UNIVERSITY SYSTEM	C2411	12 300	30,501	
TOYON RESEARCH CORPORATION	SC14-6913-1	12 300	18,402	
TOYON RESEARCH CORPORATION	SC16-5968-1	12 300	39,538	
UNIVERSITY OF ARIZONA	007825	12 300	22,989	
UNIVERSITY OF ARIZONA	200257	12 300	141,152	
UNIVERSITY OF ARIZONA	206874	12 300	238,859	
UNIVERSITY OF ARIZONA	217733	12 300	172,986	
UNIVERSITY OF ARIZONA	SUB 261548 (12595 G NA1140)	12 300	19,919	
UNIVERSITY OF CINCINNATI	009725-002	12 300	75,338	
UNIVERSITY OF COLORADO DENVER	FY15.530.001-CYC1	12 300	152,849	
UNIVERSITY OF HAWAII AT MANOA	MA140030	12 300	25,726	
UNIVERSITY OF MARYLAND	Z8160002	12 300	247,478	
UNIVERSITY OF MASSACHUSETTS AMHERST	14270-UCSB	12 300	3,235	
UNIVERSITY OF MICHIGAN	3003005562	12 300	81,007	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	Sub 5103081 (N00014-15-1-2578)	12 300	18,470	
UNIVERSITY OF NOTRE DAME (INCL GEM)	201839	12 300	175,914	
UNIVERSITY OF PENNSYLVANIA	559918	12 300	94,548	
UNIVERSITY OF PITTSBURGH	0035700 (409185-2)	12 300	91,689	
UNIVERSITY OF SOUTHERN CALIFORNIA	158857:10	12 300	270,088	
UNIVERSITY OF SOUTHERN CALIFORNIA	158860-cyc11	12 300	155,801	
UNIVERSITY OF TEXAS-AUSTIN	UTA11-000572	12 300	89,869	
UNIVERSITY OF VIRGINIA	GG11764 146901-cyc1	12 300	282,662	
UNIVERSITY OF VIRGINIA	GG11821 148033:01	12 300	68,345	
UNIVERSITY OF WASHINGTON	UWSC8184	12 300	10,674	
UNIVERSITY OF WISCONSIN-MADISON	590K122	12 300	106,851	
VALITOR, INC.	UCSF #A121908	12 300	212,539	
WOODS HOLE OCEANOGRAPHIC INSTITUTION	SUB NONE (A100749)	12 300	68,387	
LEIDOS, INC.	Sub 10163495 (N62645-14-C-4030	12 301	117,891	
SPACE MICRO, INC.	Sub P03994 (none)	12 335	43,265	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VETERANS MEDICAL RESEARCH FOUNDATIO	12 340	(303)	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Acheson 304710 (N62645-11-	12 340	32,810	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA DELAROSA 316015 N62645-11-	12 340	11,552	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Nievergelt 304782 (N62645-	12 340	20,664	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Powell 312732 (N62645-11-C	12 340	3,307	
LEIDOS, INC.	Sub PO1014827 (N62645-12-C-410	12 350	34,836	
METABIOTA, INC	201405DTRA	12 351	464,178	2
METABIOTA, INC	201406DTRA	12 351	166,158	(8
QUANTITATIVE BIOSCIENCES, INC.	Sub none (HDTRA1-15-C-0064)	12 351	90,294	(0)
down and blood a				
TEMPLE UNIVERSITY	TEMPLE/USDOD CC0162875 HOUK 2/14 54	12 351	448	

# Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY 2016	
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
VANDERBILT UNIVERSITY	3044-018968	12 351	101,406	
WASHINGTON UNIVERSITY IN ST. LOUIS	Sub WU-15-309 (HDTRA11510032)	12 351	206,634	
LUNA INNOVATIONS INCORPORATED	3287-DPA-2S/UCI-cyc1	12 360	64,497	
AMERICAN BURN ASSOCIATION	201013674	12 420	45,780	
AMERICAN BURN ASSOCIATION	SUB NONE(W81XWH-10-1-0527)	12 420	39,087	
BANYAN BIOMARKERS	Sub ATO-06 (W81XWH-10-C-0251)	12 420	11,529	
BOSTON UNIVERSITY	4500000823:004	12 420	547,611	
BRONX VETERANS MEDICAL RESEARCH FOUNDATION	W81XWH-13-1-0071	12 420	34,861	
CHILDREN'S HOSPITAL CORP. (THE), BOSTON, MASS.	CHC/USAMRAA 20102338 WU 9/15 54%	12 420	68,996	
CHILDREN'S NATIONAL MEDICAL CENTER	300013771201	12 420	37,578	
CHILDREN'S NATIONAL MEDICAL CENTER	CNMC/USARMY 63881101 SPENCER 8/13	12 420	(583)	
GENEVA FOUNDATION	201400882	12 420	6,094	
GENEVA FOUNDATION	S-1326-01:01	12 420	179,567	
GEORGETOWN UNIVERSITY	411790_GR402344-UCI-cyc1	12 420	55,103	
HARVARD UNIVERSITY	SUB 5060404 (W81XWH-12-2-0113)	12 420	110,567	
HENRY FORD HEALTH SYSTEM	W81XWH-15-1-0395	12 420	50,383	
HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY MEDICINE	2911	12 420	59,117	
HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY MEDICINE	823738	12 420	131,611	
JOHNS HOPKINS UNIVERSITY	125025	12 420	204,333	
JOHNS HOPKINS UNIVERSITY	2000851841	12 420	9,226	
JOHNS HOPKINS UNIVERSITY	2002397378	12 420	160,332	
JOHNS HOPKINS UNIVERSITY	2002431696	12 420	40	
JOHNS HOPKINS UNIVERSITY	METRC2	12 420	32,050	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B612254	12 420	23,482	
LOS ALAMOS NATIONAL SECURITY, LLC	217304-1	12 420	162,596	
MASSACHUSETTS GENERAL HOSPITAL	223328-cyc2	12 420	40,804	
MEDICAL COLLEGE OF WISCONSIN	20153757	12 420	209,237	
MEDICAL COLLEGE OF WISCONSIN	A125339	12 420	71,910	
NATIONAL TRAUMA INSTITUTE	NATIONAL TRAUMA INSTITUTE NTI-NCH-1	12 420	(16,016)	
NATIONAL TRAUMA INSTITUTE	NTI-JWMRP-201501	12 420	6,681	
NATIONAL TRAUMA INSTITUTE	NTI-NTRR15-05	12 420	4,389	
NATIONAL TRAUMA INSTITUTE	Sub NTI-JWMRP-201502(W81XWH-15	12 420	24,641	
NEW YORK UNIVERSITY	11-01935	12 420	76,141	
NEW YORK UNIVERSITY	13-A0-00-001212	12 420	59,617	
NEW YORK UNIVERSITY	10-00904; PROJ#01094 WOLKOWITZ	12 420	(17,287)	
NEW YORK UNIVERSITY SCHOOL OF MEDICINE	F/NYU 12-01517 PIOMELLI J54.5 4/15	12 420	(983)	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	1810	12 420	11.019	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	1812	12 420	14,760	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	NCIRE/USARMY 1681 TOGA 2/14 54%	12 420	440	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	SUB 1809 (W81XWH-13-1-0259)	12 420	341,319	227,6
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	Sub WEI1872-01 (W81XWH-14-1-04	12 420	23,500	221,0
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	WEI1872-02	12 420	119,041	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	WEI187205094728	12 420	4,909	
NORTHWESTERN UNIVERSITY	60038197 UCLA	12 420	108,961	
PACIFIC HEALTH RESEARCH AND EDUCATION INSTITUTE	Sub PHREI-21501-01(W81XWH-15-1	12 420	18.682	
I AGII O HEALTH NEGRATOR AND EDUCATION INSTITUTE	300 FFINEI-2 1301-01(W01AWIT-13-1	12 420	18,682	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY :	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
PELAGIQUE, LLC	W81XWH	12 420	178,633	
PURDUE UNIVERSITY	4104-64057	12 420	112,113	
QR PHARMA, INC	W81XWH-13-2-0092	12 420	(1,308)	
RESEARCH FOUNDATION FOR MENTAL HYGIENE	26001	12 420	3,578	
STANFORD UNIVERSITY	60920976-113110-cyc1	12 420	(104)	
STANFORD UNIVERSITY	61112906-117345	12 420	71,594	
TERUMO CORPORATION	W81XWH-13-C-0160	12 420	71,529	
THE GAIA MEDICAL INSTITUTE LLC	ARMY/GAIA MED MEHTA 54.5	12 420	(60,512)	
UNIVERSITY OF MIAMI	661699 (W81XWH-13-1-0048)	12 420	2,171	
UNIVERSITY OF MICHIGAN	3003219081:1	12 420	164,214	
UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT HOUSTON	UTEXAS HOUSTON W81XWH1110240 WU 09/	12 420	(974)	
UNIVERSITY OF TEXAS MEDICAL BRANCH AT GALVESTON	15-017	12 420	27,837	
UNIVERSITY OF TEXAS-M.D. ANDERSON CANCER CENTER	00002240	12 420	12,118	
UPMC	0042249 (410500) (W81XWH-14-10	12 420	136,962	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VMRF/ARMY 297641 WETHERELL 9/11	12 420	(1,418)	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VMRF/ARMY 303175 LOHR 8/12	12 420	(82)	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	GERS 312265 (W81XWH-11-1-0641)	12 420	16,307	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	LANG 312619 (W81XWH-10-1-0657)	12 420	41,605	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA ADV ALLARD (W81XWH-15-1-03	12 420	11,431	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA ADV GOLSHAN W81XWH-15-1-03	12 420	31,829	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA ADV LANG (W81XWH-15-1-0330	12 420	18,256	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA ADV NORMAN (W81XWH-15-1-03	12 420	26,058	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Dowling 308699 V-SUBVMRF-1	12 420	17,749	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA JAK (W81XWH-11-1-0641)	12 420	9,149	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA LIU 312752 (W81XWH-12-1-06	12 420	3,450	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA MILLS 312913 ( W81XWH-12-1	12 420	20,287	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Minassian 314699 (W81XWH-1	12 420	1,555	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA NIEVERGELT 314698 W81XWH-1	12 420	12,476	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA RIEDL 313178 08842001(W81X	12 420	13,218	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Robinson 298029 (W81XWH-10	12 420	20,340	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Rodgers 301910 (W81XWH-10-	12 420	7,313	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA ZURAW 313179 W81XWH-14-050	12 420	60,373	
WAKE FOREST UNIVERSITY	WFUHS 441005B GU-05	12 420	128,753	
WAKE FOREST UNIVERSITY	WFUHS 441042 CTA-12	12 420	250,145	
WASHINGTON UNIVERSITY IN ST. LOUIS	WU-14-294 (W81XWH-13-1-0094)	12 420	9,148	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	1814	12 420	587	
UNIVERSITY OF PUERTO RICO	2013201401	12 421	39,327	
ACADEMY OF APPLIED SCIENCE	14-32	12 431	4,969	
BROWN UNIVERSITY	Sub 00000820 (W911NF-15-2-0122	12 431	19,962	
CALIFORNIA STATE UNIVERSITY, NORTHRIDGE	F-14-3462UCLA:2	12 431	178,547	
CARNEGIE MELLON UNIVERSITY	1990360-350166	12 431	77,003	
CASE WESTERN RESERVE UNIVERSITY	RES509887	12 431	29,620	
COLORADO STATE UNIVERSITY	G-33024-1-CYC1	12 431	75,564	
CORNELL UNIVERSITY	76091-10531	12 431	260,826	
DCS CORPORATION	None (W911NF-10-2-0022)	12 431	835,328	

# Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

		·	FY	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
DUKE UNIVERSITY	10-ARO-1049	12 431	110,106	
DUKE UNIVERSITY	313-0590-cyc1	12 431	136,544	
FLEXTECH ALLIANCE	RFP13-161	12 431	5,279	3,36
GALOIS INC	2015-001-cyc1	12 431	587,092	
GALOIS INC	2015-001-cyc5	12 431	35,331	
HARVARD UNIVERSITY	152295.5082220.0002	12 431	382,954	
LEHIGH UNIVERSITY	543152-78001	12 431	78,792	
MAXENTRIC TECHNOLOGIES LLC	Sub 3904-1 (W911QX-14-C-0060)	12 431	16,636	
METRO ENGINEERING AND SURVEYING CO., INC.	Sub 20143976 (W91278-09-D-0049	12 431	15,656	
NORTHWESTERN UNIVERSITY	SP0034999-PROJ0009384	12 431	1,228	
OHIO STATE UNIVERSITY	60043375/RF01358012:03	12 431	134,004	
PRINCETON UNIVERSITY	00002082	12 431	98,327	
RICE UNIVERSITY	R16545:10	12 431	(157)	
SOUTHERN METHODIST UNIVERSITY	ARMY/SMU-UNI AK AS108 PINON BERGER	12 431	(8)	
STANFORD UNIVERSITY	60284806-107307-C	12 431	344,462	
TDA RESEARCH, INC.	TDA RESEARCH, INC.	12 431	314	
THE GAIA MEDICAL INSTITUTE LLC	UB 20140528 (W81XWH-13-C-0225)	12 431	8,068	
TOYON RESEARCH CORPORATION	SC16-6970-1	12 431	13,510	
TRANSLUME INC	20152538	12 431	69,999	
UNIVERSITY OF ALASKA	ARMY/UNI ALASKA UAF09-0027 HEDLIN	12 431	(757)	
UNIVERSITY OF CHICAGO	FP057787-C	12 431	4,772	
UNIVERSITY OF ILLINOIS	Sub 2015-05174-03 (W911NF-15-1	12 431	114,066	
UNIVERSITY OF MASSACHUSETTS AMHERST	16-008956 B 00 (W911NF-15-1-05	12 431	417,523	
UNIVERSITY OF MICHIGAN	3001996186	12 431	224,924	
UNIVERSITY OF MICHIGAN	3001996235:7	12 431	203,388	
UNIVERSITY OF MICHIGAN	Sub 3002677619 (W911NF-11-1-03	12 431	42,793	
UNIVERSITY OF MISSOURI	C00045065-2	12 431	42,364	
UNIVERSITY OF MISSOURI	C00045065-3	12 431	140,096	
UNIVERSITY OF NEW MEXICO	433505-873R	12 431	241,512	
UNIVERSITY OF SOUTHERN CALIFORNIA	005522	12 431	55,443	
UNIVERSITY OF TEXAS-AUSTIN	UTA14-000975	12 431	47,961	
LEMON GROVE SCHOOL DISTRICT	B 20134296 (DOD DEPENDENT SCH)	12 556	7,447	
UNIVERSITY OF PITTSBURGH	0043845-1	12 561	178,028	
PERCEPTRONICS	PS-102689-CYC1	12 598	62,126	
HYPRES, INC.	20153278	12 615	13,829	
UNIVERSITY OF SOUTHERN CALIFORNIA	113597-1-cyc1	12 617	858	
ACADEMY OF APPLIED SCIENCE	AAS-201118-CYC1	12 630	1,053	
ACADEMY OF APPLIED SCIENCE	AAS-203759-cyc1	12 630	11,942	
ACADEMY OF APPLIED SCIENCE	AAS-203763-cyc1	12 630	5,862	
JOHNS HOPKINS UNIVERSITY	2001561731	12 630	50,218	
PENNSYLVANIA STATE UNIVERSITY	006576	12 630	262,008	
PENNSYLVANIA STATE UNIVERSITY	4957UCDARMY0045	12 630	658,492	
RAYTHEON BBN TECHNOLOGIES CORP.	W911NF-09-2-0053	12 630	862,224	
SYSTEM OF SYSTEMS SECURITY CONSORTIUM	Sub 1006-15-1-3 (W15QKN-12-9-1		228,428	
THE RESEARCH CORPORATION OF THE UNIVERSITY OF HAWAII	Z10086536		136,422	
THE RESEARCH SORFORATION OF THE UNIVERSITY OF HAWAII	Z10000330	12 630	136,422	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
TULANE UNIVERSITY	TUL-SCC-553849-15/16	12 630	94,499	
UNIVERSITY OF IDAHO	GWK514SB001	12 630	1,596	
HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY MEDICINE	2942	12 750	5,424,986	
HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY MEDICINE	Sub 2880/837344 (HU0001-15-2-0	12 750	295,830	
AKRON, UNIVERSITY OF	UCSB-02561	12 800	123,171	
APOGEE RESEARCH LLC	201802-cyc1	12 800	187,257	
APOGEE RESEARCH LLC	201802-cyc5	12 800	3,166	
BAE SYSTEMS (GREAT BRITAIN)	316063	12 800	466,083	
BINGHAMTON UNIVERSITY	72611	12 800	121,679	
BOSTON COLLEGE	5001828-1:02	12 800	19,954	
BROWN UNIVERSITY	00000552	12 800	79,937	
CALIFORNIA INSTITUTE OF TECHNOLOGY	52-1092313:05	12 800	264,066	
CARBON TECHNOLOGY, INC.	CTI-202542-cyc1	12 800	50,000	
CARNEGIE MELLON UNIVERSITY	1150107-284354-GRUNBAUM-03/15	12 800	(15)	
CENTER FOR SCIENTIFIC RESEARCH AND HIGHER EDUCATION AT ENSENADA	007806	12 800	24,706	
CFD RESEARCH CORPORATION	A15-0065	12 800	133,065	
CHEMAT TECHNOLOGY, INC.	UB 20132452 (FA9453-13-C-0113)	12 800	66,632	
FLORIDA TURBINE TECHNOLOGIES, INC.	FTT160403	12 800	8,952	
GEORGE MASON UNIVERSITY	E203722-1-cyc1	12 800	19,778	
GEORGIA INSTITUTE OF TECHNOLOGY	RB267-G4	12 800	284,175	
GEORGIA INSTITUTE OF TECHNOLOGY	RB267-G5	12 800	72,978	
HARVARD UNIVERSITY	AFOSR/HARVARD 123572 DEHEYN	12 800	30	
HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY MEDICINE	2888	12 800	1,355	
HYPRES, INC.	HYPRES, INC./ DYNES	12 800	(30,768)	
JOHNS HOPKINS UNIVERSITY	2001622119	12 800	179,958	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	5710003664	12 800	446,298	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	7000289513	12 800	371,062	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	7000298543 (FA8721-05-C-0002)	12 800	52,658	
MAXENTRIC TECHNOLOGIES LLC	UCSD-4302-1 (FA8750-13-C-0182)	12 800	(674)	
METRO LASER	UCI23WP32-cyc1	12 800	484	
MICROXACT INCORPORATED	MICROXACT (DOD/FP) 0101AFOCLSD	12 800	158	
MORTON PHOTONICS	MP-UCSB-03	12 800	177,109	
MORTON PHOTONICS	MP-UCSB-04	12 800	39,510	
NORTHWESTERN UNIVERSITY	Sub SP0032777-PROJ0008738 ( FA	12 800	192,494	
PRINCETON UNIVERSITY	Sub 00001661 (FA9550-09-1-0314	12 800	(2,391)	
RICE UNIVERSITY	007847	12 800	113,025	
RICE UNIVERSITY	R18641	12 800	137,266	
STANFORD UNIVERSITY	20142401	12 800	52,044	
STANFORD UNIVERSITY	29017650-51649-B	12 800	140,839	
STANFORD UNIVERSITY	29182280-51677-C	12 800	353,401	
STANFORD UNIVERSITY	SUB 61137538-120278 (FA9550-16	12 800	24,385	
STATE UNIVERSITY OF NEW YORK	SUNY (DOD)(RAS) Bowers 7/16	12 800	179,291	
STATE UNIVERSITY OF NEW YORK	SB160126-0001	12 800	143,455	
STATE UNIVERSITY OF NEW YORK	SB160126-0003	12 800	234,365	
STATE UNIVERSITY OF NEW YORK	SB160126-0004	12 800	151,621	
			- ,-=-	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY 2	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
STATE UNIVERSITY OF NEW YORK	SB160126-0005	12 800	60,892	
STATE UNIVERSITY OF NEW YORK	SB160126-0007	12 800	71,049	
STATE UNIVERSITY OF NEW YORK	SB160126-A	12 800	469,004	
TECHNOLOGY ASSESSMENT AND TRANSFER, INC.	TECHASSESS(AF/FP)6068-01 CLSD	12 800	16,765	
UNITED TECHNOLOGIES CORP	UTRC 1211215 - Task 1	12 800	73,154	
UNIVERSAL TECHNOLOGY CORPORATION	15790000507C1	12 800	59,788	
UNIVERSITY OF BATH	Sub none (FA8655-13-1-3056)	12 800	64,106	
UNIVERSITY OF CENTRAL FLORIDA	24086151-01	12 800	391,397	
UNIVERSITY OF ILLINOIS	2010-04904-03	12 800	169,885	
UNIVERSITY OF ILLINOIS	2012-02298-06 (A0080)	12 800	209,441	
UNIVERSITY OF ILLINOIS	2016-00973-01-cyc1	12 800	12	
UNIVERSITY OF MARYLAND	36954Z8165003	12 800	18,931	
UNIVERSITY OF MARYLAND	Z812401:B	12 800	96,331	
UNIVERSITY OF MARYLAND	Z8142001	12 800	103,486	
UNIVERSITY OF MICHIGAN	3001458737:8	12 800	(1,384)	
UNIVERSITY OF MICHIGAN	3003832475	12 800	31,813	
UNIVERSITY OF MICHIGAN	Sub 20124774(UNKNOWN)	12 800	395,242	
UNIVERSITY OF MINNESOTA	A004376801	12 800	66,746	
UNIVERSITY OF NEW MEXICO	271387-870D-cyc4	12 800	356,847	
UNIVERSITY OF PENNSYLVANIA	556016	12 800	547,111	
UNIVERSITY OF PENNSYLVANIA	Sub 561009 (FA9550-13-1-0097)	12 800	131,064	
UNIVERSITY OF PITTSBURGH	0019713 (406200-1)	12 800	377,547	
UNIVERSITY OF SAN DIEGO	PHYSS1165-U2012-002	12 800	2,732	
UNIVERSITY OF SOUTHERN CALIFORNIA	55231182-CYC1	12 800	94,744	
UNIVERSITY OF TEXAS SYSTEM	UTA14-001123	12 800	109,812	
UNIVERSITY OF TEXAS-AUSTIN	UTA12-000748	12 800	47,255	
UNIVERSITY OF UTAH	10029173-S3:02	12 800	75,516	
UNIVERSITY OF UTAH	10038423-S2	12 800	5,301	
UNIVERSITY OF WASHINGTON	SUB UWSC8748 (BPO10328)	12 800	81,710	
UNIVERSITY OF WISCONSIN-MADISON	580K742	12 800	16,681	
VIBRANT	784	12 800	143,541	
YALE UNIVERSITY	B C13L11586 (FA9550-13-1-0020)	12 800	134,699	
UNIVERSITY OF ARIZONA	217734	12 800	(2,188)	
UNIVERSITY OF WASHINGTON	A16-0323-001	12 800	42,833	
SCIENTIFIC SIMULATION SYSTEMS, INC.	1409-SC002/FA7000-14-2-0017	12 801	99,185	
ADVANCED BRAIN MONITORING, INC.	Sub 2013-1069 (W31P4Q-12-C-020	12 910	36,416	
ARIZONA STATE UNIVERSITY/TEMPE	16-889-cyc1	12 910	573,471	
AURRION, LLC.	SB120043	12 910	332,162	
BAE SYSTEMS INFORMATION AND ELECTRONIC SYSTEMS INTEGRATION INC.	SUB 873470 (NONE)	12 910	186,327	
CARNEGIE MELLON UNIVERSITY	1150114-293600	12 910	159,654	
CHARLES RIVER ANALYTICS	SC1315902 (APPRIL)-CYC1	12 910	335,242	
COLUMBIA UNIVERSITY	3 (GG009550-05)	12 910	33,734	
GEORGE MASON UNIVERSITY	E2030921-cyc1	12 910	362,420	
HARVARD UNIVERSITY	Sub 152220.5094542.0003	12 910	170,932	
HEWLETT-PACKARD	HPL-MM-UCSB-0007-1	12 910	262,249	
		.2 0.0	202,240	

# Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY 2	
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
HONEYWELL, INC.	036983	12 910	94,632	
HRL LABORATORIES, LLC	10008-002328-CYC10	12 910	14,095	
HRL LABORATORIES, LLC	15041-160573-DS	12 910	31,313	
INTERNATIONAL BUSINESS MACHINES CORPORATION	Sub 4915012801 (W911NF-15-C-02	12 910	49,488	
JOHNS HOPKINS UNIVERSITY	2001573675-cyc5	12 910	728	
LEIDOS, INC.	SAICP010097056(SPAWAR)CAUWENBERGHS	12 910	(10)	
LEIDOS, INC.	P010166985-cyc1	12 910	488,622	70,08
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	5710003491	12 910	489,899	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	5710003584	12 910	169,325	
MICROELECTRONICS ADVANCED RESEARCH CORPORATION	2013-MA-2386	12 910	5,815,683	3,258,50
MICROELECTRONICS ADVANCED RESEARCH CORPORATION	442580/2A-57125	12 910	164,160	
MORTON PHOTONICS	MP-UCSB-02	12 910	157,007	
NORTHEASTERN UNIVERSITY	505068-78050	12 910	527,402	
NORTHWESTERN UNIVERSITY	SP0020412PROJ0005157	12 910	111,193	
ORACLE CORPORATION	ORACLE CORP SUB US1440128 FAINMAN	12 910	1,939	
SLS GR LLC	A15-0023	12 910	157,687	
SRI INTERNATIONAL	119-000227	12 910	38,499	
SRI INTERNATIONAL	27-001455	12 910	78,991	
STANFORD UNIVERSITY	27917990-51987-B:5	12 910	10,435	
SUN MICROSYSTEMS LABORATORIES, INC.	DOD/SUN MICRO FAINMAN 54.5	12 910	6,020	
TELEDYNE TECHNOLOGIES, INC.	PO00099849	12 910	106,082	
TELEDYNE TECHNOLOGIES, INC.	PO00099889	12 910	78,387	
TELEDYNE TECHNOLOGIES, INC.	PO00118622	12 910	25,210	
UNIVERSITY OF COLORADO BOULDER	1553360 (N0014-15-1-2809 )	12 910	47,490	
UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	1550652:6	12 910	220,217	
UNIVERSITY OF COPENHAGEN	W911NF-12-1-0354	12 910	29,296	
UNIVERSITY OF MASSACHUSETTS MEDICAL SCHOOL	WA00419007/OSP2016183	12 910	6,638	
UNIVERSITY OF MICHIGAN	3003469885	12 910	11,481	
UNIVERSITY OF MINNESOTA	006112	12 910	433,466	
UNIVERSITY OF MINNESOTA	A002069701:5	12 910	243,850	
UNIVERSITY OF NOTRE DAME (INCL GEM)	SB150081	12 910	321,959	
UNIVERSITY OF SOUTHERN CALIFORNIA	USC/USDOD 143315 DUNN 06/11 54%	12 910	(106)	
UNIVERSITY OF UTAH	10036982-UCI-cyc1	12 910	224,981	
UNIVERSITY OF UTAH	SUB 10038364-UCSD (N66001-15-2	12 910	10,127	
VANDERBILT UNIVERSITY	007905	12 910	119,860	
VANDERBILT UNIVERSITY	3128-019187	12 910	218,912	
VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY	450179-19097:02	12 910	194,401	113,89
WHITEHEAD INSTITUTE FOR BIOMEDICAL RESEARCH	SUB 10-1798-9904(HR0011-14-2-0	12 910	731,572	
YALE UNIVERSITY	IROTS: INTEROPERABLE ROBUST OR	12 910	(8)	
BROWN UNIVERSITY	A16-0282-001	12 910	34,955	
MICROELECTRONICS ADVANCED RESEARCH CORPORATION	006094	12 910	201,077	
MICROELECTRONICS ADVANCED RESEARCH CORPORATION	006096	12 910	240,710	
MICROELECTRONICS ADVANCED RESEARCH CORPORATION	006098	12 910	166,370	
MICROELECTRONICS ADVANCED RESEARCH CORPORATION	006101	12 910	103,331	
MICROELECTRONICS ADVANCED RESEARCH CORPORATION	006111			

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
UNIVERSITY OF NOTRE DAME (INCL GEM)	202092-UCB LEAST	12 910	238,600	
AMERICAN BURN ASSOCIATION	201119157	12 UNKNOWN	11,725	
AMERICAN BURN ASSOCIATION	201121884	12 UNKNOWN	7,148	
APPLIED NANOTECH, INC.	201401520	12 UNKNOWN	25,374	
ARGONNE NATIONAL LABORATORY (DOE GOCO LAB OPERATED BY UNIV OF CHICAGO)	6F30603	12 UNKNOWN	2,721	
BAE SYSTEMS (GREAT BRITAIN)	846660	12 UNKNOWN	625,990	
BRAIN TRAUMA FOUNDATION, INC.	A120415	12 UNKNOWN	12,363	
CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	007154	12 UNKNOWN	1,552	
CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	Sub NONE(SA0000453)	12 UNKNOWN	98,645	
CARNEGIE MELLON UNIVERSITY	1990365-346574-cyc1	12 UNKNOWN	54,074	
CH2M HILL	1306090	12 UNKNOWN	29,288	
CHILDREN'S HOSPITAL AND RESEARCH CENTER AT OAKLAND	128059	12 UNKNOWN	3,181	
DISTANT FOCUS CORPORATION	PO 3344	12 UNKNOWN	19,325	
ENGILITY CORP.	2015SEGL0112	12 UNKNOWN	58,441	
ENSCO, INC.	G273613851	12 UNKNOWN	114,711	
ENSCO, INC.	G273713884	12 UNKNOWN	45,573	
GARVEY SPACECRAFT CORPORATION	GSC SUB GSC-2014-03 ( NNX14CM44P) W	12 UNKNOWN	(1,353)	
GENERAL DYNAMICS CORPORATION	40228342	12 UNKNOWN	50,010	
GENEVA FOUNDATION	201122182	12 UNKNOWN	111,213	
GROUP4 LABS, LLC	GROUP4LABS (DOD/FP) 4508 CLSD	12 UNKNOWN	(8,018)	
JOHNS HOPKINS UNIVERSITY	118122	12 UNKNOWN	20,538	
JOHNS HOPKINS UNIVERSITY	2002761143	12 UNKNOWN	82,191	
L&M POLICY RESEARCH, LLC	UCALSB-PL-2014-01	12 UNKNOWN	343,772	
LOCKHEED MARTIN CORPORATION	LC4101833507	12 UNKNOWN	848,304	
LOGISTIC GLIDERS INC	201502221	12 UNKNOWN	29,374	
LOS ALAMOS NATIONAL SECURITY, LLC	318483	12 UNKNOWN	34,616	
LOS ALAMOS NATIONAL SECURITY, LLC	346271	12 UNKNOWN	47,436	
LYNNTECH, INC.	20152290	12 UNKNOWN	23,252	
MAKEL ENGINEERING, INC.	15SUBAQS01UCD	12 UNKNOWN	50,000	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	5710003875	12 UNKNOWN	418,825	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	5710003876	12 UNKNOWN	166,854	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	5710003939	12 UNKNOWN	267,160	
MATRIX RESEARCH, INC.	SUBCONTRACT 20140236	12 UNKNOWN	135,248	
MAYACHITRA, INC.	007843	12 UNKNOWN	38,478	
MAYACHITRA, INC.	MC68335-16-C-0028	12 UNKNOWN	51,742	
MAYACHITRA, INC.	UCSB-14-C-0333	12 UNKNOWN	7,760	
MITRE CORPORATION, THE	Sub 107767 (W15P7T-14-C-A802)	12 UNKNOWN	399,441	
NEW JERSEY INSTITUTE OF TECHNOLOGY	SUB (NP) 996402(W911NF-15-C-02	12 UNKNOWN	122,568	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	1679	12 UNKNOWN	19,721	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	1680	12 UNKNOWN	16,404	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	1684	12 UNKNOWN	14,200	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	SUB 1677 (W81XWH-12-2-0012)	12 UNKNOWN	184,458	(135,27
NOVATEUR RESEARCH SOLUTIONS LLC	UCSD-SUBK-N0014-14-P-1169	12 UNKNOWN	23,500	,,
ORACLE CORPORATION	LFI 214774	12 UNKNOWN	129,210	
OREGON STATE UNIVERSITY	OSU-RM100A-ALVAREZ-COHEN-3/15	12 UNKNOWN	6,533	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

				FY 2	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	F	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFD	A Number	Expenditures	Subrecipients
OUT OF THE FOG RESEARCH LLC	UCSD 20153612	12	UNKNOWN	43,467	
RADIABEAM TECHNOLOGIES, LLC	201504143	12	UNKNOWN	7,681	
RAYTHEON BBN TECHNOLOGIES CORP.	007176	12	UNKNOWN	104,809	
RAYTHEON BBN TECHNOLOGIES CORP.	W911NF0920053	12	UNKNOWN	238,849	
RAYTHEON COMPANY	4201027558	12	UNKNOWN	7,050	
RAYTHEON COMPANY	SB140137-0001	12	UNKNOWN	4,131	
RDRTEC	Sub 20143977(N68335-14-C-0335)	12	UNKNOWN	(108)	
REAL TIME RESEARCH, INC.	201502946	12	UNKNOWN	111,058	
ROYAL CALIBER LLC	201500146	12	UNKNOWN	269,968	
SOAR TECHNOLOGY, INC.	1028102UCDavis	12	UNKNOWN	22,500	
SOUTHERN METHODIST UNIVERSITY	GA00137-7510	12	UNKNOWN	36,691	
TELEDYNE TECHNOLOGIES, INC.	G9U571158	12	UNKNOWN	78,283	
TEXAS A&M UNIVERSITY - COLLEGE STATION	15-08	12	UNKNOWN	37,142	
TOYON RESEARCH CORPORATION	SC15-6935-1	12	UNKNOWN	19,746	
TRISTAN TECHNOLOGIES	UCSD 20153613	12	UNKNOWN	44,910	
UNIVERSAL TECHNOLOGY CORPORATION	16790000406C1	12	UNKNOWN	13,429	
UNIVERSITY OF ALASKA	15-0068 (P.O. P0487114)	12	UNKNOWN	503,474	
UNIVERSITY OF CENTRAL FLORIDA	24086133-02	12	UNKNOWN	605,670	
UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	W81XWH-15-1-0584	12	UNKNOWN	10,927	
UNIVERSITY OF ILLINOIS	2013-01024-01	12	UNKNOWN	850,766	
UNIVERSITY OF INNSBRUCK	030378	12	UNKNOWN	185,314	
UNIVERSITY OF MARYLAND	21651-Z9885008-cyc1	12	UNKNOWN	1,845	
UNIVERSITY OF MICHIGAN	3002565241	12	UNKNOWN	192,180	
UNIVERSITY OF SOUTHERN CALIFORNIA	Sub 48894253 (HR0011-12-C-0094	12	UNKNOWN	163,570	
UTAH STATE UNIVERSITY	007217	12	UNKNOWN	33,614	
VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY	450319-19A28	12	UNKNOWN	263,517	
CALIFORNIA PARKS AND RECREATION, DEPARTMENT OF	C1370016	12	UNKNOWN	122,034	
MICROELECTRONICS ADVANCED RESEARCH CORPORATION	20130445	12	UNKNOWN	241,373	
MICROELECTRONICS ADVANCED RESEARCH CORPORATION	20130533	12	UNKNOWN	132,927	
Subtotal Pass-Through and Partial Pass-Through Awards				63,067,053	3,537,99
Total Department of Defense				311,803,196	49,573,37
CENTRAL INTELLIGENCE AGENCY					
Pass-Through and Partial Pass-Through					
UNIVERSITY OF UTAH	006950	13	431	156,919	
Total Central Intelligence Agency				156,919	-
HOUSING & URBAN DEVELOPMENT					
Direct Awards	Various	14	RD	136,155	
Total Housing & Urban Development				136,155	ē
DEPARTMENT OF INTERIOR					
Direct Awards	Various	15	RD	14,961,227	554,41
Pass-Through and Partial Pass-Through					
UNIVERSITY OF NEVADA, LAS VEGAS/UNLV RESEARCH FOUNDATION	007919	15	231	6,781	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

				FY 2	016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal		Total Federal	Pass-Through to
	or Other Identifier	CFDA	A Number	Expenditures	Subrecipients
CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	SA0000474	15	423	735	
UNIVERSITY OF NEVADA, RENO	UNR1573	15	608	18,954	
CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE	P1382003	15	615	85,240	
CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE	P1582003	15	615	18,338	
CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE	P1480014	15	634	37,908	
OREGON, STATE OF	ODFW 203-14-01	15	634	15,158	
CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE	P1482005	15	650	80,889	
SOUTHWEST WETLANDS INTERPRETIVE ASSOCIATION	20160861	15	650	1,109	
SRI INTERNATIONAL	69-000539-CYC4	15	650	30,806	
UNIVERSITY OF GEORGIA	RR2121364942176	15	657	7,841	
WILDLIFE MANAGEMENT INSTITUTE	WMI WNS201508 FRICK 8/16	15	657	9,439	
NATIONAL FISH AND WILDLIFE FOUNDATION	0104.14.041425	15	663	51,052	
NORTH SLOPE BOROUGH (ALASKA)	2015-131	15	668	78,385	
SONOMA ECOLOGY CENTER	20110725CALCCSUBUCDICE	15	669	20,547	
UNIVERSITY OF SOUTH CAROLINA	007931	15	805	36,304	
SOUTHERN CALIFORNIA EARTHQUAKE CENTER	Y80806 GRANT-cyc5	15	808	4,115	
UNIVERSITY OF SOUTHERN CALIFORNIA	39072289:2	15	808	4,229	
UNIVERSITY OF SOUTHERN CALIFORNIA	49239887:1	15	808	38,481	
UNIVERSITY OF SOUTHERN CALIFORNIA	50030741	15	808	107	
UNIVERSITY OF SOUTHERN CALIFORNIA	57266713	15	808	56,599	
AMERICAVIEW, INC.	AV13CA01	15	815	24,330	
NATURE CONSERVANCY	OCS-NCEAS-02012016	15	820	86,626	
UNIVERSITY OF ARIZONA	131696	15	820	18,429	
UNIVERSITY OF ARIZONA	131697	15	820	26,946	
UNIVERSITY OF ARIZONA	20144990	15	820	38,009	
UNIVERSITY OF ARIZONA	212672	15	820	20,301	
UNIVERSITY OF ARIZONA	221641	15	820	124,970	
UNIVERSITY OF ARIZONA	223659	15	820	108,370	
UNIVERSITY OF ARIZONA	288625	15	820	131,622	
UNIVERSITY OF ARIZONA	G15AP00174	15	820	27,977	
UNIVERSITY OF ARIZONA	Y561461:5	15	820	145,839	
UNIVERSITY OF ARIZONA	Y561946	15	820	128,101	
SANTA MONICA MOUNTAINS FUND	P13AC00418	15	954	3,366	
UNIVERSITY OF WASHINGTON	UNIVERSITY OF WASHINGTON-UCD2013G73	15	954	5,388	
CALIFORNIA DEPARTMENT OF INDUSTRIAL RELATIONS	C8956514	15	UNKNOWN	9,000	
CALIFORNIA DIVISION OF BOATING AND WATERWAYS	C1370030	15	UNKNOWN	189,934	
MMI ENGINEERING	201402582	15	UNKNOWN	63,311	
UNIVERSITY OF GEORGIA	RR2677094353608	15	UNKNOWN	9,079	
Subtotal Pass-Through and Partial Pass-Through Awards		•		1,764,615	_
Total Department of Interior				16,725,842	554,413
DEPARTMENT OF JUSTICE					
Direct Awards	Various	16	RD	2,594,142	243,790
Pass-Through and Partial Pass-Through					
FAIRLEIGH DICKINSON UNIVERSITY	DOJ0007-01	16	203	1,095	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

				FY 2	016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number		ederal	Total Federal	Pass-Through to
	or Other Identifier	CFD	A Number	Expenditures	Subrecipients
FAIRLEIGH DICKINSON UNIVERSITY	DOJ0008-01	16	203	5,223	
ARKANSAS STATE UNIVESITY	14-678-15-cyc1	16	560	115,129	
RAND CORP	9920120084-cyc4	16	560	39,160	
UNIVERSITY OF ARKANSAS, FAYETTEVILLE	SA1302028-CYC1	16	560	(2,725)	
UNIVERSITY OF COLORADO BOULDER	1553430 ( 2015-DN-BX-K016	16	560	5,087	
NATIONAL 4-H COUNCIL	National 4-H Council - 2015-JU-FX-0	16	726	18,201	
Subtotal Pass-Through and Partial Pass-Through Awards				181,170	-
Total Department of Justice				2,775,312	243,790
DEPARTMENT OF LABOR					
Pass-Through and Partial Pass-Through					
CITY OF SANTA ANA	A-2012-015-CYC1	17	258	56,860	
CALIFORNIA EMPLOYMENT DEVELOPMENT DEPARTMENT	M6102380	17	261	43,987	
CHAFFEY COLLEGE	007218	17	282	32,830	
L-3 DATA TACTICS, INC.	UCALSB-PL-2014-01	17	UNKNOWN	44,952	
Subtotal Pass-Through and Partial Pass-Through Awards				178,629	
Total Department of Labor				178,629	-
DEPARTMENT OF STATE					
Direct Awards	Various	19	RD	2,116,762	108,446
Pass-Through and Partial Pass-Through					
INSTITUTE OF INTERNATIONAL EDUCATION	201401627	19	401	75,774	
CENTER FOR HUMAN SERVICES	FY13-A01-7014:01	19	704	2,288	
PARTNERS OF THE AMERICAS, INC.	PARTNER-1-KAMMEN,D-12/15	19	UNKNOWN	33,246	
THE NATIONAL ACADEMIES	USDS/NAS PGA-P210946 SIDDIQUI	19	UNKNOWN	(2)	
Subtotal Pass-Through and Partial Pass-Through Awards				111,306	
Total Department of State				2,228,068	108,446
DEPARTMENT OF TRANSPORTATION					
Direct Awards	Various	20	RD	7,023,556	1,413,287
Pass-Through and Partial Pass-Through					
UNIVERSITY OF MARYLAND	15493-Z9010001	20	108	74,788	
UNIVERSITY OF MARYLAND	Z918001	20	108	32,998	
UNIVERSITY OF MARYLAND	Z990102	20	108	202,053	
CALIFORNIA DEPARTMENT OF TRANSPORTATION	65A0510	20	200	47,689	
CITY AND COUNTY OF SAN FRANCISCO	VPPL-6328(054)	20	200	70,027	
LEIDOS, INC.	P010123388 R5	20	200	(13,661)	
LEIDOS, INC.	P010123388 R6	20	200	114,296	
LEIDOS, INC.	P010123388R2	20	200	(30,561)	
LEIDOS, INC.	P010123388R3	20	200	1,933	
WESTAT	8967-S03	20	200	(3,564)	
CALIFORNIA DEPARTMENT OF TRANSPORTATION	65A0541-cyc1	20	205	106,235	
PRINCETON UNIVERSITY	00002057	20	205	120,004	
OREGON DEPARTMENT OF TRANSPORTATION	30286	20	215	90,571	85,128
CALIFORNIA DEPARTMENT OF TRANSPORTATION	65A0521	20	237	788,255	371,624

# Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

				FY 2	
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number		ederal	Total Federal	Pass-Through to
OALIFORNIA HIGH OPEER RAIL AUTHORITY	or Other Identifier		A Number	Expenditures	Subrecipients
CALIFORNIA HIGH-SPEED RAIL AUTHORITY (ARRA)	HSR15-97	20	319	38,034	
CALIFORNIA OFFICE OF TRAFFIC SAFETY	PS1406-COTS-MADANAT-9/14	20	600	(1,303)	
CALIFORNIA OFFICE OF TRAFFIC SAFETY	AL1551	20	600	381,246	
CALIFORNIA OFFICE OF TRAFFIC SAFETY	PS1516	20	600	66,286	
CALIFORNIA OFFICE OF TRAFFIC SAFETY	PS1517	20	600	42,730	
CALIFORNIA OFFICE OF TRAFFIC SAFETY	PS1615	20	600	71,272	
CALIFORNIA OFFICE OF TRAFFIC SAFETY	PS1616	20	600	84,236	
CALIFORNIA OFFICE OF TRAFFIC SAFETY CALIFORNIA OFFICE OF TRAFFIC SAFETY	PT15148	20	600	279,881	
	PT16155 PS1625	20	600	524,645	
CALIFORNIA OFFICE OF TRAFFIC SAFETY		20	600	84,875	
CALIFORNIA OFFICE OF TRAFFIC SAFETY	AL1552	20	608	280,706	240,49
CALIFORNIA OFFICE OF TRAFFIC SAFETY	TR1506	20	610	68,709	
CALIFORNIA OFFICE OF TRAFFIC SAFETY	TR1605	20	610	50,684	
CALIFORNIA OFFICE OF TRAFFIC SAFETY	CALIFORNIA OFFICE OF TRAFFIC SAFETY (18975)	20	616	(878)	
CALIFORNIA OFFICE OF TRAFFIC SAFETY	AL1607	20	616	667,035	
CALIFORNIA OFFICE OF TRAFFIC SAFETY	MC1501	20	616	53,860	
CALIFORNIA OFFICE OF TRAFFIC SAFETY	SUB DD1503 (NONE)	20	616	61,840	
CALIFORNIA OFFICE OF TRAFFIC SAFETY	SUB OP1514 (NONE)	20	616	198,121	
CALIFORNIA OFFICE OF TRAFFIC SAFETY	TR1505	20	616	25,525	
CALIFORNIA OFFICE OF TRAFFIC SAFETY	TR1507	20	616	28,103	
CALIFORNIA OFFICE OF TRAFFIC SAFETY	TR1604	20	616	49,002	
CALIFORNIA OFFICE OF TRAFFIC SAFETY	TR1606	20	616	117,117	
CALIFORNIA OFFICE OF TRAFFIC SAFETY	TR1613	20	616	88,068	
CALIFORNIA OFFICE OF TRAFFIC SAFETY	TR1614	20	616	114,377	
CALIFORNIA OFFICE OF TRAFFIC SAFETY	DD1604	20	616	112,400	
CALIFORNIA OFFICE OF TRAFFIC SAFETY	OP1616	20	616	210,236	
BOOZ ALLEN HAMILTON INC.	1078934	20	762	183,816	
BOOZ ALLEN HAMILTON INC.	106990SB1M	20	762	68,048	
CALIFORNIA TRANSPORTATION COMMISSION	SRTSLNI-6342(004)	20	933	167,073	4,18
CALIFORNIA DEPARTMENT OF TRANSPORTATION	00008763	20	UNKNOWN	(8,534)	
CALIFORNIA DEPARTMENT OF TRANSPORTATION	65A0491	20	UNKNOWN	115,370	
CALIFORNIA DEPARTMENT OF TRANSPORTATION	65A0540	20	UNKNOWN	504,982	
CALIFORNIA DEPARTMENT OF TRANSPORTATION	74A0851-cyc1	20	UNKNOWN	389,754	
HONEYWELL, INC.	PO4203850099E	20	UNKNOWN	29,350	27,00
LEIDOS, INC.	006920	20	UNKNOWN	22,662	
UNIVERSITY OF ARIZONA	153516	20	UNKNOWN	70,107	
UNIVERSITY OF ILLINOIS	20150068103	20	UNKNOWN	8,857	
CALIFORNIA DEPARTMENT OF TRANSPORTATION	65A0548	20	UNKNOWN	243,390	
CALIFORNIA DEPARTMENT OF TRANSPORTATION	65A0556	20	UNKNOWN	161,510	
CALIFORNIA DEPARTMENT OF TRANSPORTATION	65A0594	20	UNKNOWN	10,227	
CALIFORNIA DEPT OF TRANSPORTATION DIVISION OF RESEARCH AND INNOVATION	65A0542	20	UNKNOWN	3,240,758	447,29
CALIFORNIA DEPT OF TRANSPORTATION DIVISION OF RESEARCH AND INNOVATION	65A0562	20	UNKNOWN	41,823	
CALIFORNIA DEPT OF TRANSPORTATION DIVISION OF RESEARCH AND INNOVATION	65A0563	20	UNKNOWN	560,680	
CAMBRIDGE SYSTEMATICS, INC.	140101	20	UNKNOWN	128,139	
WASHINGTON STATE DEPARTMENT OF TRANSPORTATION	GCB1359	20	UNKNOWN	72,041	

# Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

				FY 2	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	Federal CFDA Number		Total Federal Expenditures	Pass-Through to Subrecipients
Subtotal Pass-Through and Partial Pass-Through Awards				11,307,923	1,175,732
Total Department of Transportation				18,331,479	2,589,019
FEDERAL COMMUNICATIONS COMMISSION					
Direct Awards	Various	32	RD	258,890	
Total Federal Communications Commission				258,890	-
NATIONAL AERONAUTICS & SPACE ADMINISTRATION					
Direct Awards	Various	43	RD	133,754,334	28,653,447
Pass-Through and Partial Pass-Through					
AERO INSTITUTE	AI/NASA AERO 661 CARMAN 5/15 54%	43	001	(16)	
AERO INSTITUTE	AERO 673	43	001	128,284	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	STSI HSTGO11546301A ILLGWRTH 8/15	43	001	943	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	STSI HSTAR1263302A RAMRUIZ 9/15	43	001	2,758	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	STSI HSTGO1254902A GHKRTA 10/15	43	001	12,353	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	STSI HSTGO1255502A PROCHASKA 3/16	43	001	18,507	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A00-0012-003	43	001	45,246	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A00-0029-004	43	001	86,038	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A00-0037-003	43	001	11,179	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A00-0061-011	43	001	4	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A00-0065-003	43	001	23,835	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A00-0272-003	43	001	2,338	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A00-0274-003	43	001	1,280	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A00-0275-007	43	001	71,333	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A00-0277-003	43	001	2,072	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A00-0280-002	43	001	98,162	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A00-0282-002	43	001	79,595	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A00-1429-006	43	001	32,905	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A15-0078-001	43	001	3,781	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A15-0184-002	43	001	20,880	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A15-0191-001	43	001	3,044	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A15-0196-002	43	001	16,837	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A15-0234-002	43	001	40,978	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A15-0235-002	43	001	40,344	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A15-0250-002	43	001	72,823	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A15-0256-002	43	001	80,953	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A16-0226-001	43	001	2,885	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A16-0319-001	43	001	30,532	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A16-0353-001	43	001	1,025	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A16-0355-001	43	001	643	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST.AR.14280.004A	43	001	2,182	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-AR-13256	43	001	2,986	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-AR-13265.02-A	43	001	1,373	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-AR-13271.010-A	43	001	2,160	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-AR-13918.002-A	43	001	26,421	

# Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-12060.10-A-5	43 001	79,961	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-12266.001-A	43 001	6,561	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-12863.05-A	43 001	5,447	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-12889.013-A	43 001	2,168	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-12914.04-A-CYC2	43 001	6,600	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-12971.01-A	43 001	1,723	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13048.02-A	43 001	356	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13309.08-A	43 001	41,137	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13364.26-A	43 001	4,197	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13423.001-A	43 001	2,856	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13431.007-A	43 001	3,068	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13467.03-A	43 001	24,162	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13491.008-A	43 001	1,517	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13501.06-A	43 001	2,670	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13609.001-A	43 001	342	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13665.004-A	43 001	7,203	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13699.003-A	43 001	13,838	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13758.002-A	43 001	20,718	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13767.009-A	43 001	56,976	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13792.004-A	43 001	10,885	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13826.017-A	43 001	31,968	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13846.005-A	43 001	35,014	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13865.001-A	43 001	41,560	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13866.001-A	43 001	40,434	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14041.005-A	43 001	26,498	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14178.001-A	43 001	33,366	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-HF-51302.01-A-001	43 001	15,542	
BERMUDA INSTITUTE OF OCEAN SCIENCES	154444UCSB	43 001	9,560	
BOISE STATE UNIVERSITY	6194A	43 001	87,710	
BOSTON UNIVERSITY	4500001963	43 001	6,041	
CATHOLIC UNIVERSITY OF AMERICA, THE	361207 - Sub 1	43 001	100,791	
CENTER FOR THE ADVANCEMENT OF SCIENCE IN SPACE INC	GA-2014-154	43 001	102,004	
CONSORTIUM FOR OCEAN LEADERSHIP	SA 16-33	43 001	45,396	
CORNELL UNIVERSITY	67431-10069	43 001	25,655	
CORNELL UNIVERSITY	73739-10510	43 001	8,713	
CSU SAN MARCOS/UNIVERSITY AUXILIARY & RESEARCH SERVICES CORPORATION	SUB 85889(NNX13AN25G)	43 001	2,234	
DARTMOUTH COLLEGE	509	43 001	78,377	
DARTMOUTH COLLEGE	A00-1411-013	43 001	107,736	
EMORY UNIVERSITY	S662646	43 001	34,994	
GEORGETOWN UNIVERSITY	GEORGETOWN UNIVERSITY (78845)	43 001	118,966	
GEORGIA INSTITUTE OF TECHNOLOGY	RG176-G1-cyc1	43 001	69,721	
HARVARD UNIVERSITY	130763-5093536	43 001	91,963	
JET PROPULSION LABORATORY	1409806:017	43 001	95,010	
JET PROPULSION LABORATORY	1409809:025	43 001	265,745	
JET PROPULSION LABORATORY	1446040:006	43 001	97,347	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY 2	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
JET PROPULSION LABORATORY	1446882:011	43 001	1,159	
JET PROPULSION LABORATORY	1480144-cyc3	43 001	35,650	
JET PROPULSION LABORATORY	1487741	43 001	3,035	
JET PROPULSION LABORATORY	1492856	43 001	24,705	
JET PROPULSION LABORATORY	1507032-cyc3	43 001	35,169	
JET PROPULSION LABORATORY	1507883	43 001	49,790	
JET PROPULSION LABORATORY	1517461	43 001	20,000	
JET PROPULSION LABORATORY	1521683	43 001	119,649	
JET PROPULSION LABORATORY	1524322-cyc1	43 001	90,868	
JET PROPULSION LABORATORY	1526267	43 001	3,460	
JET PROPULSION LABORATORY	1528088	43 001	18,988	
JET PROPULSION LABORATORY	1536981	43 001	38,688	
JET PROPULSION LABORATORY	1547288-cyc1	43 001	49,975	
JOHNS HOPKINS UNIVERSITY	131186	43 001	1,138	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	5710003371:003	43 001	55,557	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	5710003374	43 001	103,873	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	MIT/NASA 5710003020 RUSSELL 06/15 5	43 001	(1,936)	
NATIONAL INSTITUTE OF AEROSPACE ASSOCIATES	X13-7143-UCLA	43 001	52,259	
NATIONAL SPACE BIOMEDICAL RESEARCH INSTITUTE	MA02801-CYC4	43 001	263,530	
OHIO STATE UNIVERSITY	60031541-CYC2	43 001	9,359	
OHIO STATE UNIVERSITY	60040479:1	43 001	36,828	
OREGON STATE UNIVERSITY	NS235A-A:4	43 001	87,606	
OREGON STATE UNIVERSITY	NS2527A-A	43 001	100,229	
PREDICTIVE SCIENCE INC.	20154780:001	43 001	115,311	
RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	RU/NASA SLR SYSTM EXPLOR FOGEL 9/16	43 001	828	
SOUTHWEST RESEARCH INSTITUTE	H99068CO	43 001	22,955	
SOUTHWEST RESEARCH INSTITUTE	H99074MO	43 001	61,072	
STONE AEROSPACE/PSC, INC.	SC-12-32-004	43 001	1,241	
TEXAS A&M UNIVERSITY - COLLEGE STATION	16-02	43 001	14,354	
THE WOODS HOLE RESEARCH CENTER INC	WHRC-ZG0827-01-cyc1	43 001	6,831	
U.SISRAEL BINATIONAL SCIENCE FOUNDATION	2012304	43 001	6,275	
UNIVERSITY CORPORATION FOR ATMOSPHERIC RESEARCH	Z14-96410	43 001	58,577	
UNIVERSITY OF CENTRAL FLORIDA	UNIV C FL 2408609301 KORYCAN 01/16	43 001	4,930	
UNIVERSITY OF COLORADO BOULDER	1553430 ( 2015-DN-BX-K016	43 001	93,309	
UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	1552631	43 001	26,651	
UNIVERSITY OF DELAWARE	34338	43 001	19,213	
UNIVERSITY OF DELAWARE	40042	43 001	10,936	
UNIVERSITY OF IOWA	1000933166:03	43 001	90,037	
UNIVERSITY OF IOWA	W000726876	43 001	31,325	
UNIVERSITY OF MARYLAND	16311-Z6905001	43 001	28,483	
UNIVERSITY OF MARYLAND	SUB Z680501 (NNX13AH67G)	43 001	41,853	
UNIVERSITY OF MARYLAND	Z681002:A	43 001	7,779	
UNIVERSITY OF MASSACHUSETTS SYSTEM	\$20140000019910	43 001	120,653	
UNIVERSITY OF MICHIGAN	3002467381:2	43 001	65,555	
UNIVERSITY OF MINNESOTA	A003457301	43 001	43,707	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY :	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
UNIVERSITY OF MONTANA	PG15-26841-01-cyc1	43 001	44,050	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5100754	43 001	36,494	
UNIVERSITY OF NORTH DAKOTA	10162-18240	43 001	99,923	
UNIVERSITY OF TEXAS-AUSTIN	UTA15-000804	43 001	9,354	
UNIVERSITY OF UTAH	10030589-UCSB	43 001	13,050	
UNIVERSITY OF WASHINGTON	764015	43 001	33,646	
UNIVERSITY OF WASHINGTON	764016	43 001	29,346	
UNIVERSITY OF WASHINGTON	764017	43 001	26,320	
UNIVERSITY OF WISCONSIN-MADISON	545K204:1	43 001	128,709	
VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY	426670-19B03	43 001	184,616	
WYLE LABORATORIES	T72213	43 001	3,226	
CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	NCLB11-CRLP-UCSD	43 001	(836)	
CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	NCLB11-CSP-UCSD	43 001	(769)	
UNIVERSITY OF DELAWARE	A15-0179-001	43 001	120,837	
UNIVERSITY OF WASHINGTON	A00-1487-002	43 001	52,389	
WILLIAM M. KECK FOUNDATION	12621A	43 001	7,041	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-12864.01-A-CYC1	43 002	(1,187)	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-12879.04-A	43 002	24,569	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13045-CYC3	43 002	11,888	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13334.05-A	43 002	14,661	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13399.01-A-CYC2	43 002	27,191	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14268.012-A-cyc1	43 002	8,228	
CALIFORNIA INSTITUTE OF TECHNOLOGY	44A-1085101	43 002	709,990	
CALIFORNIA INSTITUTE OF TECHNOLOGY	RSA-202831-cyc1	43 002	3,371	
CALIFORNIA STATE UNIVERSITY, SAN JOSE STATE UNIVERSITY FOUNDATION	2116144877UCDAVIS2015	43 002	58,387	
JET PROPULSION LABORATORY	1473072-CYC2	43 002	(2,698)	
JET PROPULSION LABORATORY	1523799	43 002	155,000	
JET PROPULSION LABORATORY	1523803	43 002	192,978	
JET PROPULSION LABORATORY	1528152-cyc1	43 002	43,856	
JET PROPULSION LABORATORY	1530800-cyc1	43 002	17,543	
JET PROPULSION LABORATORY	1541673-cyc1	43 002	10,815	
NATIONAL SPACE BIOMEDICAL RESEARCH INSTITUTE	4600578728-cyc1	43 002	40,906	
NATIONAL SPACE BIOMEDICAL RESEARCH INSTITUTE	HFP03401	43 002	101,743	
NATIONAL SPACE BIOMEDICAL RESEARCH INSTITUTE	MA02501-CYC6	43 002	16,247	
THE UNIVERSITY OF ALABAMA (TUSCALOOSA)	000419712-001-cyc5	43 002	144,997	
UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	UNIVOFC/NASA 1545648 FURLANETTO 4/1	43 002	(1,998)	
UNIVERSITY OF ILLINOIS	2015-01027-03	43 002	28,254	
UNIVERSITY OF MINNESOTA	A003104701	43 002	63,477	
JET PROPULSION LABORATORY	1541599-cyc1	43 003	6,939	
OREGON HEALTH & SCIENCE UNIVERSITY	008936_UCSF	43 003	30,246	
SOUTHWEST RESEARCH INSTITUTE	J99018CP	43 003	17,764	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-AR-13907.001-A	43 007	31,799	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13646.002-A	43 007	1,377	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13648.002-A	43 007	20,581	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13677.001-A	43 007	180,557	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

				FY 2	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	F	ederal	Total Federal	Pass-Through to
	or Other Identifier	CFDA	A Number	Expenditures	Subrecipients
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14041.002-A	43	007	88,722	
JET PROPULSION LABORATORY	1518100	43	007	23,468	
PRINCETON PLASMA PHYSICS LABORATORY	S014279-U	43	007	16,995	
AERO INSTITUTE	D-13-IFS-014	43	800	16,264	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-AR-14289.001-A-cyc1	43	800	184	
CALIFORNIA STATE UNIV. L.A. AUXILIARY SERVICES	UC1231210-cyc1	43	800	128,165	
UNIVERSITY OF WISCONSIN-MADISON	483K501	43	800	39,086	
UNIVERSITY OF WISCONSIN-MADISON	483K534	43	800	17,584	
JET PROPULSION LABORATORY	1507004	43	009	38,883	
LOMA LINDA UNIVERSITY (INCL NATL MEDICAL TECHNOLOGY TESTBED, INC.)	UCSF#A114693	43	010	(683)	
UNIVERSITIES SPACE RESEARCH ASSOCIATION	09960-03	43	010	17,696	
ANGSTROM DESIGNS ENGRG SERVS	NASA STTR UCSB 091714-UCSB02	43	UNKNOWN	168,407	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	005647	43	UNKNOWN	18,037	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	006516	43	UNKNOWN	7,903	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	006577	43	UNKNOWN	119,392	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	006578	43	UNKNOWN	16,308	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	006768	43	UNKNOWN	17	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	007208	43	UNKNOWN	14,237	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	007253	43	UNKNOWN	18,504	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	007272	43	UNKNOWN	17,978	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	007393	43	UNKNOWN	2,911	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	007521	43	UNKNOWN	32,858	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	008054	43	UNKNOWN	21,425	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	ASSOCIATION OF UNIVER-HST-GO-13661.	43	UNKNOWN	17,569	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-AR-12160.001-A	43	UNKNOWN	7,640	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-AR-12623.01-A	43	UNKNOWN	10	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-AR-12649.01-A(NONE)	43	UNKNOWN	5,087	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-AR-12822.03-A	43	UNKNOWN	20,316	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-AR-12823.001-A	43	UNKNOWN	17,458	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HSTAR1283302A	43	UNKNOWN	13,745	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-AR-12847.001-A	43	UNKNOWN	38,795	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HSTAR1323501A	43	UNKNOWN	45,463	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-AR-13242.01-A-CYC1	43	UNKNOWN	15,302	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-AR-13886.001-A-CYC1	43	UNKNOWN	30,024	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-AR-13888.003-A-cyc1	43	UNKNOWN	6,585	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-AR-13921.002-A-cyc1	43	UNKNOWN	5,373	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-AR-14284.002-A	43	UNKNOWN	51,460	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-12099.03-A	43	UNKNOWN	44,804	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-12245.02-A	43	UNKNOWN	82	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-12522.02-A	43	UNKNOWN	40,070	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-12530.01-A	43	UNKNOWN	3,779	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-12531.01-A	43	UNKNOWN	57,156	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-12533.01-A	43	UNKNOWN	9,062	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-12547.01-A-CYC1	43	UNKNOWN	18,213	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-12612.02-A	43	UNKNOWN	15,216	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

				FY 2	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Feder	ral T	otal Federal	Pass-Through to
	or Other Identifier	CFDA Nu	umber E	xpenditures	Subrecipients
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-12614.04-A	43 UN	NKNOWN	2,845	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-12815-02-A (NAS5-26555)	43 UN	NKNOWN	(2,061)	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-12880.03-A	43 UN	NKNOWN	25,953	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HSTGO12889.04A	43 UN	NKNOWN	793	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HSTGO1289801A	43 UN	NKNOWN	21,073	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13008.02-A	43 UN	NKNOWN	24,418	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13030.01-A	43 UN	NKNOWN	17,874	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13037.01-A	43 UN	NKNOWN	48,874	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13176-04-A(NAS 5-26555)	43 UN	NKNOWN	134	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HSTGO1317701A	43 UN	NKNOWN	50,863	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13286.04-A	43 UN	NKNOWN	9,688	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13287.001-A	43 UN	NKNOWN	30,731	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13335.04-A	43 UN	NKNOWN	40,875	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13343.09-A-CYC1	43 UN	NKNOWN	19,966	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13362.001-A	43 UN	NKNOWN	684	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13408.01-A	43 UN	NKNOWN	6,092	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO13659.001-A	43 UN	NKNOWN	40,829	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13662.001-A-cyc1	43 UN	NKNOWN	10,017	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13700.001-A	43 UN	NKNOWN	2,241	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13718.002-A-CYC1	43 UN	NKNOWN	15,163	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13725.001-A	43 UN	NKNOWN	11,788	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13726.001-A	43 UN	NKNOWN	11,788	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13776.001-A	43 UN	NKNOWN	66,870	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13777.001-A	43 UN	NKNOWN	17,774	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13797.001-A	43 UN	NKNOWN	36,382	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13937.003-A	43 UN	NKNOWN	72,719	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14104.002-A	43 UN	NKNOWN	19,243	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HSTGO-14252.002-A	43 UN	NKNOWN	26,775	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-HF2-51363.001-A	43 UN	NKNOWN	81,910	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-HF-51294.01-A	43 UN	NKNOWN	(38,332)	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-HF-51304.01-A	43 UN	NKNOWN	(13,561)	
BAY AREA RESEARCH CORPORATION	1-24-06-13	43 UN	NKNOWN	20,215	
CALIFORNIA INSTITUTE OF TECHNOLOGY	F/CIT 44A-1088684 COORAY J53.0 3/14	43 UN	NKNOWN	(1,954)	
CATHOLIC UNIVERSITY OF AMERICA, THE	362486	43 UN	NKNOWN	57,792	
DEPLOYABLE SPACE SYSTEMS	DSS0195	43 UN	NKNOWN	17,539	
EARTH AND SPACE RESEARCH	2013-183 UCSD	43 UN	NKNOWN	86,206	
JET PROPULSION LABORATORY	007453	43 UN	NKNOWN	2,682	
JET PROPULSION LABORATORY	008085	43 UN	NKNOWN	49,955	
JET PROPULSION LABORATORY	1356389	43 UN	NKNOWN	372,698	
JET PROPULSION LABORATORY	1356970	43 UN	NKNOWN	43,770	
JET PROPULSION LABORATORY	1388406	43 UN	NKNOWN	100,059	
JET PROPULSION LABORATORY	1420806-CYC1	43 UN	NKNOWN	1,280	
JET PROPULSION LABORATORY	1434779	43 UN	NKNOWN	19,227	
JET PROPULSION LABORATORY	1456907-CYC5	43 UN	NKNOWN	13	
JET PROPULSION LABORATORY	1466422	43 UN	NKNOWN	14,772	

# Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

				FY 2	
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number		ederal	Total Federal	Pass-Through to
	or Other Identifier	CFD	A Number	Expenditures	Subrecipients
JET PROPULSION LABORATORY	1468115	43	UNKNOWN	15,471	
JET PROPULSION LABORATORY	1473032	43	UNKNOWN	97,506	
JET PROPULSION LABORATORY	1475268-CYC1	43	UNKNOWN	28,998	
JET PROPULSION LABORATORY	1487040	43	UNKNOWN	15,712	
JET PROPULSION LABORATORY	1490690	43	UNKNOWN	26,526	
JET PROPULSION LABORATORY	1492976	43	UNKNOWN	248,296	
JET PROPULSION LABORATORY	1497438	43	UNKNOWN	10,973	
JET PROPULSION LABORATORY	1497439	43	UNKNOWN	11,730	
JET PROPULSION LABORATORY	1499810	43	UNKNOWN	102	
JET PROPULSION LABORATORY	1501380	43	UNKNOWN	11,339	
JET PROPULSION LABORATORY	1507557	43	UNKNOWN	(986)	
JET PROPULSION LABORATORY	1509483-cyc1	43	UNKNOWN	30,823	
JET PROPULSION LABORATORY	1515893	43	UNKNOWN	4,170	
JET PROPULSION LABORATORY	1518586-cyc1	43	UNKNOWN	17,954	
JET PROPULSION LABORATORY	1518945-cyc1	43	UNKNOWN	54,788	
JET PROPULSION LABORATORY	1521597	43	UNKNOWN	100,188	
JET PROPULSION LABORATORY	1528057Mod001	43	UNKNOWN	533	
JET PROPULSION LABORATORY	1531033	43	UNKNOWN	105,909	
JET PROPULSION LABORATORY	1531105	43	UNKNOWN	96,013	
JET PROPULSION LABORATORY	1532090	43	UNKNOWN	6,681	
JET PROPULSION LABORATORY	1538071	43	UNKNOWN	4,581	
JET PROPULSION LABORATORY	1539176	43	UNKNOWN	65,561	
JET PROPULSION LABORATORY	1547132	43	UNKNOWN	8,000	
JET PROPULSION LABORATORY	JPL; 1477322	43	UNKNOWN	81	
JET PROPULSION LABORATORY	JET PROPULSION LABORATORY-1530961	43	UNKNOWN	16,222	
JET PROPULSION LABORATORY	F/JPL 1447872 COORAY J53.5/54 FP 09	43	UNKNOWN	50,048	
JET PROPULSION LABORATORY	JPL-1505588-STAMPER-KURN-11/14	43	UNKNOWN	(1,782)	
JET PROPULSION LABORATORY	Sub 1450442 (NM07100956)	43	UNKNOWN	178,694	
JET PROPULSION LABORATORY	SUB 1468851 (NNN13D043T)	43	UNKNOWN	10	
JET PROPULSION LABORATORY	Sub 1472388	43	UNKNOWN	44,252	
JET PROPULSION LABORATORY	SUB 1498834	43	UNKNOWN	56,375	
JET PROPULSION LABORATORY	SUB 1502486	43	UNKNOWN	5,168	
JET PROPULSION LABORATORY	Sub 1542954 (NNN12AA01C)	43	UNKNOWN	1,357	
JOHNS HOPKINS UNIVERSITY	975268	43	UNKNOWN	7,292,429	2,362,59
LOCKHEED MARTIN CORPORATION	4100464902	43	UNKNOWN	32,031	
LOMA LINDA UNIVERSITY (INCL NATL MEDICAL TECHNOLOGY TESTBED, INC.)	LLU-48391-cyc10	43	UNKNOWN	115,107	
LOS GATOS RESEARCH, INC.	20161484	43	UNKNOWN	40,474	
MALIN SPACE SCIENCE SYSTEMS	12-0256	43	UNKNOWN	71,670	
NATIONAL SPACE BIOMEDICAL RESEARCH INSTITUTE	HFP03801	43	UNKNOWN	131,091	
NATIONAL SPACE BIOMEDICAL RESEARCH INSTITUTE	SUB NONE (CA00001)	43	UNKNOWN	38,331	
PHYSICAL SCIENCES INC.	67872-6606-46	43	UNKNOWN	102,129	
PREDICTIVE SCIENCE INC.	F/PREDICTIVE PSI-49953 MOK J26.0 11	43	UNKNOWN	(533)	
ROCHESTER INSTITUTE OF TECHNOLOGY	31264-01:5	43	UNKNOWN	2,710	
SALLY RIDE SCIENCE	NASA/SALLY RIDE SCIENCE/FLAMMER	43	UNKNOWN	(24,636)	
			2	(27,000)	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

				FY 2	
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number		ederal	Total Federal	Pass-Through to
	or Other Identifier		A Number	Expenditures	Subrecipients
STANFORD UNIVERSITY	A00-1350-015	43	UNKNOWN	291,548	
UNIVERSITY CORPORATION FOR ATMOSPHERIC RESEARCH	Z11-92258:M04	43	UNKNOWN	8,805	
UNIVERSITY OF CENTRAL FLORIDA	66016028	43	UNKNOWN	33,629	
UNIVERSITY OF CHICAGO	40692	43	UNKNOWN	14,969	
UNIVERSITY OF COLORADO BOULDER	1551728	43	UNKNOWN	2,656,043	127,437
UNIVERSITY OF COLORADO BOULDER	1000013136	43	UNKNOWN	373,208	112,904
UNIVERSITY OF COLORADO BOULDER	1000023229	43	UNKNOWN	767,000	
UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	NASA/U OF COL/MURPHY/PO 0000069112	43	UNKNOWN	(351)	
UNIVERSITY OF ILLINOIS	20120430801	43	UNKNOWN	140,898	
UNIVERSITY OF MINNESOTA	X5336545101	43	UNKNOWN	1,148,255	
UNIVERSITY OF NEW HAMPSHIRE	13-041:03	43	UNKNOWN	170,906	
UNIVERSITY OF NEW HAMPSHIRE	14-081	43	UNKNOWN	47,576	
WYLE LABORATORIES	Sub PO T72614 (NNX14AN75G)	43	UNKNOWN	14,095	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13677.024-A	43	UNKNOWN	29,011	
CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	NCLB11A-CRLP-SO	43	UNKNOWN	(383)	
Subtotal Pass-Through and Partial Pass-Through Awards				25,209,844	2,602,938
Total National Aeronautics & Space Administration				158,964,178	31,256,385
NATIONAL FOUNDATION ARTS & HUMANITIES					
Direct Awards	Various	45	RD	1,435,022	15,269
Pass-Through and Partial Pass-Through					
BROWN UNIVERSITY	BROWN-202928-cyc1	45	160	37,799	
DIGITAL PUBLIC LIBRARY OF AMERICA	DPLA 1411 FARLEY 09/15 12%	45	169	(820)	
STEPHEN F. AUSTIN STATE UNIVERSITY	12-066-13-002	45	307	1,292	
CALIFORNIA STATE LIBRARY	007623	45	310	229,658	
Subtotal Pass-Through and Partial Pass-Through Awards				267,929	-
Total National Foundation Arts & Humanities				1,702,951	15,269
NATIONAL SCIENCE FOUNDATION					
Direct Awards	Various	47	RD	467,430,837	23,197,487
Direct Awards (ARRA)	Various	47	RD	525,237	80,300
Subtotal Direct Awards				467,956,074	23,277,787
Pass-Through and Partial Pass-Through					
ARIZONA STATE UNIVERSITY/TEMPE	12-819:02	47	041	(2,672)	
ARIZONA STATE UNIVERSITY/TEMPE	15742	47	041	292,297	
BIOINSPIRA, INC.	20151766	47	041	112,165	
CALIFORNIA INSTITUTE OF TECHNOLOGY	7E-1089348:6	47	041	1,551	
CARDIAC MOTION, LLC	201403401	47	041	117,419	
CASE WESTERN RESERVE UNIVERSITY	SUB 2013-0191 (CMMI-1134953)	47	041	19,624	
CITY UNIVERSITY OF NEW YORK	40E48-A	47	041	59,818	
CLEMSON UNIVERSITY RESEARCH FOUNDATION	SUB 1649-206-2009147 (CMMI-12	47	041	47,360	
COLORADO STATE UNIVERSITY	007837	47	041	47,575	
COLORADO STATE UNIVERSITY	G-00973-2	47	041	45,155	
COMMET, LLC	103733-CYC1		041	66,109	
		47			

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY :	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through t
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
CORNELL UNIVERSITY	70369-10329	47 041	111,212	
DNATREK, LLC	201503577	47 041	18,022	
GEORGIA INSTITUTE OF TECHNOLOGY	R3392-G1	47 041	43,240	
GEORGIA INSTITUTE OF TECHNOLOGY	RG382-G1	47 041	70,272	
INSTON, INC	INSTON 20133964 WANG 12/13 54%	47 041	281	
IOWA STATE UNIVERSITY	420-72-25-CYC9	47 041	308,236	
JOHNS HOPKINS UNIVERSITY	SUB 2001929066 (ERFI-1332344)	47 041	177,637	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	MIT-5710003155-PETERSON-12/14	47 041	2,172	
NORTHWESTERN UNIVERSITY	SPO032077-PROJ0008536	47 041	52,715	
OHIO STATE UNIVERSITY	OHIO STATE UNIVERSITY-735818	47 041	3,664	
OHIO STATE UNIVERSITY	OHIO STATE UNIVERSITY-735818	47 041	33,725	
OHIO STATE UNIVERSITY	OHIO STATE UNIVERSITY-735818	47 041	16,942	
PHASE DIAGNOSTICS LLC	20155110	47 041	29,171	
PRINCETON PLASMA PHYSICS LABORATORY	S013865-U	47 041	47,853	
PURDUE UNIVERSITY	4101-51805	47 041	212,189	
PURDUE UNIVERSITY	NEES 4101-45661	47 041	19,129	
PURDUE UNIVERSITY	NEES-4101-34566 (CMMI-0927178)	47 041	1,729	
SERSENSE, INC.	201403590	47 041	50,385	
STANFORD UNIVERSITY	28139880-50542-C	47 041	875,653	
STANFORD UNIVERSITY	60359058-108886-C	47 041	50,038	
SYNVITROBIO, INC	20155140	47 041	3,875	
TRACE-ABILITY, INC	IIP-1446677	47 041	11,567	
UNIVERSITY OF ARIZONA	SUB Y502629 (EEC-0812072)	47 041	525,365	
UNIVERSITY OF ARIZONA	Y501118:8	47 041	21,204	
UNIVERSITY OF CENTRAL FLORIDA	UCF-105305-CYC1	47 041	49,652	
UNIVERSITY OF ILLINOIS	2011-01632-02	47 041	8,575	
UNIVERSITY OF ILLINOIS	2012-03500-02	47 041	180,638	
UNIVERSITY OF ILLINOIS	2014-04512-01	47 041	81,440	
UNIVERSITY OF KANSAS/KU CENTER FOR RESEARCH, INC.	FY2011-031-M3	47 041	58,067	
UNIVERSITY OF MICHIGAN	3002735491	47 041	17,600	
UNIVERSITY OF SOUTH CAROLINA	162918	47 041	4,517	
UNIVERSITY OF SOUTHERN CALIFORNIA	58669052	47 041	183,517	
UNIVERSITY OF TEXAS-AUSTIN	Sub UTA15-000855 (1520817)	47 041	25,512	
UNIVERSITY OF TEXAS-AUSTIN	UTA12-000944	47 041	403,541	
UNIVERSITY OF TEXAS-AUSTIN	UTA15-000860	47 041	19,512	
UNIVERSITY OF WASHINGTON	739923	47 041	72,601	
UNIVERSITY OF WASHINGTON	UWSC7074	47 041	5,000	
VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY	VIRGINIA POLYTECH INST 478758-19326	47 041	6,021	
VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY	479198-19905-cyc1	47 041	18,389	
UNIVERSITY OF MARYLAND, BALTIMORE COUNTY	SC-0000015277	47 041	53,127	
TEMPLE UNIVERSITY	330162-18110	47 047	57,243	
UNIVERSITY OF WASHINGTON	744909	47 047	156,727	
ASSOCIATED UNIVERSITIES, INC	20154787	47 049	34,907	
ASSOCIATED UNIVERSITIES, INC	20155187	47 049	28,683	
ASSOCIATED UNIVERSITIES, INC	ASSOCIATED UNIVERSITIES, INC-AST-08	47 049	6,796	
		77 070	5,790	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY :	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
ASSOCIATED UNIVERSITIES, INC	350584	47 049	499	
ASSOCIATED UNIVERSITIES, INC	SOSPA3-013-cyc1	47 049	9,026	
ASSOCIATED UNIVERSITIES, INC	SUB NRAO (AST-0836064)	47 049	5,005	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	1202910	47 049	421,264	
CALIFORNIA ASSOCIATION FOR RESEARCH IN ASTRONOMY	11678:2	47 049	7,292	
CALIFORNIA ASSOCIATION FOR RESEARCH IN ASTRONOMY	11934	47 049	219,578	
CALIFORNIA ASSOCIATION FOR RESEARCH IN ASTRONOMY	13401	47 049	4,734	
CALIFORNIA ASSOCIATION FOR RESEARCH IN ASTRONOMY	KECK OBS 11334 EPPS 9/16	47 049	5,827	
CALIFORNIA INSTITUTE OF TECHNOLOGY	44Q-1092164	47 049	33,877	
CALIFORNIA INSTITUTE OF TECHNOLOGY	68D1094593	47 049	234,952	
CALIFORNIA STATE UNIVERSITY, SAN FRANCISCO STATE UNIVERSITY	\$13-0007	47 049	(39)	
CALIFORNIA STATE UNIVERSITY, SAN FRANCISCO STATE UNIVERSITY	S15-0001	47 049	17,677	
COLD SPRING HARBOR LABORATORY	52380212	47 049	67,592	
COLUMBIA UNIVERSITY	3 (GG006897):3	47 049	109,689	
COLUMBIA UNIVERSITY	CU-53010-cyc10	47 049	87,176	
DREXEL UNIVERSITY	235743-3668	47 049	27,474	
DUKE UNIVERSITY	14-NSF-1017	47 049	20,061	
EMORY UNIVERSITY	T259403-CYC1	47 049	27,403	
EMORY UNIVERSITY	T259404	47 049	169,135	
EMORY UNIVERSITY	T260138	47 049	97,820	
EMORY UNIVERSITY	T439063-cyc1	47 049	117,888	
GEORGIA INSTITUTE OF TECHNOLOGY	RB011-G6	47 049	14,961	
GEORGIA INSTITUTE OF TECHNOLOGY	RG173-G1	47 049	34,554	
JACKSON STATE UNIVERSITY	633156-UCSB	47 049	155,445	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	20154978	47 049	38,296	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	5710003858	47 049	51,778	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	5710003959	47 049	342	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	5710003976	47 049	32,286	
OHIO STATE UNIVERSITY	60046604	47 049	67,142	
OHIO STATE UNIVERSITY	60046614	47 049	78,543	
OREGON STATE UNIVERSITY	S1412A-B	47 049	161,997	
OREGON STATE UNIVERSITY	S1412A-C	47 049	133,380	
PENNSYLVANIA STATE UNIVERSITY	5148-UCB-NSF-0620	47 049	60,570	
PENNSYLVANIA STATE UNIVERSITY	5182-UC-NSF-0620-cyc1	47 049	11,586	
PRINCETON UNIVERSITY	1120138	47 049	1,352,030	
RICE UNIVERSITY	Sub R3E031 (DMS-1309542)	47 049	128,647	
SRI INTERNATIONAL	139-000030	47 049	53,312	
STANFORD UNIVERSITY	60209216-106401-A	47 049	13,684	
UNIVERSITY OF GEORGIA	RR185-427/4787526	47 049	255,948	
UNIVERSITY OF MARYLAND	10694-Z4165001	47 049	131,548	
UNIVERSITY OF MICHIGAN	3002144648-CYC2	47 049	4,456	
UNIVERSITY OF MICHIGAN	3002193571	47 049	(34)	
UNIVERSITY OF MICHIGAN	3003700329	47 049	30,667	
UNIVERSITY OF MICHIGAN	3003700330-cyc1	47 049	61,318	
UNIVERSITY OF MINNESOTA	UNIVERSITY OF MINNESOTA-A004088503	47 049	10,158	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

		·	FY :	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
UNIVERSITY OF MISSOURI	C00047906-1	47 049	39,264	
UNIVERSITY OF TEXAS-EL PASO	2014057876	47 049	86,528	
UNIVERSITY OF UTAH	10030555	47 049	26,284	
UNIVERSITY OF WASHINGTON	744898	47 049	15,971	
UNIVERSITY OF WASHINGTON	745929	47 049	104,706	
UNIVERSITY OF WASHINGTON	755097:1	47 049	208,502	
UNIVERSITY OF WISCONSIN-MADISON	658K210-cyc1	47 049	147,099	
UNIVERSITY OF WISCONSIN-MADISON	sUB 408K133 (PHY-1148698)	47 049	523,712	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	A15-0091-001	47 049	56,865	
CALIFORNIA ASSOCIATION FOR RESEARCH IN ASTRONOMY	KECK OBSERVATORY 11672 ROCK 6/15	47 049	1,912	
INDIANA UNIVERSITY	BL-4830927-UCSC	47 049	11,093	
ARIZONA GEOLOGICAL SURVEY, THE	NSF/AGS (EAR-0753154) BARU	47 050	(49)	
ARIZONA STATE UNIVERSITY/TEMPE	006585	47 050	244,278	
BOSTON UNIVERSITY	4500001274	47 050	7,962	
CALIFORNIA INSTITUTE OF TECHNOLOGY	681096456	47 050	1,155	
CALIFORNIA STATE UNIVERSITY, SAN FRANCISCO STATE UNIVERSITY	ANT-1142122	47 050	96,827	
CALIFORNIA STATE UNIVERSITY, SAN JOSE STATE UNIVERSITY FOUNDATION	SJSU FDN SC1485 SANTORA 3/16	47 050	536	
COLORADO STATE UNIVERSITY	G-3624-5	47 050	19	
COLORADO STATE UNIVERSITY	SUB 20101139 (ATM0425247)	47 050	20,891	
COLUMBIA UNIVERSITY	1 (GG008523)	47 050	836	
COLUMBIA UNIVERSITY	15(GG009393)	47 050	7,605	
COLUMBIA UNIVERSITY	2(GG009393-01)	47 050	260,361	
COLUMBIA UNIVERSITY	3 (GG008992)	47 050	112,712	
COLUMBIA UNIVERSITY	3(GG008855)	47 050	81,379	
CONSORTIUM FOR OCEAN LEADERSHIP	CSRTM OCN LSHP T343A7 BRDSKY 1/15	47 050	(1)	
CONSORTIUM FOR OCEAN LEADERSHIP	NSF/COL O&M SA 9-08 ORCUTT	47 050	(9,171)	
CONSORTIUM FOR OCEAN LEADERSHIP	FP NSF/COL T330A22 GEE 26%	47 050	1	
CONSORTIUM FOR OCEAN LEADERSHIP	A00-0816-006	47 050	16,027	
CONSORTIUM FOR OCEAN LEADERSHIP	BA-102:02	47 050	5,919	
CONSORTIUM FOR OCEAN LEADERSHIP	PO#T350A110:01	47 050	11,982	
CONSORTIUM FOR OCEAN LEADERSHIP	SA 9-08	47 050	(88,053)	(1,182)
CONSORTIUM FOR OCEAN LEADERSHIP	T342A22	47 050	12	
CONSORTIUM FOR OCEAN LEADERSHIP	T342B22	47 050	26	
CONSORTIUM FOR OCEAN LEADERSHIP	T350A38	47 050	52,310	
DAUPHIN ISLAND SEA LAB	2507JK-UCSB-01	47 050	2,213	
DUKE UNIVERSITY	A15-0024-001	47 050	12,434	
FRANKLIN & MARSHALL COLLEGE	13-001	47 050	14,942	
INCORPORATED RESEARCH INSTITUTIONS FOR SEISMOLOGY	08-UCSD-SAGE	47 050	3,526,462	
INCORPORATED RESEARCH INSTITUTIONS FOR SEISMOLOGY	09-UCSD (MD)-SAGE	47 050	608,795	
INCORPORATED RESEARCH INSTITUTIONS FOR SEISMOLOGY	IRIS 56-OMO	47 050	1,916,794	
INCORPORATED RESEARCH INSTITUTIONS FOR SEISMOLOGY	Sub 92-UCSD-ECBB (ICER-1343709	47 050	53,467	
INTEGRATED OCEAN DRILLING PROGRAM	NSF/IODP/MILLER	47 050	(199)	
J&F ENTERPRISE	001-CYC1	47 050	4,529	
JOHNS HOPKINS UNIVERSITY	110284:3	47 050	6,562	
JOHNS HOPKINS UNIVERSITY	2001377399	47 050	106,211	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY :	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	5710003955	47 050	34,472	
OLD DOMINION UNIVERSITY RESEARCH FOUNDATION	15-186-100257-10	47 050	64,743	
PENNSYLVANIA STATE UNIVERSITY	4755-UCB-NSF-0507	47 050	174,579	
PENNSYLVANIA STATE UNIVERSITY	5038-UC-NSF-0507	47 050	33,032	
PRINCETON UNIVERSITY	SUB0000001:1	47 050	10,592	
PRINCETON UNIVERSITY	SUB0000008	47 050	495,111	
STROUD WATER RESEARCH CENTER	Sub 340036-55900 (EAR-1332257)	47 050	134,626	
THE UNIVERSITY OF ALABAMA IN HUNTSVILLE	SUB 2014-107 (AGS-1358386)	47 050	29,697	
TUFTS UNIVERSITY	101180-00001	47 050	43,740	
UNAVCO, INC.	UNAVCO S13-EAR1261833-S3	47 050	243,902	
UNIVERSITY AT BUFFALO (A STATE UNIVERSITY OF NEW YORK CAMPUS)	R983146	47 050	12,900	
UNIVERSITY CORPORATION FOR ATMOSPHERIC RESEARCH	Sub Z14-16839 (AGS-0753581)	47 050	64,270	
UNIVERSITY CORPORATION FOR ATMOSPHERIC RESEARCH	Sub Z15-12798 (AGS-1344155)	47 050	19,791	
UNIVERSITY CORPORATION FOR ATMOSPHERIC RESEARCH	Z15-13065	47 050	26,627	
UNIVERSITY CORPORATION FOR ATMOSPHERIC RESEARCH	Z15-16975-cyc1	47 050	34,524	
UNIVERSITY CORPORATION FOR ATMOSPHERIC RESEARCH	Z15-19193-cyc1	47 050	1,361	
UNIVERSITY CORPORATION FOR ATMOSPHERIC RESEARCH	Z16-21927-cyc1	47 050	1,268	
UNIVERSITY CORPORATION FOR ATMOSPHERIC RESEARCH	Z16-22493-cyc1	47 050	24,956	
UNIVERSITY OF CHICAGO	FP052668	47 050	111,837	
UNIVERSITY OF CHICAGO	FP052668-D	47 050	538,734	
UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	1553802	47 050	14,037	
UNIVERSITY OF HAWAII AT HILO	MA130031	47 050	30,532	
UNIVERSITY OF HAWAII AT MANOA	MA140007	47 050	5,123	
UNIVERSITY OF HAWAII AT MANOA	MA150018	47 050	24,644	
UNIVERSITY OF ILLINOIS	2009-01053-02	47 050	2,703	
UNIVERSITY OF ILLINOIS	2013-00423-01-cyc1	47 050	40,875	
UNIVERSITY OF ILLINOIS	2014-04289-03-00	47 050	92,050	
UNIVERSITY OF ILLINOIS	A00-1520-005	47 050	120,151	
UNIVERSITY OF MIAMI	P148130	47 050	15,831	
UNIVERSITY OF MIAMI	S15-15-cyc1	47 050	11,961	
UNIVERSITY OF MIAMI	S15-49	47 050	141,608	
UNIVERSITY OF MIAMI	S15-50	47 050	291,171	
UNIVERSITY OF MINNESOTA	A003176707	47 050	34,321	
UNIVERSITY OF NEW HAMPSHIRE	14-063	47 050	81,553	
UNIVERSITY OF NEW HAMPSHIRE	16-001	47 050	11,509	
UNIVERSITY OF OREGON	208991D	47 050	40,524	
UNIVERSITY OF ROCHESTER	416111-G	47 050	30,076	
UNIVERSITY OF SOUTH FLORIDA	2500156500A	47 050	80,150	
UNIVERSITY OF SOUTHERN CALIFORNIA	149703-002	47 050	226,096	
UNIVERSITY OF SOUTHERN CALIFORNIA	UNIV OF S. CA; 32774854-NSF FFT	47 050	10,005	
UNIVERSITY OF SOUTHERN CALIFORNIA	33312147:4 (63767447)	47 050	645	
UNIVERSITY OF SOUTHERN CALIFORNIA	33312147:4(63767447)	47 050	13,609	
UNIVERSITY OF SOUTHERN CALIFORNIA	39073248	47 050	1,006	
UNIVERSITY OF SOUTHERN CALIFORNIA	40244683-CYC3	47 050	2,654	
UNIVERSITY OF SOUTHERN CALIFORNIA	USC/NSF 3312147 KAGAN 1/17 54%	47 050	1,088	

# Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

						FY 2	2016
Federal Direct / Pass-Through and Partial Pass-Through		Agency / Pass-Through Number		Federal		Total Federal	Pass-Through to
			or Other Identifier	CFI	DA Number	Expenditures	Subrecipients
UNIVERSITY OF SOUTHERN CALIFORNIA			USC/NSF 33312147 RHODES 1/17 54%	47	050	(498)	
UNIVERSITY OF SOUTHERN CALIFORNIA			USC/NSF 33312147 DAVIS 1/17 26%	47	050	845	
UNIVERSITY OF SOUTHERN CALIFORNIA			61258056-cyc1	47	050	19,996	
UNIVERSITY OF SOUTHERN CALIFORNIA			62149902	47	050	25,010	
UNIVERSITY OF SOUTHERN CALIFORNIA			62581703	47	050	19,064	
UNIVERSITY OF SOUTHERN CALIFORNIA			USC/NSF 333312147 JACKSON 1/17 54%	47	050	2,965	
UNIVERSITY OF SOUTHERN CALIFORNIA			USC/NSF 33312147 JACKSON 1/17 54%	47	050	3,759	
UNIVERSITY OF SOUTHERN CALIFORNIA			USC/NSF 33312147 JACKSON 1/17 54%	47	050	3,794	
UNIVERSITY OF SOUTHERN CALIFORNIA			USC/NSF 33312147 AKCIZ 1/17 26%	47	050	10,135	
UNIVERSITY OF SOUTHERN CALIFORNIA			USC/NSF 33312147 AKCIZ 1/17 26%	47	050	13,358	
UNIVERSITY OF SOUTHERN CALIFORNIA			USC/NSF 33312147 JACKSON 01/17 54%	47	050	516	
UNIVERSITY OF SOUTHERN CALIFORNIA			A00-0823-007	47	050	88,328	
UNIVERSITY OF SOUTHERN CALIFORNIA			A00-0936-007	47	050	2,008	
UNIVERSITY OF SOUTHERN CALIFORNIA			EAR-1033462	47	050	3,706	
UNIVERSITY OF SOUTHERN CALIFORNIA			SUB 53899157 (EAR-1349180)	47	050	49,676	
UNIVERSITY OF SOUTHERN CALIFORNIA			Y81716	47	050	23,468	
UNIVERSITY OF SOUTHERN CALIFORNIA			Y86195	47	050	25,000	
UNIVERSITY OF SOUTHERN CALIFORNIA			Y86552-A	47	050	46,052	
UNIVERSITY OF SOUTHERN CALIFORNIA			Y86552-R	47	050	29,760	
UNIVERSITY OF SOUTHERN CALIFORNIA			Y86552-S	47	050	8,587	
UNIVERSITY OF SOUTHERN CALIFORNIA			Y86564	47	050	146,675	
UNIVERSITY OF SOUTHERN CALIFORNIA			Y88412	47	050	46,374	
UNIVERSITY OF TEXAS-AUSTIN			UTA11-001081	47	050	83,741	
UNIVERSITY OF WASHINGTON			682873	47	050	18,540	
UNIVERSITY OF WASHINGTON			735344	47	050	54,383	
UNIVERSITY OF WASHINGTON			762538	47	050	23,677	
UNIVERSITY OF WASHINGTON			UWSC7990	47	050	70,555	
WOODS HOLE OCEANOGRAPHIC INSTITUTION			NSF/WHOI MREFC SEND	47	050	(85,902)	
WOODS HOLE OCEANOGRAPHIC INSTITUTION			A100657	47	050	182,301	
WOODS HOLE OCEANOGRAPHIC INSTITUTION	(ARRA)		NSF/WHOI ARRA 20100891 SEND	47	050	(47,875)	
COLUMBIA UNIVERSITY			A16-0326-001	47	050	40,101	
CONSORTIUM FOR OCEAN LEADERSHIP			CSRTM OCN LSHP SAF1401 RVLO 9/15	47	050	6,226	
CONSORTIUM FOR OCEAN LEADERSHIP			CSRTM OCN LSHP T347A7 PYTAN 1/16	47	050	1,623	
CONSORTIUM FOR OCEAN LEADERSHIP			CSRTM OCN LSHP T350A7 GILL 1/16	47	050	788	
UNIVERSITY OF HAWAII AT MANOA			UNIV HAW MA140005 MCARTH 12/16	47	050	13,415	
UNIVERSITY OF NEW MEXICO			A16-0471-001	47	050	212,664	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL			A15-0146-001	47	050	15.381	
UNIVERSITY OF SOUTHERN CALIFORNIA			A00-0936-008	47	050	30,613	
BINGHAMTON UNIVERSITY			007239	47	070	77,528	
COMPUTING RESEARCH ASSOCIATION			UCLA_ALLIANCE001	47	070	39,667	
CORNELL UNIVERSITY			76221-10547	47	070	33,660	
GEORGIA INSTITUTE OF TECHNOLOGY			RD199-G11-cyc1	47	070	6,892	
HDF GROUP			05-15	47	070	62,413	
INDIANA UNIVERSITY			UA4812506UCD	47	070	163,657	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY			5710003559:1	47	070	125.059	
				41	0.0	120,000	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
NORTHWESTERN UNIVERSITY	SPO029341 Proj0007719 (ACI-145	47 070	82,422	
OHIO STATE UNIVERSITY	GRT00038045	47 070	27,686	
PENNSYLVANIA STATE UNIVERSITY	5038-UCSB-NSF-3052	47 070	61,767	
PURDUE UNIVERSITY	4101-38048	47 070	703,716	
PURDUE UNIVERSITY	4101-68868	47 070	18,632	
PURDUE UNIVERSITY	Sub 4101-38049 (CCF-0939370)	47 070	59,344	
RAYTHEON COMPANY	9500012166	47 070	58,950	
RENAISSANCE COMPUTING INSTITUTE	Sub 5037380 (ACI-1440715)	47 070	14,204	
RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	5653	47 070	236,358	
UNIVERSITY OF ILLINOIS	2011-01365-01	47 070	(5,550)	
UNIVERSITY OF ILLINOIS	Sub 2007-01077-55 (CSA OCI-072	47 070	36,995	
UNIVERSITY OF ILLINOIS	Sub 2014-00475-01(AA455) (IIS-	47 070	4,709	
UNIVERSITY OF ILLINOIS AT CHICAGO	Sub 20151074 (CNS-1456638)	47 070	193,295	
UNIVERSITY OF MASSACHUSETTS AMHERST	13-007361 A 00-CYC1	47 070	140,647	
UNIVERSITY OF MICHIGAN	SUB 3002984028 (CNS-1419243)	47 070	36,378	
UNIVERSITY OF NEW MEXICO	007941	47 070	8,260	
UNIVERSITY OF NEW MEXICO	063045-873R	47 070	593,112	
UNIVERSITY OF SOUTHERN CALIFORNIA	20154552	47 070	56,105	
UNIVERSITY OF TEXAS-DALLAS	100265	47 070	3,955	
UNIVERSITY OF WASHINGTON	20144885	47 070	112,073	
UNIVERSITY OF WISCONSIN-MADISON	552K650	47 070	90,911	
VANDERBILT UNIVERSITY	3833-019899	47 070	5,254	
UNIVERSITY OF ARIZONA	Y503161	47 071	260,886	
AMERICAN SOCIETY FOR CELL BIOLOGY	201400396	47 074	25,708	
BARNARD COLLEGE	UCD1455957	47 074	80,543	
BIGELOW LABORATORY FOR OCEAN SCIENCES	BLOS2015001	47 074	127,428	
BROWN UNIVERSITY	00000776	47 074	11,241	
CARY INSTITUTE OF ECOSYSTEM STUDIES	3161/200201406	47 074	9,076	
CARY INSTITUTE OF ECOSYSTEM STUDIES	3298/200201818	47 074	5,846	
CHAPMAN UNIVERSITY	500223-0001-cyc1	47 074	48,222	
CHAPMAN UNIVERSITY	CHAPMAN UNIVERSITY-2015-001	47 074	1,242	
COLORADO STATE UNIVERSITY	G25762	47 074	9,449	
COLORADO STATE UNIVERSITY	G-4023-2	47 074	183,712	
CORNELL UNIVERSITY	61468 9517	47 074	9,701	
CORNELL UNIVERSITY	6718310110	47 074	357,885	
CORNELL UNIVERSITY	69714-10149 HOLTON	47 074	28,023	
DANFORTH FOUNDATION	Sub 22707-UCSD ( MCB-1330562)	47 074	29,075	
DUKE UNIVERSITY	10-NSF-1065	47 074	(316)	
DUKE UNIVERSITY	333-2160	47 074	63,126	
FLORIDA STATE UNIVERSITY	FSU R01821 REZNICK 5/19	47 074	30,069	
HARVARD UNIVERSITY	1338725086581	47 074	180,380	
IOWA STATE UNIVERSITY	420-40-45D	47 074	277,897	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	Massachusettes Inst. of Tech #57100	47 074	162,165	
MICHIGAN TECHNOLOGICAL UNIVERSITY	006931	47 074	304,375	
MONTANA STATE UNIVERSITY	Sub G103-14-W4431 (DBI-1254309	47 074	126,260	
			-,	

# Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY	
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
NEVADA SYSTEM OF HIGHER EDUCATION	UNR-16-23	47 074	33,827	
OKLAHOMA STATE UNIVERSITY	AA-5-54654	47 074	234,617	
PENNSYLVANIA STATE UNIVERSITY	005648	47 074	(352)	
PENNSYLVANIA STATE UNIVERSITY	5280-UC-DHHS-6044	47 074	64,813	
RANCHO SANTA ANA BOTANIC GARDEN	005351	47 074	17,871	
RANCHO SANTA ANA BOTANIC GARDEN	RSA-11-0956417D-703	47 074	1,719	
RICE UNIVERSITY	20131304	47 074	29,076	
RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	20132841	47 074	1,742,442	
SALK INSTITUTE FOR BIOLOGICAL STUDIES	SUB 20134325 (MCB-1344299)	47 074	89,494	
STANFORD UNIVERSITY	61091724-118374	47 074	765	
THE SCRIPPS RESEARCH INSTITUTE	SUB 5-75499 (MCB-1121959)	47 074	(530)	
UNIVERSITY AT BUFFALO (A STATE UNIVERSITY OF NEW YORK CAMPUS)	R877841	47 074	232,213	
UNIVERSITY OF ALASKA	UAF 15-0072	47 074	38,065	
UNIVERSITY OF ARIZONA	152976	47 074	154,004	
UNIVERSITY OF FLORIDA	UFDSP00011009	47 074	4,633	
UNIVERSITY OF GEORGIA	007057	47 074	73,345	
UNIVERSITY OF GEORGIA	UNIVERSITY OF GEORGIA-RR167-627/S00	47 074	15,750	
UNIVERSITY OF GEORGIA	RR1675404694828	47 074	48,697	
UNIVERSITY OF HAWAII AT MANOA	Z792090-019	47 074	86,599	
UNIVERSITY OF ILLINOIS	Sub 2013-00608-01-00 (IOS-1257	47 074	32,494	
UNIVERSITY OF MARYLAND	SUB Z355901 (IOS 1025837)	47 074	2,597	
UNIVERSITY OF MARYLAND	Z3708011	47 074	74,296	
UNIVERSITY OF MICHIGAN	UMA-3003046693-GRIG-02/17	47 074	61,534	
UNIVERSITY OF MINNESOTA	D002520602	47 074	64,817	
UNIVERSITY OF NEW MEXICO	04803T-8700	47 074	26,621	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	SUB 5-37293 (IOS-1343020)	47 074	219,797	
UNIVERSITY OF NOTRE DAME (INCL GEM)	202236	47 074	47,659	
UNIVERSITY OF PUERTO RICO	2014-0	47 074	52,261	
UNIVERSITY OF PUERTO RICO	2016-002	47 074	193	
UNIVERSITY OF SOUTHERN CALIFORNIA	64141351	47 074	166,883	
UNIVERSITY OF TENNESSEE	A150127S001	47 074	662	
UNIVERSITY OF TEXAS-AUSTIN	UTA13-000215	47 074	96,611	
UNIVERSITY OF THE STATE OF NEW YORK, THE	FFT NSF/USNY FOUNTAIN	47 074	(777)	
UNIVERSITY OF WASHINGTON	726916:3	47 074	15,508	
UNIVERSITY OF WYOMING	1002790A	47 074	6,492	
UNIVERSITY OF WYOMING	NSF40391	47 074	41,508	
VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY	47898919326	47 074	63,354	2,8
WASHINGTON STATE UNIVERSITY	B 121253 G003275 (IOS 1344288)	47 074	5,476	
JOHNS HOPKINS UNIVERSITY	A00-0877-003	47 074	99,288	
NORTHERN ARIZONA UNIVERSITY	A00-1073-002	47 074	98,649	
AMERICAN SOCIOLOGICAL ASSOCIATION	ASA-203490-cyc1	47 075	7,000	
ARIZONA STATE UNIVERSITY/TEMPE	16-823	47 075	1,292	
ASSOCIATION FOR INSTITUTIONAL RESEARCH	DG15-8891	47 075	11,400	
BOSTON UNIVERSITY	007901	47 075	3,538	
GALLAUDET UNIVERSITY	SUB 0000022680 ( SBE-1041725)		2,200	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY :	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
GEORGETOWN UNIVERSITY	GR409958	47 075	20,192	
HARVARD UNIVERSITY	133873-5090398	47 075	18,348	
HARVARD UNIVERSITY	Sub 136373-5089005 (SES-150008	47 075	31,570	
HAUPTMAN-WOODWARD MEDICAL RESEARCH INSTITUTE, INC.	1306-3	47 075	4,342	
NATIONAL BUREAU OF ECONOMIC RESEARCH, INC	NAT'L BUREAU OF EC. RES. INC; NSF F	47 075	73,248	
NATIONAL BUREAU OF ECONOMIC RESEARCH, INC	38-3620-00-0-79-733-7700	47 075	22,558	
SYRACUSE UNIVERSITY	27510-03710-S01-cyc2	47 075	52,508	
TEMPLE UNIVERSITY	330162-UCLA:2	47 075	40,795	
UNIVERSITY OF MICHIGAN	3003321372	47 075	16,596	
UNIVERSITY OF WISCONSIN-MADISON	498K982	47 075	103,109	
UNIVERSITY OF WISCONSIN-MADISON	BCS-1147593	47 075	14,779	
WASHINGTON UNIVERSITY IN ST. LOUIS	WU-16-62	47 075	23,770	
AMERICAN MUSEUM OF NATURAL HISTORY	3-2014	47 076	228,773	
BATES COLLEGE	005615	47 076	26,453	
COLORADO STATE UNIVERSITY	G-3062-7	47 076	22,704	
CONCORD CONSORTIUM, THE	282-02.01	47 076	4,099	
EDUCATION DEVELOPMENT CENTER, INC.	038333	47 076	173,727	
GEORGIA INSTITUTE OF TECHNOLOGY	RD210-G1	47 076	4,612	
HARVARD UNIVERSITY	123930-5097974-cyc1	47 076	7,650	
MUSEUM OF SCIENCE	007104	47 076	4,239	
NATIONAL ACADEMY OF ENGINEERING	2000004292:01	47 076	11,134	
NATIONAL WRITING PROJECT	SUB 92-CA07-NSF2013	47 076	142	
NORTHWESTERN UNIVERSITY	SP0009801-PROJ0002728	47 076	38,965	
OCEAN DISCOVERY INSTITUTE	UCSD# 2013-2457	47 076	2,517	
PURDUE UNIVERSITY	410156088	47 076	6,799	
RAND CORP	9920160031	47 076	539	
RICE UNIVERSITY	R3F911	47 076	452	
UNIVERSITY OF KANSAS/KU CENTER FOR RESEARCH, INC.	FY2016056	47 076	16,600	
UNIVERSITY OF MICHIGAN	3003356473-cyc1	47 076	537,553	
UNIVERSITY OF MICHIGAN	3003593049	47 076	57,279	
UNIVERSITY OF SAN DIEGO	F12078-U2013-005	47 076	126,948	
UNIVERSITY OF SAN DIEGO	MARSS1172-U2014-003	47 076	163,102	
UNIVERSITY OF WISCONSIN-MADISON	SUB 490K884 (DUE-1231286)	47 076	48,421	
WESTED	S11-208-CYC2	47 076	39,557	
ARIZONA STATE UNIVERSITY/TEMPE	12-762	47 076	(5,562)	
MICHIGAN STATE UNIVERSITY	61-2349UCB	47 076	(5,386)	
MICHIGAN STATE UNIVERSITY	RC104101UCB	47 076	90,658	
STEVENS INSTITUTE OF TECHNOLOGY	SUB 2102411-01 (DUE-1407123)	47 076	29,989	
UNIVERSITY OF ILLINOIS	U OF ILLINOIS NSF IGERT LEPPERT 07/	47 076	28,728	
VANDERBILT UNIVERSITY	22511-S1	47 076	2,014	
UNIVERSITY OF CHICAGO	UOC-34252A-HOLZAPFEL-FNL	47 078	94	
UNIVERSITY OF WISCONSIN-MADISON	272K031	47 078	110,084	
CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	57387A P3013 7802 211:4	47 079	263,866	
OHIO STATE UNIVERSITY	RF01234341	47 079	28,495	
OREGON STATE UNIVERSITY	S1315A-B	47 079	148,880	

# Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

				FY :	
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number		ederal	Total Federal	Pass-Through to
	or Other Identifier	CFD	A Number	Expenditures	Subrecipients
CONSORTIUM OF UNIV FOR THE ADVANCEMENT OF HYDROLOGIC SCIENCE, INC.	SUB 20123297 (OCI-1234680)	47	080	45,597	
UNIVERSITY OF ILLINOIS	2007-01077-37	47	080	18,333	
UNIVERSITY OF ILLINOIS	20105006	47	080	47,086	
UNIVERSITY OF ILLINOIS	2011-00318-07	47	080	149,712	
UNIVERSITY OF ILLINOIS	SUB 2011-00318-13 (OCI-105357	47	080	1,394,860	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	SUB 5-37146 (OCI-0940841)	47	080	401,670	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	SUB 5-37360 (OCI-1148090)	47	080	(345)	
UNIVERSITY OF SOUTHERN CALIFORNIA	36558820	47	080	10,828	
UNIVERSITY OF SOUTHERN CALIFORNIA	SUB 33756949 (OCI-1148493)	47	080	850	
UNAVCO, INC.	UNAVCO-EAR-0732947-S7-ALL-FNL	47	082	(1,043)	
UNIVERSITY OF ILLINOIS	2015-02361-01	47	083	11,311	
UNIVERSITY OF SOUTHERN CALIFORNIA	72781708	47	083	24,200	
UNIVERSITY OF SOUTHERN CALIFORNIA	A16-0468-001	47	083	348	
AMERICAN EDUCATIONAL RESEARCH ASSOCIATION	201400493	47	UNKNOWN	14,122	
AMERICAN SOCIETY FOR BIOCHEMISTRY AND MOLECULAR BIOLOGY	SB150021	47	UNKNOWN	1,227	
COLORADO STATE UNIVERSITY	CSU-G-3232-2-LEONE-06/14	47	UNKNOWN	49	
FLUENCY LIGHTING TECHNOLOGIES	SB160083	47	UNKNOWN	17,915	
HARVARD UNIVERSITY	130783-5097125	47	UNKNOWN	5,888	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	0255-8612-4609	47	UNKNOWN	130,718	
NATIONAL BUREAU OF ECONOMIC RESEARCH, INC	343509000794227700	47	UNKNOWN	12,076	
OHIO STATE UNIVERSITY	735818	47	UNKNOWN	1,971	
SEMICONDUCTOR RESEARCH CORPORATION	006095	47	UNKNOWN	70,867	
TENNESSEE STATE UNIVERSITY	034250	47	UNKNOWN	84	
UNIVERSITY OF MINNESOTA	A004088504	47	UNKNOWN	387,996	
UNIVERSITY OF SOUTHERN CALIFORNIA	007067	47	UNKNOWN	11,626	
UNIVERSITY OF SOUTHERN CALIFORNIA	007699	47	UNKNOWN	11,972	
UNIVERSITY OF WASHINGTON	UWSC8357	47	UNKNOWN	12,318	
WESTED	WESTEDCOHEN,RO-01/16	47	UNKNOWN	22,343	
ASTRONOMICAL SOCIETY OF THE PACIFIC, THE	2014-03	47	UNKNOWN	34,160	
GEORGIA INSTITUTE OF TECHNOLOGY	004262	47	UNKNOWN	6,364	
GEORGIA INSTITUTE OF TECHNOLOGY	GEORGIA INSTITUTE OF-UCD2012P07	47	UNKNOWN	9,470	
K2 COMMUNICATIONS	201301455	47	UNKNOWN	19,258	
Subtotal Pass-Through and Partial Pass-Through Awards			0	37,532,978	1,66
Total National Science Foundation				505,489,052	23,279,45
Total Pational Colonic Foundation				303,469,032	23,279,43
DEPARTMENT OF VETERANS AFFAIRS					
Direct Awards	Various	64	RD	8,771,832	
Total Department of Veterans Affairs	v arroad	04	KD	8,771,832	
Total Department of Veterans Analis				0,771,032	•
ENVIRONMENTAL PROTECTION AGENCY					
Direct Awards	Various	66	RD	6,382,715	666,56
Pass-Through and Partial Pass-Through	vanous	00	ND	0,302,715	000,00
CALIFORNIA STATE COASTAL CONSERVANCY	12065	66	126	201.046	
HEALTH EFFECTS INSTITUTE	UCSF #A118773			201,016	
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH		66	306	39,474	
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	1110173	66	468	(483)	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

				FY 2	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Fed	deral	Total Federal	Pass-Through to
	or Other Identifier	CFDA I	Number	Expenditures	Subrecipients
GEORGIA INSTITUTE OF TECHNOLOGY	RE404-G1-cyc2	66	500	5,996	
COLORADO STATE UNIVERSITY	G-58008-1-CYC1	66	509	50,121	
FHI 360	007144	66	509	13,364	
STATE UNIVERSITY OF NEW YORK	64614-3-1110369	66	509	423	
UNIVERSITY OF ILLINOIS	2012-06652-04-CYC1	66	509	35,151	
UNIVERSITY OF IOWA	005719	66	509	86,766	
UNIVERSITY OF MICHIGAN	3002024856:06	66	509	57,080	
UNIVERSITY OF NORTH CAROLINA SYSTEM	5754601602	66	509	6,383	
UNIVERSITY OF WASHINGTON	UOW/USEPA 758052 WATSON 8/14 26%	66	509	(3)	
UNIVERSITY OF WASHINGTON	WASHING/EPA 432797 WATSON 07/14 26%	66	509	(173)	
CALIFORNIA DEPARTMENT OF PESTICIDE REGULATION	15C0091	66	605	25,017	
ABT ASSOCIATES INC.	44149	66	708	38,473	
CALIFORNIA DEPARTMENT OF PESTICIDE REGULATION	006735	66	UNKNOWN	130,812	
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	CALIFORNIA DEPARTMENT OF PUBLI-ADVA	66	UNKNOWN	977	
EASTERN RESEARCH GROUP, INC.	007812	66	UNKNOWN	3,450	
STATE WATER RESOURCES CONTROL BOARD	STATE WATER RESOURCES CONTROL-14-08	66	UNKNOWN	460,604	
UNIVERSITY OF WASHINGTON	760293	66	UNKNOWN	106,280	
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT	15650	66	UNKNOWN	334,288	
Subtotal Pass-Through and Partial Pass-Through Awards				1,595,016	
Total Environmental Protection Agency				7,977,731	666,568
NUCLEAR REGULATORY COMMISSION					
Direct Awards	Various	77	RD	1,230,057	153,682
Total Nuclear Regulatory Commission				1,230,057	153,682
DEPARTMENT OF ENERGY					
Direct Awards	Various	81	RD	112,868,304	9,097,923
Direct Awards (ARRA)	Various	81	RD	422,943	42,151
Subtotal Direct Awards				113,291,247	9,140,074
Pass-Through and Partial Pass-Through					
GENERAL ATOMICS	4500059737-cyc1	81	036	52,728	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B610987	81	036	84,872	
OAK RIDGE NATIONAL LABORATORY	4000136272-cyc1	81	036	389,951	85,423
AERODYNE RESEARCH, INC.	ARI 10978-5-cyc1	81	049	139,308	
AEROSOL DYNAMICS, INC.	3528	81	049	80,902	
AEROSOL DYNAMICS, INC.	3641-cyc1	81	049	67,897	
BINGHAMTON UNIVERSITY	039699	81	049	120,404	
BUCK INSTITUTE FOR RESEARCH ON AGING	SA29494	81	049	211,609	
CALIFORNIA INSTITUTE OF TECHNOLOGY	68J-1090279-CYC9		049	268,056	
CALIFORNIA INSTITUTE OF TECHNOLOGY	SUB 65Q-1094584 (DE-SC0010574)		049	136,387	
CALIFORNIA INSTITUTE OF TECHNOLOGY	SUB 68JCAP-1090300 (DE-SC00049		049	170,685	
CLEAN POWER RESEARCH	20133935		049	93,680	
COLLEGE OF WILLIAM AND MARY	740441-UCLA:003		049	9,485	
COLORADO STATE UNIVERSITY	G000272		049	126,544	
FERMI RESEARCH ALLIANCE, LLC (FRA) (INCL FERMILAB-DOE GOCO)	PO 613885		049	98,500	105,000
		01	· · · ·	35,300	100,000

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY :	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
GENERAL ATOMICS	4500054454 (DE-FC02-04ER54698)	81 049	63,438	
GENERAL ATOMICS	GEN ATOMICS (DOE) MOYER	81 049	(3,643)	
GENERAL ATOMICS	Sub 4500059469 (DE-NA0002730)	81 049	39,946	
GENERAL ATOMICS	UB PO4500046534 (DE-NA0001803)	81 049	15,183	
HJ SCIENCE AND TECHNOLOGY, INC.	20161999	81 049	710	
INCOM USA, INC.	036602	81 049	14,564	
INTEL CORPORATION	SUB CW1924105 (DE-SC0008717)	81 049	27,429	
JOHNS HOPKINS UNIVERSITY	SUB 2002373314 (DESC0012658)	81 049	51,521	
LOS ANGELES DEPARTMENT OF WATER AND POWER	PEPMO-UCLA-PS01	81 049	2,340	
LOS GATOS RESEARCH, INC.	Los Gatos No. 2066A-Keeling	81 049	83,296	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	5710003279:2	81 049	209,400	
METRO LASER	UCI22DE08-cyc1	81 049	50,071	
MICHIGAN STATE UNIVERSITY	61-3212C:5	81 049	(5,869)	
MOLECULAR VISTA	MV-204785-cyc1	81 049	85,552	
NORTHWESTERN UNIVERSITY	CNV0055224/PROJ0000253:8	81 049	199,265	
NOVA SCIENTIFIC, INC.	UCB 042214	81 049	95,419	
PENNSYLVANIA STATE UNIVERSITY	4916-USB-DOE-0620	81 049	108,722	
PENNSYLVANIA STATE UNIVERSITY	5024-UCLA-DOE-2377	81 049	134,093	
PENNSYLVANIA STATE UNIVERSITY	5-UCSD-DOE-2375 (DE-SC0012376)	81 049	212,606	
RADIABEAM TECHNOLOGIES, LLC	20151372	81 049	91,564	
RADIABEAM TECHNOLOGIES, LLC	RADIABEAM/DOE 20131019 MUSUMECI 9/1	81 049	(108)	
REACTIVE INNOVATIONS LLC	20155262	81 049	39,124	
SPEC, INC.	SPEC SRA-15-100115JTA	81 049	42,532	
STANFORD UNIVERSITY	2432011045900A	81 049	1,745	
STATE UNIVERSITY OF NEW YORK	68799	81 049	144,317	
STATE UNIVERSITY OF NEW YORK	68856-11194936-3	81 049	125,566	
STONY BROOK UNIVERSITY (A STATE UNIVERSITY OF NEW YORK CAMPUS)	72115	81 049	46,419	
ULTRAMET	PO NO. 10776:1	81 049	92,928	
UNIVERSITIES RESEARCH ASSOCIATION (OPERATES FERMILAB)	SUB 606537 (NONE)	81 049	151,352	
UNIVERSITY OF CENTRAL FLORIDA	004518	81 049	113,497	
UNIVERSITY OF COLORADO BOULDER	1000144280	81 049	23,926	
UNIVERSITY OF KANSAS/KU CENTER FOR RESEARCH, INC.	007775	81 049	18,100	
UNIVERSITY OF MARYLAND	Z7181005-CYC1	81 049	460,940	
UNIVERSITY OF MASSACHUSETTS AMHERST	DOE/UNIV OF MASS/ ZENGLER 11-006347	81 049	(571)	
UNIVERSITY OF MICHIGAN	3001346295	81 049	244,859	
UNIVERSITY OF MICHIGAN	3002880403	81 049	132,545	
UNIVERSITY OF MICHIGAN	3003723421	81 049	23.732	
UNIVERSITY OF MINNESOTA	A004527503	81 049	147,976	
UNIVERSITY OF NOTRE DAME (INCL GEM)	UNIVERSITY OF NOTRE DAME -202373 Am	81 049	116,781	
UNIVERSITY OF NOTRE DAME (INCL GEM)	UNIVERSITY OF NOTRE DAME (INCL-2090	81 049	313,630	
UNIVERSITY OF ROCHESTER	415025-G:5	81 049	(383)	
UNIVERSITY OF ROCHESTER	B 415024-G (DE-FC02-O4ER54789)	81 049	(1,420)	
UNIVERSITY OF TEXAS-AUSTIN	UTA14-000160:1	81 049	65,043	
UNIVERSITY OF WASHINGTON	763613-cyc1	81 049	118,223	
UNIVERSITY OF WASHINGTON	764615	81 049	150,934	
2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		01 040	100,004	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY 2	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
UNIVERSITY OF WISCONSIN-MADISON	UOFW/USDOE 375K233 BROWER 03/14 26%	81 049	3,418	
UNIVERSITY OF WISCONSIN-MADISON	UW/USDOE 552K042 BROWER 3/15 26%	81 049	(3,418)	
UNIVERSITY OF WISCONSIN-MADISON	609K674	81 049	269,680	
UNIVERSITY OF WISCONSIN-MADISON	614K924	81 049	104,240	
UNIVERSITY OF WISCONSIN-MADISON	SUB 420K991 (DE-SC0008713)	81 049	56,611	
WASHINGTON UNIVERSITY IN ST. LOUIS	004368	81 049	158,604	
WASHINGTON UNIVERSITY IN ST. LOUIS	006723	81 049	232,096	
WAYNE STATE UNIVERSITY	WSU14139	81 049	217,952	108,056
TDA RESEARCH, INC.	GA.2050.UCI.14.03-cyc2	81 049	40,993	
UNIVERSITY OF WISCONSIN SYSTEM	005878	81 049	40,870	
PURDUE UNIVERSITY	SUB 4105-57166 (DE-FE0011291)	81 057	58,405	
UNIVERSITY OF TEXAS-ARLINGTON	B 1260801390-61 (DE-FE0023118)	81 057	41,145	
UNIVERSITY OF ILLINOIS	2014-04905-01	81 079	179,993	
NORTH CAROLINA STATE UNIVERSITY	2014-0654-63	81 086	209,497	
UNIVERSITY OF TENNESSEE	A15-0653	81 086	52,392	
UNIVERSITY OF TEXAS-AUSTIN	UTA13-001076	81 086	427,261	
UTAH STATE UNIVERSITY	201502661	81 086	113,763	
ALLIANCE FOR SUSTAINABLE ENERGY, LLC	008145	81 087	13,406	
ALLIANCE FOR SUSTAINABLE ENERGY, LLC	4-23068-01 (DE-AC36-08GO28308)	81 087	57,562	
BROOKHAVEN NATIONAL LABORATORY/BROOKHAVEN SCIENCE ASSOCIATES, LLC	267696-CYC1	81 087	918,830	
CALIFORNIA POLYTECHNIC STATE UNIVERSITY FOUNDATION	16-16-45263	81 087	5,795	
CALIFORNIA POLYTECHNIC STATE UNIVERSITY, SAN LUIS OBISPO	DOE-CALPOLY SLO UNIV14-23-45059/THO	81 087	55	
FUEL CELL ENERGY INC.	10002506-cyc1	81 087	29,137	
GENERAL ATOMICS	4500054265-cyc1	81 087	126,330	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B617108	81 087	2,103	
LOS ALAMOS NATIONAL SECURITY, LLC	324390-cyc1	81 087	159,182	
OAK RIDGE NATIONAL LABORATORY	4000132775	81 087	28,309	
OAK RIDGE NATIONAL LABORATORY	4000134389	81 087	675	
OREGON STATE UNIVERSITY	G0154FA	81 087	57,465	
SOLAR RESERVE LLC	1443	81 087	138,515	
STANFORD UNIVERSITY	60094381-51077-C	81 087	144,583	
STANFORD UNIVERSITY	60094382-51077-B	81 087	11,018	
STANFORD UNIVERSITY	60094384-51077-D	81 087	82,696	
STANFORD UNIVERSITY	60094385-51077-A	81 087	310,672	
STANFORD UNIVERSITY	60962297-51077	81 087	124,472	
TDA RESEARCH, INC.	GA.2941.UCI.14.01-cyc2	81 087	37,178	
TEXAS A&M UNIVERSITY - COLLEGE STATION	033015	81 087	2,709	
ELECTRIC POWER RESEARCH INSTITUTE	0010002031	81 087	126,077	
STANFORD UNIVERSITY	A15-0114-001	81 087	114,500	
ALTEX TECHNOLOGIES CORPORATION	DEFE002663UCD002	81 089	21,971	
OREGON STATE UNIVERSITY	G0148A-B	81 089	66,456	
RTI INTERNATIONAL	007190	81 089	41,149	
TDA RESEARCH, INC.	GA.2610.UCI.11.01-cyc6	81 089	5,102	
UNIVERSITY OF SOUTHERN CALIFORNIA	66913872	81 089	7,967	
TDA RESEARCH, INC.	GA.2942.UCI.14.04-cyc3	81 089	148,000	
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# Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

				2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
IDAHO NATIONAL LABORATORY	00126925	81 105	48,897	39,460
CARNEGIE INSTITUTION	4-10469-07:2	81 112	58,175	
CARNEGIE INSTITUTION	4-10469-12	81 112	56,382	
CORNELL UNIVERSITY	SUB 67350-9962 (DE-NA0001836)	81 112	290,976	
HARVARD UNIVERSITY	130805-5088706	81 112	17,874	
INTERNATIONAL BUSINESS MACHINES CORPORATION	SUB 20133515 (UNKNOWN)	81 112	203,721	
LOS ALAMOS NATIONAL SECURITY, LLC	374238	81 112	4,385	
UNIVERSITY OF ROCHESTER	UOF ROCHESTER(DOE)#416230-G VU	81 112	(3,399)	(1,592
SANDIA NATIONAL LABORATORIES	1653354	81 113	39,874	
ARIZONA STATE UNIVERSITY/TEMPE	14-423	81 121	191,381	
BATTELLE ENERGY ALLIANCE, LLC (BEA)	168284-cyc1	81 121	140,316	
BATTELLE MEMORIAL INSTITUTE	00120569-CYC4	81 121	4,584	
CALIFORNIA STATE UNIVERSITY, LONG BEACH FOUNDATION	07-372810A-cyc5	81 121	6,419	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B613986	81 121	76,676	
LOS ALAMOS NATIONAL SECURITY, LLC	278765-CYC1	81 121	266,650	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	5710003847	81 121	645,948	76,961
OAK RIDGE NATIONAL LABORATORY	4000132990	81 121	59	
UNIVERSITY OF ILLINOIS	2014-05784-01	81 121	67,476	
UNIVERSITY OF MICHIGAN	3002964742	81 121	132,000	
UNIVERSITY OF MICHIGAN	3002964977	81 121	66,209	
UNIVERSITY OF WISCONSIN-MADISON	634K071	81 121	66,403	
ARIZONA STATE UNIVERSITY/TEMPE	15-617	81 122	24,203	
LOS ANGELES DEPARTMENT OF WATER AND POWER	LADWP EVUCLAPS05 GADH 12/15 54%	81 122	504,599	
SOUTHERN CALIFORNIA EDISON COMPANY	4500477552-cyc3	81 122	40,306	
HARVARD UNIVERSITY	130771-5085449	81 123	45,679	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B614637-cyc1	81 123	40,941	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B615672	81 123	37,340	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B616375-cyc1	81 123	35,803	
LOS ALAMOS NATIONAL SECURITY, LLC	368641-cyc1	81 123	16,947	
LOS ALAMOS NATIONAL SECURITY, LLC	379560-cyc1	81 123	23,709	
LOS ALAMOS NATIONAL SECURITY, LLC	87925-001-11	81 123	63,202	
UNIVERSITY OF UTAH	10029200-UCB	81 124	272,875	
ALCOA, INC.	DE-AR0000406	81 135	76,130	
GAS TECHNOLOGY INSTITUTE	S492	81 135	355,802	
MAGNETO-INERTIAL FUSION TECHNOLOGIES, INC	Sub None ( AR0000569)	81 135	305,946	
ROBERT BOSCH NORTH AMERICA	E-AR0000278-001 (DE-AR0000278)	81 135	111,367	
SRI INTERNATIONAL	119-000279	81 135	456,206	
STONY BROOK UNIVERSITY (A STATE UNIVERSITY OF NEW YORK CAMPUS)	20151086	81 135	220,297	
UNIVERSITY OF CINCINNATI	009725-002	81 135	113,316	
UNIVERSITY OF CINCINIVATI	UFDSP00010600	81 135	174,587	
UNIVERSITY OF FLORIDA  UNIVERSITY OF ILLINOIS	2015-05269-02-cyc1	81 135	10,562	
UNIVERSITY OF TEXAS-AUSTIN	UTA14-001162	81 135 81 135	158,986	
CARNEGIE INSTITUTION	6-10031-01	81 135		
UNIVERSITY OF ROCHESTER			36,749	
	SUB 414943-G (DE-SC-0001063)	81 410	20,456	
AEROSOL DYNAMICS, INC.	ADI-2685-GOLDSTEIN-08/14	81 UNKNOWN	(14)	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

				FY 2	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	F	ederal	Total Federal	Pass-Through to
	or Other Identifier	CFD	A Number	Expenditures	Subrecipients
ALLIANCE FOR SUSTAINABLE ENERGY, LLC	XAT-4-42242-01	81	UNKNOWN	21,235	
ALSTOM	3487-4500790783	81	UNKNOWN	27,923	
AMERICAN LITHIUM ENERGY	Sub NONE(DE-SC0013839)	81	UNKNOWN	88,330	
AMES LABORATORY	SC13395	81	UNKNOWN	192,014	
ARCADIA BIOSCIENCE, INC.	201120291	81	UNKNOWN	19,307	
ARGONNE NATIONAL LABORATORY	5F30561	81	UNKNOWN	95,197	
ARGONNE NATIONAL LABORATORY (DOE GOCO LAB OPERATED BY UNIV OF CHICAGO)	3F30841	81	UNKNOWN	(863)	(784)
BATTELLE MEMORIAL INSTITUTE	00093542	81	UNKNOWN	33,690	
BATTELLE MEMORIAL INSTITUTE	00101461	81	UNKNOWN	14,725	
BATTELLE MEMORIAL INSTITUTE	00118545	81	UNKNOWN	97,878	
BATTELLE MEMORIAL INSTITUTE	00119430	81	UNKNOWN	185,437	
BATTELLE MEMORIAL INSTITUTE	00126578	81	UNKNOWN	54,055	51,562
BLUE RIVER TECHNOLOGY	BLUE RIVER TECHNOLOGY-Y15-2594	81	UNKNOWN	32,032	
BROOKHAVEN NATIONAL LABORATORY/BROOKHAVEN SCIENCE ASSOCIATES, LLC	39554	81	UNKNOWN	256,765	
BROOKHAVEN NATIONAL LABORATORY/BROOKHAVEN SCIENCE ASSOCIATES, LLC	63913	81	UNKNOWN	173,987	
CARNEGIE INSTITUTION	4-10469-18	81	UNKNOWN	61,811	
CARNEGIE INSTITUTION	CI-4-3253-18-WENK-FNL	81	UNKNOWN	2,298	
COLORADO SCHOOL OF MINES	400769-5808	81	UNKNOWN	7,634	
FERMI RESEARCH ALLIANCE, LLC (FRA) (INCL FERMILAB-DOE GOCO)	014272	81	UNKNOWN	11,627	
FERMI RESEARCH ALLIANCE, LLC (FRA) (INCL FERMILAB-DOE GOCO)	FERMI RESEARCH ALLIANCE, LLC (-6120	81	UNKNOWN	167,549	
FERMI RESEARCH ALLIANCE, LLC (FRA) (INCL FERMILAB-DOE GOCO)	617433	81	UNKNOWN	9,951	
FERMI RESEARCH ALLIANCE, LLC (FRA) (INCL FERMILAB-DOE GOCO)	619952	81	UNKNOWN	3,771	
FERMI RESEARCH ALLIANCE, LLC (FRA) (INCL FERMILAB-DOE GOCO)	620363	81	UNKNOWN	35,289	
FERMI RESEARCH ALLIANCE, LLC (FRA) (INCL FERMILAB-DOE GOCO)	623426	81	UNKNOWN	14,924	
FERMI RESEARCH ALLIANCE, LLC (FRA) (INCL FERMILAB-DOE GOCO)	625607	81	UNKNOWN	58,398	
FERMI RESEARCH ALLIANCE, LLC (FRA) (INCL FERMILAB-DOE GOCO)	627700	81	UNKNOWN	71,590	
GAS TECHNOLOGY INSTITUTE	22422	81	UNKNOWN	(5)	
GAS TECHNOLOGY INSTITUTE	11122-20	81	UNKNOWN	7,650	
GENERAL ATOMICS	4500055243-cyc1	81	UNKNOWN	82,662	
GENERAL ATOMICS	GA (DOE) HOLLAND	81	UNKNOWN	(367)	
GENERAL ATOMICS	PO 4500054833 (DE-FG02-95ER543	81	UNKNOWN	123,612	
GENERAL ATOMICS	PO 4500054951 (DE-FC02-08ER549	81	UNKNOWN	47,207	
GENERAL ATOMICS	PO4500055468 (DE-NE0008323)	81	UNKNOWN	162,266	
GENERAL ATOMICS	Sub 4500060525(DE-FC02-04ER546	81	UNKNOWN	35,121	
GENERAL ATOMICS	Sub 4500060575(DE-FC02-08ER549	81	UNKNOWN	27,749	
HYPERV TECHNOLOGIES CORP	201503646	81	UNKNOWN	19,971	
IDAHO NATIONAL LABORATORY	00146693	81	UNKNOWN	384	
JET PROPULSION LABORATORY	1507890	81	UNKNOWN	30,425	
KOOTENAI TRIBE OF IDAHO	201502254	81	UNKNOWN	114,013	
KRELL INSTITUTE	UCD2011G12	81	UNKNOWN	1,000	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	201602508	81	UNKNOWN	24,430	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	LLNS-B601554-VANBIBBER-3/15	81	UNKNOWN	(2,930)	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B602802-CYC4	81	UNKNOWN	22,855	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B604236	81	UNKNOWN	56,660	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B607046	81	UNKNOWN	13,043	
		01	J 10 1111	10,040	

# Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

				FY 2	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	F	ederal	Total Federal	Pass-Through to
	or Other Identifier	CFD	A Number	Expenditures	Subrecipients
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B608177	81	UNKNOWN	41,854	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B609948	81	UNKNOWN	86,250	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B610136-cyc1	81	UNKNOWN	66,508	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B611060	81	UNKNOWN	80,511	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B611159	81	UNKNOWN	17,267	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B611216	81	UNKNOWN	25,181	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B611323	81	UNKNOWN	18,974	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B611495	81	UNKNOWN	13,232	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B611564	81	UNKNOWN	184,704	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B611752	81	UNKNOWN	41,353	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B611893	81	UNKNOWN	27,445	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B612331	81	UNKNOWN	57,736	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B612660	81	UNKNOWN	25,117	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B612929	81	UNKNOWN	46,429	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B613230	81	UNKNOWN	88,618	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B613475	81	UNKNOWN	88,327	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B615302	81	UNKNOWN	46,255	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B615520	81	UNKNOWN	5,374	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B615553	81	UNKNOWN	43,818	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B615664	81	UNKNOWN	42,395	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B616121	81	UNKNOWN	60,011	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B616616	81	UNKNOWN	32,285	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B616790	81	UNKNOWN	30,599	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B617085	81	UNKNOWN	19,840	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B617449	81	UNKNOWN	20,255	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B617930	81	UNKNOWN	24,995	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	Sub B608859 (AC52-06-NA25396)	81	UNKNOWN	23,772	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	Sub B608905 (DE-AC52-07NA27344	81	UNKNOWN	91,761	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	SUB B614026 (DE-AC52-07NA27344	81	UNKNOWN	11,876	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	SUB B615595	81	UNKNOWN	44,966	
LOS ALAMOS NATIONAL SECURITY, LLC	211060	81	UNKNOWN	177,247	
LOS ALAMOS NATIONAL SECURITY, LLC	257842 (DE-AC52-06NA25396)	81	UNKNOWN	65,811	
LOS ALAMOS NATIONAL SECURITY, LLC	274559	81	UNKNOWN	24,251	
LOS ALAMOS NATIONAL SECURITY, LLC	295779	81	UNKNOWN	71,098	
LOS ALAMOS NATIONAL SECURITY, LLC	LANS-240479-1-HOSEMANN-FNL	81	UNKNOWN	2,585	
LOS ALAMOS NATIONAL SECURITY, LLC	Sub 277921 (DE-AC52-06NA25396)	81	UNKNOWN	95,823	
LOS ALAMOS NATIONAL SECURITY, LLC	Sub 318473 ( DE-AC52-06NA25396	81	UNKNOWN	15,591	
LOS ALAMOS NATIONAL SECURITY, LLC	Sub 351623 (DEAC52-06NA25396)	81	UNKNOWN	208,301	
LOS ALAMOS NATIONAL SECURITY, LLC	Sub 77137-001-11 (DE-AC52-06NA	81	UNKNOWN	740,306	
LOS GATOS RESEARCH, INC.	20161485	81	UNKNOWN	14,999	
NATIONAL SECURITY TECHNOLOGIES, LLC	144064	81	UNKNOWN	60,507	
NATIONAL SECURITY TECHNOLOGIES, LLC	171303	81	UNKNOWN	24,724	
OAK RIDGE NATIONAL LABORATORY	005903	81	UNKNOWN	665,357	
OAK RIDGE NATIONAL LABORATORY	006982	81	UNKNOWN	89,141	
OAK RIDGE NATIONAL LABORATORY	4000077731	81	UNKNOWN	22,768	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

				FY 2	016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	F	ederal	Total Federal	Pass-Through to
	or Other Identifier	CFD	A Number	Expenditures	Subrecipients
OAK RIDGE NATIONAL LABORATORY	4000100283	81	UNKNOWN	31,169	
OAK RIDGE NATIONAL LABORATORY	4000101858-CYC3	81	UNKNOWN	145,175	
OAK RIDGE NATIONAL LABORATORY	4000129396	81	UNKNOWN	89,875	
OAK RIDGE NATIONAL LABORATORY	4000134953	81	UNKNOWN	82,896	
OAK RIDGE NATIONAL LABORATORY	4000138517	81	UNKNOWN	50,812	
OAK RIDGE NATIONAL LABORATORY	4000139499	81	UNKNOWN	50,000	
OAK RIDGE NATIONAL LABORATORY	4000140266	81	UNKNOWN	72,674	
OAK RIDGE NATIONAL LABORATORY	4000141233	81	UNKNOWN	201,933	
OAK RIDGE NATIONAL LABORATORY	4000147510	81	UNKNOWN	3,920	
OAK RIDGE NATIONAL LABORATORY	DOE UT/BATTELLE 4000069422 SNAVELY	81	UNKNOWN	3	
OAK RIDGE NATIONAL LABORATORY	SUB 4000138918 (DE-AC05-000R22	81	UNKNOWN	82,689	
PACIFIC NORTHWEST NATIONAL LABORATORIES	190110	81	UNKNOWN	125,148	
PACIFIC NORTHWEST NATIONAL LABORATORIES	207847	81	UNKNOWN	128,407	
PACIFIC NORTHWEST NATIONAL LABORATORIES	275882	81	UNKNOWN	107,407	
PACIFIC NORTHWEST NATIONAL LABORATORIES	PAC NW LAB; 271470; SEE PREV FND 82	81	UNKNOWN	15,410	
PACIFIC NORTHWEST NATIONAL LABORATORIES	SUB 196885 (DE-AC05-76RL01830	81	UNKNOWN	223,388	
PACIFIC NORTHWEST NATIONAL LABORATORIES	Sub 274570 (DE-AC05-76RL01830)	81	UNKNOWN	36,035	
PACIFIC NORTHWEST NATIONAL LABORATORIES	Sub 295287 (DE-AC05-76RL01830)	81	UNKNOWN	11,942	
PLASMA PROCESSES INC.	PLASMA JSO1201031(DOE/FP) CLSD	81	UNKNOWN	6,000	
PRINCETON PLASMA PHYSICS LABORATORY	Sub S014011-F (DE-AC02-09CH114	81	UNKNOWN	29,356	
PRINCETON PLASMA PHYSICS LABORATORY	SUB S014319-F (DE-AC02-09CH114	81	UNKNOWN	39,769	
SANDIA NATIONAL LABORATORIES	1439950	81	UNKNOWN	74,363	
SANDIA NATIONAL LABORATORIES	1506687	81	UNKNOWN	54,226	
SANDIA NATIONAL LABORATORIES	1514615	81	UNKNOWN	17,310	
SANDIA NATIONAL LABORATORIES	1526655	81	UNKNOWN	148,645	
SANDIA NATIONAL LABORATORIES	1577012	81	UNKNOWN		
SANDIA NATIONAL LABORATORIES	1590518	81	UNKNOWN	30,000	
SANDIA NATIONAL LABORATORIES	1590734	81		32,043	
SANDIA NATIONAL LABORATORIES SANDIA NATIONAL LABORATORIES	1590734		UNKNOWN	82,825	
	1673089	81	UNKNOWN	26,858	
SANDIA NATIONAL LABORATORIES SANDIA NATIONAL LABORATORIES	PO1404595	81	UNKNOWN	35,220	
		81	UNKNOWN	46,156	
SANDIA NATIONAL LABORATORIES	PO1627708	81	UNKNOWN	23,042	
SANDIA NATIONAL LABORATORIES	SUB 1512354 (776622)	81	UNKNOWN	20,721	
SANDIA NATIONAL LABORATORIES	SUB 1534256 (776622)	81	UNKNOWN	229,834	
STANFORD UNIVERSITY	60220830-51077-R	81	UNKNOWN	46,747	
TDA RESEARCH, INC.	GA.2085.UCI.15.02-cyc1	81	UNKNOWN	70,707	
THIRD WAVE TECHNOLOGIES, INC.	TDM731	81	UNKNOWN	47,000	
UNIVERSITIES RESEARCH ASSOCIATION (OPERATES FERMILAB)	604705	81	UNKNOWN	20,890	
UNIVERSITY OF MINNESOTA	A003127005	81	UNKNOWN	244,475	
UNIVERSITY OF TENNESSEE	A13-0708-S004	81	UNKNOWN	51,192	
SANDIA NATIONAL LABORATORIES	1519996	81	UNKNOWN	25,282	
SANDIA NATIONAL LABORATORIES	PO1668054	81	UNKNOWN	16,959	
Subtotal Pass-Through and Partial Pass-Through Awards				25,677,738	464,08
Total Department of Energy				138,968,985	9,604,16

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY 2	016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
DEPARTMENT OF EDUCATION				
Direct Awards	Various	84 RD	17,144,914	4,528,83
Pass-Through and Partial Pass-Through				
VENTURA COUNTY COMMUNITY COLLEGE DISTRICT	P031C110025	84 013	214,721	
HARTNELL COLLEGE	A00-2068-009	84 031	261,073	
SAN BERNARDINO COMMUNITY COLLEGE DISTRICT	006116	84 120	42,452	
CALIFORNIA DEPARTMENT OF REHABILITATION	28496	84 126	66,218	
CALIFORNIA DEPARTMENT OF REHABILITATION	28680	84 126	3,009	
REHABILITATION INSTITUTE OF CHICAGO	81760-cyc4	84 133	94,299	
CALIFORNIA DEPARTMENT OF REHABILITATION	29616	84 136	91,948	
CALIFORNIA DEPARTMENT OF EDUCATION	15-14349-3001-9A	84 287	1,422,587	1,087,10
CALIFORNIA DEPARTMENT OF EDUCATION	CDE-09-14349-3001-6A-HULL12/13	84 287	(5,448)	
COLUMBIA UNIVERSITY	511135-cyc1	84 305	36,607	
EDBOOST	20103499	84 305	71,057	
LITERACY DESIGN COLLABORATIVE, INC	20145515	84 305	189,229	
UNIVERSITY OF CONNECTICUT	70505	84 305	14,758	
UNIVERSITY OF MICHIGAN	3003438918	84 305	43,499	
UNIVERSITY OF MICHIGAN	3003601231	84 305	35,000	
UNIVERSITY OF SOUTH CAROLINA	15-2906	84 305	1,288	
VANDERBILT UNIVERSITY	007088	84 305	40,862	
WASHINGTON STATE UNIVERSITY	121927G003243	84 305	90,759	
WESTED	s11089	84 305	112,469	
COLUMBIA UNIVERSITY	1 (GG009670)	84 305	69,041	
VANDERBILT UNIVERSITY	22441-S1	84 305	(31)	
PENNSYLVANIA STATE UNIVERSITY	5265-UCI-USDE-0126-cyc1	84 324	60,801	
SRI INTERNATIONAL	51-001228:4	84 324	48,653	
UNIVERSITY OF CONNECTICUT	68671	84 324	13,857	
UNIVERSITY OF MICHIGAN	3003847265-cyc1	84 324	21,378	
ORANGE COUNTY DEPARTMENT OF EDUCATION	41113-cyc1	84 366	45,329	
CALIFORNIA DEPARTMENT OF EDUCATION	15-15196-3001-00	84 367	20,281	
CALIFORNIA DEPARTMENT OF EDUCATION	NCLB11-CMP-UCSB	84 367	433	
CALIFORNIA DEPARTMENT OF EDUCATION	NCLB11-CSP-UCSB	84 367	738	
CALIFORNIA DEPARTMENT OF EDUCATION	NCLB11-CWP-UCSB	84 367	1,831	
CALIFORNIA DEPARTMENT OF EDUCATION	NCLB12-CSP-UCSB	84 367	29,173	
CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	A00-1301-002	84 367	26,665	
CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	NCLB12-CMP-UCSB	84 367	20,394	
CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	NCLB12-CWP-UCSB	84 367	16,793	
CALIFORNIA POSTSECONDARY EDUCATION COMMISSION	ITQ097600	84 367	3,016,543	993,22
NATIONAL WRITING PROJECT	92-CA06-SEED2012-1-CYC4	84 367	3,457	
NATIONAL WRITING PROJECT	92-CA07-SEED2012- AMENDMENT 2A	84 367	9,985	
NATIONAL WRITING PROJECT	92-CA07-SEED2016 (DOEdu U367D1	84 367	5,755	
SRI INTERNATIONAL	51-001299	84 367	96,260	
CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	NCLB11-CWP-UCSD	84 367	(1,014)	
CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	NCLB12-CSP-UCSD	84 367	35,978	
CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	NCLB12-CWP-UCSD	84 367	37,284	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

				FY 2	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	F	ederal	Total Federal	Pass-Through to
	or Other Identifier	CFD	A Number	Expenditures	Subrecipients
CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	Sub NCLB12-CRLP-UCSD	84	367	22,814	
NATIONAL WRITING PROJECT	92-CA03-SEED2012	84	367	5,699	
UNIVERSITY OF WISCONSIN-MADISON	388K975:4	84	368	61,529	
UNIVERSITY OF KANSAS/KU CENTER FOR RESEARCH, INC.	FY2014-027	84	373	5,434	
NATIONAL MATH AND SCIENCE INITIATIVE, INC.	20160003	84	411	20,584	
CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	Sub 57795A p2128 7802 212 (291	84	418	36,496	
AFINGEN, INC.	201400874	84	UNKNOWN	28,579	
MINDSET WORKS, INC.	201500250	84	UNKNOWN	252,683	
NATIONAL SCHOOL DISTRICT	20151009	84	UNKNOWN	62,960	
PACIFIC NORTHWEST NATIONAL LABORATORIES	245520	84	UNKNOWN	4,243	
WESTAT	Sub 6024-S-002 (ED-IES-12-C-00	84	UNKNOWN	100,518	
Subtotal Pass-Through and Partial Pass-Through Awards				7,007,510	2,080,332
Total Department of Education				24,152,424	6,609,171
SMITHSONIAN INSTITUTE					
Direct Awards	Various	85	RD	7,835,006	
Total Smithsonian Institute				7,835,006	-
INSTITUTE OF PEACE					
Direct Awards	Various	91	RD	42,885	
Pass-Through and Partial Pass-Through					
ATOX BIO	201600397	91	UNKNOWN	5,011	
Subtotal Pass-Through and Partial Pass-Through Awards				5,011	-
Total Institute of Peace				47,896	-
NATIONAL COUNCIL ON DISABILITY					
Pass-Through and Partial Pass-Through					
THE SCRIPPS RESEARCH INSTITUTE	SUB 5-52225 (NS092306)	92	273	196,247	
PUBLIC HEALTH INSTITUTE	1020855	92	279	14,171	
UNIVERSITY OF VIRGINIA	SUB GB1025 150187 (HL127564)	92	837	176,818	
Subtotal Pass-Through and Partial Pass-Through Awards				387,236	-
Total National Council on Disability				387,236	-
DEPARTMENT OF HEALTH AND HUMAN SERVICES					
Direct Awards					
ADMH PHS (SAMHSA) MENTAL HEALTH - CENTER FOR MENTAL HEALTH SERVICES	Various	93	RD	909,255	327,346
ADMH PHS (SAMHSA) PREVENTION - CENTER FOR SUBSTANCE ABUSE PREVENTION	Various	93	RD	7,159,996	3,771,684
CDC CENTERS FOR DISEASE CONTROL AND PREVENTION	Various	93	RD	29,350,649	12,743,906
FDA PHS FOOD AND DRUG ADMINISTRATION	Various	93	RD	7,443,107	697,979
HCFA CENTERS FOR MEDICARE AND MEDICAID SERVICES	Various	93	RD	5,510,325	2,045,552
HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	Various	93	RD	14,934,679	1,992,185
NIH AGING, NATIONAL INSTITUTE ON	Various	93	RD	94,227,350	10,990,587
NIH ALCOHOL ABUSE AND ALCOHOLISM, NATIONAL INSTITUTE OF	Various	93	RD	18,076,654	2,575,965
NIH ARTHRITIS, MUSCULOSKELETAL & SKIN DISEASES, NATIONAL INSTITUTE OF	Various	93	RD	39,104,686	2,029,704
NIH CHILD HEALTH & HUMAN DEVELOPMENT, NATIONAL INSTITUTE OF	Various	93	RD	73,980,044	10,718,162

# Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY 2	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
NIH DEAFNESS & OTHER COMMUNICATION DISORDERS, NATIONAL INSTITUTE ON	Various	93 RD	18,514,630	421,663
NIH DENTAL AND CRANIOFACIAL RESEARCH, NATIONAL INSTITUTE OF	Various	93 RD	31,948,532	3,358,789
NIH DENTAL AND CRANIOFACIAL RESEARCH, NATIONAL INSTITUTE OF (ARRA)	Various	93 RD	(2,292)	
NIH DIABETES, DIGESTIVE & KIDNEY DISEASES, NATIONAL INSTITUTE OF	Various	93 RD	91,513,745	8,632,724
NIH DIABETES, DIGESTIVE & KIDNEY DISEASES, NATIONAL INSTITUTE OF (ARRA)	Various	93 RD	(27,229)	
NIH DRUG ABUSE, NATIONAL INSTITUTE OF	Various	93 RD	68,108,129	11,197,680
NIH ENVIRONMENTAL HEALTH SCIENCES, NATIONAL INSTITUTE OF	Various	93 RD	40,490,075	5,857,764
NIH JOHN F. FOGARTY INTERNATIONAL CENTER	Various	93 RD	6,763,289	2,454,149
NIH MEDICINE, NATIONAL LIBRARY OF	Various	93 RD	3,531,985	175,479
NIH MENTAL HEALTH, NATIONAL INSTITUTE OF (NIMH)	Various	93 RD	136,116,544	20,103,789
NIH MENTAL HEALTH, NATIONAL INSTITUTE OF (NIMH) (ARRA)	Various	93 RD	125	
NIH NATIONAL CANCER INSTITUTE	Various	93 RD	217,814,116	29,901,887
NIH NATIONAL CANCER INSTITUTE (ARRA)	Various	93 RD	(14,908)	
NIH NATIONAL CENTER FOR COMPLEMENTARY AND INTEGRATIVE HEALTH	Various	93 RD	5,954,242	64,934
NIH NATIONAL EYE INSTITUTE	Various	93 RD	60,530,011	3,963,153
NIH NATIONAL EYE INSTITUTE (ARRA)	Various	93 RD	(101,717)	
NIH NATIONAL HUMAN GENOME RESEARCH INSTITUTE	Various	93 RD	25,127,294	2,612,742
NIH NATIONAL INST OF ALLERGY AND INFECTIOUS DISEASES	Various	93 RD	210,480,619	44,446,611
NIH NATIONAL INSTITUTE OF BIOMEDICAL IMAGING AND BIOENGINEERING	Various	93 RD	27,303,849	3,225,993
NIH NATIONAL INSTITUTE OF GENERAL MEDICAL SCIENCE	Various	93 RD	206,387,094	9,152,446
NIH NATIONAL INSTITUTE OF GENERAL MEDICAL SCIENCE (ARRA)	Various	93 RD	(1,267)	
NIH NATIONAL INSTITUTE OF HEART, LUNG & BLOOD	Various	93 RD	157,709,470	19,104,903
NIH NATIONAL INSTITUTE ON MINORITY HEALTH AND HEALTH DISPARITIES	Various	93 RD	3,380,177	82,048
NIH NATIONAL INSTITUTES OF HEALTH CENTER FOR SCIENTIFIC REVIEW	Various	93 RD	3,708,950	18,932
NIH NATIONAL INSTITUTES OF HEALTH OFFICE OF THE DIRECTOR	Various	93 RD	27,785,887	3,737,088
NIH NEUROLOGICAL DISORDERS & STROKE, NATIONAL INSTITUTE OF	Various	93 RD	126,687,938	22,320,971
NIH NIH NATIONAL CENTER FOR ADVANCING TRANSLATIONAL SCIENCES	Various	93 RD	55,979,396	6,046,675
NIH NIH NATIONAL CENTER FOR RESEARCH RESOURCES	Various	93 RD	6,685,251	(13,823)
NIH NIH/MISCELLANEOUS AGENCIES & DEPARTMENTS	Various	93 RD	24,241,284	885,395
NIH NURSING RESEARCH, NATIONAL INSTITUTE OF	Various	93 RD	9,445,492	784.104
NIH OFFICE OF RESEARCH INFRASTRUCTURE PROGRAMS, NIH	Various	93 RD	60,262	
OHDS ADMINISTRATION FOR CHILDREN AND FAMILIES	Various	93 RD	1,055,323	42,846
OHDS HHSOHDS/MISCELLANEOUS AGENCIES & DEPARTMENTS	Various	93 RD	189,818	
PHS AGENCY FOR HEALTHCARE RESEARCH AND QUALITY	Various	93 RD	6,188,579	842,403
PHS AGENCY FOR HEALTHCARE RESEARCH AND QUALITY (ARRA)	Various	93 RD	(2,068)	(2,068)
PHS PHS OFFICE OF ADOLESCENT HEALTH	Various	93 RD	762,852	64,258
PHS PHS OFFICE OF WOMEN'S HEALTH	Various	93 RD	553,980	89.385
PHS PHS TOXIC SUBSTANCES AND DISEASE REGISTRY, AGENCY FOR (ATSDR)	Various	93 RD	20,595	
SEC ADMINISTRATION FOR COMMUNITY LIVING	Various	93 RD	1,106,869	348,286
SEC HHS OFFICE OF THE SECRETARY	Various	93 RD	462,443	
SEC HHS PLANNING & EVALUATION, ASSISTANT SECRETARY FOR	Various	93 RD	992.264	141,085
Subtotal Direct Awards		-2	1,868,148,373	247,955,361
Pass-Through and Partial Pass-Through			.,500,1.10,010	,000,001
RIGHT TO CARE	20163138	93 001	49,187	
Q-CHEM, INC.	2R44GM096678-02	93 003	36,486	
		55 555	33,400	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY :	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
HISPANIC-SERVING HEALTH PROFESSIONS SCHOOLS, INC.	NIH/HSHPS OMH-5-MPCMP101038 BURGOS	93 004	2,706	
WESTAT	Westat#ID-6101-S039	93 059	(41,718)	
UNIVERSITY OF ARIZONA	278887-cyc1	93 061	47,665	
STANFORD UNIVERSITY	60770272-104939	93 065	89,978	
UNIVERSITY OF WASHINGTON	755454	93 067	149,275	
SEQUOIA FOUNDATION	UCSF#A119218	93 073	1,154	
HEALTH RESEARCH, INC.	174-01	93 077	9,088	
PORTLAND STATE UNIVERSITY	007815	93 077	10,805	
UNIVERSITY OF ILLINOIS AT CHICAGO	2013-02549-04-00	93 077	83,295	
UNIVERSITY OF PENNSYLVANIA	560236	93 077	5,516	
UNIVERSITY OF WISCONSIN-MADISON	605K356	93 077	31,051	
HARVARD PILGRIM HEALTH CARE	HPHC-203160-cyc1	93 084	78,923	
CHILDREN'S HOSPITAL OF LOS ANGELES	CHLA/NIH GF005705 HARRISON 11/14 54	93 092	(335)	
RAND CORP	9920140019:2R	93 095	17,341	
CHILDREN'S HOSPITAL CORP. (THE), BOSTON, MASS.	SUB NONE (FD003523)	93 103	(10,858)	
JOHN WAYNE INSTITUTE FOR CANCER TREATMENT AND RESEARCH	KESARI-16-01 (7R01FD005077-02	93 103	8,703	
JOHNS HOPKINS UNIVERSITY	2002172146	93 103	24,585	
JOHNS HOPKINS UNIVERSITY	2012-0171(FD003898)	93 103	4,200	
RTI INTERNATIONAL	29-312-0212305-52091L-cyc1	93 103	37,218	
TRACE-ABILITY, INC	TA-UCSF-sub1	93 103	47,675	
UNIVERSITY OF KANSAS/KU CENTER FOR RESEARCH, INC.	QB859730-CYC2	93 103	6,815	
ARIZONA STATE UNIVERSITY/TEMPE	16-760	93 110	20,593	
CHILDREN'S HOSPITAL AND RESEARCH CENTER AT OAKLAND	127958UCD01	93 110	5,000	
MASSACHUSETTS GENERAL HOSPITAL	227146-cyc1	93 110	4,890	
PARTNERS HEALTHCARE SYSTEM, INC	226858-cyc1	93 110	21,982	
PARTNERS HEALTHCARE SYSTEM, INC	226859-cyc1	93 110	105,654	
RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	C14-859	93 110	14,470	
UNIVERSITY OF MASSACHUSETTS MEDICAL SCHOOL	RFS2015045 (5UA3MC25735-02-00)	93 110	12,094	
BOSTON UNIVERSITY	4500001761	93 113	90,026	
BOSTON UNIVERSITY	BU-9500300288-JERRETT-3/15	93 113	(6,368)	
BRIGHAM AND WOMEN'S HOSPITAL	113499	93 113	2,079	
CANCER PREVENTION INSTITUTE OF CALIFORNIA	R01ES019598-02-UCSF	93 113	46,392	
COLORADO STATE UNIVERSITY	1-R01ES023688-01A1	93 113	12,011	
COLUMBIA UNIVERSITY	11 (Acct.#5-37761)	93 113	10,266	
EICOSIS, LLC	201402841	93 113	739	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	02558271-4609	93 113	54,818	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	A16-0590-001	93 113	54,385	
JOHNS HOPKINS UNIVERSITY	2002850255	93 113	63,722	
JOHNS HOPKINS UNIVERSITY	20132261	93 113	76,717	
JOHNS HOPKINS UNIVERSITY	R01ES023500	93 113	36,077	
KAISER PERMANENTE DIVISION OF RESEARCH	1159585-02	93 113	106,587	
KAISER PERMANENTE DIVISION OF RESEARCH	115-9585-03	93 113	(24,347)	
KAISER PERMANENTE DIVISION OF RESEARCH	9098	93 113	1,142	
LUDWIG INSTITUTE FOR CANCER RESEARCH	NIH-LUDWIG/WANG/54.5%/06/12	93 113	(2,112)	
RAND CORP	9920130007:02	93 113	9.326	
			5,020	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY :	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
RENSSELAER POLYTECHNIC INSTITUTE	A12363	93 113	131,357	
RESEARCH FOUNDATION OF STATE UNIVERSITY OF NEW YORK (THE)	1603	93 113	15,345	
SALK INSTITUTE FOR BIOLOGICAL STUDIES	SUB NONE (ES025585)	93 113	91,993	
SALK INSTITUTE FOR BIOLOGICAL STUDIES	SUB P0170265 (ES025585)	93 113	38,183	
SANFORD BURNHAM PREBYS MEDICAL DISCOVERY INSTITUTE	NIH-BURNHAM/MASLIAH/54.5%	93 113	(114,058)	
SANFORD BURNHAM PREBYS MEDICAL DISCOVERY INSTITUTE	NIH(NIEHS)SBMRI SUB54335-11056UCSD0	93 113	(60,827)	
SILENT SPRING INSTITUTE	7475- UCB	93 113	29,014	
STATE UNIVERSITY OF NEW YORK	1456	93 113	160,457	
SUNY UNIVERSITY AT ALBANY	15-21	93 113	51,704	
UNIVERSITY OF MICHIGAN	008002	93 113	12,226	
UNIVERSITY OF MISSOURI	005947	93 113	154,210	
UNIVERSITY OF MONTANA	PG1464439	93 113	34,046	
UNIVERSITY OF PITTSBURGH	0041985(124151-1)	93 113	5,548	
UNIVERSITY OF PITTSBURGH	U01AG012553	93 113	44,157	
UNIVERSITY OF SOUTHERN CALIFORNIA	52728343:01	93 113	28,062	
UNIVERSITY OF SOUTHERN CALIFORNIA	54527700	93 113	5,518	
UNIVERSITY OF SOUTHERN CALIFORNIA	FDP-USC/NIH Y83814 FROINES 3/15	93 113	(2,556)	
UNIVERSITY OF SOUTHERN CALIFORNIA	61933158	93 113	72,771	
UNIVERSITY OF SOUTHERN CALIFORNIA	62248213	93 113	34,351	
UNIVERSITY OF SOUTHERN CALIFORNIA	64504593	93 113	38,500	
UNIVERSITY OF SOUTHERN CALIFORNIA	A15-0011	93 113	(10,270)	
WASHINGTON STATE UNIVERSITY	104099_G002809	93 113	46,057	
WASHINGTON UNIVERSITY IN ST. LOUIS	Sub WU-14-109 (ES021488)	93 113	18,988	
WASHINGTON UNIVERSITY IN ST. LOUIS	WU-16-159	93 113	15,299	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	0255-5542-4609-002	93 113	80,139	
UNIVERSITY OF WASHINGTON	750186-003	93 113	115,532	
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	11-10743 RUTHERFORD	93 116	118,682	
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	2-10039 09-11183 RUTHERFORD	93 116	2,972,926	
ALTUM, INCORPORATED	UCSF#A124778	93 121	78,458	
BIOVINC LLC	20152314	93 121	42,279	
BRIGHAM AND WOMEN'S HOSPITAL	110670	93 121	194,641	
BRIGHAM AND WOMEN'S HOSPITAL	UM1-AI068636 HAVLIR	93 121	211,420	
CASE WESTERN RESERVE UNIVERSITY	RES506229:5	93 121	19,969	
GROUP HEALTH COOPERATIVE	2014181411	93 121	712	
GROUP HEALTH COOPERATIVE	2015154243	93 121	33,225	
HARVARD UNIVERSITY	158209.5030334.0002	93 121	65,184	
HARVARD UNIVERSITY	FDP-HARVARD/NIH 123559 WANG 5/14 5	93 121	(876)	
JOHNS HOPKINS UNIVERSITY	2001653082:3	93 121	11,753	
JOHNS HOPKINS UNIVERSITY	3P50DE019032-11S2	93 121	102,550	
JOHNS HOPKINS UNIVERSITY	SUB 2002808748 ( DE019032)	93 121	13,318	
JOHNS HOPKINS UNIVERSITY	Sub 2002818823 (DE025398)	93 121	8,990	
LANKENAU INSTITUTE FOR MEDICAL RESEARCH	038314	93 121	142,090	
NEW YORK UNIVERSITY	NYU SOM OLSHEN	93 121	2,263	
PALO ALTO VETERANS INSTITUTE FOR RESEARCH, INC.	1R01DE023113-01A1	93 121	173,524	
PHASE DIAGNOSTICS LLC	20152317	93 121	20,558	
			-,	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY 2	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
SIMON FRASER UNIVERSITY	UCSF#A120483	93 121	153,197	
STANFORD UNIVERSITY	1U01DE024430-01/61206320	93 121	13,934	
UNIVERSITY AT BUFFALO (A STATE UNIVERSITY OF NEW YORK CAMPUS)	R980481	93 121	425	
UNIVERSITY OF COLORADO BOULDER	1553192-cyc1	93 121	366,271	
UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	FY15.236.004	93 121	259,017	
UNIVERSITY OF MARYLAND	1100600:5	93 121	98,616	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	UNIVERSITY OF NORTH -5-33461	93 121	102,720	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	532727	93 121	182,566	
UNIVERSITY OF PENNSYLVANIA	565540	93 121	(1)	
UNIVERSITY OF PENNSYLVANIA	565681	93 121	35,737	
UNIVERSITY OF PENNSYLVANIA	567164	93 121	76,092	
UNIVERSITY OF SOUTHERN CALIFORNIA	52681472	93 121	63,927	
UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT HOUSTON	0009450A	93 121	25,423	
UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT HOUSTON	0010816B	93 121	58,306	
WASHINGTON UNIVERSITY IN ST. LOUIS	SUB WU-15-147 (ES024120)	93 133	3,166	
CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	NIH-SDSURF/MADLENSKY/54.5%	93 135	(244)	
UNIVERSITY OF KENTUCKY/UNIVERSITY OF KENTUCKY RESEARCH FOUNDATION	3210000169-16-135	93 135	62,708	
CALIFORNIA CENTER FOR PUBLIC HEALTH ADVOCACY	20153323	93 136	23,979	
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	1511002	93 136	10,079	
CHILDREN'S HOSPITAL OF PITTSBURGH	CDC/CHOP SUB 0025841-119862-03 SILV	93 136	13,295	
BOSTON UNIVERSITY	4500001805-cyc1	93 143	108,017	
UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	400763-5801	93 143	74,596	
CITY AND COUNTY OF SAN FRANCISCO	BPHC11000127	93 145	188,996	
CITY AND COUNTY OF SAN FRANCISCO	HCPD13	93 145	72	
PUBLIC HEALTH FOUNDATION ENTERPRISES, INC.	0054.021.901/0054.021.904	93 153	5,167	
CITY AND COUNTY OF SAN FRANCISCO	BPHC11000117	93 157	1,948,994	38,409
CITY AND COUNTY OF SAN FRANCISCO	BPHC11000126	93 157	738,786	251,816
AMERICAN COLLEGE OF MEDICAL TOXICOLOGY INC.	41U61TS000238-R9-01	93 161	180,843	20,597
AMERICAN COLLEGE OF MEDICAL TOXICOLOGY INC.	78195	93 161	430	
ASSOCIATION OF OCCUPATIONAL AND ENVIRONMENTAL CLINICS	F/OCCUP ENV AOEC-43431 BAKER B10.09	93 161	1,397	
ASSOCIATION OF OCCUPATIONAL AND ENVIRONMENTAL CLINICS	SKW TROSTBERG AKTIENGESELLSCH	93 161	3,944	
ARIMA GENOMICS, LLC	Sub 20143838 (HG008118)	93 172	266,729	
BRIGHAM AND WOMEN'S HOSPITAL	109737	93 172	690	
BRIGHAM AND WOMEN'S HOSPITAL	BROAD INSTITUTE, INC. IDEKER	93 172	1,604	
COLUMBIA UNIVERSITY	2 (GG010353)-cyc4	93 172	34.790	
CORNELL UNIVERSITY	63519-10076	93 172	10,874	
CORNELL UNIVERSITY	63519-9682	93 172	50	
HARVARD UNIVERSITY	SUB 148893 (HG005550)	93 172	18,525	
HUDSONALPHA INSTITUTE FOR BIOTECHNOLOGY	20000.002.04-01-cyc1	93 172	244,208	
INDIANA UNIVERSITY	SUB BL-4629708-UCSD (HG007078)	93 172	92,987	
JACKSON LABORATORY, THE	Sub TBI (HG007497)	93 172	254,956	
JOHNS HOPKINS UNIVERSITY	NIH-JHU/ZHANG54.5%/04/12	93 172	(3,778)	
KAISER PERMANENTE DIVISION OF RESEARCH	115-6547-1	93 172	102,425	
LUDWIG INSTITUTE FOR CANCER RESEARCH				
LUDWIG INSTITUTE FOR CANCER RESEARCH	SUB 241301-05003 (HG006997)	93 172	187,159	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY 2	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
LUDWIG INSTITUTE FOR CANCER RESEARCH	Sub 242201-05003B (HG008135 )	93 172	54,949	
MISSION BIO, INC.	UCSF#A124652	93 172	7,090	
MOLECULAR ASSEMBLIES, INC	201500348	93 172	33,746	
STANFORD UNIVERSITY	21054650-8167-D-FC	93 172	107,965	
STANFORD UNIVERSITY	60141508-106846-A-05	93 172	49,034	
STANFORD UNIVERSITY	U01HG009080 BURCHARD	93 172	1,506	
UNIVERSITY OF CHICAGO	FP055388:4	93 172	55,321	
UNIVERSITY OF CONNECTICUT	SUB 43161830 (HG007005)	93 172	208,928	
UNIVERSITY OF CONNECTICUT	SUB UCHC6-42832973 (HG007005)	93 172	1,231,741	
UNIVERSITY OF MASSACHUSETTS MEDICAL SCHOOL	WA00276640/RFS2015141	93 172	185,469	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	1U01HG007437-01	93 172	21,249	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	88300	93 172	(48)	
UNIVERSITY OF UTAH	10020594-1	93 172	(1,831)	
UNIVERSITY OF WASHINGTON	UWSC8775	93 172	11,960	
WASHINGTON UNIVERSITY IN ST. LOUIS	UCSF#A122114	93 172	138,498	
WELLCOME TRUST, THE	A00-2225-004	93 172	256,106	
CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	Sub SA0000505 ( DC015046 )	93 173	76,575	
CHILDREN'S NATIONAL MEDICAL CENTER	30001518-13-01	93 173	13,808	
FATHER FLANAGANS BOYS HOME	UCSF#A125753	93 173	40,272	
JOHNS HOPKINS UNIVERSITY	2002596820	93 173	22,584	
OREGON HEALTH & SCIENCE UNIVERSITY	006897	93 173	23,349	
OREGON HEALTH & SCIENCE UNIVERSITY	Sub 1002383 (DC012938	93 173	30,678	
PRAXIS BIOSCIENCES, LLC	F/PRAXIS PB-50904 CERUSSI J53.0 06/	93 173	(10,637)	
SALK INSTITUTE FOR BIOLOGICAL STUDIES	201601254	93 173	25,274	
UNIVERSITY OF ILLINOIS	SUB 2013-05055-01 (DC013181)	93 173	8,944	
UNIVERSITY OF SOUTH CAROLINA	16-3089-cyc1	93 173	5,625	
UNIVERSITY OF SOUTHERN CALIFORNIA	43641860:2	93 173	5,100	
UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT HOUSTON	0011468B	93 173	15,295	
UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT HOUSTON	0011468C-cyc1	93 173	19,372	
UNIVERSITY OF TEXAS-AUSTIN	R03DC013403	93 173	85,466	
WEST VIRGINIA UNIVERSITY	SUB 05-159-UCSD (DC007695)	93 173	62,534	
CENTER FOR COMPREHENSIVE CARE & DIAGNOSIS OF INHERITED BLOOD DISORDERS	CIBDIX2012HRSA-UCSD-1 (MC24045	93 184	7,913	
CENTER FOR COMPREHENSIVE CARE & DIAGNOSIS OF INHERITED BLOOD DISORDERS	CIBDIX2011CDC-UCSF-1	93 184	21,005	
ACADEMIC PEDIATRIC ASSOCIATION	20152286	93 185	7,847	
JOHNS HOPKINS UNIVERSITY	2001377393 (HHSA290201100007C)	93 185	69,513	
UNIVERSITY OF ROCHESTER	416612	93 185	59,341	
UNIVERSITY OF ROCHESTER	416614	93 185	9,339	
MAYO CLINIC/MAYO FOUNDATION FOR MEDICAL EDUCATION & RESEARCH	5R01AT006515	93 213	42,341	
MIRIAM HOSPITAL, THE	Sub 710-9146 ( AT006948 )	93 213	19,786	
PARTNERS HEALTHCARE SYSTEM, INC	224322	93 213	8,392	
PARTNERS HEALTHCARE SYSTEM, INC	PSA-032408-cyc7	93 213	373	
RAND CORP	9920140048:03	93 213	127,688	
RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	A125156	93 213	43,935	
UNIVERSITY OF CONNECTICUT	SUB 7012 (AT006466)	93 213	150,628	
UNIVERSITY OF TEXAS-SOUTHWESTERN MEDICAL CENTER AT DALLAS	GMO-120903	93 213	281,280	
	5.110 12000	33 213	201,200	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY 2	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VMRF/NIH 309059 HENRY 8/14	93 213	(5,701)	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	PA GOLSHAN 312138 ( AT 007936)	93 213	20,955	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	REDWINE 312149 08658(AT007600)	93 213	15,611	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	SUB 08658002-313884 (AT007600)	93 213	2,441	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA 312160 CARTER(AT007600)	93 213	589	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA 314281 CASMAR (AT007936)	93 213	16,048	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA 314282 ROBINSON (AT007936)	93 213	27,488	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA ADV WILSON ( AT007600 )	93 213	1,122	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA HONG 309793 (AT007600-01A1	93 213	1,775	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA HURST 312140 ( AT 007936)	93 213	5,897	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA LANG 312136 ( AT007936)	93 213	33,934	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA PUNG 312730 (AT 007600)	93 213	5,215	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA TAUB 313152 (AT007600)	93 213	3,280	
UNIVERSITY OF TEXAS-SOUTHWESTERN MEDICAL CENTER AT DALLAS	A15-0206-001	93 213	91,031	
UNIVERSITY OF MICHIGAN	3003117844-cyc2	93 220	27,737	
CEDARS-SINAI MEDICAL CENTER	0001207401	93 226	34,368	
CHILDREN'S HOSPITAL MEDICAL CENTER OF CINCINNATI	134795	93 226	28,463	
CHILDREN'S HOSPITAL OF PHILADELPHIA	321060	93 226	72,308	
DARTMOUTH COLLEGE	R814	93 226	5,910	
DARTMOUTH COLLEGE	R815	93 226	123,549	
DUKE UNIVERSITY	2038054	93 226	48,850	
DUKE UNIVERSITY	2038742	93 226	110,312	
DUKE UNIVERSITY	2039719	93 226	11,477	
HARVARD PILGRIM HEALTH CARE	1R18HS021424-01-cyc4	93 226	130,419	
JOHNS HOPKINS UNIVERSITY	2002441400-cyc1	93 226	75,608	
PALO ALTO MEDICAL FOUNDATION	4-0802	93 226	2,166	
RAND CORP	RAND/DHHS 9920140072 FITZGERA 4/15	93 226	12,294	
RAND CORP	9920150014	93 226	24,811	
RAND CORP	9920160022	93 226	70,737	
RHODE ISLAND HOSPITAL	I1RI8HS022860-01A 1	93 226	60,457	
STANFORD UNIVERSITY	60856377-114856	93 226	142,340	
UNIVERSITY OF ROCHESTER	416668	93 226	81,694	
UNIVERSITY OF UTAH	10035492-01	93 226	28,055	
UNIVERSITY OF UTAH	10035492-05	93 226	29,100	
VANDERBILT UNIVERSITY	VUMC 57336	93 226	12,405	
VANDERBILT UNIVERSITY	VUMC42001-CYC2	93 226	1,346	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	08512003-313401-cyc1	93 226	24,702	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	HA 311617 ( 1R01HS021290-01A1)	93 226	29,711	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA LIU 311669 (HS 021290)	93 226	15,912	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA WEIBEL 311684 (HS021290	93 226	31,936	
WAYNE STATE UNIVERSITY	WSU12079	93 226	10,743	
ARIZONA STATE UNIVERSITY/TEMPE	15-601	93 233	198,515	
CALIFORNIA PACIFIC MEDICAL CENTER RESEARCH INSTITUTE	2803209-S106 BAUER	93 233	(147)	
UNIVERSITY OF COLORADO DENVER	FY15.001.001-cyc1	93 237	183,129	
STANFORD UNIVERSITY	60962873-104354	93 239	13,141	
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## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
STANFORD UNIVERSITY	60983264-104354-cyc1	93 239	14,339	
ADVANCED BRAIN MONITORING, INC.	Sub None (MH097303)	93 242	162,615	
ALLEN/LOEB ASSOCIATES	A127351	93 242	11,347	
ALLEN/LOEB ASSOCIATES	Web-Based Support for Implemen	93 242	29	
BIOPICO SYSTEMS	BPS-101073-cyc2	93 242	11,231	
BRANDEIS UNIVERSITY	SUB 402255 (MH102841)	93 242	167,290	
BRENTWOOD BIOMEDICAL RESEARCH INSTITUTE	20084197	93 242	4,058	
BRIGHAM AND WOMEN'S HOSPITAL	Sub 112807 (MH091448)	93 242	80,277	
CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	Sub SA0000067 (MH100260)	93 242	18,200	
CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	Sub SA0000289 (MH098124)	93 242	9,404	
CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	Sub SA0000381 (MH102578)	93 242	93,554	
CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	Sub SA0000471 (MH107802)	93 242	10,265	
CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	Sub SA0000475 ( MH103494)	93 242	25,711	
CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	Sub SA0000478 (MH107802)	93 242	12,723	
CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	Sub SA0000502 (5R01MH101173-02	93 242	15,479	
CALIFORNIA STATE UNIVERSITY, SAN FRANCISCO STATE UNIVERSITY	S10-0009 DWORKIN	93 242	26	
CALIFORNIA STATE UNIVERSITY, SAN FRANCISCO STATE UNIVERSITY	\$10-0010	93 242	3,311	
CARE NEW ENGLAND HEALTH SYSTEMS	CARE NEW ENGLAND HEALTH SYSTEMS (88094)	93 242	(6)	
CARE NEW ENGLAND HEALTH SYSTEMS	CARE NEW ENGLAND HEALTH SYSTEMS STR (88329)	93 242	(236)	
COLD SPRING HARBOR LABORATORY	NIH-CSHL/KARTEN/54.5%	93 242	(20)	
COLUMBIA UNIVERSITY	007625	93 242	77,926	
COLUMBIA UNIVERSITY	1(GG009636):1	93 242	51,794	
COLUMBIA UNIVERSITY	COLUMBIA UNIVERSITY HILLYARD	93 242	(185)	
DANA-FARBER CANCER INSTITUTE	1229301	93 242	33,385	
GEORGE WASHINGTON UNIVERSITY	13-528	93 242	19,057	
GEORGETOWN UNIVERSITY	Sub 411069 GR411012-UCSD (MH10	93 242	83,791	
GLADSTONE INSTITUTES	R2419-A	93 242	41,147	
GROUP HEALTH COOPERATIVE	MH092201-04-UCSF	93 242	68,770	
HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY MEDICINE	2196 / PO # 735721(MH087981)	93 242	(1,691)	
HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY MEDICINE	834958	93 242	10,640	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	Sub 0253-6142-4609 (MH080663)	93 242	4,813	
JOHNS HOPKINS UNIVERSITY	NIH/JHU 2001596933 SPECTOR	93 242	2,552	
JOHNS HOPKINS UNIVERSITY	Sub Task LDR03 (Al068632)	93 242	19,098	
KDAC THERAPEUTICS	KDAC-203835-cyc1	93 242	5,119	
KENNEDY KRIEGER INSTITUTE	037366	93 242	16,918	
KENNEDY KRIEGER INSTITUTE	SUB NONE (MH085328)	93 242	8,620	
LOS ANGELES BIOMEDICAL RESEARCH INSTITUTE AT HARBOR-UCLA MEDICAL CTR	15005544:1	93 242	146,975	
MASSACHUSETTS GENERAL HOSPITAL	216662	93 242	150,123	
MASSACHUSETTS GENERAL HOSPITAL	225144	93 242	88,642	
MASSACHUSETTS GENERAL HOSPITAL	MGH/NIH 217120 TOGA 08/13 54%	93 242	1,282	
MEDICAL UNIVERSITY OF SOUTH CAROLINA	MUSC15-083-cyc1	93 242	21,385	
MOUNT SINAI MEDICAL CENTER	0253-6142-4609:2	93 242	13,608	
NEUROINDX, INC.	20141039	93 242	6,572	
NEW YORK ACADEMY OF MEDICINE	UC01	93 242	44,118	
NEW YORK UNIVERSITY	15-A1-00-002894-01	93 242	20,270	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY 2	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
NORTH SHORE-LONG ISLAND JEWISH HEALTH SYSTEM	500673	93 242	18,830	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	VIN1245B LOEWY	93 242	(2,248)	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	MAT1870-095181	93 242	172,489	
NORTHWESTERN UNIVERSITY	60033871-cyc4	93 242	111,475	
NORTHWESTERN UNIVERSITY	60037237 UCSF	93 242	55,158	
PUBLIC HEALTH FOUNDATION ENTERPRISES, INC.	0176.0103	93 242	4,395	
PUBLIC HEALTH FOUNDATION ENTERPRISES, INC.	1R01MH109320-01	93 242	21,323	
PUBLIC HEALTH FOUNDATION ENTERPRISES, INC.	2417.001.001EPIC	93 242	2	
RADY CHILDREN'S HOSPITAL RESEARCH CENTER	SUB NONE (MH104289)	93 242	51,774	
RAND CORP	9920150022	93 242	61,464	
RAND CORP	9920150037	93 242	166,278	
RAND CORP	9920150088	93 242	54,939	
RESEARCH FOUNDATION FOR MENTAL HYGIENE	122583	93 242	860	
RESEARCH FOUNDATION FOR MENTAL HYGIENE	RESEARCH FOUNDATION -107617	93 242	(276)	
RESEARCH FOUNDATION OF STATE UNIVERSITY OF NEW YORK (THE)	624371105683UCD	93 242	19,231	
RHODE ISLAND HOSPITAL	701-5452:3	93 242	12,072	
RTI INTERNATIONAL	2-312-0214355-51850L	93 242	14,061	
SALK INSTITUTE FOR BIOLOGICAL STUDIES	SUB none (MH099571)	93 242	168,929	
SALK INSTITUTE FOR BIOLOGICAL STUDIES	Sub P0037374 (MH091407)	93 242	47,560	
SALK INSTITUTE FOR BIOLOGICAL STUDIES	SUB PO 143590 (MH104756)	93 242	1,043	
SOCIAL AND SCIENTIFIC SYSTEMS, INC.	NIH/SSS BRS-IMPCT-S-11-000016-00166	93 242	107	
SOCIAL AND SCIENTIFIC SYSTEMS, INC.	NIH/SSS BRS-IMPCT-S-11-000016-00157	93 242	146	
SOCIAL AND SCIENTIFIC SYSTEMS, INC.	NIH/SSS BRS-IMPCT-S-11-000016-00201	93 242	130	
SOCIAL AND SCIENTIFIC SYSTEMS, INC.	NIH/SSS 1246-AI068632 SPECTOR 54.5	93 242	593	
STANFORD UNIVERSITY	60546456-108656:01	93 242	(5,473)	
STANFORD UNIVERSITY	61097380-119948	93 242	356,191	
STANFORD UNIVERSITY	SUB 60444056-108656 (MH100900)	93 242	240	
STANFORD UNIVERSITY	SUB 60870346-103420	93 242	117,176	
STANFORD UNIVERSITY	Sub 60881566-43092 (MH086135 )	93 242	52,211	
TEMPLE UNIVERSITY	360762-UCLA:3	93 242	53,762	
THE MIND RESEARCH NETWORK	6169-002 SUBN1-cyc1	93 242	95,212	
THE SCRIPPS RESEARCH INSTITUTE	NIH-TSRI/IDEKER	93 242	(3,180)	
THE SCRIPPS RESEARCH INSTITUTE	SUB 5-50366 (MH100175)	93 242	1,117	
THE SCRIPPS RESEARCH INSTITUTE	SUB 5-50499 (MH103134)	93 242	83,645	
THE UNIVERSITY OF ALABAMA (TUSCALOOSA)	000388010-017	93 242	35,373	
THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	000504051-001	93 242	27,578	
THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	000506211-002	93 242	128,250	
THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	Sub 000509302 (MH081917 )	93 242	21,208	
THINK-NOW INC.	20153040	93 242	30,371	
UNIVERSITY OF CAPE TOWN	A125318	93 242	23,234	
UNIVERSITY OF CHICAGO	Sub FP060924 (MH087214)	93 242	25,931	
UNIVERSITY OF ILLINOIS	2013-02152-01-02	93 242	18,493	
UNIVERSITY OF ILLINOIS	B 2013-00362-02-00 (MH101043 )	93 242	28,547	
UNIVERSITY OF IOWA	SUB W000657638 (MH105527)	93 242	16,222	
UNIVERSITY OF MARYLAND, BALTIMORE	7761	93 242	153,102	
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# Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
UNIVERSITY OF MIAMI	SUB 663805 (MH100942)	93 242	372,979	
UNIVERSITY OF MICHIGAN	3003330099	93 242	96,339	
UNIVERSITY OF MICHIGAN	3003844676-cyc1	93 242	25,463	
UNIVERSITY OF NEBRASKA	Sub 34-5160-2039-110 (MH062261	93 242	171,040	
UNIVERSITY OF NEBRASKA	SUB 34-5160-2085-002(MH094160)	93 242	42,620	
UNIVERSITY OF NEBRASKA MEDICAL CENTER	Sub 34-5160-2057-615 (MH062261	93 242	61,780	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5030448	93 242	11,002	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5101901	93 242	2,413	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5-31865	93 242	220,289	
UNIVERSITY OF PENNSYLVANIA	562318	93 242	44,822	
UNIVERSITY OF PENNSYLVANIA	564938	93 242	50,619	
UNIVERSITY OF PITTSBURGH	0030253 (123481-1)	93 242	35,216	
UNIVERSITY OF PITTSBURGH	0048409 (125934-1):1	93 242	52,741	
UNIVERSITY OF PITTSBURGH	FDP-UNIPITTS/NIH 0017881 STROBER 4/	93 242	193,813	
UNIVERSITY OF PITTSBURGH	FFT (NIHI) U PITTS SUB 9007196 THOM	93 242	(202)	
UNIVERSITY OF PITTSBURGH	Sub 9007201 (120215-1) (MH0903	93 242	834	
UNIVERSITY OF ROCHESTER	Sub 416741-G (MH104756)	93 242	123,419	
UNIVERSITY OF SOUTHERN CALIFORNIA	44748603:01	93 242	215,764	
UNIVERSITY OF SOUTHERN CALIFORNIA	SUB 46137897 (MH100979)	93 242	6,624	
UNIVERSITY OF WASHINGTON	UW/NIH SUB 748835 GAINES 8% 2013	93 242	(406)	
UNIVERSITY OF WASHINGTON	UWSC8566	93 242	6,399	
UNIVERSITY OF WISCONSIN-MADISON	Sub 647K544 ( MH095984 )	93 242	46,485	
VANDERBILT UNIVERSITY	21951-\$2:7	93 242	51,466	
VANDERBILT UNIVERSITY	Sub 38441 (MH095621)	93 242	119,457	
VANDERBILT UNIVERSITY	Sub 8077-020521 (MH106748)	93 242	5,275	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	Vmrf 256308 Henry	93 242	(6,727)	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VMRF/NIH MUDALIAR	93 242	(12,282)	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	Sub Eyler (MH083968)	93 242	20,574	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA (NIH) DALY 8152 (MH091057)	93 242	2,305	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Aarons 308075 (MH091057)	93 242	11,849	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA BUZZELLA 312451 (MH100410)	93 242	3,407	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Eyler (MH083968)	93 242	9,821	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA FEIFEL (MH100410)	93 242	21,445	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Golshan 308077 (MH091057)	93 242	1,684	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA GRANHOLM (MH100410)	93 242	41,615	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Granholm 300615 (MH091057)	93 242	42,372	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Perivoliotis 308078 (MH091	93 242	5,147	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Rufener 303767 (MH091057-0	93 242	2,499	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Sommerfeld 308079 (MH09105	93 242	25,902	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA WORLEY 315555 ( MH 091057-	93 242	2,785	
WASHINGTON UNIVERSITY IN ST. LOUIS	SUB WU-14-154 (MH091657)	93 242	802	
WEST VIRGINIA UNIVERSITY	14716	93 242	87,778	
WRIGHT STATE UNIVERSITY	R21MH099361	93 242	98,528	
YALE UNIVERSITY	1P50MH106934-01	93 242	187,986	
YALE UNIVERSITY	YALE UNIV M13A11523 06/13 54%	93 242	7,504	

# Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY	
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
YALE UNIVERSITY	C15A12041 (A10127)	93 242	501,710	
YALE UNIVERSITY	C16A12292 (A10323)	93 242	55,191	
YALE UNIVERSITY	M13A11486 (A09057):02	93 242	290,219	
YALE UNIVERSITY	M14A11717(A09236)	93 242	7,559	
YALE UNIVERSITY	M14A11730 (A09454) (MH099979)	93 242	310	
YALE UNIVERSITY	M15A11970 (A10040) (MH977969)	93 242	37,149	
YALE UNIVERSITY	M15A12179 (A10304)	93 242	191,041	
YALE UNIVERSITY	M15A12265 (A10439)	93 242	31,322	
YALE UNIVERSITY	M16A12222 (A10393)	93 242	521,609	
YALE UNIVERSITY	M16A12225 (A10393)	93 242	190,281	
YALE UNIVERSITY	YALE_M14A11892	93 242	107,049	
CLARE FOUNDATION, INC.	20152532	93 243	95,566	
GOOD SAMARITAN SHELTER	SB130033	93 243	43,599	
HEALTHRIGHT 360	20114625	93 243	9,664	
HEALTHRIGHT 360	2014-15:2	93 243	17,355	
SANTA BARBARA, COUNTY OF	SB COUNTY (DHHS) BC15060 6/15	93 243	(2,236)	
SANTA BARBARA, COUNTY OF	BC 15-060	93 243	68	
SPECIAL SERVICES FOR GROUPS	4550:04	93 243	10,536	
TIME FOR CHANGE FOUNDATION	H79TI024020:02	93 243	18,072	
CALIFORNIA DEPARTMENT OF HEALTH CARE SERVICES	1289548	93 251	10,179	2,00
CALIFORNIA DEPARTMENT OF HEALTH CARE SERVICES	15-92217	93 251	41,523	
CPWR - THE CENTER FOR CONSTRUCTION RESEARCH AND TRAINING	3001-609-01	93 262	156,820	
CPWR - THE CENTER FOR CONSTRUCTION RESEARCH AND TRAINING	3001-614-01	93 262	131,763	15,75
CPWR - THE CENTER FOR CONSTRUCTION RESEARCH AND TRAINING	U600H009762	93 262	232,048	
GEORGE WASHINGTON UNIVERSITY	13-M107	93 262	(4,338)	
GEORGE WASHINGTON UNIVERSITY	14-M53	93 262	41,398	
GEORGE WASHINGTON UNIVERSITY	15-M43	93 262	45,580	
STANFORD UNIVERSITY	29007300-48844-B	93 262	159,930	
UNIVERSITY OF IOWA	Sub W000794302 (OH010238)	93 262	18,215	
UNIVERSITY OF MINNESOTA	A004330202	93 262	49,430	
UNIVERSITY OF WASHINGTON	764047	93 262	40,837	
HEALTH RESEARCH, INC.	Hith Res Inc, Geng	93 266	(4,223)	
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	13-10010 RUTHERFORD	93 268	12,469,249	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VMRF/NIH 294934 SCHULTEIS 2/11	93 270	2,828	
BIOLINQ, INC.	Sub 20154324 (AA024643)	93 273	11,423	
BRENTWOOD BIOMEDICAL RESEARCH INSTITUTE	20111179	93 273	109,325	
BRENTWOOD BIOMEDICAL RESEARCH INSTITUTE	20111881:4	93 273	28,505	
BRENTWOOD BIOMEDICAL RESEARCH INSTITUTE	BBRI/NIH 20090297 GUKOVSKY 02/11 26	93 273	(1,156)	
BROWN UNIVERSITY	SUB 00000613 (AA019072)	93 273	22,258	
CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	Sub 57976A 7802 P4352 211 (AA0	93 273	4,941	
CHILDREN'S HOSPITAL OF LOS ANGELES	P2013-0010:3	93 273	19,275	
CLEVELAND CLINIC FOUNDATION	CLEVELAND CLINIC 270SUB FELDSTEIN	93 273	(22,193)	
COLUMBIA UNIVERSITY	1(GG008346)	93 273	32,269	
GROUP HEALTH COOPERATIVE	2015123695	93 273	13,807	
GROUP HEALTH COOPERATIVE	2015173830	93 273	15,889	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

				FY 2	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal		Total Federal	Pass-Through to
	or Other Identifier	CFD	A Number	Expenditures	Subrecipients
GROUP HEALTH COOPERATIVE	2015173832	93	273	15,889	
GROUP HEALTH COOPERATIVE	2016108379	93	273	5,923	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	Sub 0255-5041-4609 (AA018734)	93	273	(23)	
KENNEDY KRIEGER INSTITUTE	Sub None ( AA024404)	93	273	24,345	
NEW YORK UNIVERSITY	F7090-01:01	93	273	88,031	
OREGON HEALTH & SCIENCE UNIVERSITY	Sub 9007455 (AA013641)	93	273	26,975	
PUBLIC HEALTH INSTITUTE	1020572	93	273	30,557	
RAND CORP	9920130157:01	93	273	56,863	
RHODE ISLAND HOSPITAL	701-5475-1-CA	93	273	4,547	
SRI INTERNATIONAL	157-000018	93	273	31,301	
SUNY DOWNSTATE MEDICAL CENTER	Sub 1009189 (AA008401)	93	273	570,259	
UNIVERSITY OF ARIZONA	13391	93	273	13,009	
UNIVERSITY OF MISSOURI - KANSAS CITY	004428500036238	93	273	14,308	
UNIVERSITY OF NEW MEXICO	028328-873N	93	273	3,154	
UNIVERSITY OF PITTSBURGH	SUB 0029929 (AA021690)	93	273	6,044	
UNIVERSITY OF SOUTHERN CALIFORNIA	58445116	93	273	84,737	
UNIVERSITY OF SOUTHERN CALIFORNIA	Sub 48143238 (AA011999)	93	273	134,383	
UNIVERSITY OF SOUTHERN CALIFORNIA	Sub 48143288 (AA011999)	93	273	4,804	
UNIVERSITY OF SOUTHERN CALIFORNIA	SUB 58436214 (AA011999)	93	273	27,900	
UNIVERSITY OF SOUTHERN CALIFORNIA	Sub 70546921 (AA011999)	93	273	861	
UNIVERSITY OF SOUTHERN CALIFORNIA	Sub 70547055 ( AA011999)	93	273	2,928	
UNIVERSITY OF TEXAS-AUSTIN	UTA13-000879	93	273	51,740	
UNIVERSITY OF VIRGINIA	SUB GC12038-140273 (AA019720)	93	273	83,102	
UNIVERSITY OF WASHINGTON	701474-CYC6	93	273	86,030	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Ho 310664 (AA021908)	93	273	3,231	
WASHINGTON UNIVERSITY IN ST. LOUIS	SUB WU-15-189 (TR000481)	93	273	26,816	
WAYNE STATE UNIVERSITY	SUB WSU14013 (AA022891)	93	273	4,803	
AMERICAN ACADEMY OF CHILD & ADOLESCENT PSYCHIATRY	NIDA-AACAP-Meruelo	93	279	5,053	
ANTIDOTE THERAPEUTICS, INC.	Sub 20143632 (DA038877)	93	279	97,095	
BAYLOR COLLEGE OF MEDICINE	Sub SC102150631 (DA036134 )	93	279	57,956	
BOSTON MEDICAL CENTER CORPORATION	Sub 0310101 (DA032082)	93	279	42,863	
BOSTON UNIVERSITY	4500001814	93	279	76,978	
CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	SA0000428	93	279	(5,576)	
CARE NEW ENGLAND HEALTH SYSTEMS	CARE NEW ENGLAND HEALTH SYSTEMS STR (88478)	93	279	(53)	
CHILDREN'S HOSPITAL OF LOS ANGELES	P2014-0049	93	279	4,912	
CHILDREN'S HOSPITAL OF LOS ANGELES	P2015-0407	93	279	276,036	
COLUMBIA UNIVERSITY	1(GG008409)	93	279	16,387	
COLUMBIA UNIVERSITY	1(GG011510)	93	279	189,946	
EMORY UNIVERSITY	SUB T232419 (DA036233)	93	279	14,860	
FLORIDA INTERNATIONAL UNIVERSITY	800002647-01	93	279	11,420	
FORDHAM UNIVERSITY	FISHER FELLOW:02	93	279	3,062	1,800
FRED HUTCHINSON CANCER RESEARCH CENTER	0000848137	93	279	101,133	
FRIENDS RESEARCH INST., INC.	11338-3	93	279	19,322	
FRIENDS RESEARCH INST., INC.	11339-2:1	93	279	(786)	
GROUP HEALTH COOPERATIVE	2014184493	93	279	2,845	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

		·	FY :	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
GROUP HEALTH COOPERATIVE	2015173125	93 279	14,151	
IQ SOLUTIONS INC.	NIDA-ANRS Fellowship	93 279	19,035	
IQ SOLUTIONS INC.	NIDA-INSERM-ZELL	93 279	46,128	
JOHNS HOPKINS UNIVERSITY	2001603363	93 279	101,424	
KAISER PERMANENTE DIVISION OF RESEARCH	RNG200340-UCSF-01	93 279	26,075	
MAGEE-WOMENS HOSPITAL, RESEARCH INSTITUTE AND FOUNDATION	8020	93 279	9,951	
NEW YORK UNIVERSITY	15-0-S1-003671-01	93 279	232,416	
NEW YORK UNIVERSITY	15-AO-S2-00-003671-01:1	93 279	141,902	121,952
NEW YORK UNIVERSITY	NYU/NIH 15-A0-S1-003671 LING 02/17	93 279	266,638	205,194
NORTHWESTERN UNIVERSITY	60031384	93 279	50,310	
NORTHWESTERN UNIVERSITY	60031384-UCSF#A120192	93 279	20,323	
NORTHWESTERN UNIVERSITY	60035189 UCLA:A03	93 279	10,317	
OREGON HEALTH & SCIENCE UNIVERSITY	1003544 UCI-cyc3	93 279	355,598	
OREGON HEALTH & SCIENCE UNIVERSITY	GPHPM0183A_UCSF	93 279	66,737	
PUBLIC HEALTH FOUNDATION ENTERPRISES, INC.	R01DA031678	93 279	7,758	
PUBLIC HEALTH FOUNDATION ENTERPRISES, INC.	UCSF #A121523	93 279	8,509	
RAND CORP	9920100039:5	93 279	27,076	
RAND CORP	9920130131:2	93 279	1,280	
RHODE ISLAND HOSPITAL	7137029	93 279	2,033	
RTI INTERNATIONAL	1R01DA038632-01	93 279	68,245	
STANFORD UNIVERSITY	60317762-26345-F	93 279	77,432	
STOCHASTECH CORPORATION	201602008	93 279	7,601	
THE SCRIPPS RESEARCH INSTITUTE	5-20141 (DA031566)	93 279	45,956	
THE SCRIPPS RESEARCH INSTITUTE	Sub 5-20694 (DA029968)	93 279	12,049	
THE SCRIPPS RESEARCH INSTITUTE	Sub 5-52217 (DA 036164)	93 279	44,450	
THE SCRIPPS RESEARCH INSTITUTE	SUB 5-52431 (DA040458)	93 279	46,267	
TULANE UNIVERSITY	NIH/TULANE 20130541 SPECTOR	93 279	(21,959)	
UNIVERSITY OF BRITISH COLUMBIA	20R08866:2	93 279	(109)	
UNIVERSITY OF CHICAGO	47695-A SEN	93 279	(2,912)	
UNIVERSITY OF CHICAGO	FP095270-B	93 279	67,286	
UNIVERSITY OF COLORADO DENVER	Sub none (DA035804)	93 279	328,675	
UNIVERSITY OF GEORGIA	RR376-411/4945336	93 279	15,268	
UNIVERSITY OF KANSAS/KU CENTER FOR RESEARCH, INC.	1R01DA03579-01A1	93 279	15,997	
UNIVERSITY OF KANSAS/KU CENTER FOR RESEARCH, INC.	QN858270	93 279	103,264	
UNIVERSITY OF MIAMI	UMIAMI/NIH GELBERG M175215 05/13 26	93 279	(114)	
UNIVERSITY OF MICHIGAN	3003833985	93 279	7,625	
UNIVERSITY OF MINNESOTA	U54DA031659	93 279	729,489	
UNIVERSITY OF NEVADA, RENO	UNR-16-07 (DA038185)	93 279	19,148	
UNIVERSITY OF NEW MEXICO	2R01DA016017-12	93 279	1,109,899	
UNIVERSITY OF NEW MEXICO	7R01DA031056-05	93 279	199,978	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	1R01DA037215	93 279	48,675	
UNIVERSITY OF OREGON	006526	93 279	147,609	
UNIVERSITY OF PENNSYLVANIA	554035/10021771/1889200	93 279	34,572	
UNIVERSITY OF PENNSYLVANIA	UCSF#A116246	93 279	8,246	
UNIVERSITY OF PITTSBURGH	0046202-cyc1	93 279	19,338	
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## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY 2	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Agency / Pass-Through Number Federal Total Fed		Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
UNIVERSITY OF SOUTHERN CALIFORNIA	64576033	93 279	39,915	
UNIVERSITY OF UTAH	10030628-CYC1	93 279	22,420	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VMRF/NIH 254937 SCHULTES	93 279	(3,114)	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Anthenelli 307431 (NIDA-VA	93 279	40,559	
WAYNE STATE UNIVERSITY	WSU12080	93 279	131,803	
ASTRAEA THERAPEUTICS, LLC	2014-UCI-033744-01-cyc2	93 279	34,780	
INTERNATIONAL AIDS SOCIETY	IAS-NIDA-GUISE	93 279	37,287	
AMERICAN THROMBOSIS AND HEMOSTASIS NETWORK	ATHN2011002-HTC17-2 (DD000761)	93 283	3,282	
ASSOCIATION OF SCHOOLS OF PUBLIC HEALTH	S5058	93 283	98,878	4,237
COMMUNITY ACTION PARTNERSHIP OF ORANGE COUNTY	CAPOC -201561-cyc1	93 283	198,761	
HARVARD PILGRIM HEALTH CARE	HPHC-50423-cyc7	93 283	60,410	
HISPANIC-SERVING HEALTH PROFESSIONS SCHOOLS, INC.	CDC-HSHPS/ZUNIGA/8%/12/03	93 283	(20,099)	
NATIONAL FRAGILE X FOUNDATION	201302771	93 283	6,704	
PUBLIC HEALTH FOUNDATION ENTERPRISES, INC.	0235.016.901	93 283	24,951	
PUBLIC HEALTH FOUNDATION ENTERPRISES, INC.	235.013.920	93 283	17,024	
BOSTON UNIVERSITY	4500001576	93 286	514	
BOSTON UNIVERSITY	4500001787 amd1	93 286	75,591	
BOSTON UNIVERSITY	4500001790	93 286	146,785	
CALIFORNIA INSTITUTE OF TECHNOLOGY	19GM1087680	93 286	70,691	
COLORADO STATE UNIVERSITY SYSTEM (SYSTEM PARENT CODE)	G-00068-1-cyc1	93 286	22,841	
EMORY UNIVERSITY	T494666	93 286	191,962	
GENERAL ELECTRIC COMPANY (INCL GE HEALTHCARE, GE LIGHTING INST)	400161117	93 286	172,452	
LOMA LINDA UNIVERSITY (INCL NATL MEDICAL TECHNOLOGY TESTBED, INC.)	LOM LIND U SC1201 SADROZ 01/16	93 286	11,964	
MASSACHUSETTS GENERAL HOSPITAL	221952	93 286	58,050	
MAYO CLINIC/MAYO FOUNDATION FOR MEDICAL EDUCATION & RESEARCH	P.O. 63770979	93 286	90,483	
NANOCELLECT BIOMEDICAL, INC.	Sub 20151958 (GM112442)	93 286	21,600	
NEUROENABLING TECHNOLOGIES, INC.	20145487	93 286	39,963	
NEUROENABLING TECHNOLOGIES, INC.	20145497	93 286	45,331	
NORTHWESTERN UNIVERSITY	NW SP10719/PROJ0002996 ANDRSN J53 1	93 286	(256)	
NORTHWESTERN UNIVERSITY	SP0021845-PROJ0007944	93 286	139,382	
NORTHWESTERN UNIVERSITY	SUB SP0030422-PROJ0008084 (EB0	93 286	188,290	
RUSH UNIVERSITY MEDICAL CENTER	Sub 2R56AI065361(AI065361)	93 286	89,941	
STANFORD UNIVERSITY	26590470-44290-A	93 286	103,390	
STANFORD UNIVERSITY	60664402-113972	93 286	371,163	
UNIVERSITY OF ILLINOIS	489799 E3786:3	93 286	(1,612)	
UNIVERSITY OF MEMPHIS	20142031	93 286	319,554	
UNIVERSITY OF MEMPHIS	Sub none (EB020404)	93 286	87,735	
UNIVERSITY OF MEMPHIS	U54EB020404	93 286	196,842	
UNIVERSITY OF MICHIGAN	3003598082-cyc1	93 286	529,284	
UNIVERSITY OF MINNESOTA	A002611301	93 286	6,392	
UNIVERSITY OF SOUTHERN CALIFORNIA	F/USC 149116 LEE ABRAHAM J53.0 08/1	93 286	2	
HEALTH RESEARCH, INC.	1U81HP27843-01-03	93 300	71,719	
ALTAMED HEALTH SERVICES CORPORATION	5NU58DP005740-02-00	93 304	17,719	
MANDELA MARKETPLACE INCORPORATED	MANDELA MARKETPLACE INCORPORA-Y15-	93 304	73,550	
CHARLES R. DREW UNIVERSITY OF MEDICINE AND SCIENCE	14-15-RV-G0070700-UCLA	93 307	32,948	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY 2	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number		Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
CHARLES R. DREW UNIVERSITY OF MEDICINE AND SCIENCE	15-16-RV-G0070700-UCLA	93 307	26,937	
CHARLES R. DREW UNIVERSITY OF MEDICINE AND SCIENCE	20155050	93 307	96,232	
CHARLES R. DREW UNIVERSITY OF MEDICINE AND SCIENCE	RASFDP-CDU/NIH G0986A00 SHAPIRO 05/	93 307	(42,957)	
CHARLES R. DREW UNIVERSITY OF MEDICINE AND SCIENCE	CDU/NIH JVG0077100 GIBBONS 8/14	93 307	(96)	
CHARLES R. DREW UNIVERSITY OF MEDICINE AND SCIENCE	DREW/NIH 1011KNG0986A0 SHARPIRO 5/1	93 307	(700)	
PACIFIC INSTITUTE FOR RESEARCH AND EVALUATION	Sub 0784 (MD010292)	93 307	10,068	
RAND CORP	9920140034:3	93 307	9,873	
RAND CORP	9920140145:1	93 307	105,356	
SAINT BARNABAS MEDICAL CENTER	UCLA1	93 307	122,507	
THE UNIVERSITY OF ALABAMA (TUSCALOOSA)	000505098-001	93 307	98,635	
UNIVERSITY OF MINNESOTA	H003876602	93 307	8,912	
UNIVERSITY OF MINNESOTA	N004745103	93 307	12,778	
UNIVERSITY OF PITTSBURGH	0047269 (126836-1)	93 307	16,064	
UNIVERSITY OF ROCHESTER	416172-G-cyc3	93 307	84,875	
UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT HOUSTON	0008663AM-cyc1	93 307	16,132	
UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT HOUSTON	0008663AS-cyc1	93 307	11,477	
UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT HOUSTON	Sub None (MD006941)	93 307	4,358	
UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT SAN ANTONIO	0008663S	93 307	5,881	
URBAN INSTITUTE	Sub 08609-006-00-UCSD-01 (MD00	93 307	76,515	
BRIGHAM AND WOMEN'S HOSPITAL	SUB 111215 (HL117861)	93 310	64,903	
BRIGHAM AND WOMEN'S HOSPITAL	SUB 111353 (HL117861)	93 310	88,458	
BROAD INSTITUTE INC.	5230122-5500000600:1	93 310	246,958	
BROAD INSTITUTE INC.	SUB 5230123-55000000792 (DK102	93 310	148,662	
CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	SUB SA0000339 (GM095384)	93 310	19,883	
CALIFORNIA STATE UNIVERSITY, SAN FRANCISCO STATE UNIVERSITY	1RL5MD009599-01	93 310	136,197	
CALIFORNIA STATE UNIVERSITY, SAN FRANCISCO STATE UNIVERSITY	S14-0004	93 310	432,336	
INDIANA UNIVERSITY	BL-4624901-UCI-cyc1	93 310	114,229	
LUDWIG INSTITUTE FOR CANCER RESEARCH	Sub 242301-05003A (DK107977 )	93 310	373,743	
LUDWIG INSTITUTE FOR CANCER RESEARCH	Sub 242301-05003B (DK107977)	93 310	46,433	
LUDWIG INSTITUTE FOR CANCER RESEARCH	SUB 242301-05003s (DK107977)	93 310	10,402	
MASSACHUSETTS GENERAL HOSPITAL	1U01MH105027-01	93 310	333,672	
PROFUSA, INC.	UCSF#A120651	93 310	41,440	
RAND CORP	9920150065 :01	93 310	33,139	
SALK INSTITUTE FOR BIOLOGICAL STUDIES	SUB NONE (EB021247)	93 310	196,368	
STANFORD UNIVERSITY	60392112-109837:01	93 310	149,482	
UNIVERSITY OF CHICAGO	FP047994-A	93 310	(142,926)	
UNIVERSITY OF CHICAGO	FP054245-B	93 310	18,833	
UNIVERSITY OF CONNECTICUT	UCHC6-61884479-cyc1	93 310	169,226	
UNIVERSITY OF MASSACHUSETTS AMHERST	WA00363865/OSP2016101	93 310	174,488	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	1U01MH104974-01	93 310	262,696	
UNIVERSITY OF SOUTHERN CALIFORNIA	68588929	93 310	59,982	
UNIVERSITY OF SOUTHERN CALIFORNIA	CTAFYN035	93 310	36,758	
UNIVERSITY OF SOUTHERN CALIFORNIA	Sub 70853595 (TR000967)	93 310	15,623	
UNIVERSITY OF SOUTHERN CALIFORNIA	Sub 71082591 (TR000967)	93 310	64,155	
YALE UNIVERSITY	YALE AISEN SUB M15A11884 (A10043) (	93 310	505,596	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
YESHIVA UNIVERSITY	310952	93 310	421,716	
HARVARD UNIVERSITY	152296.5089286.0107	93 310	83,434	
STANFORD UNIVERSITY	60442456-107901-B:2	93 313	171,372	
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	1510403	93 323	224,960	
PUBLIC HEALTH FOUNDATION ENTERPRISES, INC.	201501025	93 323	22,058	
PUBLIC HEALTH FOUNDATION ENTERPRISES, INC.	U50CK000410	93 323	14,884	
SEIU EDUCATION & SUPPORT FUND	UCSF# A121065	93 332	178,232	
CHILDREN'S HOSPITAL OF LOS ANGELES	SUB P2014-0220 SUB (TR000130)	93 350	360	
MOLECULAR EXPRESS	20152516	93 350	48,778	
UNIVERSITY OF PITTSBURGH	3UL1TR000005-09S1	93 350	4,443	
UNIVERSITY OF PITTSBURGH	9010570	93 350	(6,588)	
UNIVERSITY OF PITTSBURGH	9010570-CYC1	93 350	14,142	
UNIVERSITY OF PITTSBURGH	SUB 9010570 (TR000005)	93 350	29,716	
UNIVERSITY OF PITTSBURGH	Sub 9011366 (TR000005)	93 350	5,079	
WASHINGTON UNIVERSITY IN ST. LOUIS	WU-15-182-cyc1	93 350	338,786	
JACKSON LABORATORY, THE	SUB NONE (OD020351)	93 351	19,878	
JACKSON LABORATORY, THE	TBI	93 351	20,265	
MASSACHUSETTS GENERAL HOSPITAL	224641	93 351	252,552	
MICHIGAN STATE UNIVERSITY	RC104007UCD	93 351	209,436	
OREGON HEALTH & SCIENCE UNIVERSITY	1001928UCD	93 351	47,711	
UNIVERSITY OF KANSAS/KU CENTER FOR RESEARCH, INC.	FY2016-054-cyc1	93 351	26,324	
UNIVERSITY OF WASHINGTON	UWSC8629BPO9536	93 351	153,773	
NATIONAL UNIVERSITY	202101-001-FY2016	93 359	30,665	
DUKE UNIVERSITY	U24NR014637	93 361	227,496	
HARVARD UNIVERSITY	1215005	93 361	36,160	
KENT STATE UNIVERSITY	1R01NR015674-01	93 361	63,389	
NEW YORK UNIVERSITY	F7604-01	93 361	35,549	
UNIVERSITY OF PITTSBURGH	0019358(119075-2)	93 361	101,883	
UNIVERSITY OF PITTSBURGH	0032090 (123962-2)	93 361	22,724	
WASHINGTON UNIVERSITY IN ST. LOUIS	Sub WU-14-85 (NR014449)	93 361	23,491	
WASHINGTON UNIVERSITY IN ST. LOUIS	Sub WU-16-302 (NR015738)	93 361	6,790	
KENT STATE UNIVERSITY	A15-0113-001	93 361	16,834	
CHILDREN'S HOSPITAL AND RESEARCH CENTER AT OAKLAND	128927UCD	93 365	29,673	
CHILDREN'S HOSPITAL AND RESEARCH CENTER AT OAKLAND	CHILDREN'S HOSPITAL AND RESE-12_892	93 365	15,543	
THE SCRIPPS RESEARCH INSTITUTE	Sub 5-50506 (TR001114)	93 371	133,007	
LAM FOUNDATION, THE	THELAM/NIH 20081178 LYNCH 7/9 10%	93 389	(4,835)	
OCT MEDICAL IMAGING, INC	OCT-55725-cyc2	93 389	48,624	
UNIVERSITY OF SOUTHERN CALIFORNIA	USC/NIH 36505147 TOGA 10/13 54%	93 389	3,716	
BAYLOR COLLEGE OF MEDICINE	101622295	93 393	34,222	
BIOMEDICAL RESEARCH INSTITUTE OF NEW MEXICO	20153517	93 393	10,209	
BRIGHAM AND WOMEN'S HOSPITAL	107288:4	93 393	42,169	
BRIGHAM AND WOMEN'S HOSPITAL	108520	93 393	9,645	
BRIGHAM AND WOMEN'S HOSPITAL	BWH/NIH SUB105240/CA138962 JAIN 55%	93 393	(15,650)	
CHILDREN'S HOSPITAL OF PHILADELPHIA	321072	93 393	154,179	
CHILDREN'S HOSPITAL OF PHILADELPHIA	CHILDREN'S HOSP OF PHIL FP00013087	93 393	(43,189)	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY 2	016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
CHILDREN'S MERCY HOSPITAL, THE	Sub 16-0002 ( CA194492)	93 393	22,412	
CITY OF HOPE	22524.915837.6695-cyc12	93 393	81,893	
CITY OF HOPE	3000026124	93 393	154,331	
CITY OF HOPE	50040.1914961.669303:4	93 393	12,558	
CITY OF HOPE	50297.2000498.6693-cyc4	93 393	331,317	
CITY OF HOPE	51974.2001759.669304-cyc1	93 393	195,944	
CITY OF HOPE	CITY OF HOPE (78601)	93 393	(236)	
CITY OF HOPE	CITY OF HOPE (78663)	93 393	(4,216)	
CITY OF HOPE	Sub 51974.2001759.669301 (CA19	93 393	444,246	
CLAREMONT COLLEGES	CLAREMONT COLLEGES (NIH CA150559) P	93 393	910	
DARTMOUTH COLLEGE	DARTMOUTH#902	93 393	57,370	
EMMES CORPORATION, THE	1568GNA643	93 393	25,169	
FRED HUTCHINSON CANCER RESEARCH CENTER	0000701013	93 393	2,972	
FRED HUTCHINSON CANCER RESEARCH CENTER	0000845112	93 393	14,367	
FRED HUTCHINSON CANCER RESEARCH CENTER	R01CA183570	93 393	40,320	
GROUP HEALTH COOPERATIVE	2014118673	93 393	1,265	
GROUP HEALTH COOPERATIVE	CA154292-UCSF	93 393	699,246	84,870
HARVARD UNIVERSITY	114181-5077986	93 393	36,096	
HEALTH RESEARCH, INC.	45-01	93 393	(1,222)	
HEALTH RESEARCH, INC.	Sub55-0979-01(CA132951)	93 393	146,162	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	Sub 0255 7461 4609 (CA178307	93 393	25,869	
JOHNS HOPKINS UNIVERSITY	2001273933	93 393	3,631	
KAISER PERMANENTE DIVISION OF RESEARCH	OSR #03033223	93 393	(1,989)	
KAISER PERMANENTE DIVISION OF RESEARCH	UCSF#A121466	93 393	18,150	
MAYO CLINIC/MAYO FOUNDATION FOR MEDICAL EDUCATION & RESEARCH	63253912	93 393	209,956	
MAYO CLINIC/MAYO FOUNDATION FOR MEDICAL EDUCATION & RESEARCH	PRIME:1R01CA154517-01A1	93 393	131,857	
MAYO CLINIC/MAYO FOUNDATION FOR MEDICAL EDUCATION & RESEARCH	UCSF#A115113	93 393	4,047	
NATIONAL DEVELOPMENT AND RESEARCH INSTITUTES, INC.	626A	93 393	167,955	
NORTHWESTERN UNIVERSITY	1R01CA16404101	93 393	14,950	
NORTHWESTERN UNIVERSITY	60034672UCD	93 393	24,630	
NORTHWESTERN UNIVERSITY	60037274 UCLA	93 393	136,155	
NORTHWESTERN UNIVERSITY	SUB 60037274 UCSD (CA186878)	93 393	120,656	
OREGON HEALTH & SCIENCE UNIVERSITY	GPRC00884BUCD	93 393	34,314	
SANFORD BURNHAM PREBYS MEDICAL DISCOVERY INSTITUTE	56663-11825-UCSF-01	93 393	143,920	
SANFORD BURNHAM PREBYS MEDICAL DISCOVERY INSTITUTE	Sub 58196-12674-UCSD (CA177322	93 393	18,335	
THE UNIVERSITY OF ALABAMA (TUSCALOOSA)	000501506-004 BRACCI	93 393	(7)	
UNIVERSITY OF ARIZONA	Sub 27590 (CA153086)	93 393	42,118	
UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	FY15598001	93 393	10,542	
UNIVERSITY OF HAWAII AT MANOA	KA0084	93 393	203,819	
UNIVERSITY OF HOUSTON	R-15-0034	93 393	15,696	
UNIVERSITY OF ILLINOIS	Sub none (CA154254)	93 393	40,196	
UNIVERSITY OF ILLINOIS AT CHICAGO	Sub 2010-03794-15-00 (CA154254	93 393	17,170	
UNIVERSITY OF IOWA	W000802688	93 393	1,244	
UNIVERSITY OF MIAMI	F/UNIV OF MI 66971E DASH J54/54.5 C	93 393	2	
UNIVERSITY OF MINNESOTA	P003871501	93 393	11,120	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY 2	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
UNIVERSITY OF ROCHESTER	415597G	93 393	210,802	
UNIVERSITY OF ROCHESTER	416055G	93 393	206,728	
UNIVERSITY OF SOUTHERN CALIFORNIA	42997318:1	93 393	17,976	
UNIVERSITY OF SOUTHERN CALIFORNIA	58690317	93 393	47,617	
UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT HOUSTON	00002076	93 393	28,528	
UNIVERSITY OF TEXAS-M.D. ANDERSON CANCER CENTER	00003027	93 393	20,067	
UNIVERSITY OF TEXAS-M.D. ANDERSON CANCER CENTER	00003065	93 393	90,486	
UNIVERSITY OF TEXAS-M.D. ANDERSON CANCER CENTER	Sub 00001664 (CA177914)	93 393	104,948	
UNIVERSITY OF TEXAS-M.D. ANDERSON CANCER CENTER	Sub 00003030 (CA186566)	93 393	7,020	
UNIVERSITY OF TEXAS-SAN ANTONIO	156632	93 393	39,165	
UNIVERSITY OF UTAH	10035205	93 393	82,104	
UNIVERSITY OF WASHINGTON	UWC8242	93 393	180,749	
WAKE FOREST UNIVERSITY	WFUHS 114040	93 393	42,011	
WAKE FOREST UNIVERSITY HEALTH SCIENCES	114040	93 393	31,212	
YALE UNIVERSITY	A07956(M11A10846)	93 393	34,573	
YESHIVA UNIVERSITY	9-526-4875-MCCUNE SMITH-MCCUNE	93 393	(2,972)	
YESHIVA UNIVERSITY	OSR #05040746	93 393	(5,096)	
AMERICAN COLLEGE OF RADIOLOGY	1431 / 1352	93 394	(5,126)	
AMERICAN COLLEGE OF RADIOLOGY	20112027	93 394	4,550	
AMERICAN COLLEGE OF RADIOLOGY	NIH-ACRIN/MATTREY 26% 12/12	93 394	34,571	
AMERICAN COLLEGE OF RADIOLOGY	NIH/ACRIN 6698 WALLACE	93 394	8,546	
AMERICAN COLLEGE OF RADIOLOGY (ARRA)	ACR-51858-cyc3	93 394	1,612	
BAYLOR COLLEGE OF MEDICINE	102054093	93 394	914	
BOSTON UNIVERSITY	4500001661:2	93 394	56,717	
CANCER TARGETED TECHNOLOGY	R44CA192451	93 394	29,428	
DANA-FARBER CANCER INSTITUTE	Sub 1217703 (CA176058)	93 394	11,433	
DREXEL UNIVERSITY	Sub 232545 (CA168856)	93 394	82,904	
DUKE UNIVERSITY	14-NIH-1105	93 394	208,019	
DUKE UNIVERSITY	Validation of Prognostic and P	93 394	14,616	
GROUP HEALTH COOPERATIVE	2011120783	93 394	30,875	
JOHNS HOPKINS UNIVERSITY	20141565	93 394	25,306	
KAISER PERMANENTE DIVISION OF RESEARCH	20143488	93 394	66,968	
MEMORIAL SLOAN-KETTERING CANCER CENTER	BD516943	93 394	161,921	
MEMORIAL SLOAN-KETTERING CANCER CENTER	UCSF#A121300	93 394	46,624	
NRG ONCOLOGY	NRG BSB - UCSF Yr 1	93 394	698,097	
OCT MEDICAL IMAGING, INC	OCT-201177-cyc1	93 394	187,599	
SPECTRAL MOLECULAR IMAGING, INC.	SMI-103747-cyc3	93 394	79,114	
STANFORD UNIVERSITY	29200920-50890-B	93 394	157,357	
STANFORD UNIVERSITY	22034000-30572-B DIEDERICH	93 394	(114)	
THOMAS JEFFERSON UNIVERSITY	Sub 080-30000-R99001 (CA140339	93 394	(430)	
UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	2-5-27545	93 394	10,818	
UNIVERSITY OF MICHIGAN	3003732467	93 394	104,439	
UNIVERSITY OF PITTSBURGH	0032557 (122424-1)	93 394	(6,112)	
	0032337 (122424-1)			
UNIVERSITY OF SOUTHERN CALIFORNIA	USC-H39719-JERRETT-FNL	93 394	(10,495)	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY 2016	
ederal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT SAN ANTONIO	156635	93 394	(6,203)	
UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT SAN ANTONIO	157254	93 394	35,669	
UNIVERSITY OF TEXAS-M.D. ANDERSON CANCER CENTER	00003874	93 394	7,629	
UNIVERSITY OF TEXAS-SAN ANTONIO	158345	93 394	(29,083)	
WEINBERG MEDICAL PHYSICS LLC	WMP-54529-cyc2	93 394	89,727	
ABREOS BIOSCIENCES	Sub 20151685 (CA192697)	93 395	51,078	
AMERICAN COLLEGE OF RADIOLOGY	F/ACR 7896 KUO CT B26.0 12/14	93 395	30,463	
AMERICAN COLLEGE OF RADIOLOGY	NCI-ACR/MELL/26%/12/09	93 395	20,965	
BCN BIOSCIENCES	20151901	93 395	19,973	
BRENTWOOD BIOMEDICAL RESEARCH INSTITUTE	20132299	93 395	15,746	
BRIGHAM AND WOMEN'S HOSPITAL	UCSF #A120606	93 395	3,830	
CALIFORNIA INSTITUTE OF TECHNOLOGY	21B-1088934:06	93 395	17,784	
CALIFORNIA INSTITUTE OF TECHNOLOGY	68-1093781:02	93 395	136,491	
CELLSIGHT TECHNOLOGIES	A121974	93 395	30,152	
CHEMOFILTER, INC	UCSF#A124229	93 395	15,419	
CHILDREN'S HOSPITAL CORP. (THE), BOSTON, MASS.	SUB RSTFD0000659211 (CA109467)	93 395	68,373	
CHILDREN'S HOSPITAL OF LOS ANGELES	2004-05	93 395	15,671	
CHILDREN'S HOSPITAL OF LOS ANGELES	8018-RGF008024-00:2	93 395	26,893	
CHILDREN'S HOSPITAL OF LOS ANGELES	CHLA#479 WEISS	93 395	(19,077)	
CHILDREN'S HOSPITAL OF LOS ANGELES	8018-RGF006458 MATTHAY	93 395	(1,237)	
CHILDREN'S HOSPITAL OF PHILADELPHIA	1U10CA180886-01	93 395	22,640	
CHILDREN'S HOSPITAL OF PHILADELPHIA	1UG1CA189955-01	93 395	12,644	
CHILDREN'S HOSPITAL OF PHILADELPHIA	201503563	93 395	10,442	
CHILDREN'S HOSPITAL OF PHILADELPHIA	20150682	93 395	6,244	
CHILDREN'S HOSPITAL OF PHILADELPHIA	65_SUB37_01(HHSN261200800001E)	93 395	8,605	
CHILDREN'S HOSPITAL OF PHILADELPHIA	NIH/CHOP FP00013744_SUB119_01 ROBER	93 395	39,358	
CHILDREN'S HOSPITAL OF PHILADELPHIA	NIH/CHOP FP111375_A1_SUB05_01 ROBER	93 395	2,499	
CHILDREN'S HOSPITAL OF PHILADELPHIA	NIH/CHOP 9500080215-13C ROBERTS	93 395	23,778	
CHILDREN'S HOSPITAL OF PHILADELPHIA	NIH/CHOP 9500080215-13C ROBERTS	93 395	(101,852)	
CHILDREN'S HOSPITAL OF PHILADELPHIA	9500080216	93 395	15,739	
CHILDREN'S HOSPITAL OF PHILADELPHIA	9500100715	93 395	785	
CHILDREN'S HOSPITAL OF PHILADELPHIA	961551-RSUB	93 395	22,755	
CHILDREN'S HOSPITAL OF PHILADELPHIA	960497 DVORAK	93 395	(1,539)	
CHILDREN'S HOSPITAL OF PHILADELPHIA	FP00015221_SUB417_01	93 395	3,062	
CHILDREN'S HOSPITAL OF PHILADELPHIA	PRM:UM1CA097452	93 395	33,464	
CHILDREN'S HOSPITAL OF PHILADELPHIA	Sub F13864_SUB21_01 (HHSN26120	93 395	5,678	
CHILDREN'S HOSPITAL OF PHILADELPHIA	Sub FP125221 (CA180886)	93 395	42,066	
CHILDREN'S HOSPITAL OF PHILADELPHIA	Sub FP13560 (CA097452)	93 395	2,041	
CHILDREN'S HOSPITAL OF PHILADELPHIA	SUB UG1CA189955	93 395	10,339	
CHILDREN'S HOSPITAL OF PHILADELPHIA	U10CA180886	93 395	81,374	
CHILDREN'S HOSPITAL OF PHILADELPHIA	UCSF#A121763	93 395	29,602	
CHILDREN'S HOSPITAL OF PHILADELPHIA	UCSF#A122000	93 395	3,806	
CHILDREN'S HOSPITAL OF PHILADELPHIA	UCSF#A122092	93 395	11,654	
CHILDREN'S HOSPITAL OF PHILADELPHIA	UCSF#A124393	93 395	52,670	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY 2	016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Agency / Pass-Through Number Federal T		Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
CITY OF HOPE	51183.2000123.669399	93 395	127,834	
COLUMBIA UNIVERSITY	COLUMBIA UNIVERSITY PIERCE	93 395	248	
COLUMBIA UNIVERSITY	Sub GG010355 (CA167174)	93 395	115,563	
CURESEARCH FOR CHILDREN'S CANCER	NIH-NCCF/ROBERTS/26%	93 395	(4,118)	
CURTANA PHARMACEUTICALS, INC	Sub 20143803 (NIH)	93 395	72,438	
DANA-FARBER CANCER INSTITUTE	4021401	93 395	813	
ECOG-ACRIN MEDICAL RESEARCH FOUNDATION INC.	U10CA180820-01-UCSF1	93 395	44,994	
ECOG-ACRIN MEDICAL RESEARCH FOUNDATION INC.	U10CA180820-01-UCLA1	93 395	9,763	
EMMES CORPORATION, THE	15-0007	93 395	(174)	
EMMES CORPORATION, THE	1568GNA643-CLASS CS	93 395	8,071	
EMMES CORPORATION, THE	PO1568GNA643	93 395	379,419	
EMMES CORPORATION, THE	SUB P01568GNA643 (CA121947)	93 395	65,113	
EPIC SCIENCES, INC	NIH/EPIC SCIENCES BAZHENOVA	93 395	(1,671)	
FRED HUTCHINSON CANCER RESEARCH CENTER	0000819431	93 395	4,532	
GYNECOLOGIC ONCOLOGY GROUP	27469-46-CYC31	93 395	138,041	500
GYNECOLOGIC ONCOLOGY GROUP	NPCS-GYN GRP 27469022 EISNER 3/16	93 395	34,716	
GYNECOLOGIC ONCOLOGY GROUP	27469-130 CHAN	93 395	(19,749)	
GYNECOLOGIC ONCOLOGY GROUP	GOG-101462-cyc3	93 395	30,938	
HENRY FORD HEALTH SYSTEM	NIH-HFHS/GERWICK 55% 04/15	93 395	(212)	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	Sub 02556-0601-4609 (CA193523)	93 395	11,904	
INDIANA UNIVERSITY	992796	93 395	4,890	
JOHN WAYNE INSTITUTE FOR CANCER TREATMENT AND RESEARCH	20104272	93 395	278,128	
JOHN WAYNE INSTITUTE FOR CANCER TREATMENT AND RESEARCH	FARIES-15-01	93 395	124,770	
JOHNS HOPKINS UNIVERSITY	2002439000:1	93 395	37,714	
JOHNS HOPKINS UNIVERSITY	20154842	93 395	16,260	
JOHNS HOPKINS UNIVERSITY	JHU/NIH CLOUGHESY 20110582 12/13 54	93 395	31,132	
JOHNS HOPKINS UNIVERSITY	JHU/NIH ABTC1002 CLOUGHESY 12/13 54	93 395	14,151	
JOHNS HOPKINS UNIVERSITY	JHU/NIH 20102757 CLOUGHESY 12/13	93 395	19,776	
JOHNS HOPKINS UNIVERSITY	ABTC0902(NCCTGN0874) CHANG	93 395	(1,755)	
JOHNS HOPKINS UNIVERSITY	ABTC 1202	93 395	770	
JOHNS HOPKINS UNIVERSITY	ABTC 1301	93 395	27,204	
JOHNS HOPKINS UNIVERSITY	PO #2002555461	93 395	1,856	
LEIDOS BIOMEDICAL RESEARCH, INC.	LEIDOS BIOMED RES/NIH 14X069 LIPPMA	93 395	(4,237)	
LEIDOS, INC.	Sub 13XS025 (HHSN261200800001E	93 395	56,514	
MASSACHUSETTS GENERAL HOSPITAL	222723	93 395	124,812	
MASSACHUSETTS GENERAL HOSPITAL	226035	93 395	118,247	
MASSACHUSETTS GENERAL HOSPITAL	Sub 220879 (CA069246)	93 395	172,026	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	5710003460	93 395	40,946	
MAYO CLINIC/MAYO FOUNDATION FOR MEDICAL EDUCATION & RESEARCH	SUB MCC-194321 (CA189823)	93 395	49,034	
MEDICAL COLLEGE OF WISCONSIN	R01CA184798	93 395	1,490	
MEDICAL UNIVERSITY OF SOUTH CAROLINA	MUSC13-059-CYC2	93 395	74,457	
MEMORIAL SLOAN-KETTERING CANCER CENTER	224268-cyc1	93 395	3,488	
MEMORIAL SLOAN-KETTERING CANCER CENTER	BD517413B-cyc1	93 395	24,660	
MEMORIAL SLOAN-KETTERING CANCER CENTER	BD517413-cyc1	93 395	12,046	
MICHIGAN STATE UNIVERSITY	RC100173UCI-cyc7	93 395	15,466	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY :	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
MONTEFIORE MEDICAL CENTER	MMC-203153-cyc1	93 395	80,000	
NEW YORK UNIVERSITY	F7618-02	93 395	40,836	
NRG ONCOLOGY	BIQSFP YR1-UCSF	93 395	14,450	
NRG ONCOLOGY	GANZ - YR2	93 395	6,852	
NRG ONCOLOGY	GOG237 - UCI - 01-cyc1	93 395	63,737	
NRG ONCOLOGY	NRG Oncology	93 395	135,102	
NRG ONCOLOGY	NRG-201385-cyc1	93 395	307	
NRG ONCOLOGY	UOFC,IRVINE - YR. 1-cyc2	93 395	29,725	
NSABP FOUNDATION, INC.	F/NSABP FND TFED38-710 MEHTA CTJ26.	93 395	10,841	
NSABP FOUNDATION, INC.	F/NSABP FND TFED41S271MEHTA CT B26.	93 395	5,444	
NSABP FOUNDATION, INC.	TFED41-137	93 395	2,082	
OREGON HEALTH & SCIENCE UNIVERSITY	1005019_UCIRVINE-cyc1	93 395	85,813	
OREGON HEALTH & SCIENCE UNIVERSITY	OREGON HEALTH & SCI-9009627_UCDAVIS	93 395	84,900	
OREGON HEALTH & SCIENCE UNIVERSITY	OREGON HEALTH & SCI-9009627_UCDAVIS	93 395	12,830	
OREGON HEALTH & SCIENCE UNIVERSITY	OREGON HEALTH SCIENCES UNIVER	93 395	1,504	
OREGON HEALTH & SCIENCE UNIVERSITY	9009627_UCLA:1	93 395	39,748	
OREGON HEALTH & SCIENCE UNIVERSITY	SWOG-201304-cyc1	93 395	4,162	
PPD INC.	NIH/PPD HHSN261201100105C KNIGHT	93 395	40,777	
PPD INC.	HHSN261201100105C (N02CP-2011-	93 395	592,118	
SAINT LOUIS UNIVERSITY	Sub 33245 (CA169519)	93 395	78,680	
SIGNALRX PHARMACEUTICALS, INC	Sub 20143837 (CA192656)	93 395	62,263	
ST. JUDE CHILDREN'S RESEARCH HOSPITAL	110068130-7417101 PRADOS	93 395	385	
ST. JUDE CHILDREN'S RESEARCH HOSPITAL	UM1CA081457	93 395	3,693	
STANFORD UNIVERSITY	60958489-117119	93 395	32,673	
SWOG	012258	93 395	1,008	
SWOG	1004031UCDS0819Mack	93 395	47,544	
SWOG	20154355	93 395	6,266	
SWOG	20161228	93 395	1,334	
SWOG	CTSU/E1609	93 395	35,081	
SWOG	SWOG-41803-CYC3	93 395	248,163	
TELESECURITY SCIENCES, INC.	201402861	93 395	45,510	
THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	000508437-005	93 395	3,852	
TRACE-ABILITY, INC	1R43CA192499-01	93 395	24,573	
UNIVERSITY OF ARIZONA	316616	93 395	4,378	
UNIVERSITY OF PITTSBURGH	UNIVPITT/NIH 0020237 ECONOMOU 06/10	93 395	(820)	
UNIVERSITY OF PITTSBURGH	5R01CA178766-03	93 395	5,067	
UNIVERSITY OF PITTSBURGH	9004499(120961-1)	93 395	47.877	
UNIVERSITY OF PITTSBURGH	9010905(125165-1)	93 395	5,290	
UNIVERSITY OF TEXAS-SOUTHWESTERN MEDICAL CENTER AT DALLAS	151012	93 395	6,825	
YESHIVA UNIVERSITY	310635	93 395	92,780	
ZONEONE PHARMA, INC.	1R41CA192689-01	93 395	140,151	
NRG ONCOLOGY	UCAI-YR.1-cyc2	93 395	7,975	
UNIVERSITY OF MICHIGAN	3002128521	93 395	55,685	
ACOUSTIC MEDSYSTEMS, INC.	2R44CA121740-02	93 396	216,646	
BAYLOR RESEARCH INSTITUTE	41010301401-cyc1	93 396	272,107	
		30 030	2,2,107	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY 2	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
CALIFORNIA INSTITUTE OF TECHNOLOGY	Sub 19GM-1093586 (CA164803)	93 396	104,834	
CASE WESTERN RESERVE UNIVERSITY	SUB RES509813 (CA198941)	93 396	105,731	
CEDARS-SINAI MEDICAL CENTER	P.O. 0001130159	93 396	213,423	
CEDARS-SINAI MEDICAL CENTER	P.O. 00011396626	93 396	2,871	
CHILDREN'S HOSPITAL OF PHILADELPHIA	NIH/CHOP FP13013_SUB263_01 YU	93 396	1,099	
ECOG-ACRIN MEDICAL RESEARCH FOUNDATION INC.	6698	93 396	(34,678)	
JOHNS HOPKINS UNIVERSITY	SUB 2002785140 (CA177669)	93 396	5,993	
LEIDOS BIOMEDICAL RESEARCH, INC.	14X062	93 396	(1,458)	
LEIDOS BIOMEDICAL RESEARCH, INC.	16X002	93 396	174,974	
LEIDOS BIOMEDICAL RESEARCH, INC.	29X\$133	93 396	107,991	
LEIDOS BIOMEDICAL RESEARCH, INC.	29XS133TO08	93 396	309,877	
LEIDOS BIOMEDICAL RESEARCH, INC.	29XS133TO13	93 396	228,382	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	SUB 5710004012 (CA184898)	93 396	83,860	
MEDICAL UNIVERSITY OF SOUTH CAROLINA	MUSC14-046	93 396	10,602	
ST. JUDE CHILDREN'S RESEARCH HOSPITAL	111913019-7593083	93 396	12,176	
UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	FY14.701.001	93 396	117,662	
UNIVERSITY OF ILLINOIS	2014-03427-01	93 396	29,463	
UNIVERSITY OF PENNSYLVANIA	1P01CA165997-01A1	93 396	46,292	
UNIVERSITY OF SOUTHERN CALIFORNIA	45390795-CYC2	93 396	1,319	
UNIVERSITY OF SOUTHERN CALIFORNIA	65232523	93 396	63,767	
UNIVERSITY OF SOUTHERN CALIFORNIA	65279540-cyc1	93 396	45,361	
UNIVERSITY OF SOUTHERN CALIFORNIA	65318381	93 396	75,555	
UNIVERSITY OF SOUTHERN CALIFORNIA	UNIVERSITY OF SOUTHERN CALIFO (78700)	93 396	(6,029)	
UNIVERSITY OF TEXAS-M.D. ANDERSON CANCER CENTER	00000786	93 396	18,027	
UNIVERSITY OF TEXAS-M.D. ANDERSON CANCER CENTER	00003639	93 396	79,609	
UNIVERSITY OF TEXAS-M.D. ANDERSON CANCER CENTER	UNI OF TEXAS SUB 12094225 (CA097007	93 396	(10,760)	
UNIVERSITY OF TEXAS-M.D. ANDERSON CANCER CENTER	Sub 00001959 (CA182905)	93 396	106,645	
UNIVERSITY OF TEXAS-M.D. ANDERSON CANCER CENTER	SUB 00003638 ( CA196403 )	93 396	80,430	
VANDERBILT UNIVERSITY	VUMC38098	93 396	100,474	
WASHINGTON UNIVERSITY IN ST. LOUIS	WASHINGTON UNIVERSITY, (ST. LOUIS) (88002)	93 396	123	
WISTAR INSTITUTE, THE	24622-04-314	93 396	352,961	
CALIFORNIA INSTITUTE OF TECHNOLOGY	68-1090126:04	93 397	22,444	
CALIFORNIA INSTITUTE OF TECHNOLOGY	CA INST TECH RAS PHELPS RAS 07/16 5	93 397	746,217	
CHARLES R. DREW UNIVERSITY OF MEDICINE AND SCIENCE	P20 MD000182-14	93 397	488,768	
INDIANA UNIVERSITY	IIN4689833UCSF	93 397	109,305	
INDIANA UNIVERSITY	IN4689835UCSF	93 397	22,822	
INDIANA UNIVERSITY	IN4689836UCSF	93 397	189,385	
KAISER PERMANENTE DIVISION OF RESEARCH	3US.tCA 163262-0-tSI	93 397	13,693	
MAYO CLINIC/MAYO FOUNDATION FOR MEDICAL EDUCATION & RESEARCH	1U54CA153605-01	93 397	1,216	
MEMORIAL SLOAN-KETTERING CANCER CENTER	BD511891	93 397	4,757	
NORTHWESTERN UNIVERSITY	60027389 UC	93 397	17,663	
NORTHWESTERN UNIVERSITY	60040958UCSF	93 397	34,088	
OREGON HEALTH & SCIENCE UNIVERSITY	9008718_UCB	93 397	85	
OREGON HEALTH & SCIENCE UNIVERSITY	9008723	93 397	169,160	
PRINCETON UNIVERSITY	00001805	93 397	7,576	
			.,0.0	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY 2	016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Agency / Pass-Through Number Federal Tot		Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
PRINCETON UNIVERSITY	00001806	93 397	(18)	
PRINCETON UNIVERSITY	00001808	93 397	(29)	
PRINCETON UNIVERSITY	00001804 TLSTY	93 397	(94)	
RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	8024	93 397	760	
STANFORD UNIVERSITY	60469416-112063-G	93 397	29,587	
STANFORD UNIVERSITY	STANFORD/NIH 26723560 WORK 7/14 54%	93 397	(12,429)	
STANFORD UNIVERSITY	7U54CA143836-05	93 397	33,932	
STANFORD UNIVERSITY	SU-60467757-112063ASETHIAN7/14	93 397	231	
STANFORD UNIVERSITY	SU-60467763-112063ESETHIAN5/14	93 397	208	
UNIVERSITY OF MARYLAND	SR00004046	93 397	28,233	
UNIVERSITY OF PITTSBURGH	0046110(126709-1)	93 397	56,269	
UNIVERSITY OF PITTSBURGH	9012056(126714-1)	93 397	135,973	
UNIVERSITY OF SOUTHERN CALIFORNIA	44735953:1	93 397	27,163	
UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT SAN ANTONIO	131932/131929	93 397	44,715	
UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT SAN ANTONIO	Sub 155647/155095 (CA153511)	93 397	1,520	
YESHIVA UNIVERSITY	31082B	93 397	97,184	
CHILDREN'S HOSPITAL OF PHILADELPHIA	NIH/CHOP FP00015898-SUB157_01 ROBER	93 398	1,414	
NRG ONCOLOGY	Sub 908798 (NCI)	93 398	21,219	
PURDUE UNIVERSITY	1R25CA174665-01A1	93 398	8,959	
UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT SAN ANTONIO	131534/131477	93 398	1,778	
UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT SAN ANTONIO	158716/158715	93 398	16,138	
VANDERBILT UNIVERSITY	NIH/VUMC 38642 SANDER	93 398	1,939	
BRIGHAM AND WOMEN'S HOSPITAL	CALGB/CA136	93 399	(3,113)	
CHILDREN'S HOSPITAL OF PHILADELPHIA	9500020513-CCOP PCR	93 399	(436)	
NSABP FOUNDATION, INC.	F/NSABP PFED26-UCI-01 HLCMB CTJ26.0	93 399	2,400	
NSABP FOUNDATION, INC.	UCLA-YR28EXT:2	93 399	60,844	
UNIVERSITY OF MICHIGAN	F/UN MI SWOG F021095 MEYSKENS J52.5	93 399	1,002	
ASSOCIATION OF ASIAN PACIFIC COMMUNITY HEALTH ORGANIZATIONS	AAPCHO/DHHS 20121107 PONCE 8/13 26%	93 420	21	
REHABILITATION INSTITUTE OF CHICAGO	81758-cyc3	93 433	35,403	
UNIVERSITY OF MINNESOTA	A005198604	93 433	13,155	
RIVERSIDE-SAN BERNARDINO COUNTY INDIAN HEALTH, INC	20132665	93 508	76,123	
CALIFORNIA DEPARTMENT OF INSURANCE	13038IA	93 511	1,548,034	691,80
UNIVERSITY OF ARIZONA	226256	93 516	124,916	92,192
PUBLIC HEALTH FOUNDATION ENTERPRISES, INC.	0190.0104	93 521	50,995	
PUBLIC HEALTH FOUNDATION ENTERPRISES, INC.	0190.0203/2470.003.901	93 521	83,064	
CALIFORNIA HEALTH BENEFIT EXCHANGE	13-E9001:A1	93 525	1,153,556	428,50
CALIFORNIA HEALTH BENEFIT EXCHANGE	CAHBE 13-E9001 KOMINSKI 6/14 26%	93 525	(8,431)	
CALIFORNIA HEALTH BENEFIT EXCHANGE	CHBE-12E9132-CASTANEDA-12/14	93 525	(162)	
UNIVERSITY OF ROCHESTER	416576	93 533	5,207	
JOHNS HOPKINS UNIVERSITY	2002479511	93 542	104,543	
CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	CDSS-112021-NEEDELL-6/14	93 558	7	
CALIFORNIA STATE UNIVERSITY, NORTHRIDGE	90YE0153	93 575	9,075	
CALIFORNIA CHILD DEVELOPMENT DIVISION	CN130193	93 575	40,169	
UNIVERSITY OF CINCINNATI	NIH-U CINCINNATI/HEMMEN/26%	93 583	18,979	
UNIVERSITY OF MICHIGAN	SUBK00004112-ESETT	93 583	34,157	

# Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY 2	
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
SOUTH BAY COMMUNITY SERVICES	Sub 20140475 (90EV0422-01-00)	93 592	116,037	
ASSOCIATION OF AMERICAN MEDICAL COLLEGES	C1CMS331324	93 610	257,425	
ASSOCIATION OF AMERICAN MEDICAL COLLEGES	Sub GT-32013-06 (1CICMS331324-	93 610	143,884	
CHILDREN'S NATIONAL MEDICAL CENTER	20153022	93 610	789,612	
DARTMOUTH COLLEGE	1521	93 610	(862)	
FOUNDATION FOR CALIFORNIA COMMUNITY COLLEGES	TC-011-13	93 610	(738)	
SUNY UNIVERSITY AT ALBANY	14-56	93 648	52,703	5,06
SUNY UNIVERSITY AT ALBANY	15-49	93 648	73,571	
BRENTWOOD BIOMEDICAL RESEARCH INSTITUTE (ARRA)	BBRI/NIH 20152478 ESCUETA 1/15 26%	93 701	70,548	
CARE NEW ENGLAND HEALTH SYSTEMS (ARRA)	CARE NEW ENGLAND HEALTH SYSTEMS	93 701	(2,764)	
DUKE UNIVERSITY (ARRA)	ARRA DUKE UNIV 161411 KRISHNAM J53.	93 701	(6,375)	
EMMES CORPORATION, THE (ARRA)	20154935	93 701	24,401	
THE SCRIPPS RESEARCH INSTITUTE (ARRA)	NIH-TSRI/SAH/54.5%07/11	93 701	(19,410)	
TULANE UNIVERSITY (ARRA)	TULANE UNIVERSITY (INCL MEDICAL CEN	93 701	(254)	
UNIVERSITY OF GEORGIA (ARRA)	NIH/GA HEALTH SUB 237895-5 CALCUTT	93 701	(157)	
UNIVERSITY OF IOWA (ARRA)	NIH-U IOWA/KUO 54.5% 02/11	93 701	188	
UNIVERSITY OF MICHIGAN (ARRA)	3002565073:5	93 701	9,059	7,19
UNIVERSITY OF MICHIGAN (ARRA)	UMICH/NIH 3001689705 BELPERIO 08/12	93 701	(8,340)	
UNIVERSITY OF MICHIGAN (ARRA)	9166sc	93 701	24	
UNIVERSITY OF WASHINGTON (ARRA)	NIH FFT- UOW-GALASKO	93 701	1	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO (ARRA)	VPA Terkeltaub (AG007996)	93 701	43,806	
ACADEMYHEALTH	AHRQ/ACADEMYHEALTH SUB HS19564 JIAN	93 715	(15,000)	
AMERICAN COLLEGE OF RADIOLOGY	ACRIN 4701	93 715	42,884	
OUTCOME SCIENCES, INC.	OUTCOME/DHHS DECIDE62EH CAPRIOLI 4/	93 715	(352)	
OUTCOME SCIENCES, INC.	OUTCOME/DHHS DECIDEID62 COLEMAN 7/1	93 715	(697)	
ACADEMIC PEDIATRIC ASSOCIATION	20152248	93 733	37,723	
MERCED COUNTY DEPARTMENT OF PUBLIC HEALTH	2015074	93 737	152,255	8,00
NEW YORK MEDICAL COLLEGE	L-10215	93 737	(668)	
COMMUNITY HEALTH COUNCILS, INC.	20145339	93 743	51,422	19,14
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	1410730	93 757	141,909	
CALIFORNIA DEPARTMENT OF AGING	CDHW; MS-0809-12	93 778	46,570	
CALIFORNIA DEPARTMENT OF HEALTH CARE SERVICES	CA DHS 05-45334 MOORE	93 778	(650)	
BATTELLE MEMORIAL INSTITUTE	236817	93 800	7,656	
HARVARD PILGRIM HEALTH CARE	HPHC-202120-cyc1	93 823	419,598	
BRIGHAM AND WOMEN'S HOSPITAL	Sub None (HL101422)	93 827	19,482	
BAYLOR COLLEGE OF MEDICINE	2R01HL098B39-05A1	93 837	29,025	
BETH ISRAEL DEACONESS MEDICAL CENTER	Sub None (HL 108724)	93 837	1,832	
BIOPICO SYSTEMS	BPS-54576-CYC3	93 837	23,307	
BRIGHAM AND WOMEN'S HOSPITAL	BAWH/NIH 105963 WATSON 4/15 26%	93 837	407	
BRIGHAM AND WOMEN'S HOSPITAL	BWH-101848-CYC1	93 837	6,109	
BRIGHAM AND WOMEN'S HOSPITAL	SUB 112044 (HL128135)	93 837	99,235	
BRIGHAM AND WOMEN'S HOSPITAL	SUB 225707 (HL123336)	93 837	11,686	
		93 837	2,223	
BRIGHAM AND WOMEN'S HOSPITAL	SUB PS#10/223 (HL 101422)			
BRIGHAM AND WOMEN'S HOSPITAL BRIGHAM AND WOMEN'S HOSPITAL	SUB PS#107223 (HL101422) UCSF#A124108	93 837	10,601	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY :	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number Federal		Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	B SA0000320-321-322 (HL085577)	93 837	375,504	
CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	SUB SA0000320 (HL085577)	93 837	502,317	
CASE WESTERN RESERVE UNIVERSITY	RES510228	93 837	130,086	
CEDARS-SINAI MEDICAL CENTER	0000927441:002	93 837	28,196	
CEDARS-SINAI MEDICAL CENTER	0001150918:003	93 837	144,213	
CEDARS-SINAI MEDICAL CENTER	R01HL117983	93 837	5	
CLEVELAND CLINIC FOUNDATION	CLEVELAND CLINIC FOUNDATION-P20HL11	93 837	47,751	
CLEVELAND CLINIC FOUNDATION	CLEVELAND CLINIC FOUNDATION-P20HL11	93 837	209,211	
COLUMBIA UNIVERSITY	1 (GG011504)-cyc1	93 837	82,618	
COLUMBIA UNIVERSITY	SUB 1 (GG007512) (HL112388)	93 837	390,332	
COLUMBIA UNIVERSITY	Sub GG10320 (HL123061)	93 837	271,647	
COLUMBIA UNIVERSITY	UCSF#A119116	93 837	(7,698)	
CORNELL UNIVERSITY	R24HL120847	93 837	36,809	
DETON CORPORATION	Sub 20154348 (HL128120)	93 837	6,807	
DUKE UNIVERSITY	077	93 837	14,488	
DUKE UNIVERSITY	SUB NONE (HL105448)	93 837	9,396	
FRED HUTCHINSON CANCER RESEARCH CENTER	Sub 0000798072 (HL105065)	93 837	20,872	
FRED HUTCHINSON CANCER RESEARCH CENTER	SUB 0000824605 (HL122273)	93 837	48,353	
FRED HUTCHINSON CANCER RESEARCH CENTER	Sub 0000857429 (HL122273)	93 837	253,079	
GLADSTONE INSTITUTES	R2316-A	93 837	348,750	
HARVARD UNIVERSITY	HARVARD/NIH 123641 WANG 04/12 54%	93 837	(1,066)	
HARVARD UNIVERSITY	HARVARD/NIH 123641 WANG 4/14 54%	93 837	(5)	
HUMACYTE, INC	UCSF#A123087	93 837	31,482	
JOHNS HOPKINS UNIVERSITY	2002681722	93 837	70,670	
KAISER PERMANENTE DIVISION OF RESEARCH	115-9306-01-cyc6	93 837	438,222	
LA JOLLA INSTITUTE FOR ALLERGY AND IMMUNOLOGY	Sub 22593-44-393 (HL055798)	93 837	441,189	
LOS ANGELES BIOMEDICAL RESEARCH INSTITUTE AT HARBOR-UCLA MEDICAL CTR	30147-01	93 837	17,769	
MASSACHUSETTS GENERAL HOSPITAL	20152224	93 837	6,471	
MASSACHUSETTS GENERAL HOSPITAL	20152908:1	93 837	29,970	
MASSACHUSETTS GENERAL HOSPITAL	218179	93 837	361,258	
MASSACHUSETTS GENERAL HOSPITAL	224883	93 837	11,164	
MASSACHUSETTS GENERAL HOSPITAL	MGH#224883	93 837	4,334	
MASSACHUSETTS GENERAL HOSPITAL	U01HL23336	93 837	14,553	
MAYO CLINIC/MAYO FOUNDATION FOR MEDICAL EDUCATION & RESEARCH	64218059	93 837	6,096	
MEDICAL COLLEGE OF WISCONSIN	UCSF#A126325	93 837	24,083	
MERCATOR MEDSYSTEMS, INC	2R44HL102998-02-01	93 837	13,478	
MIRIAM HOSPITAL, THE	MIRIAM HOSPITAL, THE	93 837	(272)	
MIRIAM HOSPITAL, THE	Sub 710-9868 (HL109116)	93 837	29,853	
MORGRIDGE INSTITUTE FOR RESEARCH	MIR (PHS) D12-J0053 SOH 04/15	93 837	550	
NATIONAL BUREAU OF ECONOMIC RESEARCH, INC	33-4144-UCSF	93 837	87,220	
NATIONAL JEWISH HEALTH	20103401	93 837	124,206	
NATIONAL JEWISH HEALTH	60147/2020100601	93 837	86,317	
NEW ENGLAND RESEARCH INSTITUTE, INC.	201500084	93 837	2,170	
NEW ENGLAND RESEARCH INSTITUTE, INC.	Sub B2B (HL098188)	93 837	95,806	
NEW ENGLAND RESEARCH INSTITUTE, INC.	Sub None (HL107407)	93 837	6,761	
*			2,7.01	

# Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY	
ederal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
NEW ENGLAND RESEARCH INSTITUTE, INC.	Sub none (HL68270)	93 837	37,837	
NEW YORK UNIVERSITY	20131088	93 837	2,495	
NEW YORK UNIVERSITY	NYU-103915-CYC1	93 837	45,639	
NEW YORK UNIVERSITY	UCSF#A126863	93 837	4,069	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	1774:2	93 837	32,525	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	PUL1939	93 837	36,678	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	RAT1855-01	93 837	19,901	
NORTHWESTERN UNIVERSITY	60036200UCSF	93 837	298,634	
NORTHWESTERN UNIVERSITY	SP0028071-PROJ0007326	93 837	119,091	
OCT MEDICAL IMAGING, INC	OCTMI-204394-cyc1	93 837	1,260	
OHIO STATE UNIVERSITY	60028980	93 837	16,253	
OHIO STATE UNIVERSITY	60041988:2	93 837	55,395	
OHIO STATE UNIVERSITY	SUB 60040456 (HL123015)	93 837	135,603	
OREGON HEALTH & SCIENCE UNIVERSITY	1002459_UCLA:01	93 837	18,716	
OREGON HEALTH & SCIENCE UNIVERSITY	1002459UCDHS	93 837	36,046	
OREGON HEALTH & SCIENCE UNIVERSITY	1002919-UCLA:3	93 837	15,426	
OREGON HEALTH & SCIENCE UNIVERSITY	1005364UCDavis	93 837	82,244	
OREGON HEALTH & SCIENCE UNIVERSITY	OHSU/NIH GPEDC0036A SHIVKUMAR 8/10	93 837	(209)	
OREGON HEALTH & SCIENCE UNIVERSITY	GPEDC0036A SAHN:6	93 837	5,851	
OREGON HEALTH & SCIENCE UNIVERSITY	SUB 1005338 UCSD (HL078610)	93 837	74,189	
PENNSYLVANIA STATE UNIVERSITY	5 U10 HL098115-06	93 837	1,445	
PENNSYLVANIA STATE UNIVERSITY	UCAHL098115#5	93 837	380,191	249,2
PENNSYLVANIA STATE UNIVERSITY	UCAHL098115_TO6	93 837	61,865	39,2
PENNSYLVANIA STATE UNIVERSITY	UCAHL098115_TO7	93 837	19,490	
PENNSYLVANIA STATE UNIVERSITY	UCASF HL098115	93 837	67,858	
PENNSYLVANIA STATE UNIVERSITY	UCSF#A116687	93 837	(64,893)	
PENNSYLVANIA STATE UNIVERSITY	UCSF#A120869	93 837	19,418	
QT MEDICAL, INC.	QT001-CYC1	93 837	20,613	
RETHINK MEDICAL, INC	R34HL125001	93 837	2,484	
RHODE ISLAND HOSPITAL	701-5552:2	93 837	215,539	
SEATTLE CHILDREN'S HOSPITAL, RESEARCH AND FOUNDATION	Sub 10942SUB (HL113810)	93 837	(37)	
SELFA, INC	SELFA/NIH 20141653 CHUI 01/15 54%	93 837	(928)	
STANFORD UNIVERSITY	60436086-107606:1	93 837	37,663	
STANFORD UNIVERSITY	60436089107606C	93 837	114,835	
STANFORD UNIVERSITY	60594679-107635	93 837	53,493	
STANFORD UNIVERSITY	R01HL128170	93 837	125,599	
STANFORD UNIVERSITY	Sub 60988003-118781 (HL083359)	93 837	62,112	
STANFORD UNIVERSITY	Sub 61153993-121531 ( HL123689	93 837	112,102	
TARGESON, INC	TARGESON SUB20142138HL110496DEMARIA	93 837	(120,659)	
TARGESON, INC	Sub 20150555 (HL110496)	93 837	259,647	
THE UNIVERSITY OF ALABAMA (TUSCALOOSA)	UCSF#A120725-MASTER	93 837	14,486	
THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	000503570-007	93 837	42,093	
THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	000506834-001	93 837	17,647	
THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	UCSF#A126440	93 837	47,606	
TOURO COLLEGE	00008SC		,500	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

				2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
TOURO COLLEGE	UCSF#A121796	93 837	169,914	
UNIVERSITY OF CHICAGO	Sub FP053587 (HL119967)	93 837	39,001	
UNIVERSITY OF IOWA	SUB W000748110 (HL116259)	93 837	39,023	
UNIVERSITY OF IOWA	W000716361	93 837	221,928	
UNIVERSITY OF MIAMI	665288	93 837	43,609	
UNIVERSITY OF MICHIGAN	3001599217:6	93 837	1,233	
UNIVERSITY OF MICHIGAN	3001793564	93 837	370	
UNIVERSITY OF MICHIGAN	3003212185-cyc1	93 837	117,312	
UNIVERSITY OF MICHIGAN	Sub 3002988796 (R01HL117860)	93 837	43,885	
UNIVERSITY OF MISSISSIPPI	66105170515-UCLA:1	93 837	29,149	
UNIVERSITY OF NORTH TEXAS	Sub GF2651-3 (HL109340)	93 837	12,772	
UNIVERSITY OF PENNSYLVANIA	558497	93 837	(28,344)	
UNIVERSITY OF PENNSYLVANIA	567197	93 837	36,497	
UNIVERSITY OF PITTSBURGH	0031059 (123325-2)	93 837	(62)	
UNIVERSITY OF PITTSBURGH	UOP 0031059(122365-1) KLEERUP 6/15	93 837	(11,007)	
UNIVERSITY OF PITTSBURGH	SUB 0037380(123141-1)(HL110955	93 837	62,812	
UNIVERSITY OF PITTSBURGH	Sub 0041597 (HL122144)	93 837	50,861	
UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT HOUSTON	0010612A	93 837	64,821	
UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT HOUSTON	0008027C	93 837	19,074	
UNIVERSITY OF VERMONT	1UM1HL120877-01	93 837	188,658	
UNIVERSITY OF WASHINGTON	749902	93 837	34,545	
UNIVERSITY OF WASHINGTON	757013	93 837	45,287	
UNIVERSITY OF WASHINGTON	SUB UWSC8735 (HL122199)	93 837	36,356	
UNIVERSITY OF WASHINGTON	UWSC7526	93 837	120,707	
UNIVERSITY OF WASHINGTON	UWSC8535	93 837	3,545	
UNIVERSITY OF WASHINGTON	UWSC9050	93 837	4,738	
UNIVERSITY OF WISCONSIN-MADISON	452K200	93 837	5,063	
VANDERBILT UNIVERSITY	VUMC38906	93 837	5,024	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	08558012-314002	93 837	20,001	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VMRF/NIH 285787 ROSS	93 837	647	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VMRF/NIH 292074 BLANCHARD	93 837	2	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	SUB 08558-309843 (HL066941)	93 837	415,658	43,64
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	SUB 08558-309844 (HL066941)	93 837	232,995	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	Sub 08558-309845 (HL066941)	93 837	286,717	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA 315351 FU ( HL066941 )	93 837	66,103	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA GUATELLI 315752 (AI 081668	93 837	94,769	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA HAMMOND 311687 (HL066941)	93 837	34,006	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Hammond 313103 (HL081741)	93 837	10,430	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA HAMMOND 316080 ( HL 122038	93 837	34,112	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA MAISEL 311887 (HL066941)	93 837	930	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Schilling 315389 (HL066941	93 837	41,150	
WAKE FOREST UNIVERSITY	Sub WFUHS 10385 (HL-104199)	93 837	14,663	7.24
WAKE FOREST UNIVERSITY	WFUHS 114486	93 837	5,132	- ,=
WASHINGTON UNIVERSITY IN ST. LOUIS	WU-11-69	93 837	47,954	
	*******	50 007	77,004	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY	FY 2016	
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federa	Total Federal	Pass-Through to	
	or Other Identifier	CFDA Num	ber Expenditures	Subrecipients	
YESHIVA UNIVERSITY	YESHIVA UNIVERSITY (INCL ALBERT EIN) (87411)	93 837	746		
ARADIGM CORPORATION	UCSF #A122751	93 838	6,298		
AUGUSTA UNIVERSITY	R01HL060190	93 838	(3,272)		
BAYLOR COLLEGE OF MEDICINE	101598921	93 838	143,258		
BRIGHAM AND WOMEN'S HOSPITAL	106476	93 838	(2,048)		
BRIGHAM AND WOMEN'S HOSPITAL	107578	93 838	5,488		
CHILDREN'S HOSPITAL CORP. (THE), BOSTON, MASS.	5U01HL107681-03	93 838	2,285		
CHILDREN'S HOSPITAL CORP. (THE), BOSTON, MASS.	74159	93 838	4,286		
COLUMBIA UNIVERSITY	1(GG007619-02)	93 838	878		
DUKE UNIVERSITY	2039484	93 838	352,504		
HENRY FORD HEALTH SYSTEM	1R01HL118267-01A1	93 838	282,465		
JOHNS HOPKINS UNIVERSITY	200144389	93 838	32,596		
NEOVATIVE, INC.	NV001-cyc1	93 838	46,355		
NORTHWESTERN UNIVERSITY	60035059 UC:A02	93 838	165,647		
NORTHWESTERN UNIVERSITY	SP0020933-PROJ000556:2	93 838	45,605		
PENNSYLVANIA STATE UNIVERSITY	UCASF_HL109086	93 838	115,192		
PENNSYLVANIA STATE UNIVERSITY	UCASFHL109086	93 838	141,001		
RADIOLOGICAL SOCIETY OF NORTH AMERICA INC	HSN268201200078C(2A)	93 838	367,727		
THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	Sub 000503442 (HL122626)	93 838	166,983		
UNIVERSITY OF ARIZONA	291957	93 838	260,897		
UNIVERSITY OF COLORADO DENVER	FY15.727.002	93 838	18,635		
UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	FY13.369.006	93 838	153,942		
UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	FY15.369.005	93 838	68,297		
UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	UCSF#A122529	93 838	80,808		
UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	UCSF#A122565	93 838	141,075		
UNIVERSITY OF IOWA	W000696756	93 838	82,324		
UNIVERSITY OF MICHIGAN	3002467528	93 838	101,163		
UNIVERSITY OF MICHIGAN	3003837218	93 838	33,435		
UNIVERSITY OF MICHIGAN	R01HL122438	93 838	89,558		
UNIVERSITY OF MINNESOTA	A000213101	93 838	117,401		
UNIVERSITY OF MINNESOTA	P001344002	93 838	336		
UNIVERSITY OF PENNSYLVANIA	2852954/UCSF PROP	93 838	1,400		
UNIVERSITY OF PENNSYLVANIA	557172	93 838	18,124		
UNIVERSITY OF PENNSYLVANIA	561374	93 838	2,739		
UNIVERSITY OF PENNSYLVANIA	R01HL087115	93 838	17,127		
UNIVERSITY OF PITTSBURGH	0014426 (123580-2):2	93 838	(211,932)		
UNIVERSITY OF PITTSBURGH	0014426(118315-1)	93 838	89,230		
UNIVERSITY OF PITTSBURGH	0035200 (123815-1)	93 838	35,618		
UNIVERSITY OF PITTSBURGH	0035200(123815-1)	93 838	121,442		
UNIVERSITY OF PITTSBURGH	0041577 (1251-1)	93 838	100,327		
UNIVERSITY OF PITTSBURGH	0041577(125120-2)	93 838	166,330		
UNIVERSITY OF PITTSBURGH	0045031(126089-1)	93 838	183,816		
UNIVERSITY OF PITTSBURGH	UPITT/NIH 0014426 KLEERUP 7/10 54%	93 838	(33,760)		
UNIVERSITY OF PITTSBURGH	PITT/NIH 0001933 KLEERUP 6/12 54%	93 838	(33,760)		
UNIVERSITY OF PITTSBURGH	9008508 (123014-1)	93 838	52,113	15,	
oz.c c	3000000 (120017-1)	33 030	52,113	15,4	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY 2	2016
ederal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
UNIVERSITY OF VIRGINIA	GC12056 138846:04	93 838	39,807	
UNIVERSITY OF WASHINGTON	Sub 713253 (none)	93 838	1,658	
VANDERBILT UNIVERSITY	11 R01 HL126176	93 838	140,553	
VANDERBILT UNIVERSITY	SUB VUMC41149 (HL116358)	93 838	3,221	
VANDERBILT UNIVERSITY	VUMC 44299	93 838	29,020	
VANDERBILT UNIVERSITY	VUMC-10190	93 838	10,259	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Bouvet 304649 (HL107652)	93 838	8,384	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Fuster 308305 (HL107652)	93 838	40,459	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA MiRACLE 307585 (HHSN268200	93 838	10,320	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Zuniga 312860 (HL107652)	93 838	6,267	
XFIBRA, LLC	Sub (20152506) (HL122022)	93 838	140,452	
XFIBRA, LLC	SUB 20160160 (HL127919)	93 838	114,412	
YALE UNIVERSITY	SUB M15A120003 (HL116235)	93 838	77,182	
BRIGHAM AND WOMEN'S HOSPITAL	NIH/BRIGHAM/106777/LOREDO 54.5%	93 839	43	
CHILDREN'S HOSPITAL OF LOS ANGELES	8018-RGF008095-00:2	93 839	187,423	
DUKE UNIVERSITY	NIH-DUKE U/HERMANN	93 839	161	
MEDICAL UNIVERSITY OF SOUTH CAROLINA	MUSC09-114	93 839	2,813	
NATIONAL JEWISH MEDICAL AND RESEARCH CENTER	SUB 2020072608 (HL089897)	93 839	192,063	
NATIONAL MARROW DONOR PROGRAM	525-RDSAFE DVORAK	93 839	(3,513)	
NATIONAL MARROW DONOR PROGRAM	NMDP DAMON	93 839	5,455	
NATIONAL MARROW DONOR PROGRAM	Sub none (HL69294)	93 839	701	
NATIONAL MARROW DONOR PROGRAM	U10HL069294	93 839	9,388	
PENNSYLVANIA STATE UNIVERSITY	UCA-SFHL098115-02	93 839	99,973	
PROTEOGENOMICS RESEARCH INSTITUTE FOR SYSTEMS MEDICINE	SUB NONE (HL119165)	93 839	239,699	
THE SCRIPPS RESEARCH INSTITUTE	SUB 5-50314 (HL031950)	93 839	380,336	
UNIVERSITY OF MARYLAND	R01HL119439	93 839	396,954	
UNIVERSITY OF MINNESOTA	N003130601	93 839	188,458	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	533356	93 839	76,376	
UNIVERSITY OF PENNSYLVANIA	565117	93 839	146,727	
UNIVERSITY OF PENNSYLVANIA	566085	93 839	61,056	
UNIVERSITY OF PENNSYLVANIA	P01HL040387	93 839	116,551	
UNIVERSITY OF VERMONT	U OF VERMONT CRIQUI	93 839	251,469	
UNIVERSITY OF WASHINGTON	UWSC8212	93 839	13,025	
UNIVERSITY OF WASHINGTON	UWSC8734	93 839	60,220	
UNIVERSITY SYSTEM OF MARYLAND	13873-cyc1	93 839	30,900	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	HAMMOND 311720 (HL066941-11A1)	93 839	47,563	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	MLIJIC-HARPF 311732 (HL066941)	93 839	100,362	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	SS 311780 (2P01 HL066941-11A1)	93 839	39,100	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA CHEN (HL066941)	93 839	13,897	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA HAMMOND (HL066941)	93 839	25,556	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA HAMMOND 309658 ( HL066941)	93 839	94,912	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA HAMMOND 311895 (HL066941)	93 839	(332)	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA ROTH 309659 (HL066941)	93 839	79,679	
YESHIVA UNIVERSITY	SUB 9-526-6969 (HL110900)	93 839	490.156	
THOMAS JEFFERSON UNIVERSITY	T JEFFRSON 08018060S10601HLM5/15	93 839	(11,486)	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY :	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
UNIVERSITY OF MICHIGAN	A16-0006-001	93 839	43,021	
CEDARS-SINAI MEDICAL CENTER	0000953876	93 845	39,324	
BAYLOR COLLEGE OF MEDICINE	102008496	93 846	83,354	
BAYLOR COLLEGE OF MEDICINE	5600491721:05	93 846	(6,201)	
BENAROYA RESEARCH INSTITUTE AT VIRGINIA MASON	FY141TN112	93 846	94,463	
BIOPICO SYSTEMS	BPS-200053-cyc1	93 846	6,174	
BOSTON UNIVERSITY	4500001229	93 846	32,181	
BOSTON UNIVERSITY	4500001983	93 846	81,371	
BOSTON UNIVERSITY	450001255	93 846	30,192	
BOSTON UNIVERSITY	BOSTON/NIH 4500001554 FURST 8/14 54	93 846	4,966	
BRIGHAM AND WOMEN'S HOSPITAL	109136	93 846	5,494	
BROWN UNIVERSITY	00000531-cyc5	93 846	108,661	
CALIFORNIA PACIFIC MEDICAL CENTER RESEARCH INSTITUTE	280201003-0714-S167	93 846	323,738	
CHILDREN'S MERCY HOSPITAL, THE	11-0009	93 846	(522)	
CHILDREN'S NATIONAL MEDICAL CENTER	08381202	93 846	15,544	
COLUMBIA UNIVERSITY	1 (GG003850)	93 846	24,232	
COLUMBIA UNIVERSITY	1 (GG007778)	93 846	132,667	
CONFLUENCE LIFE SCIENCES, LLP	20140159 (AR-065817)	93 846	6,662	
EMORY UNIVERSITY	Sub T190800 (AR064307)	93 846	23,079	
HARVARD UNIVERSITY	Sub 90056 (AR060816)	93 846	23,961	
HEBREW SENIORLIFE INC.	UCSF#A121271	93 846	17,392	
ICELANDIC HEART ASSOCIATION	HHSN27120120022C	93 846	36,628	
LA JOLLA INSTITUTE FOR ALLERGY AND IMMUNOLOGY	SUB 22474-44-334 (AR066053)	93 846	69,005	
MAYO CLINIC/MAYO FOUNDATION FOR MEDICAL EDUCATION & RESEARCH	2R01AR027065-31	93 846	(26)	
MICHIGAN STATE UNIVERSITY	RC105700UCSF	93 846	806	
MOLECULAR IMAGING CORPORATION(ACQUIRED)	MI-54571-cyc3	93 846	72,256	
NATIONWIDE CHILDREN'S HOSPITAL	735611 (AR060949)	93 846	285,868	
NORTH SHORE-LONG ISLAND JEWISH HEALTH SYSTEM	500678UCSF	93 846	160,889	47,881
NORTHWESTERN UNIVERSITY	60031647 UCSF	93 846	16,643	
NORTHWESTERN UNIVERSITY	60038418 UCLA	93 846	7,711	
NORTHWESTERN UNIVERSITY	R01AR065473	93 846	109,197	
O.N. DIAGNOSTICS, LLC	007FUS1-01	93 846	58,123	
O.N. DIAGNOSTICS, LLC	2R44AR057616-03A1	93 846	31,656	
PENNSYLVANIA STATE UNIVERSITY	UCSF#A122503	93 846	6,561	
PHYSICAL SCIENCES INC.	201500396	93 846	29,788	
SANFORD BURNHAM PREBYS MEDICAL DISCOVERY INSTITUTE	SUB 58556-12524 (AR 064873)	93 846	25,559	
SCARLESS LABORATORIES, INC	1R43AR064126-01	93 846	878	
SCARLESS LABORATORIES, INC	2R44AR064126-03A1	93 846	20,371	
SURFACE BIOADVANCES INC.	SUB 20131851 (AR064043)	93 846	951	
SUTTER WEST BAY HOSPITALS	1162 (VMRF BOARD OF DIRECTORS)	93 846	28,142	
THE UNIVERSITY OF ALABAMA (TUSCALOOSA)	Sub 000357678-002 (AR057954)	93 846	(22,040)	
THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	007118	93 846	80,302	
UNIVERSITY OF ARIZONA	247411	93 846	118,768	
UNIVERSITY OF CINCINNATI	008754	93 846	58,644	
UNIVERSITY OF COLORADO DENVER	Sub 15.090.005 (AR067681)	93 846	228,362	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY :	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
UNIVERSITY OF FLORIDA	UFDSP00010892	93 846	134,305	
UNIVERSITY OF FLORIDA	UFDSP00010893	93 846	13,732	
UNIVERSITY OF FLORIDA	UFDSP00010895	93 846	35,611	
UNIVERSITY OF MICHIGAN	3003938003	93 846	8,113	
UNIVERSITY OF PENNSYLVANIA	564917	93 846	(1,009)	
UNIVERSITY OF PENNSYLVANIA	564991	93 846	2,027	
UNIVERSITY OF PENNSYLVANIA	566571	93 846	78,590	
UNIVERSITY OF SOUTHERN CALIFORNIA	67569403	93 846	28,166	
UNIVERSITY OF TENNESSEE	AR064354UCLA	93 846	8,171	
UNIVERSITY OF WASHINGTON	745568:3	93 846	(79,421)	
UNIVERSITY OF WISCONSIN-MADISON	Sub 630K464 (AR068373)	93 846	62,231	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA YOUNG 312238 (Al090970)	93 846	10,223	
WASHINGTON STATE UNIVERSITY	11617 G003092	93 846	207,116	
WASHINGTON UNIVERSITY IN ST. LOUIS	SUB WU-11-226 (AR057836)	93 846	(528)	
WASHINGTON UNIVERSITY IN ST. LOUIS	SUB WU-14-263 (AR064755)	93 846	(895)	
YESHIVA UNIVERSITY	310451	93 846	20,824	
ACOUSTIC MEDSYSTEMS, INC.	A127047	93 847	1,332	
ANTEANA THERAPEUTICS, INC.	ATI-201867-cyc1	93 847	89,494	
AUGUSTA UNIVERSITY	25034-72	93 847	37,362	
AUGUSTA UNIVERSITY	Sub 25034-71 ( DK076169)	93 847	10,011	
AUGUSTA UNIVERSITY	Sub 25732-32 (DK076169)	93 847	7,084	
AUGUSTA UNIVERSITY	SUB 25732-77 (DK076169)	93 847	14,650	
BAYLOR COLLEGE OF MEDICINE	102159190	93 847	123,776	
BAYLOR COLLEGE OF MEDICINE	102159207	93 847	61,019	
BAYLOR COLLEGE OF MEDICINE	BAYLOR/NIH SUB 101792364 ROSENFELD	93 847	(70,323)	
BETH ISRAEL DEACONESS MEDICAL CENTER	NIH-BETH ISREAL/ZHANG/54.5/07/11	93 847	(557)	
BIOLINQ, INC.	SUB 20150264 (DK103559)	93 847	15,820	
BOSTON UNIVERSITY	4500001991	93 847	5,561	
BRENTWOOD BIOMEDICAL RESEARCH INSTITUTE	20140254:1	93 847	34,950	
BRENTWOOD BIOMEDICAL RESEARCH INSTITUTE	20121469:3	93 847	208,215	
CASE WESTERN RESERVE UNIVERSITY	SUB CWRU-N01-DK-6-2203 (DK3782	93 847	(59,714)	
CASE WESTERN RESERVE UNIVERSITY	SUB RES508624 (DK101074)	93 847	3,252	
CASE WESTERN RESERVE UNIVERSITY	SUB RES509275 (DK094157)	93 847	198,208	
CASE WESTERN RESERVE UNIVERSITY	SUB RES509478 (DK104438)	93 847	21,163	
CEDARS-SINAI MEDICAL CENTER	0001073756	93 847	15,424	
CEDARS-SINAI MEDICAL CENTER	0001163606	93 847	9,721	
CEDARS-SINAI MEDICAL CENTER	0001179467	93 847	191,932	
CEDARS-SINAI MEDICAL CENTER	1U01DK108314-01	93 847	4,030	
CHILDREN'S HOSPITAL OF LOS ANGELES	CHLA TGF7134-2015 GLANZMAN 08/15 8%	93 847	540	
CHILDREN'S HOSPITAL OF LOS ANGELES	Sub TGF7134 2015 (DK078385)	93 847	540	
CHILDREN'S HOSPITAL OF LOS ANGELES	TGF7134-2015	93 847	540	
CHILDREN'S MERCY HOSPITAL, THE	13-0022:1	93 847	14,662	
CHILDREN'S MERCY HOSPITAL, THE	13-0025	93 847	2,522	
COLUMBIA UNIVERSITY	1(ACCT.#5-39391)	93 847	3,090	
COLUMBIA UNIVERSITY	COLUMBIA UNIVERSITY SCHWIMMER	93 847	(415,227)	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY 2	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
COLUMBIA UNIVERSITY	COLUMBIA UNIV SUB GG005583-02 (DK06	93 847	1,740	
COLUMBIA UNIVERSITY	Sub 1 (GG010427-02) (DK061734-	93 847	95,873	
COLUMBIA UNIVERSITY	Sub 1 (GG010427-05) (DK061734)	93 847	155,735	
COLUMBIA UNIVERSITY	SUB 1(GG010427)(DK061734)	93 847	959,235	
COLUMBIA UNIVERSITY	Sub 3 (GG010427) (DK061734)	93 847	131,816	
COLUMBIA UNIVERSITY	Sub GG005583-02 (DK061734)	93 847	300,062	
CONNECTICUT CHILDRENS MEDICAL CENTER	12-179296-28	93 847	886	
DUKE UNIVERSITY	R34-DK094116-04 REVISED	93 847	25,076	
EMORY UNIVERSITY	5R01DK098231-02	93 847	1,002	
EMORY UNIVERSITY	SUB S726754 (DK094346)	93 847	25,146	
GEORGE WASHINGTON UNIVERSITY	SUB S-GRD1213-KR40 (DK098246)	93 847	70,348	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	0255-3831-4609	93 847	132,780	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	0255-5001-4609:07	93 847	6,742	
INDIANA UNIVERSITY	A15-0013-002	93 847	80,177	
JOHNS HOPKINS UNIVERSITY	1R24DK099803-01A1	93 847	576,850	
JOHNS HOPKINS UNIVERSITY	2001646276	93 847	16,610	
KAISER PERMANENTE DIVISION OF RESEARCH	11 5-9075-07	93 847	24.576	
KAISER PERMANENTE DIVISION OF RESEARCH	115-7257/1494	93 847	34,806	
KAISER PERMANENTE DIVISION OF RESEARCH	115-7258/1493	93 847	3,547	
KAISER PERMANENTE DIVISION OF RESEARCH	115-9075-01	93 847	42,380	
KAISER PERMANENTE DIVISION OF RESEARCH	115-9075-06	93 847	21,255	
KAISER PERMANENTE DIVISION OF RESEARCH	115-9107-04	93 847	9,536	
KAISER PERMANENTE DIVISION OF RESEARCH	RNG200295-03	93 847	56,916	
LA JOLLA INSTITUTE FOR ALLERGY AND IMMUNOLOGY	SUB 20045-44-334 (DK106233)	93 847	14,080	
LOUISIANA STATE UNIVERSITY AND AGRICULTURAL AND MECHANICAL COLLEGE	1 R01 DK090607-50326-S1	93 847	98,753	
LOUISIANA STATE UNIVERSITY AND AGRICULTURAL AND MECHANICAL COLLEGE	5R01DK092575	93 847	74,984	
LPATH INCORPORATED	20155262 (R43DK098829)	93 847	31,118	
LUDWIG INSTITUTE FOR CANCER RESEARCH	Sub 242001-05003B (DK105541)	93 847	346,284	
LUDWIG INSTITUTE FOR CANCER RESEARCH	Sub 2420012-05003A (DK105541)	93 847	339,606	
MAINE MEDICAL CENTER	1330002	93 847	3,735	
MAINE MEDICAL CENTER	145703	93 847	36,030	
MCGILL UNIVERSTIY	215686 PRIME-06RENEWAL	93 847	14,687	
MCGILL UNIVERSTIY	Correction of defective CFTR f		14,007	
MEDICAL COLLEGE OF WISCONSIN	201501396	93 847 93 847	174,744	
MEMORIAL HOSPITAL OF RHODE ISLAND	108-864MARCUS	93 847	1,014	
NEW ENGLAND RESEARCH INSTITUTE, INC.	NERI 20111296 SUB(DK058229) ALBO	93 847	1,014	
NEW ENGLAND RESEARCH INSTITUTE, INC. NEXTRAST, INC	UCSF#A124589	93 847	50,492	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	YUKL1941-098824		50,492 17,072	
OKLAHOMA MEDICAL RESEARCH FOUNDATION	OMR FDN/NIH 20094032 BRAUN 04/15 54			
OREGON HEALTH & SCIENCE UNIVERSITY	SUB 1005905 UCSD (DK102813)	93 847	(231)	
	UCSF#A123054	93 847	21,134	
SAFE MEDICAL DESIGN, LLC SAINT BARNABAS MEDICAL CENTER	UCLA2	93 847	37,684	
		93 847	26,328	
SEATTLE CHILDREN'S HOSPITAL, RESEARCH AND FOUNDATION	11109SUB Srinath	93 847	(1,279)	
STANFORD UNIVERSITY	60896104-116817	93 847	32,653	
STANFORD UNIVERSITY	61065546-117234	93 847	12,466	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY 2	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
STANFORD UNIVERSITY	61111888-116833	93 847	54,290	
STANFORD UNIVERSITY	R01DK101674	93 847	216,116	
STATE UNIVERSITY OF NEW YORK	110108252451792	93 847	6,050	
THE SCRIPPS RESEARCH INSTITUTE	5-52131	93 847	144,507	
THE UNIVERSITY OF ALABAMA SYSTEM (SYSTEMWIDE PARENT CODE)	SUB 000501524 (DK079337)	93 847	549,426	
TOURO COLLEGE	1R01DK089216-01-RADIOLOGY-UCSF	93 847	14,055	
TOURO COLLEGE	DK089216-01-PEDIATRICS ENDO-SF	93 847	(1,730)	
UNIVERSITY HEALTH NETWORK	1	93 847	48,178	
UNIVERSITY OF ARIZONA	SUB 92941 (DK080801)	93 847	124,225	
UNIVERSITY OF ARIZONA	SUB PO 148522 (DK058251)	93 847	273,387	
UNIVERSITY OF CINCINNATI	009897-002	93 847	8,536	
UNIVERSITY OF COLORADO DENVER	FY15.748.001-cyc1	93 847	735	
UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	FY13.274.003	93 847	150,050	62,058
UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	FY15.018.001	93 847	203,368	
UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	FY15.269.002 AMD2	93 847	25,906	
UNIVERSITY OF FLORIDA	NIH-UNIV FLORIDA SUB UFDSP00010634	93 847	23,672	
UNIVERSITY OF IOWA	W000426013	93 847	(2,942)	
UNIVERSITY OF IOWA	W000449875	93 847	55,697	
UNIVERSITY OF MASSACHUSETTS AMHERST	SUB 13-007352 (DK064902)	93 847	76,192	
UNIVERSITY OF MASSACHUSETTS AMHERST	Sub 14-007792 (DK097011)	93 847	126,599	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5101190	93 847	57,230	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5-34392	93 847	105,286	
UNIVERSITY OF OREGON	SUB 215380A (DK095926)	93 847	36,783	
UNIVERSITY OF PITTSBURGH	0019927(118536-5)	93 847	22,037	
UNIVERSITY OF PITTSBURGH	PRO12060248	93 847	17,275	
UNIVERSITY OF SOUTH FLORIDA	6119127600AQ	93 847	610,010	
UNIVERSITY OF SOUTH FLORIDA	6119-1295-00-AV	93 847	21,773	
UNIVERSITY OF SOUTH FLORIDA	UCSF#A111732	93 847	268,769	
UNIVERSITY OF SOUTHERN CALIFORNIA	44520040:01	93 847	77,994	
UNIVERSITY OF TENNESSEE	R01DK096920UCIRVINE-cyc5	93 847	65,440	
UNIVERSITY OF TEXAS-SOUTHWESTERN MEDICAL CENTER AT DALLAS	120504	93 847	(432)	
UNIVERSITY OF TEXAS-SOUTHWESTERN MEDICAL CENTER AT DALLAS	161111-Registry	93 847	126,420	
UNIVERSITY OF TEXAS-SOUTHWESTERN MEDICAL CENTER AT DALLAS	GMO111127:3	93 847	(36,236)	
UNIVERSITY OF TEXAS-SOUTHWESTERN MEDICAL CENTER AT DALLAS	GMO-111128	93 847	19,839	
UNIVERSITY OF WASHINGTON	0747088-CYC3	93 847	971	
UNIVERSITY OF WASHINGTON	1R01DK102134-01	93 847	25,406	
UNIVERSITY OF WASHINGTON	FFT NIH UW SUB 698059 AFARI	93 847	487	
UNIVERSITY OF WASHINGTON	Sub 698055 (DK082325)	93 847	28,226	
VACUUM PROCESS ENGINEERING, INC	A121392	93 847	82,588	
VANDERBILT UNIVERSITY	NIH/VUMC 38646 SANDER	93 847	(2,357)	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA ADV IX (DK 102438)	93 847	7,308	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Edelman 307593 (DK098246-0	93 847	5,857	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Henry 307582 ( DK098246)	93 847	14,846	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA IX (DK097093)	93 847	58,802	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA IX 310177 DK098234-01A1	93 847	25,047	

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			FY 2	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA IX 310997 (DK101720)	93 847	45,245	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA JOACHIM 314867 (DK105314)	93 847	11,140	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA PETTUS 316074 ( DK098246)	93 847	22,822	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA-Mudaliar 307671 (DK098246)	93 847	23,841	
VIRGINIA COMMONWEALTH UNIVERSITY	1R01DK094818-01A1	93 847	61,913	
VIRGINIA COMMONWEALTH UNIVERSITY	Sub PD304070-SC106315 (DK10596	93 847	390,357	
WAKE FOREST UNIVERSITY	Look AHEAD (Action for Health	93 847	3,930	
WASHINGTON UNIVERSITY IN ST. LOUIS	Sub WU-15-284 (DK078669)	93 847	215,875	
WASHINGTON UNIVERSITY IN ST. LOUIS	Sub WU-15-285 (DK078669)	93 847	53,055	
YALE UNIVERSITY	M15A11978(A10081)-cyc1	93 847	154,501	
CHILDREN'S MERCY HOSPITAL, THE	NP-CMH/NIH 050012 YADIN 07/13 54%	93 849	2,384	
CHILDREN'S MERCY HOSPITAL, THE	SUB 07-005 (DK066143)	93 849	17,482	
MEDICAL COLLEGE OF WISCONSIN	SUB NONE (DK088831)	93 849	465,001	
NEW ENGLAND RESEARCH INSTITUTE, INC.	NIH-NERI/ALBO/26% 06/13	93 849	1,230	
STANFORD UNIVERSITY	NIH-STANFORD/MEHTA/26%/01/10	93 849	(65,299)	
ALLEN INSTITUTE FOR BRAIN SCIENCE	R01NS092474	93 853	201,203	
ANN & ROBERT H. LURIE CHILDREN'S HOSPITAL OF CHICAGO	901460-UCLA	93 853	21,086	
ANTEANA THERAPEUTICS, INC.	ATI-200910-cyc1	93 853	38,161	
AUGUSTA UNIVERSITY	27087A-1-cyc3	93 853	148,992	
BAYLOR COLLEGE OF MEDICINE	Sub 102068662 (NS089366)	93 853	115,028	
BETH ISRAEL DEACONESS MEDICAL CENTER	01025970	93 853	55,946	
BRENTWOOD BIOMEDICAL RESEARCH INSTITUTE	20145153	93 853	65,433	
BRENTWOOD BIOMEDICAL RESEARCH INSTITUTE	2014265:3	93 853	81,730	
BRIGHAM AND WOMEN'S HOSPITAL	108685-cyc3	93 853	276,151	
BRIGHAM AND WOMEN'S HOSPITAL	112065	93 853	7,920	
BRIGHAM AND WOMEN'S HOSPITAL	Sub 108685 (NS 079201)	93 853	194,301	
CASE WESTERN RESERVE UNIVERSITY	RES509427	93 853	364,827	
CHILDREN'S HOSPITAL CORP. (THE), BOSTON, MASS.	0000299804	93 853	40,063	
CHILDREN'S HOSPITAL CORP. (THE), BOSTON, MASS.	RSTFD0000596413:04	93 853	26,936	
CHILDREN'S HOSPITAL CORP. (THE), BOSTON, MASS.	RSTFD0000596557:04	93 853	298,580	92,239
CHILDREN'S HOSPITAL CORP. (THE), BOSTON, MASS.	RSTFD0000610379	93 853	49,623	
CHILDREN'S HOSPITAL MEDICAL CENTER OF CINCINNATI	109540	93 853	117	
CHILDREN'S HOSPITAL MEDICAL CENTER OF CINCINNATI	Sub 107759 (NS045911)	93 853	2,823	
CHILDREN'S HOSPITAL OF PHILADELPHIA	321039	93 853	218,672	
CLEVELAND CLINIC FOUNDATION	SUB 496-SUB (NS082083)	93 853	17,953	
COLD SPRING HARBOR LABORATORY	64100112	93 853	165,805	
COLUMBIA UNIVERSITY	1(GG008135-02)	93 853	13,844	
COLUMBIA UNIVERSITY	1(GG010432-02)	93 853	3,598	
COLUMBIA UNIVERSITY	1R01NS089552-01	93 853	38,118	
COLUMBIA UNIVERSITY	4 (GG006906-11):01	93 853	22,807	
COLUMBIA UNIVERSITY	Sub GG010312 (NS078059)	93 853	18,301	
CORNELL UNIVERSITY	NIH-CORNELL/SONG/26%/11/11	93 853	533	
DANA-FARBER CANCER INSTITUTE	1136805	93 853	230,720	
DANA-FARBER CANCER INSTITUTE	1278001	93 853	71,470	
DIAGNOSTIC CONSULTING NETWORK	DCN-55972-cyc1	93 853	66,548	

# Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

		<u> </u>	FY	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
DIAGNOSTIC CONSULTING NETWORK	Sub 20134874 (NS 76359)	93 853	59,544	
DUKE UNIVERSITY	2033809-CYC1	93 853	3,894	2,47
DUKE UNIVERSITY	SUB 2034905 (NS092521)	93 853	203,585	
EMMES CORPORATION, THE	20101609	93 853	2,177	
EMORY UNIVERSITY	T182905-CYC4	93 853	17	
EMORY UNIVERSITY	T423135-cyc1	93 853	184,069	
GLADSTONE INSTITUTES	1R01NS079725-01A1	93 853	223,645	
GLADSTONE INSTITUTES	20105403	93 853	38,364	
GLADSTONE INSTITUTES	R01750-A	93 853	17,344	
GLADSTONE INSTITUTES	R02082-A	93 853	7,844	
GLADSTONE INSTITUTES	Sub R2400-A (NS094342)	93 853	247,840	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	0255-0641-4609	93 853	562,081	
INSTITUTE FOR MOLECULAR MEDICINE, INC. (CALIFORNIA)	UCI-2014-56074-CYC1	93 853	93,909	
INSTITUTE FOR MOLECULAR MEDICINE, INC. (CALIFORNIA)	UCI-2014-56212-CYC1	93 853	94,423	
JOHNS HOPKINS UNIVERSITY	2000767379:5	93 853	20,729	
KAISER PERMANENTE DIVISION OF RESEARCH	115-7290/1514-01	93 853	95,176	
KAISER PERMANENTE DIVISION OF RESEARCH	115-9703/1301-01	93 853	417,237	43,57
KAISER PERMANENTE DIVISION OF RESEARCH	5962-UCB	93 853	132,027	
KITWARE, INC.	KITWARE/NIH K00084100S01VANHORN 12/	93 853	1,565	
LUDWIG INSTITUTE FOR CANCER RESEARCH	233305-05012:03	93 853	108,702	
MAGNESENSORS, INC.	MAGNESENSORS, INC. SUB 3037 (NS0776	93 853	8,332	
MASSACHUSETTS GENERAL HOSPITAL	20131516	93 853	3,394	
MASSACHUSETTS GENERAL HOSPITAL	A127236	93 853	88	
MASSACHUSETTS GENERAL HOSPITAL	NN103	93 853	63,184	
MASSACHUSETTS GENERAL HOSPITAL	PS#221606-cyc3	93 853	1,384	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	5710003857-cyc1	93 853	247,346	
MAYO CLINIC/MAYO FOUNDATION FOR MEDICAL EDUCATION & RESEARCH	NIH-MAYO FOUNDATION YAKSH	93 853	(914)	
MAYO CLINIC/MAYO FOUNDATION FOR MEDICAL EDUCATION & RESEARCH	A126507	93 853	576	
MAYO CLINIC/MAYO FOUNDATION FOR MEDICAL EDUCATION & RESEARCH	SUB MAYO CLINIC (NS044233)	93 853	9,312	
MEDICAL UNIVERSITY OF SOUTH CAROLINA	MUSC14-016:1	93 853	12,649	
NORTHWESTERN UNIVERSITY	1U01NS080818-01A1	93 853	16,714	
NORTHWESTERN UNIVERSITY	60036745 UC-cyc3	93 853	9,230	
NORTHWESTERN UNIVERSITY	60041563 UCI-cyc1	93 853	79,069	
NORTHWESTERN UNIVERSITY	60042630 UCD	93 853	4,316	
NORTHWESTERN UNIVERSITY	R01NS080619	93 853	316,853	
NORTHWESTERN UNIVERSITY	Sub 60036745 UCSD (NS080818)	93 853	31,272	
OREGON HEALTH & SCIENCE UNIVERSITY	SUB NONE (OD011883)	93 853	54,475	
PARTNERS HEALTHCARE SYSTEM, INC	MGH/NIH 20141200 DOBKIN 05/15 54%	93 853	43,437	
PARTNERS HEALTHCARE SYSTEM, INC	NS052592	93 853	2,300	
PRINCETON UNIVERSITY	Sub 0000039 (NS090562 )	93 853	145,007	
ROCKEFELLER UNIVERSITY	5R01NS083823-03:1	93 853	245,507	
ROKHAN, LLC	FAIN: R43NS087659	93 853	3,673	
SANFORD BURNHAM PREBYS MEDICAL DISCOVERY INSTITUTE	56642-11822-UCSD-01 (NS074303)	93 853	(33,530)	
SANFORD BURNHAM PREBYS MEDICAL DISCOVERY INSTITUTE	BURNHAM SUB 56602-11995-UCSD-02 (NS	93 853	169,337	
SANFORD RESEARCH	SR-2014-25	93 853	44,374	
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# Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY :	
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
SEPULVEDA RESEARCH CORPORATION	SRC/NIH LAI0004 UC01 LAI 5/16 54%	93 853	237,455	
STANFORD UNIVERSITY	28361770-3222-E	93 853	15,115	
STANFORD UNIVERSITY	25847520-45119-A MILLER	93 853	(14,293)	
TEGA THERAPEUTICS INC	Sub 20151510 (R43NS089383 )	93 853	34,058	
THE UNIVERSITY OF ALABAMA (TUSCALOOSA)	000427597-003	93 853	31,984	
THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	Sub 000509001 (NS036960)	93 853	171,012	
UNIVERSITY OF BRITISH COLUMBIA	20R22010	93 853	70,297	
UNIVERSITY OF BRITISH COLUMBIA	NIH-U BRITISH COLUMBIA/MEYER/26%	93 853	52	
UNIVERSITY OF CHICAGO	FP060364-cyc1	93 853	63,811	
UNIVERSITY OF CINCINNATI	U01NS091951-133897-cyc1	93 853	11,839	
UNIVERSITY OF CINCINNATI	006883	93 853	3,602	
UNIVERSITY OF CINCINNATI	00822-ADM-SAVER-1	93 853	35,794	
UNIVERSITY OF CINCINNATI	008822-ADM-CRAMER-CYC1	93 853	87,026	
UNIVERSITY OF CINCINNATI	UCINN/NIH 006883 SHARMA 07/14 54%	93 853	281	
UNIVERSITY OF CINCINNATI	COEUS#006883	93 853	6,106	
UNIVERSITY OF CINCINNATI	Sub 00980-002 ( NS094403 )	93 853	82,026	
UNIVERSITY OF FLORIDA	UFDSP00010612-cyc1	93 853	199,212	
UNIVERSITY OF ILLINOIS	NP/UI/NIH 200700602 LIEBESKIND 6/14	93 853	(196)	
UNIVERSITY OF IOWA	SUB 430-23-12A (NS089487)	93 853	38,374	
UNIVERSITY OF KENTUCKY/UNIVERSITY OF KENTUCKY RESEARCH FOUNDATION	UKENTUCKY/NIH 10411 MARVIZON 01/15	93 853	(3,058)	
UNIVERSITY OF MARYLAND	050263B-CYC1	93 853	51,375	
UNIVERSITY OF MIAMI	662706:1	93 853	99,483	
UNIVERSITY OF MIAMI	665673-cyc1	93 853	16,151	
UNIVERSITY OF MIAMI	Sub 664008 (NS092091)	93 853	185,374	
UNIVERSITY OF MICHIGAN	3001300368-PIII	93 853	3,159	
UNIVERSITY OF MICHIGAN	3001413298-PNT	93 853	58,247	3,50
UNIVERSITY OF MICHIGAN	3002064226	93 853	(10,139)	-,
UNIVERSITY OF MICHIGAN	3002112002-SHN	93 853	67,161	
UNIVERSITY OF MICHIGAN	3002348507-SHN:11	93 853	7,583	7,54
UNIVERSITY OF MICHIGAN	3002387269:3	93 853	13,055	
UNIVERSITY OF MICHIGAN	3002987750	93 853	8,588	
UNIVERSITY OF MICHIGAN	8381	93 853	7,143	
UNIVERSITY OF MICHIGAN	3000691491-RPT HEMPHILL	93 853	(3,556)	
UNIVERSITY OF MICHIGAN	N003439222	93 853	5,955	
UNIVERSITY OF MICHIGAN	R01-NS055746	93 853	71,865	
UNIVERSITY OF MICHIGAN	SUBK00002380-ATACHII	93 853	2,331	
UNIVERSITY OF MINNESOTA	Sub N000936910 (NS062091)	93 853	(447)	
UNIVERSITY OF MONTANA	PG16-64514-03	93 853	95,381	
UNIVERSITY OF PENNSYLVANIA	566106-cyc1	93 853	12,202	
UNIVERSITY OF PITTSBURGH	0030451(123192)	93 853	61,457	
UNIVERSITY OF PITTSBURGH	0044484(125590-1)	93 853	59,062	
UNIVERSITY OF PITTSBURGH	0044312	93 853	57,228	
UNIVERSITY OF PRITISBURGH	415681-G/5-27019	93 853	57,228 439	
UNIVERSITY OF ROCHESTER  UNIVERSITY OF ROCHESTER	NIH U ROCHESTER LESSIG			
UNIVERSITY OF ROCHESTER UNIVERSITY OF SOUTHERN CALIFORNIA		93 853	183	
UNIVERSITY OF SOUTHERN CALIFORNIA	SUB 48161201 (NS080655)	93 853	19,597	

# Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

				2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
UNIVERSITY OF UTAH	10035100-01	93 853	90,184	
UNIVERSITY OF UTAH	U OF UTAH 10031107-01 OTIS 08/14 54	93 853	(6,397)	
UNIVERSITY OF VERMONT	27988SUB51551-CYC1	93 853	85,611	
UNIVERSITY OF VIRGINIA	GB10094-147357	93 853	5,148	
UNIVERSITY OF VIRGINIA	GB10094148459	93 853	50,098	
UNIVERSITY OF WASHINGTON	752137	93 853	16,260	
UNIVERSITY OF WASHINGTON	763739-cyc1	93 853	109,380	
UNIVERSITY OF WASHINGTON	UOW-NIH FFT- LESSIG	93 853	171	
UNIVERSITY OF WASHINGTON	SUB 754143 (NS086094)	93 853	11,100	
UNIVERSITY OF WISCONSIN SYSTEM	sub 547K304 (NS083688)	93 853	120,353	
UNIVERSITY OF WISCONSIN-MADISON	SUB 578K325 (NS083514)	93 853	79,385	
WASHINGTON STATE UNIVERSITY	Sub120907-G003351 (NS085369)	93 853	97,894	
WASHINGTON UNIVERSITY IN ST. LOUIS	WU-12-20	93 853	39,122	
YALE UNIVERSITY	A07593	93 853	581	
YALE UNIVERSITY	A08580	93 853	2,979	
YALE UNIVERSITY	M14A12115(A09533), JACOBSON, M	93 853	5,820	
YALE UNIVERSITY	M14A11621 (A09205)	93 853	25,505	
YALE UNIVERSITY	OSR #05039318	93 853	7,183	
YALE UNIVERSITY	SUB M10A10554 (NS044876)	93 853	23,287	
BOSTON UNIVERSITY	A16-0139-001	93 853	17,759	
MASSACHUSETTS GENERAL HOSPITAL	A00-0513-002	93 853	17,116	
UNIVERSITY OF TEXAS-AUSTIN	A00-0486-004	93 853	82,379	
RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	99-705	93 854	800	
ADVANCED GENETIC SYSTEMS, INC.	ADV GENE FRANKEL	93 855	(88)	
ALTRAVAX, INC.	007493	93 855	157,275	139,52
ARIZONA STATE UNIVERSITY/TEMPE	16-964	93 855	650	
BAYLOR COLLEGE OF MEDICINE	SUB 101835723 (Al105101)	93 855	83,410	
BAYLOR UNIVERSITY MEDICAL CENTER	41010191301	93 855	2,271	
BENAROYA RESEARCH INSTITUTE AT VIRGINIA MASON	1UM1Al109565-01 Revised	93 855	354,442	
BENAROYA RESEARCH INSTITUTE AT VIRGINIA MASON	1UM1AI109565-01	93 855	40,813	
BENAROYA RESEARCH INSTITUTE AT VIRGINIA MASON	1UM1AI109565-01	93 855	46,078	
BENAROYA RESEARCH INSTITUTE AT VIRGINIA MASON	5U01Al101990-02 REVISED	93 855	18,347	
BENAROYA RESEARCH INSTITUTE AT VIRGINIA MASON	FY14ITN040	93 855	21,950	
BENAROYA RESEARCH INSTITUTE AT VIRGINIA MASON	FY14ITN047	93 855	66,762	
BENAROYA RESEARCH INSTITUTE AT VIRGINIA MASON	FY14ITN049	93 855	21,220	
BENAROYA RESEARCH INSTITUTE AT VIRGINIA MASON	FY14ITN078	93 855	15,271	
BENAROYA RESEARCH INSTITUTE AT VIRGINIA MASON	FY15109844	93 855	73,997	
BENAROYA RESEARCH INSTITUTE AT VIRGINIA MASON	FY15ITN104	93 855	37,066	
BENAROYA RESEARCH INSTITUTE AT VIRGINIA MASON	FY15ITN160	93 855	35,557	
BENAROYA RESEARCH INSTITUTE AT VIRGINIA MASON	FY16ITN057	93 855	6,006,778	
BENAROYA RESEARCH INSTITUTE AT VIRGINIA MASON	FY16ITN186	93 855	661	
BENAROYA RESEARCH INSTITUTE AT VIRGINIA MASON	rFY16ITN053	93 855	3,438	
BLOOD SYSTEMS, INC. DBA BLOOD SYSTEMS RESEARCH INSTITUTE	11349UCSF118	93 855	34,046	
BLOOD SYSTEMS, INC. DBA BLOOD SYSTEMS RESEARCH INSTITUTE	BSRI#11205UCSF108	93 855	6,608	
BOSTON MEDICAL CENTER CORPORATION	0371101	93 855	17,835	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY 2	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
BRIGHAM AND WOMEN'S HOSPITAL	037829	93 855	68,005	
BRIGHAM AND WOMEN'S HOSPITAL	109135:02	93 855	3,594	
BRIGHAM AND WOMEN'S HOSPITAL	109925	93 855	275,208	
BRIGHAM AND WOMEN'S HOSPITAL	110008:02	93 855	254,037	
BRIGHAM AND WOMEN'S HOSPITAL	110009	93 855	81,194	
BRIGHAM AND WOMEN'S HOSPITAL	110080	93 855	36,113	
BRIGHAM AND WOMEN'S HOSPITAL	110237	93 855	569	
BRIGHAM AND WOMEN'S HOSPITAL	110237:1	93 855	11,198	
BRIGHAM AND WOMEN'S HOSPITAL	110238	93 855	4,312	
BRIGHAM AND WOMEN'S HOSPITAL	110256	93 855	9,617	
BRIGHAM AND WOMEN'S HOSPITAL	110668	93 855	46,165	
BRIGHAM AND WOMEN'S HOSPITAL	111669:1	93 855	187,072	
BRIGHAM AND WOMEN'S HOSPITAL	20143967:1	93 855	218,947	
BRIGHAM AND WOMEN'S HOSPITAL	2UM1AI068636-08	93 855	9,369	
BRIGHAM AND WOMEN'S HOSPITAL	BWH/NIH PS#105087CTOT11 FONAROW 8/1	93 855	(38)	
BRIGHAM AND WOMEN'S HOSPITAL	BWH/NIH SUB 108364 BENSON 55%	93 855	(2)	
BRIGHAM AND WOMEN'S HOSPITAL	BRIGHAM & WOMENS HOSP/NIH WACHSMAN	93 855	68	
BRIGHAM AND WOMEN'S HOSPITAL	Sub 108561 (Al068636)	93 855	2,722	
BRIGHAM AND WOMEN'S HOSPITAL	SUB 110009 (Al068636)	93 855	55,238	
BRIGHAM AND WOMEN'S HOSPITAL	Sub 110080 (AI 068636)	93 855	243,961	
BRIGHAM AND WOMEN'S HOSPITAL	Sub 110206 (Al068636)	93 855	612,794	
BRIGHAM AND WOMEN'S HOSPITAL	Sub 110233 (Al068636)	93 855	5,032	
BRIGHAM AND WOMEN'S HOSPITAL	UCSF#A123675	93 855	6,618	
BRIGHAM AND WOMEN'S HOSPITAL	UM1AI068636-HUNT	93 855	58,060	
BROAD INSTITUTE INC.	55035495500000802	93 855	31,076	
CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	SUB SA0000338 (AI105185)	93 855	195,246	
CASE WESTERN RESERVE UNIVERSITY	CASE WESTERN RESERVE UNIVERSI (78664)	93 855	7	
CASE WESTERN RESERVE UNIVERSITY	RES509076-CYC1	93 855	109,470	
CAYETANO HEREDIA UNIVERSITY	R01AI099727:3	93 855	62,149	
CHILDREN'S HOSPITAL AND RESEARCH CENTER AT OAKLAND	128217002	93 855	263,716	
CHILDREN'S HOSPITAL CORP. (THE), BOSTON, MASS.	85253:3	93 855	100,472	
CHILDREN'S HOSPITAL CORP. (THE), BOSTON, MASS.	RSTFD0000593889:5	93 855	13,497	
CHILDREN'S HOSPITAL CORP. (THE), BOSTON, MASS.	UCSF #A113850	93 855	2,979	
CHILDREN'S HOSPITAL MEDICAL CENTER OF CINCINNATI	131124:02	93 855	18,400	
CHILDREN'S HOSPITAL MEDICAL CENTER OF CINCINNATI	Sub 135407 (Al117804)	93 855	71,609	
CHILDREN'S HOSPITAL OF LOS ANGELES	Sub P2013-0259 (AI106716)	93 855	117,559	
CHILDREN'S HOSPITAL OF LOS ANGELES	Sub p2013-0259-UCSD2_14_1 (Al1	93 855	423,587	
CITY OF HOPE	508001914673669304	93 855	22,027	
CITY OF HOPE	50800914673962	93 855	(89,228)	
COLLABORATIVE DRUG DISCOVERY, INC	COLLAB DRUG DISCOVERY 20150010 (AI1	93 855	(9)	
COLORADO STATE UNIVERSITY	G-14944-1	93 855	127,825	
COLORADO STATE UNIVERSITY	G-46001-2	93 855	57,765	
COLUMBIA UNIVERSITY	11(GG011896-09)	93 855	39,802	
COLUMBIA UNIVERSITY	5 (ACCT# 5-30261)	93 855	76,474	
COLUMBIA UNIVERSITY	7(GG008377-12)	93 855	205,740	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY :	
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
DANA-FARBER CANCER INSTITUTE	1235901	93 855	59,757	
DARTMOUTH COLLEGE	1152	93 855	62,261	
DUKE UNIVERSITY	203 8792	93 855	40,760	
DUKE UNIVERSITY	2032191	93 855	1,205,235	
DUKE UNIVERSITY	2033035	93 855	11,533	
DUKE UNIVERSITY	2033846	93 855	12,584	
DUKE UNIVERSITY	2033855	93 855	16,681	
DUKE UNIVERSITY	203-4120	93 855	7,662	
DUKE UNIVERSITY	2034442	93 855	404,028	
DUKE UNIVERSITY	203-8578	93 855	474,944	
DUKE UNIVERSITY	DUKE UNIV/NIH W20120425 FURST 10/14	93 855	(269)	
DUKE UNIVERSITY	2030931 VON SCHEVEN	93 855	(1,402)	
DUKE UNIVERSITY	2032103 / 2032993 VON SCHEVEN	93 855	18,048	
DUKE UNIVERSITY	Sub 2032980 (Al056363)	93 855	81,811	
DUKE UNIVERSITY	UCSF#A122022	93 855	164,596	
DUKE UNIVERSITY	UCSF#A122787	93 855	122	
EMORY UNIVERSITY	SUB S899904 (AI090023)	93 855	19,535	
EMORY UNIVERSITY	T487245	93 855	483,647	
FHI 360	007731	93 855	1,244	
FHI 360	09-487-8337	93 855	188,433	169,512
FHI 360	15000021/UMIAI068619	93 855	1,143	
FHI 360	865:13	93 855	21,688	
FHI 360	HPTN-SMITH	93 855	11,131	
FHI 360	PO#15001679	93 855	239,942	
FHI 360	PO15000026:1	93 855	27,157	
FHI 360	PO15000047 (FCO 796/ID 0080.02	93 855	575,113	575,113
FHI 360	PO15001941	93 855	401,745	368,863
FHI 360	PO15002977	93 855	46,733	
FHI 360	PO15004412:03	93 855	234,215	
FHI 360	PO16002764	93 855	831	
FHI 360	Sub 1600119 (Al068619 )	93 855	462	
FHI 360	Sub 952/0100.0141 (Al068619)	93 855	31,022	
FHI 360	Sub FCO 797 (Al068619)	93 855	829,844	829,844
FHI 360	UM1 Al068619	93 855	654,407	531,94
FORSYTH INSTITUTE, THE	01018UCSF-2420	93 855	179,152	
FOX CHASE CANCER CENTER	A124346	93 855	114,703	
FOX CHASE CANCER CENTER	SUB CORE B (Al102853)	93 855	166,520	
FOX CHASE CANCER CENTER	SUB PROJECT 4 (Al102853)	93 855	364,018	
FRED HUTCHINSON CANCER RESEARCH CENTER	0000828949	93 855	40,963	
FRED HUTCHINSON CANCER RESEARCH CENTER	0000859892	93 855	3,378	
FRED HUTCHINSON CANCER RESEARCH CENTER	F/HUTCHINSON 0000768988 FORTHALJ53	93 855	3	
FRED HUTCHINSON CANCER RESEARCH CENTER	FDP-FHCRC/NIH 762017 ANTON 12/13 26	93 855	(858)	
GENERAL ELECTRIC COMPANY (INCL GE HEALTHCARE, GE LIGHTING INST)	PO NO. 401038186	93 855	124,972	
GEORGE WASHINGTON UNIVERSITY	12-M60	93 855	3,227	
GEORGE WASHINGTON UNIVERSITY	FDP-GWU/NIH 12-M56 ROTHERAM 05/15 5			
GEONGE WASHINGTON UNIVERSITY	FDF-GWU/NIN 12-N300 KUTHEKAM 05/15 5	93 855	(198)	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY :	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
GEORGETOWN UNIVERSITY	Sub 411316_GR411240-UCSD AWD-7	93 855	27,450	
GEORGIA INSTITUTE OF TECHNOLOGY	RE606-G1	93 855	64,026	
GLADSTONE INSTITUTES	J. David Gladstone Inst;R01071	93 855	14,448	
GLADSTONE INSTITUTES	R01070	93 855	75,291	
GLADSTONE INSTITUTES	R01072	93 855	37,397	
GLIXIS THERAPEUTICS, LLC	55760-cyc2	93 855	80,000	
HARVARD PILGRIM HEALTH CARE	PH000391A-CYC6	93 855	2,756	
HENRY FORD HEALTH SYSTEM	UCSF#A120210	93 855	617,363	53,859
HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY MEDICINE	2372	93 855	125,325	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	007416	93 855	134,096	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	0254-3241-4609	93 855	415,388	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	0255-1350-4609	93 855	241,389	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	0255-1351-4609:3	93 855	69,114	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	0255-1352-4609:1	93 855	258,963	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	0255-1359-4609	93 855	105,100	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	025578414609	93 855	221,078	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	0255-8610-4609	93 855	175,663	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	0255-8616-4609	93 855	12,020	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	0255-8624-4609	93 855	4,199	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	SUB 0254-3241-4609 (Al106754)	93 855	310,460	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	Sub 0254-3243-4609 (Al106754)	93 855	504,285	
IMMUNE DEFICIENCY FOUNDATION	2U24AI086037-06	93 855	43,512	
IMMUNE DEFICIENCY FOUNDATION	ID FOUND PUCK	93 855	(3,365)	
INDIANA UNIVERSITY	IN-4685211-UCSF	93 855	327,487	
INDIANA UNIVERSITY	IN4688381UCB	93 855	38,147	
INTEGRATED BIOTHERAPEUTICS, INC	R56TOXVAX-UCSF-Y1	93 855	76,432	
IOWA STATE UNIVERSITY	430-40-01A:05	93 855	183,706	
IOWA STATE UNIVERSITY	430-40-09A	93 855	43,339	
JOHNS HOPKINS UNIVERSITY	2001318908:3	93 855	248,332	
JOHNS HOPKINS UNIVERSITY	2001586402:4	93 855	29,636	
JOHNS HOPKINS UNIVERSITY	2002259596	93 855	203,920	
JOHNS HOPKINS UNIVERSITY	2002292916:02	93 855	34,369	
JOHNS HOPKINS UNIVERSITY	2002292921:02	93 855	31,678	
JOHNS HOPKINS UNIVERSITY	2002292925:01	93 855	9,570	
JOHNS HOPKINS UNIVERSITY	2002320204	93 855	32,912	
JOHNS HOPKINS UNIVERSITY	2002425863	93 855	149,248	
JOHNS HOPKINS UNIVERSITY	2002656257	93 855	80,971	
JOHNS HOPKINS UNIVERSITY	2002740603	93 855	46,200	
JOHNS HOPKINS UNIVERSITY	2002797871	93 855	5,216	
JOHNS HOPKINS UNIVERSITY	20141864	93 855	404,381	
JOHNS HOPKINS UNIVERSITY	PRIME:R21AI106031	93 855	1,298	
JOHNS HOPKINS UNIVERSITY	PSTO LAB 05 (Al068632)	93 855	30,750	
JOHNS HOPKINS UNIVERSITY	R01Al107028	93 855	70,865	
JOHNS HOPKINS UNIVERSITY	Sub 2002283571 (Al068632)	93 855	116,483	
JOHNS HOPKINS UNIVERSITY	SUB 2002347320 (Al09657)	93 855	2.441	
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## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY :	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
JOHNS HOPKINS UNIVERSITY	Sub 2002438807 (Al068632)	93 855	23,943	
JOHNS HOPKINS UNIVERSITY	UCSF#A117877	93 855	64,166	
JOHNS HOPKINS UNIVERSITY	UM1AI068632	93 855	26,508	
LA JOLLA INSTITUTE FOR ALLERGY AND IMMUNOLOGY	20025-03-381	93 855	19,392	
LA JOLLA INSTITUTE FOR ALLERGY AND IMMUNOLOGY	Sub 26244-44-382 (AI109976)	93 855	487,996	
LA JOLLA INSTITUTE FOR ALLERGY AND IMMUNOLOGY	SUB 26625-44-381 (Al100275 )	93 855	224,731	
LIVERMORE INSTRUMENTS INC	UCSF#A120687	93 855	(8,693)	
LOS ANGELES BIOMEDICAL RESEARCH INSTITUTE AT HARBOR-UCLA MEDICAL CTR	30685-UCLA	93 855	10,506	
MAGEE-WOMENS HOSPITAL, RESEARCH INSTITUTE AND FOUNDATION	7292:2	93 855	30,040	
MAGEE-WOMENS HOSPITAL, RESEARCH INSTITUTE AND FOUNDATION	9375	93 855	13,801	
MAGEE-WOMENS HOSPITAL, RESEARCH INSTITUTE AND FOUNDATION	UM1 AI068633	93 855	94,452	
MAPP BIOPHARMACEUTICAL, INC.	7036-01 (CA186591)	93 855	37,508	
MASSACHUSETTS GENERAL HOSPITAL	Sub 223124 (Al095261)	93 855	38,919	
MASSACHUSETTS GENERAL HOSPITAL	UCSF#A122308	93 855	12,813	
MAYO CLINIC/MAYO FOUNDATION FOR MEDICAL EDUCATION & RESEARCH	63778365	93 855	27,900	
MBIO DIAGNOSTICS, INC.	MBIO DIAGNOSTICS, INC. SCHOOLEY	93 855	(748)	
MBIO DIAGNOSTICS, INC.	SUB NONE (AI093289)	93 855	50,879	
MBIO DIAGNOSTICS, INC.	SUB NONE (AI96189)	93 855	190,439	
MICROBIAL MEDICAL, INC.	20154055-1	93 855	22,471	
MICROBIOTIX, INC	20160317-1	93 855	78,568	
NANJING MEDICAL UNIVERSITY	Sub 20160567 (R43EB021129 )	93 855	7,090	
NATIONAL JEWISH HEALTH	Sub 2020096801 (Al117673)	93 855	1,162,871	
NATIONWIDE CHILDREN'S HOSPITAL	957913	93 855	110,600	
NEW YORK UNIVERSITY	15-A0-00-004739-01	93 855	18,338	
NORTH CAROLINA STATE UNIVERSITY	2010-1544-01	93 855	40,762	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	SUB SUL1847-04 (Al106987)	93 855	56,193	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	SUL1847-03	93 855	65,976	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	WONG1924-02	93 855	25,849	
NORTHWESTERN UNIVERSITY	60024957 UCLA:A03	93 855	(103,280)	
OAK CREST INSTITUTE OF SCIENCE	S14-164 UCLA	93 855	65,556	
OAK CREST INSTITUTE OF SCIENCE	Sub S14-164 (Al113048)	93 855	88,289	
ONCOIMMUNE, INC	201400133	93 855	19,421	
OREGON HEALTH & SCIENCE UNIVERSITY	9006527UCDBARRY	93 855	168,766	
OREGON HEALTH & SCIENCE UNIVERSITY	Sub 9006862	93 855	81,982	
PARTNERS HEALTHCARE SYSTEM, INC	224471	93 855	63,897	
PENNSYLVANIA STATE UNIVERSITY	005552	93 855	62,832	
PENNSYLVANIA STATE UNIVERSITY	4281-UCI-DHHS-9672-cyc5	93 855	656,129	
PENNSYLVANIA STATE UNIVERSITY	5233-UCI-DHHS-0793-cyc1	93 855	3,480	
PENNSYLVANIA STATE UNIVERSITY	Sub 4993-UCSD-DHHS-1692 (Al111	93 855	22,758	
PROFIL INSTITUTE FOR CLINICAL RESEARCH, INC.	Sub M37-SD-060-0910-4 (AI06864	93 855	(377)	
PUBLIC HEALTH FOUNDATION ENTERPRISES, INC.	HOME: A Comprehensive HIV Test	93 855	(554)	
PUBLIC HEALTH FOUNDATION ENTERPRISES, INC.	UCSF #A122745	93 855	561,714	
PUBLIC HEALTH FOUNDATION ENTERPRISES, INC.	UCSF#A120764	93 855	8,489	
PUBLIC HEALTH FOUNDATION ENTERPRISES, INC.	UCSF#A120960	93 855	38,970	
RAND CORP	9920150090	93 855	32,894	
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## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY 2	016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	8127	93 855	993	
SALK INSTITUTE FOR BIOLOGICAL STUDIES	NIH-SALK/DAVID/54.5%	93 855	(42,785)	
SANFORD BURNHAM PREBYS MEDICAL DISCOVERY INSTITUTE	55648-12651-UCLA	93 855	41,313	
SANFORD BURNHAM PREBYS MEDICAL DISCOVERY INSTITUTE	57659-12538-UCI-CYC2	93 855	14,929	
SANFORD BURNHAM PREBYS MEDICAL DISCOVERY INSTITUTE	7 P01 Al090935-05	93 855	41,286	
SANFORD BURNHAM PREBYS MEDICAL DISCOVERY INSTITUTE	Sub 55648-12640-UCSD (AI090935	93 855	65,266	
SILVER LAKE RESEARCH CORPORATION	036637	93 855	29,405	
SIXAL, INC.	20120004	93 855	52,694	
SIXAL, INC.	20152343	93 855	17,422	
SOCIAL AND SCIENTIFIC SYSTEMS, INC.	SSS/NIH 12000065002305 LAKE 5/12 26	93 855	(157)	
ST. JOSEPH'S HOSPITAL AND MEDICAL CENTER	STJOSEPH/NIH 20092736 LA CAVA 04/15	93 855	(130,413)	
STANFORD UNIVERSITY	1U19Al109662-01	93 855	304,636	
STANFORD UNIVERSITY	60230227-104104-A	93 855	107,676	
STANFORD UNIVERSITY	60625362-107582 UCLA	93 855	33,241	
STANFORD UNIVERSITY	60892242-584	93 855	16,767	
STANFORD UNIVERSITY	61048126-117572	93 855	75,128	
STANFORD UNIVERSITY	61097839-48307	93 855	9,634	
SUSTAINABLE SCIENCES INSTITUTE	IR1200-1	93 855	17,147	
TEXAS A&M RESEARCH FOUNDATION	P01Al095208	93 855	313,429	
TEXAS A&M UNIVERSITY - COLLEGE STATION	99-S130607-CYC3	93 855	224,345	
TEXAS BIOMEDICAL RESEARCH INSTITUTE (TEXAS BIOMED)	15-4547-003	93 855	25,527	
THE SCRIPPS RESEARCH INSTITUTE	5-23317	93 855	266,830	
THE UNIVERSITY OF ALABAMA (TUSCALOOSA)	000397076-014	93 855	502,682	
THE UNIVERSITY OF ALABAMA (TUSCALOOSA)	000397076-016	93 855	91,840	
THE UNIVERSITY OF ALABAMA (TUSCALOOSA)	NIH-U ALABAMA/MATHEWS/08/11	93 855	(4,194)	
THE UNIVERSITY OF ALABAMA (TUSCALOOSA)	SUB 397076-013 (AI067039)	93 855	401,298	
THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	000503356-SP002-01 7	93 855	70,410	
THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	P30Al027767	93 855	7,543	
TUNITAS THERAPEUTICS	TT/NIH 20104491 ZHANG 12/11 54%	93 855	(4,618)	
UNIVERSITY OF CHICAGO	NIH/UNIV CHICAGO 39778-5-30823 NIZE	93 855	(9,419)	
UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	FY16.206.002	93 855	198,481	
UNIVERSITY OF CONNECTICUT	UCH641200355	93 855	583,141	
UNIVERSITY OF DELAWARE	38795	93 855	25,097	
UNIVERSITY OF ILLINOIS	2013-00311-01 (AA501)-CYC2	93 855	42,934	
UNIVERSITY OF IOWA	430-40-09A VanBrocklin,H	93 855	9,421	
UNIVERSITY OF MASSACHUSETTS AMHERST	SUB WA00324479/RFS2016020 (Al1	93 855	102,539	
UNIVERSITY OF MINNESOTA	P661628540 PRICE	93 855	(1,194)	
UNIVERSITY OF MINNESOTA	M6616285701	93 855	21,607	
UNIVERSITY OF MINNESOTA	P004756905	93 855	126,886	
UNIVERSITY OF MINNESOTA	P004756918	93 855	123,410	
UNIVERSITY OF MINNESOTA	P004756920	93 855	19,039	
UNIVERSITY OF MINNESOTA	P661628545	93 855	29,986	
UNIVERSITY OF NEBRASKA	34-5319-2002-001-cyc3	93 855	156,466	
UNIVERSITY OF NEBRASKA	F/U NE 34-5319-2002-001 DAVIESJ53.5	93 855	(49,877)	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	14-4256	93 855	1,279	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY 2	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	1R01Al114310-01	93 855	129,871	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5100230	93 855	28,133	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5103294	93 855	4,144	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5-31534	93 855	269,632	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	531551	93 855	308,404	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5-31553:4	93 855	292,673	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	534272	93 855	223,943	
UNIVERSITY OF PENNSYLVANIA	551334	93 855	15,411	
UNIVERSITY OF PENNSYLVANIA	557199	93 855	87,243	
UNIVERSITY OF PENNSYLVANIA	557758:2	93 855	16,676	
UNIVERSITY OF PENNSYLVANIA	560841	93 855	14,754	
UNIVERSITY OF PENNSYLVANIA	560928	93 855	29,852	
UNIVERSITY OF PENNSYLVANIA	564036	93 855	8,010	
UNIVERSITY OF PENNSYLVANIA	566950	93 855	48,096	
UNIVERSITY OF PENNSYLVANIA	Sub 560574 (Al052845)	93 855	33,714	
UNIVERSITY OF PITTSBURGH	0026281 (123833-11)-cyc2	93 855	78,996	
UNIVERSITY OF ROCHESTER	SUB 415505-G (AI094511)	93 855	75,759	
UNIVERSITY OF SOUTH FLORIDA	6144-1094-00-A	93 855	49,004	
UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT SAN ANTONIO	5U19 Al070412-09	93 855	41,528	
UNIVERSITY OF WASHINGTON	008046	93 855	12,362	
UNIVERSITY OF WASHINGTON	UWSC7071-cyc1	93 855	120,361	
UNIVERSITY OF WASHINGTON	UWSC7111:2	93 855	63,933	
UNIVERSITY OF WASHINGTON	UWSC8589	93 855	7,387	
UNIVERSITY OF WASHINGTON	WU-16-67-cyc1	93 855	23,176	
UNIVERSITY OF WISCONSIN-MADISON	1UM1AI114271-01	93 855	755,188	
UNIVERSITY OF WISCONSIN-MADISON	363K716	93 855	203,788	
UNIVERSITY OF WISCONSIN-MADISON	446K493	93 855	41,359	
UNIVERSITY OF WISCONSIN-MADISON	SUB 565K025 (Al113580)	93 855	148,726	
UNIVERSITY OF WISCONSIN-MADISON	SUB 627K701 (Al106772)	93 855	199,845	
UPMC	9278	93 855	23,066	
VANDERBILT UNIVERSITY	SUB 2796-018392 (Al110750)	93 855	44,695	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VMRF/NIH 256304 ZURAW	93 855	(5,300)	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA/NIH HOSTETLER 275651 16% 03/08	93 855	(515)	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VMRF/NIH 285261 BEADLE	93 855	514	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VMRF/NIH 288472 HUANG	93 855	(5,351)	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VMRF/NIH 293125 WOELK	93 855	(1,196)	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VMRF/NIH 293126 LITTLE	93 855	2,034	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA /NIH 307764 GUATELLI 8/13	93 855	(4,001)	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VMRF/NIH 307832 RICHMAN 5/13	93 855	(2,010)	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA BELIAKOVA-BETHELL (AI03621	93 855	10,384	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Beliakova-Bethell 312649 (	93 855	81,286	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Guatelli 308328 C13A11599	93 855	45,094	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Guatelli 310092 (Al 110162	93 855	11,825	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA GUATELLI 313326 ( AI114397	93 855	22,810	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA LOONEY (AI104283)	93 855	2,973	
		00 000	2,570	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY 2	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Looney 309176 ( Al036214)	93 855	11,770	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA RAMIREZ 316161 ( AI081668)	93 855	2,824	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA RICHMAN 302533 (Al096113)	93 855	20,221	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA SINGH 313353 (C13A11599) (	93 855	15,270	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA SMITH (AI036214)	93 855	20,156	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA SPINA 302724 (Al096113)	93 855	45,834	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Spina 312650 (Al110162)	93 855	6,453	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Strain 307761 (Al104283)	93 855	6,060	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA STRAIN 311166 (Al036214)	93 855	12,060	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA STRAIN 312547 (Al096113)	93 855	26,551	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA STRAIN 314982 (Al104283)	93 855	45,242	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA WEIBEL (Al036214)	93 855	19,682	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Zuraw 312757 (Al070535)	93 855	19,181	
VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY	F/VA INST 431602-19905MCCLELLND J53	93 855	(56,090)	(56,090)
WASHINGTON UNIVERSITY IN ST. LOUIS	WU-13-77	93 855	6,288	
YALE UNIVERSITY	M11A10961 (A09896)-cyc3	93 855	42,858	
YALE UNIVERSITY	M15A12208 (A10336)	93 855	128,011	
YALE UNIVERSITY	M16A12284(A10454)-cyc1	93 855	116,901	
YALE UNIVERSITY	M16A12357 (A10542)-cyc1	93 855	41,866	
YALE UNIVERSITY	UCSF#A119978	93 855	222,200	
YESHIVA UNIVERSITY	Sub 310479 (Al101436)	93 855	162,811	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	R21Al116218	93 855	143,607	
PARTNERS HEALTHCARE SYSTEM, INC	220299	93 855	7,419	
SANFORD BURNHAM PREBYS MEDICAL DISCOVERY INSTITUTE	58295-12468-UCB	93 855	239,156	
UNIVERSITY OF WASHINGTON	006406	93 855	326,847	
ALTUM, INCORPORATED	Sub 20151237 (NONE)	93 856	17,537	
BRIGHAM AND WOMEN'S HOSPITAL	BWH/NIH SUB 108487 HAUBRICH 55% 201	93 856	(9,767)	
BRIGHAM AND WOMEN'S HOSPITAL	Sub 113091 (AI068636 )	93 856	2,970	
DETON CORPORATION	DETON CORP CATANZARO SUB 20130284 (	93 856	(14,468)	
DUKE UNIVERSITY	SUB NONE (AI103315)	93 856	2,620	
EMORY UNIVERSITY	Sub T563785 (Al090023 )	93 856	31,660	
FLORIDA STATE UNIVERSITY	NIH-FSU/OPELLA/54.5%	93 856	(4,863)	
INTERNATIONAL AIDS VACCINE INITIATIVE INC.	SUB NONE (AI090970)	93 856	32,872	
JOHNS HOPKINS UNIVERSITY	NIH/JHU PTCL01 PO2002244654 SPECTOR	93 856	(250,169)	
SCARLESS LABORATORIES, INC	1R43AR063558-01A1	93 856	88,219	
SOCIAL AND SCIENTIFIC SYSTEMS, INC.	FFT SSS(NIH) TASK ORDER 3 SCHOOLEY	93 856	2,856	
SOCIAL AND SCIENTIFIC SYSTEMS, INC.	NIH/SSS CRB-DCR01-S-09-00299 IRC004	93 856	1,234	
THE SCRIPPS RESEARCH INSTITUTE	NIH/TSRI 5-23879 WINZELER	93 856	198	
THE SCRIPPS RESEARCH INSTITUTE	Sub 5-52034 (All86112)	93 856	15,986	
UNIVERSITY OF PENNSYLVANIA	NIH-U PENNSYLVANIA/WOODS/54.5%08/10	93 856	(53,141)	
UNIVERSITY OF PENNSYLVANIA	SUB 552499 (Al082020)	93 856	57,205	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VMRF/NIH 252308 GUATELLI 3/06	93 856	1,177	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	NIH-VMRF PA WITKE 16% 5/03	93 856	(712)	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VMRF/NIH WOELK	93 856	(558)	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VMRF/NIH BLAIR	93 856	1,495	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY 2	016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VMRF/NIH 286610 SMITH	93 856	(2,854)	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VMRF/NIH 291182 LANDSBERG	93 856	(1,495)	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VMRF/NIH 293530 GUATELLI	93 856	2,202	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA 308518 Delano-Wood (AG0164	93 856	9,345	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA ADV JAK (AG016495)	93 856	6,932	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA GUATELLI 316286 (AI116194)	93 856	10,493	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Pond 312239 (Al090970)	93 856	2,398	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Singh 306974 (Al081668)	93 856	26,541	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA SINGH 312651 (AI110162)	93 856	8,350	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA SMITH 312237 (Al090970)	93 856	592	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Spina 314064 (Al036214)	93 856	35,260	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA WEIBEL 312366 (AI027763)	93 856	6,673	
VIROGENICS, INC.	VIROGENICS, INC. (NIH R43AI100398)	93 856	(6,950)	
MERCATOR MEDSYSTEMS, INC	MERCATOR OWENS	93 857	(4)	
ADVANCED GENETIC SYSTEMS, INC.	1R41GM115250-01	93 859	28,364	
AKONNI BIOSYSTEMS	Sub 8056.1.A ( R44GM103053 )	93 859	7,048	
AMERICAN SOCIETY FOR CELL BIOLOGY	AMERICAN SOCIETY FOR CELL BIOL-2014	93 859	2,923	
ARIZONA STATE UNIVERSITY/TEMPE	12-848-003A	93 859	6,623	
ARIZONA STATE UNIVERSITY/TEMPE	1R01GM100471-01 12841	93 859	30,164	
ARIZONA STATE UNIVERSITY/TEMPE	SUB 15-695 (GM106081)	93 859	25,058	
ARIZONA STATE UNIVERSITY/TEMPE	SUB 16-798 (GM113967)	93 859	181,184	
CALIFORNIA INSTITUTE OF TECHNOLOGY	68-1095554	93 859	19,775	
CALIFORNIA INSTITUTE OF TECHNOLOGY	SUB 1089976 (GM094610)	93 859	(565)	
CALIFORNIA INSTITUTE OF TECHNOLOGY	SUB 68C-1093852 (GM094610)	93 859	(38,374)	
CALIFORNIA INSTITUTE OF TECHNOLOGY	Sub 82-1094663 (GM070923)	93 859	43,747	
CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	NIH GM095384/SDSU 56586A/CONRAD 54.	93 859	(4,831)	
CARNEGIE INSTITUTION	6-10375-01	93 859	41,292	
CHILDREN'S HOSPITAL AND RESEARCH CENTER AT OAKLAND	12_8036_UCB_01	93 859	108,916	
CHILDREN'S HOSPITAL AND RESEARCH CENTER AT OAKLAND	12_8036_UCLA_01	93 859	475,598	
CHILDREN'S HOSPITAL AND RESEARCH CENTER AT OAKLAND	12_8036_UCSF_01	93 859	178,655	
CHILDREN'S HOSPITAL AND RESEARCH CENTER AT OAKLAND	1R01GM109030-01	93 859	82,678	
CHILDREN'S HOSPITAL OF LOS ANGELES	P2012-0274:A3	93 859	17,406	
COLORADO STATE UNIVERSITY	G-35013-1	93 859	294,683	
COLUMBIA UNIVERSITY	1 (GG007543)-cyc4	93 859	37,972	
COLUMBIA UNIVERSITY	1(GG008102)	93 859	16,840	
COLUMBIA UNIVERSITY	1GG009648	93 859	13,236	
CORNELL UNIVERSITY	69800-10240	93 859	98,865	
CSU SAN MARCOS/UNIVERSITY AUXILIARY & RESEARCH SERVICES CORPORATION	2R01GM075316	93 859	70,144	
DANA-FARBER CANCER INSTITUTE	1260002	93 859	63,508	
DARTMOUTH COLLEGE	006706	93 859	28,909	
DUKE UNIVERSITY	2034849-cyc1	93 859	18,807	
EMORY UNIVERSITY	SubT445706 (GM114612)	93 859	62,061	
ENDOCRINE SOCIETY, THE	Sub 10001 (GM095349)	93 859	7,345	
FRED HUTCHINSON CANCER RESEARCH CENTER	0000855720	93 859	9,885	
GEORGIA STATE UNIVERSITY	GSU SP0012346-04 POWERS 2/17	93 859	25,603	
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## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY 2	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
INDIANA UNIVERSITY	BL-4635304-UCD	93 859	2,995	
JACKSON LABORATORY, THE	20133882:1	93 859	(4,965)	
JOHNS HOPKINS UNIVERSITY	R01AR064066	93 859	63	
LEIDOS BIOMEDICAL RESEARCH, INC.	29XS133TO15	93 859	86,378	
LOS ALAMOS NATIONAL SECURITY, LLC	205716-1:4	93 859	271,387	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	Sub 5710003747 (GM082209)	93 859	151,100	
MEDICAL COLLEGE OF WISCONSIN	A00-0434-004	93 859	55,015	
MEDICAL COLLEGE OF WISCONSIN	SUB NONE (GM094503)	93 859	(275)	
MODULATED IMAGING, INC.	MI-50912-cyc4	93 859	9,703	
NANOCELLECT BIOMEDICAL, INC.	20130370	93 859	120,399	
NEOVATIVE, INC.	NV002-cyc1	93 859	44,124	
NEW MEXICO CONSORTIUM, INC.	Sub NMC158-01 (GM105608)	93 859	49,054	
NEW YORK UNIVERSITY	005857	93 859	58,684	
NORTH CAROLINA STATE UNIVERSITY	Sub none (GM093939)	93 859	71,828	
NORTHWESTERN UNIVERSITY	SP0029368-PROJ0007727-cyc1	93 859	56,411	
OHIO STATE UNIVERSITY	60029134 UCLA:03	93 859	13,810	
PURDUE UNIVERSITY	4102-59359:01	93 859	7,099	
ROCKEFELLER UNIVERSITY	1P41GM109824-01	93 859	369,502	
ROCKEFELLER UNIVERSITY	1R01GM112108-01A1	93 859	91,419	
ROCKEFELLER UNIVERSITY	7R01GM107124-02	93 859	34,223	
ROCKEFELLER UNIVERSITY	PRIME:U01GM098256	93 859	5,389	
ROCKEFELLER UNIVERSITY	UCSF#A118457	93 859	4,603	
RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	5398-CYC1	93 859	18,688	
RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	RUTGERS UNIVERSITY	93 859	1,138	
SANFORD BURNHAM PREBYS MEDICAL DISCOVERY INSTITUTE	55631-11502-UCSD-04 (GM094663)	93 859	1,647	
SANFORD BURNHAM PREBYS MEDICAL DISCOVERY INSTITUTE	56344-11738-UCSD-01 (GM098412)	93 859	311,079	
SANFORD BURNHAM PREBYS MEDICAL DISCOVERY INSTITUTE	56344-11964 UCSD-01 (GM098412)	93 859	78,134	
SANFORD BURNHAM PREBYS MEDICAL DISCOVERY INSTITUTE	56863-11900-UCI-cyc6	93 859	75,787	
ST. JUDE CHILDREN'S RESEARCH HOSPITAL	112156010-7660158	93 859	61,009	
STANFORD UNIVERSITY	5U19GM106990-02	93 859	250,620	
STANFORD UNIVERSITY	60411189-38890-C	93 859	23,064	
STANFORD UNIVERSITY	60544676-109623	93 859	108,940	
STANFORD UNIVERSITY	60684362-112326:1	93 859	445,521	
STANFORD UNIVERSITY	60910571111755	93 859	20,544	
STANFORD UNIVERSITY	61000019-469	93 859	102,635	
STANFORD UNIVERSITY	61124790-121581	93 859	72,500	
STANFORD UNIVERSITY	SUB 60133681 (GM102098)	93 859	111,298	
STANFORD UNIVERSITY	Sub 61004648-39087 (GM083118)	93 859	145,625	
STANFORD UNIVERSITY	SUB 61009649-108979 (GM106990)	93 859	330,743	
TEMPLE UNIVERSITY	Sub 258162UC (GM110749)	93 859	20,757	
TEXAS A&M RESEARCH FOUNDATION	SUB S140266 (GM052964)	93 859	17,012	
TEXAS A&M UNIVERSITY - COLLEGE STATION	TEXAS A&M MOLINSKI	93 859	(3,199)	
THE SCRIPPS RESEARCH INSTITUTE	Sub 5-50085 (GM100934)	93 859	49,116	
THE SCRIPPS RESEARCH INSTITUTE	SUB 5-50246 (GM094586)	93 859	15,383	
THE SCRIPPS RESEARCH INSTITUTE	Sub 5-50419 (GM105766)	93 859	36,755	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY :	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
THE SCRIPPS RESEARCH INSTITUTE	Sub PO 5-52584 (GM056006)	93 859	102,209	
UNIVERSIDAD NACIONAL AUTONOMA DE MEXICO	201402451	93 859	14,699	
UNIVERSITY OF ARIZONA	U OF AZ/NIH PRION PRPGTN SINDI 8/16	93 859	30,098	
UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	FY15.726.002	93 859	81,791	
UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	UCSF#A124303	93 859	251,722	
UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	UCSF#A124403	93 859	169,079	
UNIVERSITY OF FLORIDA	International Clinics on Infec	93 859	1,852	
UNIVERSITY OF FLORIDA	UFDSP00010870:1	93 859	121,373	
UNIVERSITY OF FLORIDA	UFDSP00010901	93 859	33,545	
UNIVERSITY OF ILLINOIS	2009-01303-03	93 859	1	
UNIVERSITY OF ILLINOIS	2010-00365-05	93 859	660,281	
UNIVERSITY OF KANSAS/KU CENTER FOR RESEARCH, INC.	QL814631-CYC1	93 859	8,681	
UNIVERSITY OF KANSAS/KU CENTER FOR RESEARCH, INC.	QL859695	93 859	(69)	
UNIVERSITY OF MASSACHUSETTS SYSTEM	RFS2015073	93 859	105,828	
UNIVERSITY OF MIAMI	7R01GM08520502	93 859	61,494	
UNIVERSITY OF MICHIGAN	3002447196	93 859	10,374	
UNIVERSITY OF MICHIGAN	3003206498	93 859	17,148	
UNIVERSITY OF MICHIGAN	3003707885	93 859	83,207	
UNIVERSITY OF MICHIGAN	A16-0292-001	93 859	45,036	
UNIVERSITY OF MICHIGAN	SUB 3001689311 (GM096194)	93 859	(201)	
UNIVERSITY OF MICHIGAN	Sub 3003094979 (GM094503)	93 859	105,956	
UNIVERSITY OF MICHIGAN	Sub 3003490309 (GM078553)	93 859	52,766	
UNIVERSITY OF MINNESOTA	N002311201 (GM100310)	93 859	110,441	
UNIVERSITY OF MINNESOTA	SUB 0904509601 (GM110129)	93 859	75,408	
UNIVERSITY OF MISSISSIPPI	66100920513	93 859	14,377	
UNIVERSITY OF PENNSYLVANIA	562336-cyc3	93 859	15,589	
UNIVERSITY OF PENNSYLVANIA	FDP-UPENN/NIH 557821 OLCESE 5/15 54	93 859	234	
UNIVERSITY OF PITTSBURGH	0019692 (124457-6)	93 859	592	
UNIVERSITY OF SOUTHERN CALIFORNIA	38602638:2	93 859	46,598	
UNIVERSITY OF SOUTHERN CALIFORNIA	SUB 41872741 (GM056006)	93 859	39,220	
UNIVERSITY OF SOUTHERN CALIFORNIA	Sub 63581583 (GM094618)	93 859	24,602	
UNIVERSITY OF TEXAS-AUSTIN	SUB uta15-000328 (GM111926)	93 859	120,832	
UNIVERSITY OF TEXAS-AUSTIN	Sub UTA16-000010 (GM104876)	93 859	29,188	
UNIVERSITY OF VIRGINIA	GC12130 139092:04	93 859	52,033	
UNIVERSITY OF WASHINGTON	UWSC8727	93 859	1,766	
UNIVERSITY OF WASHINGTON	UWSC8745	93 859	127,239	
VALITOR, INC.	2489-018400	93 859	340	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VMRF/NIH 294962 SCHULTEIS 3/11	93 859	287	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VMRF/NIH 294960 P.PATEL 4/11	93 859	6,837	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA ADV HEAD ( GM 085179 )	93 859	6,344	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA ADV PATEL ( GM085179 )	93 859	9,221	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA ADV PEARN ( GM085179 )	93 859	1,618	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA HEAD 307635 ( GM085179)	93 859	19,020	
VIRGINIA COMMONWEALTH UNIVERSITY	PD303431-SC105094 ( GM109895)	93 859	99,309	
WASHINGTON UNIVERSITY IN ST. LOUIS	WU-HT-12-15-MOD-3	93 859	3,518	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY 2	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
YALE UNIVERSITY	C15A12298	93 859	53,985	
YESHIVA UNIVERSITY	310591	93 859	318,147	
YESHIVA UNIVERSITY	9-526-5266	93 859	(2,529)	
CORNELL UNIVERSITY	A00-0525-003	93 859	33,755	
THOMAS JEFFERSON UNIVERSITY	080-18060-S10301-002	93 859	(7,658)	
SAN DIEGO COMMUNITY COLLEGE DISTRICT	Sub none ( GM073590)	93 862	48,578	
THE SCRIPPS RESEARCH INSTITUTE	NIH-TSRI / ABAGYAN	93 862	(193)	
UNIVERSITY OF VIRGINIA	NIH-U OF VIRGINIA/KLEMKE/54.5%/7-09	93 862	(10,858)	
UNIVERSITY OF MIAMI	66619X:6	93 864	(149)	
ARKANSAS CHILDREN'S HOSPITAL RESEARCH INSTITUTE	034586	93 865	29,690	
BATTELLE MEMORIAL INSTITUTE	442772	93 865	109,506	
BAYLOR COLLEGE OF MEDICINE	5600716512:03	93 865	368,186	
BOSTON UNIVERSITY	4500001209	93 865	7,992	
CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	512J P3531 7802 211 (HD047736)	93 865	30,232	
CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	NICHHD-SDSURF/GOLLAN/54.5%07/08	93 865	(183)	
CHILDREN'S HOSPITAL CORP. (THE), BOSTON, MASS.	R01HD074261	93 865	27,253	
CHILDREN'S HOSPITAL MEDICAL CENTER OF CINCINNATI	130474	93 865	92,876	
CHILDREN'S HOSPITAL MEDICAL CENTER OF CINCINNATI	130474-CLEMENS	93 865	(7,549)	
CHILDREN'S HOSPITAL MEDICAL CENTER OF CINCINNATI	130474-MENDELSOHN	93 865	108,839	
CHILDREN'S HOSPITAL MEDICAL CENTER OF CINCINNATI	130474 (HD000850)	93 865	(18,473)	
CHILDREN'S HOSPITAL MEDICAL CENTER OF CINCINNATI	134198	93 865	33,228	
CHILDREN'S HOSPITAL MEDICAL CENTER OF CINCINNATI	136763	93 865	73,479	
CHILDREN'S HOSPITAL MEDICAL CENTER OF CINCINNATI	5K12HD000850-30	93 865	99,023	
CHILDREN'S HOSPITAL OF LOS ANGELES	8011-RGF009152-00-2	93 865	917	
CHILDREN'S HOSPITAL OF PHILADELPHIA	3017X-cyc2	93 865	221,215	
CHILDREN'S HOSPITAL OF PHILADELPHIA	3210050618	93 865	11,382	
CHILDREN'S HOSPITAL OF PITTSBURGH	0026567 1 19337-01 (HD064407)	93 865	2,046	
CHILDREN'S NATIONAL MEDICAL CENTER	CRI/NIH 300005201204 WONG 8/14 54%	93 865	(13,470)	
CORNELL UNIVERSITY	15101696-03	93 865	22,672	
DREXEL UNIVERSITY	DREXEL UNIVERSITY (78666)	93 865	33	
DUKE UNIVERSITY	Sub 197946 215519 (HD 076676)	93 865	2,614	
DUKE UNIVERSITY	SUB NONE (HD081044)	93 865	11,032	
EMORY UNIVERSITY	EU-S903312-DAHL-5/14	93 865	3,501	
FLINT REHABILITATION DEVICES	55769-cyc1	93 865	148,550	
FLINT REHABILITATION DEVICES	FRD-200966-cyc1	93 865	15,521	
FLORIDA INTERNATIONAL UNIVERSITY	800002699-02	93 865	(148)	
FLORIDA STATE UNIVERSITY	R01776	93 865	52,761	
GEORGE WASHINGTON UNIVERSITY	UCSF#A121694	93 865	158,530	
GEORGIA INSTITUTE OF TECHNOLOGY	RG230-G1	93 865	144,229	
GLYCOHUB, INC.	201500220	93 865	49,694	
HARVARD UNIVERSITY	114074.0782	93 865	4,262	
HARVARD UNIVERSITY	114074.0830.5041149 (HD052102)	93 865	(99,768)	
HARVARD UNIVERSITY	114074.0928.5041147 (HD052102)	93 865	(6,152)	
HARVARD UNIVERSITY	114074.1079.5048379	93 865	43,950	
HARVARD UNIVERSITY	114205-1179-5096789:1	93 865	84,876	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

				2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
HARVARD UNIVERSITY	152188.5052439.0004	93 865	51,882	
HARVARD UNIVERSITY	Sub 114205-1128-5096796 AMP (H	93 865	384,146	
HARVARD UNIVERSITY	Sub 114205-1130-5096798 SMARTT	93 865	518,281	
HASKINS LABORATORIES, INC	R01HD065794	93 865	32,795	
HASKINS LABORATORIES, INC	UCSF#A123134	93 865	32,377	
HENRY FORD HEALTH SYSTEM	87645	93 865	69,866	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	0254-3514-4609	93 865	22,629	
JOHNS HOPKINS UNIVERSITY	2002294060	93 865	74,139	
JOHNS HOPKINS UNIVERSITY	2002295012:1	93 865	257,073	
JOHNS HOPKINS UNIVERSITY	2002432331	93 865	8,197	
MAGEE-WOMENS HOSPITAL, RESEARCH INSTITUTE AND FOUNDATION	2618	93 865	302,894	
MAGEE-WOMENS HOSPITAL, RESEARCH INSTITUTE AND FOUNDATION	MAGEE WOMENS HOSP/NIH 7279 ANTON 8/	93 865	(177)	
MAYO CLINIC/MAYO FOUNDATION FOR MEDICAL EDUCATION & RESEARCH	63112599	93 865	56,157	
MAYO CLINIC/MAYO FOUNDATION FOR MEDICAL EDUCATION & RESEARCH	SUB NONE (HD031476)	93 865	11,325	
MU-JHU CARE LIMITED	R01HD080476	93 865	59,013	
NATIONWIDE CHILDREN'S HOSPITAL	30000744-06:5	93 865	43,378	
NATIONWIDE CHILDREN'S HOSPITAL	30002425-05	93 865	171,663	
NEW YORK UNIVERSITY	F7432-01-cyc4	93 865	75,469	
NORTHWESTERN UNIVERSITY	60032241 UCI-cyc4	93 865	10,175	
OREGON HEALTH & SCIENCE UNIVERSITY	9009028_UCLA:3	93 865	264,409	
RTI INTERNATIONAL	0212456:07	93 865	150,086	
RTI INTERNATIONAL	2-312-0214493-52064L	93 865	36,429	
RTI INTERNATIONAL	SUB HD069031 (HD054214)	93 865	586,046	556,97
RTI INTERNATIONAL	Sub none (HD036790)	93 865	371	
SALK INSTITUTE FOR BIOLOGICAL STUDIES	NIH-SALK/SEMENDEFERI/54.5/2/12	93 865	(2,409)	
SALK INSTITUTE FOR BIOLOGICAL STUDIES	NIH-SALK INST PO52446 HALGREN	93 865	(811)	
SCINTILLON INSTITUTE	22026-206-450-cyc1	93 865	528	
SEATTLE CHILDREN'S HOSPITAL, RESEARCH AND FOUNDATION	10889SUB:01	93 865	7,309	
SEATTLE CHILDREN'S HOSPITAL, RESEARCH AND FOUNDATION	11305SUB	93 865	38,090	
SEQUOIA FOUNDATION	9098 UCSF FY15-16	93 865	17,400	
STANFORD UNIVERSITY	1R21HD079095-01A1	93 865	19,493	
STANFORD UNIVERSITY	60116704-105015-B	93 865	9,871	
STANFORD UNIVERSITY	STANFORD UNIVERSITY-ADVANCE	93 865	31,802	
STATE UNIVERSITY OF NEW YORK	R839463	93 865	11,210	
STELLENBOSCH UNIVERSITY	S004190 / 55811	93 865	55,488	
STELLENBOSCH UNIVERSITY	Sub S004189 (R01HD083042	93 865	115,966	
THE UNIVERSITY OF ALABAMA (TUSCALOOSA)	0003388010-008:6	93 865	47,528	
THE UNIVERSITY OF ALABAMA (TUSCALOOSA)	000388010-002	93 865	93,113	
THE UNIVERSITY OF ALABAMA (TUSCALOOSA)	000388010-019 (HD040533)	93 865	12,839	
THE UNIVERSITY OF ALABAMA (TUSCALOOSA)	000388010-056	93 865	21,412	
THE UNIVERSITY OF ALABAMA (TUSCALOOSA)	Sub 000342391-014 (HD061222)	93 865	22,476	
THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	Sub 000504713-012 (HD061222)	93 865	5,781	
TULANE UNIVERSITY	SUB TUL-HSC-553714-15/16 (HD52	93 865	3,444	
TULANE UNIVERSITY	Sub TUL-HSC-553718-15/16 (HD05	93 865	13,766	
TULANE UNIVERSITY	TUL-HSC-553703-15/16	93 865	19,837	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY :	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
TULANE UNIVERSITY	TUL-HSC-553716-15/16	93 865	17,451	
UNIVERSITY OF CAMBRIDGE	RAS-CAM/NIH RG78257 LUEDERS 05/17 5	93 865	63,688	
UNIVERSITY OF CHICAGO	FP036878-03-cyc2	93 865	157,421	
UNIVERSITY OF COLORADO DENVER	FY15.366.001-cyc1	93 865	214,251	
UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	14-036-002:2	93 865	203,560	
UNIVERSITY OF ILLINOIS	2010064230300	93 865	6,655	
UNIVERSITY OF KANSAS/KU CENTER FOR RESEARCH, INC.	FY2014-014-M2:2	93 865	77,649	
UNIVERSITY OF MARYLAND, BALTIMORE	1500173	93 865	159,196	
UNIVERSITY OF MICHIGAN	3002531057	93 865	82,656	
UNIVERSITY OF MICHIGAN	3002797878:2	93 865	37,619	
UNIVERSITY OF MICHIGAN	3003317170-cyc2	93 865	58,412	
UNIVERSITY OF MICHIGAN	3003525385	93 865	12,072	
UNIVERSITY OF MICHIGAN	NIH-U MICHIGAN/NAGER/06/11	93 865	(10,457)	
UNIVERSITY OF MICHIGAN	Sub 3002375941 (HD033487)	93 865	31,115	
UNIVERSITY OF NOTRE DAME (INCL GEM)	202180UCD	93 865	57,539	
UNIVERSITY OF OKLAHOMA	RS20130769-05	93 865	7,045	
UNIVERSITY OF PENNSYLVANIA	567200/10051438/16377	93 865	16,043	
UNIVERSITY OF PITTSBURGH	0026212 (124361-3)	93 865	201,926	
UNIVERSITY OF PITTSBURGH	0026567(119337-02)	93 865	52,929	
UNIVERSITY OF PITTSBURGH	0048860 (126874-1)	93 865	13,792	
UNIVERSITY OF PITTSBURGH	0013027(122144-2):6	93 865	29,250	
UNIVERSITY OF SOUTHERN CALIFORNIA	111697-cyc14	93 865	54,140	
UNIVERSITY OF SOUTHERN CALIFORNIA	60664307	93 865	64,841	
UNIVERSITY OF TEXAS-SOUTHWESTERN MEDICAL CENTER AT DALLAS	006993	93 865	490,635	
UNIVERSITY OF THE WITWATERSRAND	Innovations in HIV testing to	93 865	2,637	
UNIVERSITY OF UTAH	20140880	93 865	2,416	
UNIVERSITY OF UTAH	K12HD047349	93 865	(551)	
UNIVERSITY OF UTAH	Sub 10034455-UCSD-HALGREN (HD0	93 865	28,724	
UNIVERSITY OF WASHINGTON	720069-cyc6	93 865	40,170	
VANDERBILT UNIVERSITY	1973-013635	93 865	1,272	
VANDERBILT UNIVERSITY	3176-013636	93 865	95,000	
WASHINGTON STATE UNIVERSITY	104536G002848	93 865	2,969	
WASHINGTON STATE UNIVERSITY	104536-G003490	93 865	134,581	
WASHINGTON UNIVERSITY IN ST. LOUIS	1R01HD078641-01A1	93 865	9,517	
WASHINGTON UNIVERSITY IN ST. LOUIS	WU-15-73	93 865	20,153	
WASHINGTON UNIVERSITY IN ST. LOUIS	WU-16-139	93 865	126,082	
WAYNE STATE UNIVERSITY	WSU11032	93 865	17,163	
WAYNE STATE UNIVERSITY	WSU16014	93 865	58,435	
WITS HEALTH CONSORTIUM (PTY) LIMITED	D1404360-01	93 865	23,169	
WRIGHT STATE UNIVERSITY	Sub None (HD059969)	93 865	25,557	
YALE UNIVERSITY	2U10HD055925-06	93 865	(43,893)	
YALE UNIVERSITY	M14A11918(A10192)	93 865	2,553	
YALE UNIVERSITY	M14A12052 (A10192)	93 865	7,800	
YALE UNIVERSITY	M15A12144 (A10236)	93 865	12,131	
YALE UNIVERSITY	M15A12257	93 865	34,749	
THE SHIPE OF THE S	INITOTALIZZOI	93 000	34,749	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY :	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
YESHIVA UNIVERSITY	310897	93 865	69,306	
CHILDREN'S HOSPITAL MEDICAL CENTER OF CINCINNATI	1R01HD07812701	93 865	142,539	
STANFORD UNIVERSITY	A14-0009-002	93 865	35,459	
STANFORD UNIVERSITY	A16-0544-001	93 865	61,482	
AFASCI, INC.	201224712	93 866	(54)	
AMERICAN FEDERATION-AGING RESEARCH	UCSF #A124460	93 866	8,173	
AMYDIS DIAGNOSTICS	Sub 20162223 ( R43AG050454 )	93 866	20,251	
BETH ISRAEL DEACONESS MEDICAL CENTER	Sub 01026387 (AG041869)	93 866	10,610	
BOSTON UNIVERSITY	BOSTON UNIVERSITY; 9500301286	93 866	221,967	
BOSTON UNIVERSITY	4500001840	93 866	75,251	
BRIGHAM AND WOMEN'S HOSPITAL	111014:3	93 866	151,945	
BROWN UNIVERSITY	00000843	93 866	38,033	
BROWN UNIVERSITY	R01AG051170	93 866	31,698	
BUCK INSTITUTE FOR RESEARCH ON AGING	2049	93 866	147,673	
BUCK INSTITUTE FOR RESEARCH ON AGING	SA31100	93 866	66,624	
CALIFORNIA PACIFIC MEDICAL CENTER RESEARCH INSTITUTE	2803226-S140	93 866	123,313	
CALIFORNIA PACIFIC MEDICAL CENTER RESEARCH INSTITUTE	2803227-S141	93 866	147,182	
CALIFORNIA PACIFIC MEDICAL CENTER RESEARCH INSTITUTE	2803232-S153	93 866	106,377	
COLUMBIA UNIVERSITY	2(GGO10471)-cyc1	93 866	265,547	
DIAMIR, LLC	Sub 20152707 (AG044860)	93 866	32,608	
DUKE UNIVERSITY	2035220	93 866	10,356	
DUKE UNIVERSITY	2039361	93 866	8,778	
EMORY UNIVERSITY	T498827:2	93 866	114,563	
FRED HUTCHINSON CANCER RESEARCH CENTER	SUB 795124 (AG032699)	93 866	13,875	
FRED HUTCHINSON CANCER RESEARCH CENTER	Sub 843415 (AG 048209)	93 866	29,936	
GLADSTONE INSTITUTES	Sub R01709-A (AG011385)	93 866	51,825	
GROUP HEALTH COOPERATIVE	SUB 2015168560 (AG006781)	93 866	228,649	
HARVARD UNIVERSITY	116528-5061518:2	93 866	21,735	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	025498934609	93 866	85,398	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	025499214609	93 866	70,992	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	ICAHN SCHOOL OF MEDICINE AT MO-ADVA	93 866	53,314	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	MOUNT SINAI SCHOOL OF MED 025499214	93 866	64,108	
INDIAN HEALTH COUNCIL, INC.	NIH-IHCI/WINGARD/26%	93 866	10,627	
INDIAN HEALTH COUNCIL, INC.	NIH-IHCI/WINGARD/26%	93 866	(10,624)	
INDIAN HEALTH COUNCIL, INC.	Sub none (HS008101)	93 866	13,526	
INSTITUTE FOR MOLECULAR MEDICINE, INC. (CALIFORNIA)	UCI-2015-200641-cyc1	93 866	93,928	
INSTITUTE FOR MOLECULAR MEDICINE, INC. (CALIFORNIA)	UCI-2015-200642-cyc1	93 866	153,435	
JOHNS HOPKINS UNIVERSITY	2002476658	93 866	24,834	
JOHNS HOPKINS UNIVERSITY	JOHNS HOPKINS U (NIH AG042187) ZHAN	93 866	(839)	
MASSACHUSETTS GENERAL HOSPITAL	224849:2	93 866	12,909	
MAYO CLINIC/MAYO FOUNDATION FOR MEDICAL EDUCATION & RESEARCH	63788300	93 866	710,666	
MEDICAL TECHNOLOGY & PRACTICE PATTERNS INSTITUTE	MTPPIUCD001	93 866	10,875	
MINNEAPOLIS MEDICAL RESEARCH FOUNDATION	07292-2	93 866	68,555	
NATIONAL BUREAU OF ECONOMIC RESEARCH, INC	33-4135-06-UCB	93 866	45,101	
NATIONAL BUREAU OF ECONOMIC RESEARCH, INC	84-4008-13-UCLA:1	93 866	172,434	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY 2	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
NATIONAL BUREAU OF ECONOMIC RESEARCH, INC	UCSF-33-4118-08 FANG	93 866	323	
NATIONAL OPINION RESEARCH CENTER	5845-UCLA:03	93 866	38,515	
NEW YORK UNIVERSITY	13-A1-00-000091-01-CYC2	93 866	2,463	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	1521:5	93 866	203	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	1569	93 866	102,806	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	1572	93 866	628,242	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	1578	93 866	292,904	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	1579-CYC2	93 866	28,654	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	SUB 1566 (AG024904)	93 866	1,845,765	1,121,393
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	WEI1908	93 866	33,716	
OREGON STATE UNIVERSITY	P0355A-A:3	93 866	(185)	
PACIFIC HEALTH RESEARCH AND EDUCATION INSTITUTE	Sub 21304 (AG046871)	93 866	27,175	
PACIFIC HEALTH RESEARCH AND EDUCATION INSTITUTE	SUB PHREI-21401 (AG046614)	93 866	17,451	
PALO ALTO VETERANS INSTITUTE FOR RESEARCH, INC.	LEE0002-02-cyc1	93 866	88,634	
PARK NICOLLET INSTITUTE	1R21AG046571-01	93 866	3,882	
PEKING UNIVERSITY	1520801	93 866	43,401	
PENNSYLVANIA STATE UNIVERSITY	5084-UCI-UWM-K941-CYC1	93 866	4,960	
PENNSYLVANIA STATE UNIVERSITY	UH2AG052167	93 866	17,512	
PRINCETON UNIVERSITY	Sub0000086 (AG024361)	93 866	3,919	
RAND CORP	9920150099	93 866	21,668	
SCRIPPS RESEARCH INSTITUTE (FLORIDA)	007510	93 866	119,099	
STANFORD UNIVERSITY	Sub 61089692-112006 (AG047366)	93 866	31,582	
SUTTER WEST BAY HOSPITALS	007915	93 866	20,367	
THE SCRIPPS RESEARCH INSTITUTE	SCRIPPS RI SUB 5-0043 (AG031097) MA	93 866	(82)	
THE SCRIPPS RESEARCH INSTITUTE	TSRI/ 5-50172/ SAH	93 866	(67,399)	
THE SCRIPPS RESEARCH INSTITUTE	SUB 5-50699 (AG007996)	93 866	239,128	
THE UNIVERSITY OF ALABAMA (TUSCALOOSA)	000410331-004	93 866	44,467	
TUFTS UNIVERSITY	Sub 5005009-SERV (AG027002)	93 866	4,179	
UNIVERSITY OF ARIZONA	306302	93 866	10,387	
UNIVERSITY OF ARIZONA	310311	93 866	315,912	
UNIVERSITY OF ARIZONA	Y561548	93 866	130,367	
UNIVERSITY OF CHICAGO	UNIVERSITY OF CHICAGO 42038A	93 866	141,033	
UNIVERSITY OF CHICAGO	FP056715-C	93 866	151,341	
UNIVERSITY OF MIAMI	K01AG047273	93 866	9,693	
UNIVERSITY OF MICHIGAN	3002312638	93 866	39,760	
UNIVERSITY OF MICHIGAN	3002601380:4	93 866	35,972	
UNIVERSITY OF MICHIGAN	3003282032	93 866	15,611	
UNIVERSITY OF MICHIGAN	3003282033	93 866	59,166	
UNIVERSITY OF MICHIGAN	3003622799-cyc1	93 866	15,317	
UNIVERSITY OF PENNSYLVANIA	557804	93 866	4,005	
UNIVERSITY OF PENNSYLVANIA	559717	93 866	11,116	
UNIVERSITY OF PENNSYLVANIA	566604	93 866	21,821	
UNIVERSITY OF PENNSYLVANIA	UNIVERSITY OF PENNSYLVANIA BARRETT-	93 866	22,044	
UNIVERSITY OF PENNSYLVANIA	UNIVERSITY OF PENNSYLVANIA BARRETT-	93 866	8,684	
UNIVERSITY OF PENNSYLVANIA	Sub 5 52206 (AG030644)	93 866	24,232	
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## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY 2	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
UNIVERSITY OF PITTSBURGH	0046842 (126362-2)	93 866	18,453	
UNIVERSITY OF PITTSBURGH	UNIVERSITY OF PITTSBUR 0012200(1196	93 866	143,434	
UNIVERSITY OF PITTSBURGH	Sub 0030451 (123192) (NS081041	93 866	97,092	
UNIVERSITY OF PUERTO RICO	1R1MH102025-01A1	93 866	10,214	
UNIVERSITY OF SOUTHERN CALIFORNIA	005075	93 866	72,822	
UNIVERSITY OF SOUTHERN CALIFORNIA	149740:5	93 866	101,607	
UNIVERSITY OF SOUTHERN CALIFORNIA	46832931	93 866	39,104	
UNIVERSITY OF SOUTHERN CALIFORNIA	54096768:01	93 866	62,965	
UNIVERSITY OF SOUTHERN CALIFORNIA	54826553	93 866	325,614	
UNIVERSITY OF SOUTHERN CALIFORNIA	70220892	93 866	23,407	
UNIVERSITY OF SOUTHERN CALIFORNIA	H40302 KRAMER	93 866	(954)	
UNIVERSITY OF SOUTHERN CALIFORNIA	CTAADNI029-cyc1	93 866	30,988	
UNIVERSITY OF SOUTHERN CALIFORNIA	CTAADNI035	93 866	285	
UNIVERSITY OF SOUTHERN CALIFORNIA	CTAADNI073	93 866	38,739	
UNIVERSITY OF SOUTHERN CALIFORNIA	CTAADNI116	93 866	5,810	
UNIVERSITY OF SOUTHERN CALIFORNIA	CTAADNI128-cyc1	93 866	37,938	
UNIVERSITY OF SOUTHERN CALIFORNIA	Sub 71082543(AG041845)	93 866	37,040	
UNIVERSITY OF WASHINGTON	762196-CYC1	93 866	26,906	
UNIVERSITY OF WASHINGTON	762197	93 866	52,918	
UNIVERSITY OF WASHINGTON	762200	93 866	25,995	
UNIVERSITY OF WASHINGTON	Sub 750427 (HL077863)	93 866	(83,852)	
UNIVERSITY OF WASHINGTON	Sub 752710 (AG16976)	93 866	25,981	
UNIVERSITY OF WISCONSIN-MADISON	552K720	93 866	29,795	
UNIVERSITY OF WISCONSIN-MADISON	552K731	93 866	567,310	
UNIVERSITY OF WISCONSIN-MADISON	674K660	93 866	4,008	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Bondi (AG016495)	93 866	6,150	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA Bryan 308279 (AG007996)	93 866	12,819	
WAKE FOREST UNIVERSITY	SUB 110918 (AG044325)	93 866	22,342	
WAKE FOREST UNIVERSITY	SUB WFUHS 110656 (AG041845)	93 866	235,281	65,975
WASHINGTON UNIVERSITY IN ST. LOUIS	WASHINGTON UNIVERSITY, (ST. LOUIS,	93 866	141	
WASHINGTON UNIVERSITY IN ST. LOUIS	SUB WU-13-193 (AG032438) AISEN	93 866	(64,838)	8,462
WASHINGTON UNIVERSITY IN ST. LOUIS	WASHINGTON UNIV WU-14-48 GALASKO	93 866	(14,814)	
WASHINGTON UNIVERSITY IN ST. LOUIS	Sub WU-14-333 (AG032438)	93 866	161,337	
WASHINGTON UNIVERSITY IN ST. LOUIS	Sub WU-15-135 (AG049369)	93 866	1,128,480	
WASHINGTON UNIVERSITY IN ST. LOUIS	WI-14-321:1	93 866	(126,649)	
WASHINGTON UNIVERSITY IN ST. LOUIS	WU-15-155	93 866	36,622	
WILLIAM BEAUMONT HOSPITAL	100-2986794	93 866	31,068	
XOMA CORPORATION	XOMA MARKS	93 866	1,388	
INNOSENSE LLC	IS-201510-CYC1	93 866	29,614	
AEON IMAGING, LLC	036273	93 867	15,959	
AUGUSTA UNIVERSITY	27838A01	93 867	18,234	
BAYLOR COLLEGE OF MEDICINE	101991062-CYC1	93 867	132,700	
BAYLOR COLLEGE OF MEDICINE	BAYLOR COLLEGE OF MEDICINE SUB 1016	93 867	54	
BAYLOR COLLEGE OF MEDICINE	SUB 101835646 (EY016525)	93 867	81,133	
CALADRIUS BIOSCIENCES, INC.	CBI-202725-cyc1	93 867	36,157	
			33,107	

# Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY :	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
CALIFORNIA INSTITUTE OF TECHNOLOGY	21B-1094432:1	93 867	57,340	
CARNEGIE MELLON UNIVERSITY	1090339-274246:3	93 867	86,766	
CASE WESTERN RESERVE UNIVERSITY	CWRU/NIH EY016482 ALDAVE 3/9 50%	93 867	3,407	
CASE WESTERN RESERVE UNIVERSITY	Sub RES507959 (EY023196)	93 867	141,770	
CEDARS-SINAI MEDICAL CENTER	0001135026	93 867	10,332	
CHILDREN'S HOSPITAL MEDICAL CENTER OF CINCINNATI	131035	93 867	137,969	
CHILDREN'S HOSPITAL OF PHILADELPHIA	R01EY021137	93 867	1,092	
COLUMBIA UNIVERSITY	1 (GG006490)-cyc3	93 867	120,883	
CORNELL UNIVERSITY	11091561	93 867	80,538	
EYENUK LLC	20141489	93 867	34,731	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	1U10EY024526-01	93 867	30,758	
JAEB CENTER FOR HEALTH RESEARCH, INC.	06002685	93 867	5,758	
JAEB CENTER FOR HEALTH RESEARCH, INC.	JCHR/NIH 04022900 SCHWARTZ 12/9 54%	93 867	(11,750)	
JAEB CENTER FOR HEALTH RESEARCH, INC.	0EY020797-01A1 ROSE-NUSSBAUMER	93 867	3,491	
JAEB CENTER FOR HEALTH RESEARCH, INC.	U10EY11751	93 867	9,183	
JOHNS HOPKINS UNIVERSITY	2000011278/95351	93 867	42,477	
JOHNS HOPKINS UNIVERSITY	2001653080:5	93 867	31,170	
JOHNS HOPKINS UNIVERSITY	2002473559	93 867	1,809	
JOHNS HOPKINS UNIVERSITY	2002507432	93 867	427	
JOHNS HOPKINS UNIVERSITY	JHU SUB2001589439(EY014660) FREEMAN	93 867	13,661	
JOHNS HOPKINS UNIVERSITY	Sub none (EY022680)	93 867	220,484	
LEGACY HEALTH SYSTEM	Sub None (EY011610)	93 867	129,683	
NEURO KINETICS, INC.	NEURO/NIH 20072728 GORIN 01/13 54%	93 867	(380)	
NEURO KINETICS, INC.	NEUO/NIH 5R44EY018025 GORIN 01/14 5	93 867	59	
OPTIKIRA, LLC	R41EY026370	93 867	33,156	
OREGON HEALTH & SCIENCE UNIVERSITY	1003279UCD	93 867	6,437	
PENNSYLVANIA STATE UNIVERSITY	U10EY023533	93 867	19,300	
PENNSYLVANIA STATE UNIVERSITY	UCDEY023533	93 867	3,948	
PHOTOSWITCH BIOSCIENCES, INC.	20162022	93 867	10,761	
PRINCETON UNIVERSITY	SUB0000029	93 867	25,097	
ST. LUKES-ROOSEVELT INSTITUTE FOR HEALTH SCIENCES	ST. LUKES-ROOSEVELT INSTITUTE-20140	93 867	1	
STANFORD UNIVERSITY	60721444-114192	93 867	51,061	
THE SCRIPPS RESEARCH INSTITUTE	TSRI/NIH 5-23853 CHERESH 54.5/55	93 867	947	
THE SCRIPPS RESEARCH INSTITUTE	SUB 5-23854 (EY022025)	93 867	209,856	
THE SCRIPPS RESEARCH INSTITUTE	Sub 5-50595 (EY022025)	93 867	612,653	
UNIVERSITY OF IOWA	Sub 2000569253 (EY023187)	93 867	7,257	
UNIVERSITY OF OKLAHOMA	SUB RS20151124 (EY025947)	93 867	94,417	
UNIVERSITY OF PENNSYLVANIA	562971:1	93 867	45,579	
UNIVERSITY OF PENNSYLVANIA	564799 (was 5904)	93 867	13,604	
UNIVERSITY OF PENNSYLVANIA	564824	93 867	10,045	
UNIVERSITY OF SOUTHERN CALIFORNIA	54529007	93 867	61,938	
UNIVERSITY OF SOUTHERN CALIFORNIA	66207998	93 867	180,824	
UNIVERSITY OF SOUTHERN CALIFORNIA	72730838-cyc1	93 867	13,576	
UNIVERSITY OF WASHINGTON	762670	93 867	302,538	
WASHINGTON UNIVERSITY IN ST. LOUIS	Sub WU-16-120 (EY025181)	93 867	5,289	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY 2	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
WASHINGTON UNIVERSITY IN ST. LOUIS	sub WU-16-20 (EY025183)	93 867	107,225	
WASHINGTON UNIVERSITY IN ST. LOUIS	WU-15-230	93 867	212,136	
WASHINGTON UNIVERSITY IN ST. LOUIS	WU-16-119	93 867	16,421	
WASHINGTON UNIVERSITY IN ST. LOUIS	WU-16-121	93 867	23,804	
WAYNE STATE UNIVERSITY	WSU14046	93 867	17,867	
YALE UNIVERSITY	M16A12311 (A10507)-cyc1	93 867	97,738	
STANFORD UNIVERSITY	60339679-107577-A-001	93 867	111,838	
ARIZONA STATE UNIVERSITY/TEMPE	15-731	93 879	60,018	
CHILDREN'S NATIONAL MEDICAL CENTER	FF-NIH/ 30001387/ CHILDREN'S HOSPTL	93 879	30	
COLUMBIA UNIVERSITY	GG007254	93 879	51,303	
LOS ANGELES COUNTY DEPARTMENT OF HEALTH SERVICES	H-705831-CYC1	93 889	(2)	
UNIVERSITY OF WISCONSIN-MADISON	235K841 SEN	93 895	(542)	
SAN DIEGO COUNTY	536590	93 914	38,822	
INDIAN HEALTH COUNCIL, INC.	SUB 102313 (IHS0081-01-00)	93 933	94,263	
PUBLIC HEALTH FOUNDATION ENTERPRISES, INC.	1U65PS004454-01	93 939	619,967	
UNIVERSITY OF WASHINGTON	759694	93 939	29,733	
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	1320566	93 945	197,884	
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	13-10023	93 946	2,097,711	720,43
LOS ANGELES COUNTY DEPARTMENT OF HEALTH SERVICES	PH-001733	93 959	7,227	
LOS ANGELES COUNTY DEPARTMENT OF HEALTH SERVICES	PH-001733:13	93 959	838,752	134,19
CALIFORNIA STATE UNIVERSITY, SAN DIEGO STATE UNIVERSITY	SDSU/HRSA LEGNER 8% 2018	93 969	210,830	
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	13-20458	93 977	3,379,002	
FHI 360	0080.0214/780:01	93 977	30,418	
DARTMOUTH COLLEGE	1265	93 989	12,595	
EDUARDO MONDLANE UNIVERSITY	Sub C0010 (TW010135)	93 989	23,927	
EDUARDO MONDLANE UNIVERSITY	Sub CC002FUEM2010 (TW008908)	93 989	157,157	
EDUARDO MONDLANE UNIVERSITY	Sub CC003FUEM2010 (TW008910)	93 989	46,128	
GEORGIA INSTITUTE OF TECHNOLOGY	NIH-GIT/FENICAL/54.5%/08/11	93 989	(29,758)	
GEORGIA INSTITUTE OF TECHNOLOGY	RF135-G1	93 989	275,907	11,21
JOHNS HOPKINS UNIVERSITY	2001049549	93 989	(92)	
JOHNS HOPKINS UNIVERSITY	2002590467	93 989	18,059	
UNIVERSITY OF SOUTH FLORIDA	1211-1065-00-D	93 989	81,079	
ACCELERATED MEDICAL DIAGNOSTICS, LLC	201224815	93 UNKNOWN	3,705	
ACCELERATED MEDICAL DIAGNOSTICS, LLC	20130127	93 UNKNOWN	32,969	
ADDIS ABABA UNIVERSITY	HRSA/AAU T8HA21124-01-00 MCCUTCHAN	93 UNKNOWN	(8)	
AKONNI BIOSYSTEMS	Sub CRA# 80531A-001 (EB011274)	93 UNKNOWN	73,494	
ARGOS THERAPEUTICS, INC.	201013996	93 UNKNOWN	(2,081)	
BATTELLE MEMORIAL INSTITUTE	BATTELLE MEMORIAL INSTITUTE-236817	93 UNKNOWN	86,461	
BATTELLE MEMORIAL INSTITUTE	BATTELLE MEMORIAL INSTITUTE-236817N	93 UNKNOWN	74,601	
BIOLINQ, INC.	20150783	93 UNKNOWN	33,809	
BIOLINQ, INC.	Sub none (DK097989)	93 UNKNOWN	11,085	
BIOLOGICAL DYNAMICS, INC.	1R43CA183414	93 UNKNOWN	12,796	
BIOTHERYX, INC.	BIOTHERYX/PHS SUB 20150229 KLEMKE 2	93 UNKNOWN	96,100	
BLOOD SYSTEMS, INC. DBA BLOOD SYSTEMS RESEARCH INSTITUTE	10841UCSF100 SEIELSTAD	93 UNKNOWN	17,835	
BRIGHAM AND WOMEN'S HOSPITAL	111558	93 UNKNOWN	4,092	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

				FY 2	016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number		ederal	Total Federal	Pass-Through to
	or Other Identifier	CFD	A Number	Expenditures	Subrecipients
CALIFORNIA ASSOCIATION OF HEALTH FACILITIES	201502630	93	UNKNOWN	137,724	
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	Sub 13-20934 (NONE)	93	UNKNOWN	415,804	
CELLERANT THERAPEUTICS, INC.	CELLERANT/BARDA CLT008-03 WIEDUWILT	93	UNKNOWN	36,839	
CELLERANT THERAPEUTICS, INC.	SUB CLT008-02 (HHSO1002010000	93	UNKNOWN	2,313	
CHICAGO ASSOCIATION FOR RESEARCH AND EDUCATION IN SCIENCE	UCSF#A115379	93	UNKNOWN	88,837	
CHILDREN'S HOSPITAL OF PHILADELPHIA	950008021512C	93	UNKNOWN	27,292	
CHILDREN'S HOSPITAL OF PHILADELPHIA	950010071504C	93	UNKNOWN	53,839	
CHILDREN'S HOSPITAL OF PHILADELPHIA	A123897	93	UNKNOWN	22,046	
CHILDREN'S MERCY HOSPITAL, THE	NIH-CHILDRENS/BENADOR 28% 07/10	93	UNKNOWN	64	
CNI FEDERAL SERVICES, LLC	5-001-1 (HHSM-500-2009-00046C)	93	UNKNOWN	1,209,652	
COLUMBIA UNIVERSITY	10GG1189609	93	UNKNOWN	7,535	
COMMUNITY HEALTH IMPROVEMENT PARTNERS	Sub 5834-122-01 (DP005834)	93	UNKNOWN	195,338	
DANA-FARBER CANCER INSTITUTE	R01CA172067	93	UNKNOWN	42,172	
DEVACELL INC.	DEVACELL/NIH U43CA186114 LIU	93	UNKNOWN	126	
DUKE UNIVERSITY	203-9449 (HHSN275201000003I)	93	UNKNOWN	7,781	
DUKE UNIVERSITY	206993 2752010000031	93	UNKNOWN	1,897	
DUKE UNIVERSITY	NIH/DUKE UNIV 178785 TREMOULET	93	UNKNOWN	6,031	
DUKE UNIVERSITY	Sub 2039304 (HHSN275201000031i	93	UNKNOWN	13,580	
DUKE UNIVERSITY	SUB NONE (HHSN275201000003I)	93	UNKNOWN	13,413	
DYNUPOL, INC	UCSF#A124840	93	UNKNOWN	30,162	
EPIGEN BIOSCIENCES, INC.	Sub none(NS086244)	93	UNKNOWN	2,438	
ETHIOPIAN PUBLIC HEALTH ASSOCIATION	SUB NONE (GH000763)	93	UNKNOWN	200,057	
FHI 360	PO16001621	93	UNKNOWN	70,267	46,03
FRED HUTCHINSON CANCER RESEARCH CENTER	0000860512	93	UNKNOWN	83,435	
GEORGE WASHINGTON UNIVERSITY	NIH-GWU/GOTTSCHALK/26%	93	UNKNOWN	1,221	
GEORGIA INSTITUTE OF TECHNOLOGY	RB307S2	93	UNKNOWN	96,242	
GEORGIA INSTITUTE OF TECHNOLOGY	RB307-S3	93	UNKNOWN	8,801	
GROUP HEALTH COOPERATIVE	201400517	93	UNKNOWN	4,500	
GROUP HEALTH COOPERATIVE	201400520	93	UNKNOWN	150,108	
HEALTH RESEARCH ASSOCIATES, INC	4936-02	93	UNKNOWN	189,331	
HEALTH RESEARCH, INC.	5306-01 GENG	93	UNKNOWN	26,167	
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	02580512HHSN272201400008C	93	UNKNOWN	417,921	
KAISER PERMANENTE DIVISION OF RESEARCH	201503226	93	UNKNOWN	313,198	
LA JOLLA INSTITUTE FOR ALLERGY AND IMMUNOLOGY	NIH/LIAI 25072-44-381 O'DONNELL	93	UNKNOWN	1,150	
LAMNOTHERAPEUTICS INC.	201500391	93	UNKNOWN	21,374	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B611777	93	UNKNOWN	16,630	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B611809	93	UNKNOWN	541	
LEIDOS BIOMEDICAL RESEARCH, INC.	15X159	93	UNKNOWN	51,296	
LEIDOS BIOMEDICAL RESEARCH, INC.	16X114	93	UNKNOWN	77,752	
LEIDOS, INC.	14X102	93	UNKNOWN	924	
LEIDOS, INC.	15X037	93	UNKNOWN	218,500	
LP THERAPEUTICS, INC.	201500565	93	UNKNOWN	40,022	
MAPP BIOPHARMACEUTICAL, INC.	701501	93	UNKNOWN	22,661	
MAPP BIOPHARMACEUTICAL, INC.	7021-02	93	UNKNOWN	20,740	
MASSACHUSETTS GENERAL HOSPITAL	NN101	93	UNKNOWN	126	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

				FY 2	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	F	ederal	Total Federal	Pass-Through to
	or Other Identifier	CFD	A Number	Expenditures	Subrecipients
MASSACHUSETTS GENERAL HOSPITAL	NN102	93	UNKNOWN	17,214	
MENTAL HEALTH SYSTEMS, INC.	SAMHSA-MHS/AARONS/13% 04/10	93	UNKNOWN	6,399	
MIRNA THERAPEUTICS, INC.	201503462	93	UNKNOWN	84,743	
N2 BIOMEDICAL	NJMU-1322-CYC1	93	UNKNOWN	(25)	
NANOCELLECT BIOMEDICAL, INC.	20150601 (HHSN261201400051C)	93	UNKNOWN	68,287	
NATIONAL JEWISH MEDICAL AND RESEARCH CENTER	NATL JEWISH MEDICAL & RESEARCH CNTR	93	UNKNOWN	15,067	
NEWOMICS, INC.	20150766	93	UNKNOWN	329,204	
NORTHROP GRUMMAN CORPORATION	7500128578	93	UNKNOWN	43,743	
NORTHROP GRUMMAN SYSTEMS CORPORATION	7500133818	93	UNKNOWN	1,004,714	297,726
OREGON HEALTH & SCIENCE UNIVERSITY	201500026	93	UNKNOWN	4,743	
OREGON HEALTH & SCIENCE UNIVERSITY	S1320	93	UNKNOWN	185	
OREGON HEALTH & SCIENCE UNIVERSITY	UCSF A125686	93	UNKNOWN	616	
PUBLIC HEALTH FOUNDATION ENTERPRISES, INC.	UCSF#A125350	93	UNKNOWN	13,739	
RAND CORP	9920150120	93	UNKNOWN	21,408	
RESEARCH FOUNDATION FOR MENTAL HYGIENE	HHSN2712012000071	93	UNKNOWN	(432)	
RESEARCH FOUNDATION FOR MENTAL HYGIENE	HHSN271201200007I	93	UNKNOWN	123,298	
RXBIO HOLDINGS, INC.	201601959	93	UNKNOWN	430,347	
SAN DIEGO WORKFORCE PARTNERSHIP	SAN DIEGO WORKFORCE PARTNERSHIP BEC	93	UNKNOWN	(4,438)	
SEACOAST SCIENCE, INC.	SEACOAST SCIENCE (NIH) 13-0915SC CA	93	UNKNOWN	29,496	
SOCIAL AND SCIENTIFIC SYSTEMS, INC.	CRB-SSS-S-14-003991 COHEN	93	UNKNOWN	(9,272)	
SOCIAL AND SCIENTIFIC SYSTEMS, INC.	CRB-SSS-S-15-004544	93	UNKNOWN	149,405	
SRI INTERNATIONAL	SRI INTERNATIONAL TAYLOR	93	UNKNOWN	(122)	
STANFORD UNIVERSITY	60311550107265A	93	UNKNOWN	66,497	
STANFORD UNIVERSITY	606464673501922	93	UNKNOWN	99,257	
STATE OF MARYLAND	201402292	93	UNKNOWN	60,466	
STATE OF NEW YORK	Evaluation of Haiti Quality Im	93	UNKNOWN	(1,383)	
TARGESON, INC	1R43CA183149-01	93	UNKNOWN	775	
THE UNIVERSITY OF ALABAMA (TUSCALOOSA)	502889SP004001	93	UNKNOWN	421,453	
THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	R24Al067039	93	UNKNOWN	3,563	
THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	UCSF#A125357	93	UNKNOWN	67,663	
TURNER CONSULTING GROUP, INC.	Sub 20111001-01 TCG (HHSN26820	93	UNKNOWN	9,879	
UNIVERSITY OF CHICAGO	FP046103-B	93	UNKNOWN	56,921	
UNIVERSITY OF FLORIDA	B 20090630 (NIDDK/NIAID/NICHD)	93	UNKNOWN	57,315	
UNIVERSITY OF FLORIDA	UFDSP00011069	93	UNKNOWN	87,181	
UNIVERSITY OF IOWA	W000696003	93	UNKNOWN	281,856	
UNIVERSITY OF NEVADA, RENO	R01GM101928	93	UNKNOWN	91,435	
UNIVERSITY OF PENNSYLVANIA	562134	93	UNKNOWN	168,966	
UNIVERSITY OF SOUTH FLORIDA	09000015	93	UNKNOWN	7,782	
UNIVERSITY OF UTAH	1000905008	93	UNKNOWN	71,268	
UNIVERSITY OF UTAH	UNIVERSITY OF UTAH 2102090	93	UNKNOWN	21,091	
UNIVERSITY OF UTAH	10035609-UCSF Sapru,A	93	UNKNOWN	2,340	
UNIVERSITY OF VERMONT	28557SUBUCDavis	93	UNKNOWN	34,575	
UNIVERSITY OF WASHINGTON	757148	93	UNKNOWN	61,145	
UNIVERSITY OF WASHINGTON	762195	93	UNKNOWN	26,856	
UNIVERSITY OF WASHINGTON	HRSA/U WASHINGTON/MATHEWS/8%	93	UNKNOWN	(1,053)	
				(1,000)	

### Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

		_		FY 2	
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number		ederal	Total Federal	Pass-Through to
	or Other Identifier	CFD	A Number	Expenditures	Subrecipients
VISDEX CORPORATION	VISDEX CORPORATION-201224855	93	UNKNOWN	33,727	
WASHINGTON UNIVERSITY IN ST. LOUIS	Sub WU-11-255(N01-HR-76196	93	UNKNOWN	7,992	
WAVE 80 BIOSCIENCES, INC	UCSF#A126121	93	UNKNOWN	7,258	
WESTAT	SUB S8954 (HHSN271201100027C)	93	UNKNOWN	474,157	
ZIVA CORPORATION	HHSN2612014000058C	93	UNKNOWN	28,881	
ZIVA CORPORATION	Sub 20144161	93	UNKNOWN	170,979	
CALIFORNIA HEALTH AND HUMAN SERVICES AGENCY (ARRA)	CAL HEALTH & HUMAN SVS (DHHS) 13-H9	93	UNKNOWN	(1,094)	
SAN DIEGO COUNTY	Sub 544567 (none)	93	UNKNOWN	276,283	
Subtotal Pass-Through and Partial Pass-Through Awards				210,851,870	8,188,0
Total Department of Health and Human Services				2,079,000,243	256,143,4
CORPORATION FOR NATIONAL AND COMMUNITY SERVICE					
Pass-Through and Partial Pass-Through					
JUMPSTART FOR YOUNG CHILDREN, INC.	490200-cyc18	94	006	138,795	
JUMPSTART FOR YOUNG CHILDREN, INC.	492015-CYC1	94	006	33,272	
JUMPSTART FOR YOUNG CHILDREN, INC.	F/JUMPSTART 492012 MANN B5.26 08/13	94	006	1,740	
JUMPSTART FOR YOUNG CHILDREN, INC.	JS-BB PROJ#880200-FULLER-08/14	94	006	(4,528)	
JUMPSTART FOR YOUNG CHILDREN, INC.	880200	94	006	65,128	
JUMPSTART FOR YOUNG CHILDREN, INC.	JUMPSTA-880200-BRIDGES,-08/15	94	006	11,612	
Subtotal Pass-Through and Partial Pass-Through Awards				246,019	
Total Corporation for National and Community Service				246,019	
DEPARTMENT OF HOMELAND SECURITY					
Direct Awards	Various	97	RD	2,180,061	
Pass-Through and Partial Pass-Through					
VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY	Sub 432844-19A28 (D12PC00337)	97	001	230,731	
THE CENTER FOR RURAL DEVELOPMENT	FY140009203UCDAVIS	97	005	15,066	
THE CENTER FOR RURAL DEVELOPMENT	K0015466EH	97	005	109,531	
HRL LABORATORIES, LLC	14089-503866-DS-cyc1	97	007	93,129	
MAXENTRIC TECHNOLOGIES LLC	20132178	97	036	77,997	
CALIFORNIA EMERGENCY MANAGEMENT AGENCY	FEMA-1884-DR-CA, Project #PL23	97	039	(53)	
GEORGE MASON UNIVERSITY	E2033681-cyc1	97	065	154,600	
PEPPERPRINT	UCB2015-HSHQDC-15-C-B0010	97	077	66,844	
SKYSIGHT TECHNOLOGIES LLC	20152553	97	077	43,789	
APPLIED TECHNOLOGY COUNCIL	784-24-646	97	082	43,785	
UNIVERSITY OF ILLINOIS	2016-01414-01-01:01	97	108	28,610	
FLIR SYSTEMS, INC.	Sub GHC-14000-004 (NONE)	97	UNKNOWN	4,894	
GEORGE MASON UNIVERSITY	E203053-1-cyc1	97	UNKNOWN	90,062	
PURDUE UNIVERSITY	4112-57682	97	UNKNOWN	66,246	
Subtotal Pass-Through and Partial Pass-Through Awards				1,025,231	
Total Department of Homeland Security				3,205,292	
AGENCY FOR INTERNATIONAL DEVELOPMENT					
Direct Awards	Various	98	RD	38,546,106	25,655,3
Pass-Through and Partial Pass-Through					

# Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

				FY 2	
ederal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number		ederal	Total Federal	Pass-Through to
	or Other Identifier		A Number	Expenditures	Subrecipients
ASTRAEA NATIONAL LESBIAN ACTION FOUNDATION	GLHRP151	98	001	54,903	
COLLEGE OF WILLIAM AND MARY	740681-T	98	001	34,910	
GEORGE MASON UNIVERSITY	E2032703-CYC1	98	001	146,376	
HARVARD UNIVERSITY	106395-5094553	98	001	72,039	
INSTITUTE OF INTERNATIONAL EDUCATION	4-SM-UCSD (AID-OAA-A-12-00039)	98	001	883	
INSTITUTE OF INTERNATIONAL EDUCATION	DFG-9-APS-UCLA:2	98	001	1,089	
INTERNATIONAL BUSINESS & TECHNICAL CONSULTANTS, INC.	15-IBTCI-00027	98	001	261,001	
INTERNATIONAL CROPS RESEARCH INSTITUTE FOR THE SEMI-ARID TROPICS	201502915	98	001	10,691	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	5710003316	98	001	73,519	
METABIOTA, INC	2015-14-USAID	98	001	74,600	
MICHIGAN STATE UNIVERSITY	RC102194FIGIRRIG	98	001	13,880	
MITCHELL GROUP, INC.	THE MIT-TMG/OAS-MALCOLM -09/14	98	001	(971)	
MITCHELL GROUP, INC.	TMG/OASIS-SAREL-YEAR 3-2015	98	001	186,931	
MITCHELL GROUP, INC.	TMG/OASIS-SAREL-YEAR2-2015	98	001	103,751	
NATIONAL ACADEMY OF SCIENCES	PGA2000003658	98	001	66,541	
NEW YORK UNIVERSITY	F7465-01	98	001	118,434	
PARTNERS IN HOPE (MALAWI)	674-A-00-10-00035-00:5	98	001	1,136,780	
POPULATION COUNCIL - NEW YORK	SH1503	98	001	9,369	
RTI INTERNATIONAL	888-13-16-10	98	001	145,322	
SOCIAL IMPACT, INC.	REQ-LAC-11-0000 37	98	001	46,423	
TUFTS UNIVERSITY	201502576	98	001	238,568	53,64
UCP WHEELS FOR HUMANITY	20140822	98	001	(303)	
HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY MEDICINE	sUB 2997 ( AI099734)	98	855	37,068	
NORTHEASTERN UNIVERSITY	500421-78053	98	865	29,759	
ALLEN INSTITUTE FOR BRAIN SCIENCE	2014-0571	98	UNKNOWN	280,860	
COLORADO STATE UNIVERSITY	COLORADO STATE UNIVERSITY G-9650-18	98	UNKNOWN	3,233	
FHI 360	G000060	98	UNKNOWN	1,162,566	782,8
INTERNATIONAL MAIZE AND WHEAT IMPROVEMENT CENTER	016258	98	UNKNOWN	813,428	411,5
INTERNATIONAL POTATO CENTER	201300797	98	UNKNOWN	78,684	
MICHIGAN STATE UNIVERSITY	003844	98	UNKNOWN	56,370	
MICHIGAN STATE UNIVERSITY	MSU RC062946 ROBERT/CLS 12/16*	98	UNKNOWN	131,640	
MICHIGAN STATE UNIVERSITY	MSU RC062946 ROBERTS 12/16*	98	UNKNOWN	227,246	165,00
NATIONAL ACADEMY OF SCIENCES	2000006165	98	UNKNOWN	2,805	
PURDUE UNIVERSITY	8000062960	98	UNKNOWN	5,483	
UNIVERSITY OF ILLINOIS	20100720002	98	UNKNOWN	41,687	
Subtotal Pass-Through and Partial Pass-Through Awards	<del></del>	30	OHIGOWIA	5,665,565	1,413,0
Total Agency for International Development				44,211,671	27,068,4
OTHER FEDERAL AGENCIES	Mariana			004:	
Direct Awards	Various	99	RD	684,134	15,3
Pass-Through and Partial Pass-Through	0000004774111440004				
UNIVERSITY OF MICHIGAN	3003891771UM16-04-cyc1	99	UNKNOWN	55,052	
AECOM TECHNICAL SERVICES	14C-16487-LB23, TASK ORDER 02	99	UNKNOWN	53,749	
AFASCI, INC.	5R44DA031578	99	UNKNOWN	107,396	
AGILTRON, INC.	150545	99	UNKNOWN	87,058	

# Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

				FY 2	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	F	ederal	Total Federal	Pass-Through to
	or Other Identifier	CFD	A Number	Expenditures	Subrecipients
AMERICAN THROMBOSIS AND HEMOSTASIS NETWORK	ATHN2014 ATHN 2 842 1	99	UNKNOWN	74	
ANTHROTRONIX, INC.	N0014-15-P-1072/ UCLACRESST-10	99	UNKNOWN	25,110	
APPLIED TECHNOLOGY COUNCIL	APPLIED-783-24MOEHLE,J-12/14	99	UNKNOWN	(18)	
APTIMA, INC.	0997-1622	99	UNKNOWN	(2,888)	
ARIZONA STATE UNIVERSITY/TEMPE	13-205:05	99	UNKNOWN	65,737	
ASSOCIATION OF ASIAN PACIFIC COMMUNITY HEALTH ORGANIZATIONS	AAPCHO/DHHS 20150779 PONCE 5/15 26%	99	UNKNOWN	4,000	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	STSI/NASA HSTGO1256801A MALKAN 2/15	99	UNKNOWN	(1)	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	STSI HSTGO1221401A PRCHSKA 10/15	99	UNKNOWN	4,001	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	STSI/NASA HSTGO12290 ZUCKERMAN 09/1	99	UNKNOWN	(39)	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-AR-13260.02-A	99	UNKNOWN	9,719	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-12959.01-A	99	UNKNOWN	14,914	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13287.002-A	99	UNKNOWN	4,707	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13352.001-A	99	UNKNOWN	34,981	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13459.09-A	99	UNKNOWN	5,896	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13475.01-A	99	UNKNOWN	4,254	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-13612.001-A	99	UNKNOWN	342	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14044.001-A	99	UNKNOWN	3,715	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14199.002-A	99	UNKNOWN	42,345	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-GO-14219.002-A	99	UNKNOWN	21,205	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-HF2-51353.001-A	99	UNKNOWN	51,501	
BCN BIOSCIENCES	6T01EP130002-01-04	99	UNKNOWN	290,163	
BCN BIOSCIENCES	HHSN272201500004C	99	UNKNOWN	260,234	
BIO-WAVES INCORPORATED	BW2015-SIO-001	99	UNKNOWN	29,961	
BODIMOJO	1R43DK105623-01	99	UNKNOWN	49,212	
BOEING COMPANY, THE	1078934	99	UNKNOWN	197,781	
BOEING COMPANY, THE	PO NO. 1169752	99	UNKNOWN	35,870	
BOOZ ALLEN HAMILTON INC.	HAMILTON/NIH 98990XSB23 DENNIS 01/1	99	UNKNOWN	20,000	
BROAD INSTITUTE INC.	5417070-5500000722	99	UNKNOWN	639,451	
BROOKHAVEN NATIONAL LABORATORY/BROOKHAVEN SCIENCE ASSOCIATES, LLC	186731-010	99	UNKNOWN	558,596	
BROOKHAVEN NATIONAL LABORATORY/BROOKHAVEN SCIENCE ASSOCIATES, LLC	198731	99	UNKNOWN	105,202	
BROOKHAVEN NATIONAL LABORATORY/BROOKHAVEN SCIENCE ASSOCIATES, LLC	223656-003	99	UNKNOWN	9,210	
BROOKHAVEN NATIONAL LABORATORY/BROOKHAVEN SCIENCE ASSOCIATES, LLC	233044:2	99	UNKNOWN	117,271	
BROOKHAVEN NATIONAL LABORATORY/BROOKHAVEN SCIENCE ASSOCIATES, LLC	238854:2	99	UNKNOWN	18,967	
BROOKHAVEN NATIONAL LABORATORY/BROOKHAVEN SCIENCE ASSOCIATES, LLC	241533:2	99	UNKNOWN	1,901	
CALIFORNIA DEPARTMENT OF HEALTH CARE SERVICES	15-92255	99	UNKNOWN	354,173	
CALIFORNIA INSTITUTE OF TECHNOLOGY	A15-0170-001	99	UNKNOWN	27,076	
CALIFORNIA STATE COASTAL CONSERVANCY	14-026	99	UNKNOWN	38,230	
CENTER FOR SOCIAL INNOVATION, LLC	HHSS2832012000351	99	UNKNOWN	19,237	
CH2M HILL	CH2M Hill 10006-7-103221	99	UNKNOWN	179,854	
CHARLES STARK DRAPER LABORATORY, INC.	Draper SC001-1024	99	UNKNOWN	23,623	
COLORADO STATE UNIVERSITY	007958	99	UNKNOWN	61,286	
CONNECTICUT CHILDRENS MEDICAL CENTER	12-179296-17	99	UNKNOWN	2,465	
CRAYTEX. LLC	20163237	99	UNKNOWN	100,968	
CREARE INCORPORATED	Creare 74939	99	UNKNOWN	11,897	
CREATIVE ENGINEERING SOLUTIONS	20141952	99	UNKNOWN	71,638	
	==:::==	33	CITICIOVIN	71,000	

# Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

				FY 2	016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Fe	ederal	Total Federal	Pass-Through to
	or Other Identifier	CFDA	Number	Expenditures	Subrecipients
CREONEX SYSTEMS	20143806	99	UNKNOWN	44,247	
CREONEX SYSTEMS	20152726	99	UNKNOWN	77,214	
CREONEX SYSTEMS	20153642	99	UNKNOWN	57,250	
CRYSTAL RESEARCH INC	20160020	99	UNKNOWN	96,118	
DEFENSE GROUP INC.	14-0274-3523-001	99	UNKNOWN	18,827	
DEFENSE GROUP INC.	DEFENSE G 130004876 LIEBERMAN 12/15	99	UNKNOWN	6,930	
DUKE UNIVERSITY	20134974	99	UNKNOWN	249	
DUKE UNIVERSITY	2034985	99	UNKNOWN	18,900	
DUKE UNIVERSITY	NP/DUKE/NIH 20100872 FURST 07/11 54	99	UNKNOWN	5,792	
DUKE UNIVERSITY	DUKE/NIH HHSN2722011 KAFAJA 10/13 5	99	UNKNOWN	2,859	
DUKE UNIVERSITY	CSA173577/OPP206993: TO 27	99	UNKNOWN	46	
DUKE UNIVERSITY	HHSN272200900023C:4	99	UNKNOWN	81,148	
DUKE UNIVERSITY	SUB 20144899 (HHSN-27520100000	99	UNKNOWN	7,244	
DUKE UNIVERSITY	Sub 20160141 (HHSN275201000003	99	UNKNOWN	62,697	
DUKE UNIVERSITY	Sub 212079 ( HHSO100201300009C	99	UNKNOWN	845	
DUKE UNIVERSITY	Sub CE01-120 (HHSO100201300009	99	UNKNOWN	26,738	
DXTERITY DIAGNOSTICS	20150825	99	UNKNOWN	11,157	
EMMES CORPORATION, THE	SUB NONE (NS062835)	99	UNKNOWN	115,096	
ERC, INCORPORATED	PO NO. PS150006	99	UNKNOWN	38,102	
ERC, INCORPORATED	PO NO. PS150008	99	UNKNOWN	73,190	
ERC, INCORPORATED	PO NO. PS160001	99	UNKNOWN	8,289	
ERC, INCORPORATED	PO NO. RS131108	99	UNKNOWN	44,657	
ERC, INCORPORATED	RS131109	99	UNKNOWN	40,614	
FARUS, LLC	2R44DE021326-02	99	UNKNOWN	43,220	
FAST-TRACK DRUGS & BIOLOGICS, LLC	HHSN27500003-1061-NCIG6-UCLA	99	UNKNOWN	544,665	
FEINSTITUTEEIN INSTITUTE FOR MEDICAL RESEARCH	500613 UCLA:1	99	UNKNOWN	17,310	
FERMI RESEARCH ALLIANCE, LLC (FRA) (INCL FERMILAB-DOE GOCO)	619181:1	99	UNKNOWN	71,724	
FLEXTECH ALLIANCE	RFP15-175	99	UNKNOWN	54,191	
FRED HUTCHINSON CANCER RESEARCH CENTER	Sub 0000796789 (HHSN2682013000	99	UNKNOWN	29,321	
FRED HUTCHINSON CANCER RESEARCH CENTER	Sub 0000807414 (HHSN2682011000	99	UNKNOWN	61,320	
GALOIS INC	2015-007	99	UNKNOWN	222,080	
GENERAL ATOMICS	4500053550	99	UNKNOWN	297,526	
GENERAL ATOMICS	4500059085	99	UNKNOWN	423,206	
GENERAL ATOMICS	GAC/US DOE PEEBLES PO4500041234 10/	99	UNKNOWN	(24)	
GENERAL ATOMICS	GAC 45000047909 PEEBLES 10/14 26%	99	UNKNOWN	(24)	
GEORGIA INSTITUTE OF TECHNOLOGY	RF228-G1	99	UNKNOWN	234,022	
GEORGIA INSTITUTE OF TECHNOLOGY	RF386-S3	99	UNKNOWN	207,752	
GLOBAL ALGAE INNOVATIONS	GAI 20133695	99	UNKNOWN	135,795	
GSI ENVIRONMENTAL, INC	13-009	99	UNKNOWN	114,391	
HEALTH RESEARCH AND EDUCATION TRUST	FDP-R&ET/DHHS STEADMAN 09/14	99	UNKNOWN	(23)	
HEALTH RESEARCH AND EDUCATION TRUST	80784	99	UNKNOWN	76,124	
HLS RESEARCH, INC.	HLS 15-1002	99	UNKNOWN	15,523	
HONEYWELL, INC.	HONEYWELL(USDT)3501527800E1216	99	UNKNOWN	22,018	
HRL LABORATORIES, LLC	HRL/USDOD 702086BS HONGWEN 09/14 54	99	UNKNOWN	(85)	
HYPRES, INC.				(50)	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

				FY 2	2016
ederal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	F	ederal	Total Federal	Pass-Through
	or Other Identifier	CFD	A Number	Expenditures	Subrecipients
IDAHO NATIONAL LABORATORY	167290	99	UNKNOWN	1,413	
ILLINOIS APPLIED RESEARCH ASSOCIATES, LLC	20151870	99	UNKNOWN	79,363	
IMAGINAB INC.	4R44CA157025-02	99	UNKNOWN	51,875	
INCORPORATED RESEARCH INSTITUTIONS FOR SEISMOLOGY	14-UCSD-TAJIK	99	UNKNOWN	18,231	
INFERLINK CORPORATION	W81XWH-13-C-0158	99	UNKNOWN	27,439	
INFLEXXION, INC.	2R44HD066920-03A1	99	UNKNOWN	222,655	
INFOSCITEX CORPORATION	A16-0500-001	99	UNKNOWN	4,489	
INSTON, INC	20143232	99	UNKNOWN	18,471	
INTELLIGENT OPTICAL SYSTEMS, INC.	3236 NIH-NEURONANO	99	UNKNOWN	(8,486)	
INTERNATIONAL BUSINESS MACHINES CORPORATION	PO #5003856916	99	UNKNOWN	298,430	
IQ SOLUTIONS INC.	NIDA/US-Mexico Fellowship	99	UNKNOWN	36,816	
JAEB CENTER FOR HEALTH RESEARCH, INC.	1U10EY020797-01A1	99	UNKNOWN	7,521	
JET PROPULSION LABORATORY	1278932:011	99	UNKNOWN	665	
JET PROPULSION LABORATORY	1385250:012	99	UNKNOWN	61,369	
JET PROPULSION LABORATORY	1401886:008	99	UNKNOWN	62,433	
JET PROPULSION LABORATORY	1424022	99	UNKNOWN	212,039	
JET PROPULSION LABORATORY	1436227	99	UNKNOWN	80,189	
JET PROPULSION LABORATORY	1436963:02	99	UNKNOWN	7,589	
JET PROPULSION LABORATORY	1459600:005	99	UNKNOWN	24,243	
JET PROPULSION LABORATORY	1481588-01	99	UNKNOWN	155,663	
JET PROPULSION LABORATORY	1486376	99	UNKNOWN	138,012	
JET PROPULSION LABORATORY	1490248	99	UNKNOWN	115,190	
JET PROPULSION LABORATORY	1499223:001	99	UNKNOWN	14,813	
JET PROPULSION LABORATORY	1501530:001	99	UNKNOWN	7,650	
JET PROPULSION LABORATORY	1506677	99	UNKNOWN	41,705	
JET PROPULSION LABORATORY	1508617	99	UNKNOWN	40,574	
JET PROPULSION LABORATORY	1512045	99	UNKNOWN	(345)	
JET PROPULSION LABORATORY	1512469	99	UNKNOWN	29,371	
JET PROPULSION LABORATORY	1512986:002	99	UNKNOWN	339,632	
JET PROPULSION LABORATORY	1513478	99	UNKNOWN	14,555	
JET PROPULSION LABORATORY	1514193	99	UNKNOWN	60,370	
JET PROPULSION LABORATORY	1514272	99	UNKNOWN	8,632	
JET PROPULSION LABORATORY	1514518	99	UNKNOWN	4,767	
JET PROPULSION LABORATORY	1514727	99	UNKNOWN	38,358	
JET PROPULSION LABORATORY	1514876	99	UNKNOWN	47,703	
JET PROPULSION LABORATORY	1515239	99	UNKNOWN	5,926	
JET PROPULSION LABORATORY	1515694	99	UNKNOWN	46,038	
JET PROPULSION LABORATORY	1516625	99	UNKNOWN	144,921	
JET PROPULSION LABORATORY	1518694	99	UNKNOWN	15,225	
JET PROPULSION LABORATORY	1520000	99	UNKNOWN	(703)	
JET PROPULSION LABORATORY	1520173	99	UNKNOWN	25,592	
JET PROPULSION LABORATORY	1521256	99	UNKNOWN	21,201	
JET PROPULSION LABORATORY	1521593	99	UNKNOWN	124,084	1
JET PROPULSION LABORATORY	1522155	99	UNKNOWN	124,945	
		55		,040	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

				FY 2	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	F	ederal	Total Federal	Pass-Through to
	or Other Identifier	CFD	A Number	Expenditures	Subrecipients
JET PROPULSION LABORATORY	1525520	99	UNKNOWN	61,354	
JET PROPULSION LABORATORY	1526530	99	UNKNOWN	67,402	
JET PROPULSION LABORATORY	1527039	99	UNKNOWN	25,000	
JET PROPULSION LABORATORY	1527849	99	UNKNOWN	32,265	
JET PROPULSION LABORATORY	1528316	99	UNKNOWN	14,462	
JET PROPULSION LABORATORY	1529017	99	UNKNOWN	19,419	
JET PROPULSION LABORATORY	1530277	99	UNKNOWN	38,935	
JET PROPULSION LABORATORY	1530495	99	UNKNOWN	33,866	
JET PROPULSION LABORATORY	1530672	99	UNKNOWN	61,753	
JET PROPULSION LABORATORY	1531316:001	99	UNKNOWN	113,238	
JET PROPULSION LABORATORY	1531879	99	UNKNOWN	42,054	
JET PROPULSION LABORATORY	1532733:02	99	UNKNOWN	39,930	
JET PROPULSION LABORATORY	1533732	99	UNKNOWN	26,390	
JET PROPULSION LABORATORY	1533870:002	99	UNKNOWN	118,604	
JET PROPULSION LABORATORY	1534124	99	UNKNOWN	11,613	
JET PROPULSION LABORATORY	1535758	99	UNKNOWN	20,449	
JET PROPULSION LABORATORY	1536070	99	UNKNOWN	18,272	
JET PROPULSION LABORATORY	1537305	99	UNKNOWN	35,357	
JET PROPULSION LABORATORY	1537426	99	UNKNOWN	101,653	
JET PROPULSION LABORATORY	1537508	99	UNKNOWN	10,778	
JET PROPULSION LABORATORY	1537626	99	UNKNOWN	58,376	
JET PROPULSION LABORATORY	1537682	99	UNKNOWN	36,758	
JET PROPULSION LABORATORY	1537756	99	UNKNOWN	48,564	
JET PROPULSION LABORATORY	1538771	99	UNKNOWN	26,048	
JET PROPULSION LABORATORY	1540430:01	99	UNKNOWN	19,014	
JET PROPULSION LABORATORY	1541178	99	UNKNOWN	7,347	
JET PROPULSION LABORATORY	1542315:001	99	UNKNOWN	111,197	
JET PROPULSION LABORATORY	1543035	99	UNKNOWN	38,854	
JET PROPULSION LABORATORY	1543317	99	UNKNOWN	50,927	
JET PROPULSION LABORATORY	1544602	99	UNKNOWN	1,533	
JET PROPULSION LABORATORY	1545119	99	UNKNOWN	21,655	
JET PROPULSION LABORATORY	1546731	99	UNKNOWN	13,463	
JET PROPULSION LABORATORY	1551859	99	UNKNOWN	7,624	
JET PROPULSION LABORATORY	JPL RSA1447318 FORTNEY 9/15	99	UNKNOWN	64	
JET PROPULSION LABORATORY	JPL/NASA 1497431 RUSSELL 9/15 54%	99	UNKNOWN	(743)	
JET PROPULSION LABORATORY	RSA No. 1519403	99	UNKNOWN	30,839	
JET PROPULSION LABORATORY	RSA No. 1519406	99	UNKNOWN	7,655	
JOHNS HOPKINS UNIVERSITY	118127	99	UNKNOWN	46,606	
JOHNS HOPKINS UNIVERSITY	127296	99	UNKNOWN	108,071	
JOHNS HOPKINS UNIVERSITY	132224	99	UNKNOWN	53,661	
LANZATECH	LANZATECH 20142106	99	UNKNOWN	142,235	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B607572:4	99	UNKNOWN	308,508	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	25137	99	UNKNOWN	(2)	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B590441	99	UNKNOWN	16,495	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B594460	99	UNKNOWN	2,496	
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# Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

				FY 2	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	F	ederal	Total Federal	Pass-Through to
	or Other Identifier	CFD	A Number	Expenditures	Subrecipients
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B599552	99	UNKNOWN	61,191	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	008053	99	UNKNOWN	17,785	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	LLNS B608016 HOPKINS 12/14 54%	99	UNKNOWN	(3,354)	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	LLNS/US DOD B599552 HOPKINS 4/15 54	99	UNKNOWN	(2,635)	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B608015:1	99	UNKNOWN	89,128	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B612916	99	UNKNOWN	14,683	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B613194	99	UNKNOWN	75,828	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B615218	99	UNKNOWN	8,332	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B615778	99	UNKNOWN	62,249	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B615821	99	UNKNOWN	36,247	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B615842	99	UNKNOWN	36,501	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B617745	99	UNKNOWN	12,936	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B617862	99	UNKNOWN	8,720	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	PO#B614264	99	UNKNOWN	23,355	
LEEDS MANAGEMENT CONSULTING INC	ED-O11-13-C-0073	99	UNKNOWN	29,990	
LEIDOS BIOMEDICAL RESEARCH, INC.	14X111	99	UNKNOWN	4,293	
LEIDOS BIOMEDICAL RESEARCH, INC.	16X164	99	UNKNOWN	1,386	
LGS INNOVATIONS LLC	LGS141160G	99	UNKNOWN	216,880	
LIBREDE, INC.	20121721	99	UNKNOWN	29,189	
LOS ALAMOS NATIONAL SECURITY, LLC	008035	99	UNKNOWN	3,646	
LOS ALAMOS NATIONAL SECURITY, LLC	142454-004	99	UNKNOWN	191,906	
LOS ALAMOS NATIONAL SECURITY, LLC	216965-1:3	99	UNKNOWN	11,500	
LOS ALAMOS NATIONAL SECURITY, LLC	216966-1:3	99	UNKNOWN	28,278	
LOS ALAMOS NATIONAL SECURITY, LLC	243489-001	99	UNKNOWN	2,059	
LOS ALAMOS NATIONAL SECURITY, LLC	257201-002	99	UNKNOWN	80,351	
LOS ALAMOS NATIONAL SECURITY, LLC	308948	99	UNKNOWN	90,126	
LOS ALAMOS NATIONAL SECURITY, LLC	315140	99	UNKNOWN	3,011	
LOS ALAMOS NATIONAL SECURITY, LLC	383906	99	UNKNOWN	9,734	
LOS ANGELES COUNTY DEPARTMENT OF HEALTH SERVICES	CNTYLADPH/DHHS PH002511 WELLS 6/14	99	UNKNOWN	(2,273)	
LOS ANGELES COUNTY DEPARTMENT OF HEALTH SERVICES	CLA/DHHS DPOPH14361162 MCCURTIS 4/1	99	UNKNOWN	(6,759)	
LOS ANGELES COUNTY DEPARTMENT OF HEALTH SERVICES	PH-002511:1	99	UNKNOWN	(4,249)	
LOS ANGELES COUNTY DEPARTMENT OF HEALTH SERVICES	PH-002511:2	99	UNKNOWN	158,707	
LOS ANGELES DEPARTMENT OF WATER AND POWER	DR-UCLA-PS05 (A) Sub Task 001,	99	UNKNOWN	152,417	
LOS ANGELES POLICE FOUNDATION	20144647	99	UNKNOWN	80,198	
MAGEE-WOMENS HOSPITAL, RESEARCH INSTITUTE AND FOUNDATION	MAGEE FDN/NIH 7290 ANTON 08/14 26%	99	UNKNOWN	(44,400)	
MEDICAL COLLEGE OF WISCONSIN	MCW/NIH 20102467 BOOKHEIMER 05/14 5	99	UNKNOWN	(14,555)	
MEMORIAL SLOAN-KETTERING CANCER CENTER	SLOAN/NIH MSKCC07014 CHMIELOW 10/1	99	UNKNOWN	(18)	
MICROELECTRONICS ADVANCED RESEARCH CORPORATION	2013-MA-2382	99	UNKNOWN	5,648,627	3,511,5
MOROCCAN FOUNDATION FOR ADVANCED SCIENCE, INNOVATION AND RESEARCH	PANERA/AFRL SB1FA955014 CARMAN 06/1	99	UNKNOWN	1,327	5,511,5
NANOCELLECT BIOMEDICAL, INC.	NANOPIXEL/NSF 20140002 HUFFAKER 12/	99	UNKNOWN	31,953	
NANOPIXEL TECHNOLOGIES	SA3404-26309:21	99	UNKNOWN	(47)	
NATIONAL JEWISH HEALTH	NJH/NIH 20093678 LI 6/15 54%	99	UNKNOWN	2,042	
NAVMAR APPLIED SCIENCES CORPORATION	NAVMAR APPLIED SCIE CORP PX002554 T	99	UNKNOWN	4,763	
NEURAL ANALYTICS	IIP-1448525	99			
HEORIE AIR AET HOO	111 - 1770020	99	UNKNOWN	(5,873)	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

				FY 2	
eral Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Fed	deral	Total Federal	Pass-Through t
	or Other Identifier	CFDA	Number	Expenditures	Subrecipients
NORTH SHORE-LONG ISLAND JEWISH HEALTH SYSTEM	UCL1-01-NON-ARRA:4	99	UNKNOWN	2,041	
NORTHROP GRUMMAN CORPORATION	20141363	99	UNKNOWN	75,242	
NORTHROP GRUMMAN CORPORATION	7600019071	99	UNKNOWN	300,019	
NOVARTIS AG	CRAD001CUS168T	99	UNKNOWN	(19,045)	
OAK RIDGE NATIONAL LABORATORY	4000116770:03	99	UNKNOWN	622,485	
OAK RIDGE NATIONAL LABORATORY	4000139957	99	UNKNOWN	131,013	
OAK RIDGE NATIONAL LABORATORY	4000142358	99	UNKNOWN	47,582	
OAK RIDGE NATIONAL LABORATORY	4000143356	99	UNKNOWN	46,795	
OAK RIDGE NATIONAL LABORATORY	OAK RN LAB/USDOE 92665 LIAO 9/12 54	99	UNKNOWN	(528)	
OCEAN NANOTECH	20143181	99	UNKNOWN	210,464	
OEWAVES	20161012	99	UNKNOWN	40,933	
OREGON STATE UNIVERSITY	X0164A-A	99	UNKNOWN	12,504	
PACIFIC DEVELOPMENT AND TECHNOLOGY, LLC	20110828	99	UNKNOWN	(173)	
PACIFIC NORTHWEST NATIONAL LABORATORIES	287593	99	UNKNOWN	3,820	
PACIFIC NORTHWEST NATIONAL LABORATORIES	A15-0016	99	UNKNOWN	7,186	
PACIFIC NORTHWEST NATIONAL LABORATORIES	20152753	99	UNKNOWN	17,749	
PACIFIC NORTHWEST NATIONAL LABORATORIES	245999	99	UNKNOWN	21,593	
PELAGIQUE, LLC	20130580	99	UNKNOWN	1,279	
PRATT & WHITNEY	SB100016 - Task 24	99	UNKNOWN	4,929	
PREMITEC	20144132	99	UNKNOWN	78,429	
PRINCETON PLASMA PHYSICS LABORATORY	S012340-F:5	99	UNKNOWN	(125)	
PRINCETON PLASMA PHYSICS LABORATORY	S014889-R	99	UNKNOWN	27,264	
PROTEIN SCIENCES CORP.	2U44CA167593-02	99	UNKNOWN	149,191	
PURDUE UNIVERSITY	PURDUE UNIV/DOD 410444613 LESTER 9/	99	UNKNOWN	(1,087)	
QUANTUM APPLIED SCIENCE AND RESEARCH, INC.	20151743 (W81XWH-12-C-0056)	99	UNKNOWN	2,811	
RADIABEAM TECHNOLOGIES, LLC	20144162	99	UNKNOWN	183,119	
RADIABEAM TECHNOLOGIES, LLC	20151673	99	UNKNOWN	66,484	
RADIABEAM TECHNOLOGIES, LLC	20154874	99	UNKNOWN	50,346	
RADIABEAM TECHNOLOGIES, LLC	20160519	99	UNKNOWN	3,128	
RADIABEAM TECHNOLOGIES, LLC	20164118	99	UNKNOWN	4,013	
RADIABEAM TECHNOLOGIES, LLC	20164153	99	UNKNOWN	2,086	
RADIABEAM TECHNOLOGIES, LLC	RT/USDOE 20140048 MUSUMECI 5/14 54%	99	UNKNOWN	(8)	
RADIABEAM TECHNOLOGIES, LLC	PA-12-088	99	UNKNOWN	51,748	
RADIOLOGICAL SOCIETY OF NORTH AMERICA INC (ARRA)	RSNA/NIH HHSN268201000050 MCNITT 03	99	UNKNOWN	(2,686)	
RADIOLOGICAL SOCIETY OF NORTH AMERICA INC (ARRA)	RSNA/NIH 268201000050C MCNITT-GRAY	99	UNKNOWN	(1,112)	
RAND CORP	9920120024:03	99	UNKNOWN	6,975	
RAND CORP	9920140170	99	UNKNOWN	127,049	
RAND CORP	9920150078:1	99	UNKNOWN	10,672	
RAND CORP	9920150142	99	UNKNOWN	13,275	
RAYTHEON BBN TECHNOLOGIES CORP.	9500011577	99	UNKNOWN	28,679	
REMOTE SENSING SYSTEMS	6103	99	UNKNOWN	20,403	
SANDIA NATIONAL LABORATORIES	1111359:3	99	UNKNOWN	119,111	8
SANDIA NATIONAL LABORATORIES	1651967	99	UNKNOWN	20,649	
SANDIA NATIONAL LABORATORIES	A15-0012-002	99	UNKNOWN	128,005	
SANDIA NATIONAL LABORATORIES	P.O. #1518002	99	UNKNOWN	42,385	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Numbe	er Expenditures	Subrecipients
SCARLESS LABORATORIES, INC	4R44DE024692-02	99 UNKNO	OWN 179,024	
SOCIAL AND SCIENTIFIC SYSTEMS, INC.	SSS/NIH 00295 DEVILLE 9/11 54%	99 UNKNO	OWN (769)	
SOCIAL AND SCIENTIFIC SYSTEMS, INC.	SSS/NIH 00295 DEVILLE 3/15 54%	99 UNKNO	OWN 47,758	
SOCIAL AND SCIENTIFIC SYSTEMS, INC.	SSS/NIH CRBSSSS12002370 DEVILLE 12/	99 UNKNO	OWN (22,584)	
SOCIAL AND SCIENTIFIC SYSTEMS, INC.	SSS/NIH RBSSSS13003358 KLAUSNER 09/	99 UNKNO	OWN (4,523)	
SOCIAL AND SCIENTIFIC SYSTEMS, INC.	SSS/NIH CRB-SSS-S-14-004056 MORRIS	99 UNKNO	OWN 30,509	
SOCIAL AND SCIENTIFIC SYSTEMS, INC.	CRB-SSS-S-14-003983	99 UNKNO	OWN 32,861	
SOCIAL AND SCIENTIFIC SYSTEMS, INC.	CRB-SSS-S-15-004310	99 UNKNO	OWN 28,992	
SOCIAL AND SCIENTIFIC SYSTEMS, INC.	CRB-SSS-S-15-004351	99 UNKNO	OWN 126,364	
SOCIAL AND SCIENTIFIC SYSTEMS, INC.	CRB-SSS-S-15-004576	99 UNKNO	OWN 25,455	
SOCIAL AND SCIENTIFIC SYSTEMS, INC.	CRB-SSS-S-15-004631	99 UNKNO	DWN 118,176	
SOCIAL AND SCIENTIFIC SYSTEMS, INC.	Sub CRB-SSS-S-15-004567 (HHSN2	99 UNKNO	WN 2,804	
SOFIE BIOSCIENCES, INC	20143741	99 UNKNO	OWN 94,579	
SOFIE BIOSCIENCES, INC	20144768	99 UNKNO	OWN 176,076	
SOITEC SOLAR	20130388 (W912HQ-13-C-0032)	99 UNKNO	OWN 117,548	
SOUTHWEST RESEARCH INSTITUTE	699046X :25	99 UNKNO	OWN 14,512	
SOUTHWEST RESEARCH INSTITUTE	H99010MO	99 UNKNO	OWN 139,034	
STANFORD UNIVERSITY	105193-009	99 UNKNO	OWN 109,798	
STATE UNIVERSITY OF NEW YORK	SUB 68799-6(DESC0012583)	99 UNKNO	OWN 381,284	
TELESAGE, INC.	20150331	99 UNKNO		
THE SCRIPPS RESEARCH INSTITUTE	5-52325	99 UNKNO	OWN 138,828	
THINK-NOW INC.	2013-2773	99 UNKNO	OWN 58,371	
THINK-NOW INC.	20134440	99 UNKNO	OWN 1,730	
TUNITAS THERAPEUTICS	20112992	99 UNKNO	OWN 207,138	
UNIVERSITIES RESEARCH ASSOCIATION (OPERATES FERMILAB)	601656:11	99 UNKNO	OWN 73,301	
UNIVERSITIES RESEARCH ASSOCIATION (OPERATES FERMILAB)	603654:10	99 UNKNO	OWN 239,466	
UNIVERSITIES RESEARCH ASSOCIATION (OPERATES FERMILAB)	PO #596112:5	99 UNKNO		
UNIVERSITIES RESEARCH ASSOCIATION (OPERATES FERMILAB)	PO #605974:3	99 UNKNO	OWN 202,606	
UNIVERSITIES SPACE RESEARCH ASSOCIATION	08500-05:76	99 UNKNO	OWN 67,560	
UNIVERSITY OF ARIZONA	20152604 (HHSN2612012000311)	99 UNKNO		
UNIVERSITY OF ARIZONA	3003980	99 UNKNO		
UNIVERSITY OF ARIZONA	Sub 20160294 (HHSN261201200031	99 UNKNO		
UNIVERSITY OF COLORADO SYSTEM (SYSTEM PARENT CODE)	1548642:4	99 UNKNO	OWN 405	
UNIVERSITY OF HAWAII AT MANOA	MA110025:004	99 UNKNO		
UNIVERSITY OF IOWA	1001057397:01	99 UNKNO		
UNIVERSITY OF MARYLAND	028-Z7181002:A	99 UNKNO		
UNIVERSITY OF MARYLAND	31673-Z9825002	99 UNKNO		
UNIVERSITY OF MICHIGAN	3003891771UM16-04-cyc1	99 UNKNO		
UNIVERSITY OF MINNESOTA	X5336545102:10	99 UNKNO		
UNIVERSITY OF NEW HAMPSHIRE	06-001	99 UNKNO		77,75
UNIVERSITY OF NEW MEXICO	008256	99 UNKNO		77,70
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5056054	99 UNKNO		6.57
UNIVERSITY OF OREGON	251370A:1	99 UNKNO		0,51
UNIVERSITY OF OREGON	0024031-5:03	99 UNKNO		
UNIVERSITY OF YMMODOROM UNIVERSITY OF SOUTHERN CALIFORNIA	59361997	99 UNKNO		
CHARLES OF GOOTHERA CALIFORNIA	33301331	aa ONKING	7VVIN 58,773	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

				FY 2	016
deral Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	F	ederal	Total Federal	Pass-Through to
	or Other Identifier	CFD	A Number	Expenditures	Subrecipients
UNIVERSITY OF SOUTHERN CALIFORNIA	61207781	99	UNKNOWN	40,948	
UNIVERSITY OF SOUTHERN CALIFORNIA	67808754	99	UNKNOWN	79,245	
UNIVERSITY OF TEXAS-AUSTIN	UTA15-000131	99	UNKNOWN	861,938	
UNIVERSITY OF UTAH	10009050-15CAPITATED:8	99	UNKNOWN	134,437	
UNIVERSITY OF WASHINGTON	747180:2	99	UNKNOWN	(51)	
UNIVERSITY OF WASHINGTON	UW/NIH 745379 HALFON 09/13 26%	99	UNKNOWN	366	
UNIVERSITY OF WASHINGTON	UWSC8540	99	UNKNOWN	477,813	
VANDERBILT UNIVERSITY	Sub VUMC 44030 (HHSN2722014000	99	UNKNOWN	54,775	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA 316054 MORLAND ( W81XWH-12	99	UNKNOWN	22,131	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA CARTER 315854 ( VMRF 09249	99	UNKNOWN	44,106	
VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY	A00-0722-003	99	UNKNOWN	90,775	
WESTAT	6001-PO-016	99	UNKNOWN	13,625	
WESTAT	6049.03-S01	99	UNKNOWN	24,128	
WESTAT	6101-S059 (MOD. NO.2)	99	UNKNOWN	769,454	
WESTAT	6101-S074	99	UNKNOWN	97,989	
WESTAT	8967-S02:04	99	UNKNOWN	17,421	
WORLD VISION INC	ACR2-001	99	UNKNOWN	78,804	
WYLE LABORATORIES	T72556	99	UNKNOWN	219,138	
WYLE LABORATORIES	T72613	99	UNKNOWN	20,185	
WYLE LABORATORIES	T73047	99	UNKNOWN	8,902	
ZYMERGEN, INC.	4209	99	UNKNOWN	8,215	
ZYMERGEN, INC.	4282	99	UNKNOWN	4,119	
3E TECHNOLOGIES INTERNATIONAL, INC.	3ETI 03S1005100UCR JIANG 9/16	99	UNKNOWN	32,645	
ARIZONA STATE UNIVERSITY/TEMPE	A16-0487-001	99	UNKNOWN	1,213	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	AURA N414580A HUNTER 3/15	99	UNKNOWN	(3,692)	
AURORA FLIGHT SCIENCES CORPORATION	AURORA AFS151264 TEODRSCU 6/16	99	UNKNOWN	33,205	
BRIGHAM YOUNG UNIVERSITY	15-0425	99	UNKNOWN	207,999	
BROAD INSTITUTE INC.	A15-0194-002	99	UNKNOWN	436,052	
BROOKHAVEN NATIONAL LABORATORY/BROOKHAVEN SCIENCE ASSOCIATES, LLC	BROOKHAVEN 280632 NIELSEN 9/15	99	UNKNOWN	3,050	
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	14-10802	99	UNKNOWN	147,158	
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	MCA8995SC (14-10709)	99	UNKNOWN	39,956	
CALIFORNIA STRAWBERRY COMMISSION	SC-15-04	99	UNKNOWN	72,093	
CENTER FOR RESEARCH IN STORAGE SYSTEMS	A00-0711-002	99	UNKNOWN	451,593	
CHILDREN'S HOSPITAL AND RESEARCH CENTER AT OAKLAND	A00-0677-003	99	UNKNOWN	8,927	
CONCERN UNIVERSAL	A16-0164-001	99	UNKNOWN	38,454	
EAST CAROLINA UNIVERSITY	A10-0074-S005	99	UNKNOWN	76,985	
EPIR TECHNOLOGIES, INC.	0149-13-SUCSC-0001	99	UNKNOWN	309	
HYDROGEOLOGIC, INC.	SC-15-155	99	UNKNOWN	4,319	
JET PROPULSION LABORATORY	A15-0098-001	99	UNKNOWN	17,422	
JET PROPULSION LABORATORY	A15-0195-001	99	UNKNOWN	25,236	
JET PROPULSION LABORATORY	A16-0081-001	99	UNKNOWN	8,924	
JET PROPULSION LABORATORY	A16-0228-001	99	UNKNOWN	86,667	
JET PROPULSION LABORATORY	A16-0506-001	99	UNKNOWN	1,335	
JET PROPULSION LABORATORY	A16-0545-001	99	UNKNOWN	2.121	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B606314-002	99	UNKNOWN	(942)	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

				FY 2	016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	F	ederal	Total Federal	Pass-Through to
	or Other Identifier	CFD	A Number	Expenditures	Subrecipients
LEIDOS BIOMEDICAL RESEARCH, INC.	A00-2172-019	99	UNKNOWN	1,441,935	
LEIDOS, INC.	A00-2172-021	99	UNKNOWN	(37,697)	
MASSACHUSETTS GENERAL HOSPITAL	A15-0163-001	99	UNKNOWN	18,974	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	A00-0229-003	99	UNKNOWN	41,180	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	123403A	99	UNKNOWN	34,163	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444653-84067	99	UNKNOWN	98,345	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444653-84097	99	UNKNOWN	96,287	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444653-84126	99	UNKNOWN	153,294	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444653-84128	99	UNKNOWN	126,681	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444653-84129	99	UNKNOWN	32,761	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444653-84211	99	UNKNOWN	67,535	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444653-84227	99	UNKNOWN	111,529	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444653-84228	99	UNKNOWN	60,687	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444908-84219	99	UNKNOWN	42,472	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444920-84033	99	UNKNOWN	159,866	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444920-84080	99	UNKNOWN	(79)	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444920-84213	99	UNKNOWN	182,814	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444920-84214	99	UNKNOWN	23,918	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444927-84086	99	UNKNOWN	15,989	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444927-84091	99	UNKNOWN	219,616	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444927-84193	99	UNKNOWN	123,256	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444949-84149	99	UNKNOWN	585	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444949-84188	99	UNKNOWN	60,052	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444949-84200	99	UNKNOWN	803	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444951-84016	99	UNKNOWN	172,331	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444951-84053	99	UNKNOWN	93,506	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444951-84057	99	UNKNOWN	120,638	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444951-84116	99	UNKNOWN	107,479	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444951-84183	99	UNKNOWN	248	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444951-84190	99	UNKNOWN	68,417	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444951-84220	99	UNKNOWN	198,718	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444951-84221	99	UNKNOWN	46,128	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444955-84218	99	UNKNOWN	140,595	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444956-84222	99	UNKNOWN	116,340	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444988-84009	99	UNKNOWN	210,042	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444988-84014	99	UNKNOWN	13,534	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444988-84041	99	UNKNOWN	128,614	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444988-84076	99	UNKNOWN	87,668	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444988-84082	99	UNKNOWN	84,964	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444988-84098	99	UNKNOWN	60,406	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444988-84127	99	UNKNOWN	134,087	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444988-84142	99	UNKNOWN	19,027	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444988-84153	99	UNKNOWN	54,274	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444988-84155	99	UNKNOWN	8,492	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444988-84162	99	UNKNOWN	74,912	
		35	2	,012	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

				FY 2	016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Fe	ederal	Total Federal	Pass-Through to
	or Other Identifier	CFDA	Number	Expenditures	Subrecipients
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444988-84166	99	UNKNOWN	30,363	_
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444988-84204	99	UNKNOWN	84,332	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444988-84215	99	UNKNOWN	112,002	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444988-84224	99	UNKNOWN	76,641	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	444988-84229	99	UNKNOWN	4,990	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	445141-84203	99	UNKNOWN	8,795	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	445231-84187	99	UNKNOWN	2,296	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	446306-84205	99	UNKNOWN	105,956	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	557755-84201	99	UNKNOWN	24,546	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	558109-84207	99	UNKNOWN	(808)	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	84095 - 02 - 444988	99	UNKNOWN	8,377	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	84132 - 02 - 444988	99	UNKNOWN	39,975	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	84140 - 02 - 444947	99	UNKNOWN	31,286	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	84184 - 02 - 444951	99	UNKNOWN	70,772	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	84233-444951	99	UNKNOWN	2,115	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	84239-444949	99	UNKNOWN	1,104	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	A121355	99	UNKNOWN	44,937	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	Joint Personnel Agreement - Ra (B4458)	99	UNKNOWN	(867)	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	JPA - CENZER, IRENA	99	UNKNOWN	18,370	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	JPA - COHEN, BETH	99	UNKNOWN	6,246	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	JPA - HAAN, MARY	99	UNKNOWN	8,777	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	JPA - LEE, SEI	99	UNKNOWN	71,439	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	JPA - LOEWY, RACHEL	99	UNKNOWN	45,514	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	JPA - MACKIN, ROBERT	99	UNKNOWN	39,601	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	JPA - MAGUEN	99	UNKNOWN	15,458	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	JPA - MAKLASHINA	99	UNKNOWN	184,192	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	JPA - MICHAEL HOPE	99	UNKNOWN	18,317	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	JPA - MUKHERJEE	99	UNKNOWN	15,564	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	JPA - OWEN, JULIA	99	UNKNOWN	78	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	JPA - SALONER, DAVID	99	UNKNOWN	71,005	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	JPA - SUDORE,REBECCA	99	UNKNOWN	97,337	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	JPA - ZHANG, YU	99	UNKNOWN	86,263	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	JPA -HENDERSON SABES	99	UNKNOWN	96,143	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	UCSF #A125195	99	UNKNOWN	47,811	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	UCSF #A125197	99	UNKNOWN	71,924	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	UCSF#A121247	99	UNKNOWN	(787)	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	UCSF#A121262	99	UNKNOWN	16,224	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	UCSF#A121321	99	UNKNOWN	(3,221)	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	UCSF#A121357	99	UNKNOWN	15,564	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	UCSF#A121400	99	UNKNOWN	21,838	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	UCSF#A121562	99	UNKNOWN	(560)	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	UCSF#A121580	99	UNKNOWN	2,502	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	UCSF#A121938	99	UNKNOWN	23,161	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	UCSF#A121959	99	UNKNOWN	194,943	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	UCSF#A121975	99	UNKNOWN	30,758	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

				FY 2	016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number		ederal	Total Federal	Pass-Through to
	or Other Identifier	CFD	A Number	Expenditures	Subrecipients
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	UCSF#A121979	99	UNKNOWN	87,839	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	UCSF#A122189	99	UNKNOWN	27,669	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	UCSF#A122191	99	UNKNOWN	63,856	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	UCSF#A122581	99	UNKNOWN	20,752	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	UCSF#A122582	99	UNKNOWN	28,371	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	UCSF#A122743	99	UNKNOWN	294,674	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	UCSF#A124078	99	UNKNOWN	86,066	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	UCSF#A124079	99	UNKNOWN	273,583	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	UCSF#A124450	99	UNKNOWN	45,345	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	UCSF#A124495	99	UNKNOWN	4,324	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	UCSF#A124553	99	UNKNOWN	25,780	
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	UCSF#A125083	99	UNKNOWN	54,608	
SCALE-FREE UNTETHERED NETWORK SYSTEMS TECHNOLOGY	A00-0627-003	99	UNKNOWN	98,680	
SRI INTERNATIONAL	19-000213-004	99	UNKNOWN	229,811	
SRI INTERNATIONAL	A16-0013-001	99	UNKNOWN	107,593	
STONE AEROSPACE/PSC, INC.	A16-0296-001	99	UNKNOWN	3,773	
TETRA TECH, INC.	A15-0141-001	99	UNKNOWN	6,930	
UNIVERSAL TECHNOLOGY CORPORATION	A16-0236-001	99	UNKNOWN	20,234	
UNIVERSITY OF MINNESOTA	A003571420	99	UNKNOWN	128,384	
UNIVERSITY OF MINNESOTA	A16-0585-001	99	UNKNOWN	25,378	
UNIVERSITY OF SOUTH FLORIDA	A16-0255-001	99	UNKNOWN	34,885	
VETERANS MEDICAL RESEARCH FOUNDATION OF SAN DIEGO	VPA BELIAKOVA-BETHELL ID15-VMR	99	UNKNOWN	4,557	
VIRGINIA FOUNDATION FOR THE HUMANITIES AND PUBLIC POLICY	A16-0120-001	99	UNKNOWN	14,998	
Subtotal Pass-Through and Partial Pass-Through Awards		00	0	40,165,432	3,694,44
Total Other Federal Agencies				40,849,566	3,709,823
Total Guidi Todold Tigonolo				40,040,000	0,700,020
Total Research and Development Cluster			_	3,481,395,869	427,320,229
DEPARTMENT OF AGRICULTURE - COOPERATIVE EXTENSION CLUSTER					
Direct Awards		10	500	12,381,954	12,750
Pass-Through and Partial Pass-Through					
KANSAS STATE UNIVERSITY	Kansas State University - S15051	10	500	31,477	
KANSAS STATE UNIVERSITY	KANSAS STATE UNIVERSITY-S16006	10	500	19,627	
KANSAS STATE UNIVERSITY	KANSAS STATE UNIVERSITY-S16069	10	500	31,728	
KANSAS STATE UNIVERSITY	KANSAS STATE UNIVERSITY-S15167	10	500	738	
PURDUE UNIVERSITY	PURDUE UNIV 8000065349 LESTER 05/15	10	500	11,118	
UNIVERSITY OF WYOMING	UNIVERSITY OF WYOMING; 1001769	10	500	5,933	
UNIVERSITY OF WYOMING	UNIVERSITY OF WYOMING-1002139	10	500	3,804	
UNIVERSITY OF WYOMING	UW Y11-1099	10	500	6,573	
WASHINGTON STATE UNIVERSITY	WASHINGTON STATE UNIVERSI-108815 G0	10	500	16,471	
WASHINGTON STATE UNIVERSITY	Washington State University-108815_	10	500	9,794	
Subtotal Pass-Through and Partial Pass-Through Awards				137,263	-
Total Department of Agriculture - Cooperative Extension Cluster			_	12,519,217	12,750

### Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

		_		FY 2	
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier		ederal A Number	Total Federal Expenditures	Pass-Through to Subrecipients
				,	
DEPARTMENT OF AGRICULTURE - SUPPLEMENTAL NUTRITION ASSISTANCE PROGRAM (SNAP) CLUSTER					
Pass-Through and Partial Pass-Through					
ALAMEDA COUNTY	Alameda County #Contract 11069	10	551	25,966	
ALAMEDA COUNTY	Alameda County - 12333	10	551	52,676	
TULARE, COUNTY OF	GENT-2015-38	10	551	43,788	
ALPINE, COUNTY OF	EW-2015-01	10	561	9,962	
CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	15-IA-00006	10	561	1,838	
CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	25857	10	561	1,481,959	
CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	25879	10	561	4,431,443	202,34
CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	CDSS; MCA; 12-2039	10	561	(30)	
CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	88296	10	561	4,238,298	
GLENN, COUNTY OF	EW201409	10	561	(943)	
GLENN, COUNTY OF	RD210-G1	10	561	27,350	
RIVERSIDE COUNTY	RIVERSIDE COUNTY-CW-02769	10	561	7,223	
RIVERSIDE COUNTY	SA132047UCD	10	561	6,825	
Subtotal Pass-Through and Partial Pass-Through Awards		10	001	10,326,355	202,34
			-	10,326,355	202,34
Total Department of Agriculture - Supplemental Nutrition Assistance Program Cluster				10,326,355	202,3
				10,326,355	202,34
DEPARTMENT OF LABOR - WIA/WIOA CLUSTER				10,326,355	202,34
DEPARTMENT OF LABOR - WIA/WIOA CLUSTER Pass-Through and Partial Pass-Through	CA/EDD K391536 LYDER 06/14 10%	17	258		202,34
DEPARTMENT OF LABOR - WIA/WIOA CLUSTER Pass-Through and Partial Pass-Through CALIFORNIA EMPLOYMENT DEVELOPMENT DEPARTMENT	CA/EDD K391536 LYDER 06/14 10% A-CITYOFI A/DOL C-121135 LOEHER 6/13	17 17	258 259	571	202,94
DEPARTMENT OF LABOR - WIA/WIOA CLUSTER  Pass-Through and Partial Pass-Through  CALIFORNIA EMPLOYMENT DEVELOPMENT DEPARTMENT  CITY OF LOS ANGELES	A-CITYOFLA/DOL C-121135 LOEHER 6/13	17	259	571 (252)	202,94
DEPARTMENT OF LABOR - WIA/WIOA CLUSTER Pass-Through and Partial Pass-Through CALIFORNIA EMPLOYMENT DEVELOPMENT DEPARTMENT				571	202,9
DEPARTMENT OF LABOR - WIA/WIOA CLUSTER  Pass-Through and Partial Pass-Through  CALIFORNIA EMPLOYMENT DEVELOPMENT DEPARTMENT  CITY OF LOS ANGELES  CITY OF LOS ANGELES	A-CITYOFLA/DOL C-121135 LOEHER 6/13	17	259	571 (252) (253)	-
DEPARTMENT OF LABOR - WIA/WIOA CLUSTER  Pass-Through and Partial Pass-Through  CALIFORNIA EMPLOYMENT DEVELOPMENT DEPARTMENT  CITY OF LOS ANGELES  CITY OF LOS ANGELES  Subtotal Pass-Through and Partial Pass-Through Awards	A-CITYOFLA/DOL C-121135 LOEHER 6/13	17	259	571 (252) (253) 66	-
DEPARTMENT OF LABOR - WIA/WIOA CLUSTER  Pass-Through and Partial Pass-Through  CALIFORNIA EMPLOYMENT DEVELOPMENT DEPARTMENT  CITY OF LOS ANGELES  CITY OF LOS ANGELES  Subtotal Pass-Through and Partial Pass-Through Awards  Total Department of Labor - WIA/WIOA Cluster	A-CITYOFLA/DOL C-121135 LOEHER 6/13	17	259	571 (252) (253) 66	-
DEPARTMENT OF LABOR - WIA/WIOA CLUSTER  Pass-Through and Partial Pass-Through  CALIFORNIA EMPLOYMENT DEVELOPMENT DEPARTMENT  CITY OF LOS ANGELES  CITY OF LOS ANGELES  Subtotal Pass-Through and Partial Pass-Through Awards  Total Department of Labor - WIA/WIOA Cluster	A-CITYOFLA/DOL C-121135 LOEHER 6/13	17	259	571 (252) (253) 66	-
PEPARTMENT OF LABOR - WIAWIOA CLUSTER  Pass-Through and Partial Pass-Through  CALIFORNIA EMPLOYMENT DEVELOPMENT DEPARTMENT  CITY OF LOS ANGELES  CITY OF LOS ANGELES  Subtotal Pass-Through and Partial Pass-Through Awards  Total Department of Labor - WIAWIOA Cluster  PEPARTMENT OF TRANSPORTATION - FEDERAL TRANSIT CLUSTER  Pass-Through and Partial Pass-Through	A-CITYOFLA/DOL C-121135 LOEHER 6/13 LA/USDOL T4976C-119143 LOEHER 06/12	17 17	259 259	571 (252) (253) 66	-
PASS-Through and Partial Pass-Through CALIFORNIA EMPLOYMENT DEVELOPMENT DEPARTMENT CITY OF LOS ANGELES CITY OF LOS ANGELES Subtotal Pass-Through and Partial Pass-Through Awards  Total Department of Labor - WIA/WIOA Cluster  PASS-Through and Partial Pass-Through DEPARTMENT OF TRANSPORTATION - FEDERAL TRANSIT CLUSTER PASS-Through and Partial Pass-Through DAVIS, CITY OF  Total Department of Transportation - Federal Transit Cluster	A-CITYOFLA/DOL C-121135 LOEHER 6/13 LA/USDOL T4976C-119143 LOEHER 06/12	17 17	259 259	571 (252) (253) 66 66	
PEPARTMENT OF LABOR - WIA/WIOA CLUSTER  Pass-Through and Partial Pass-Through  CALIFORNIA EMPLOYMENT DEVELOPMENT DEPARTMENT CITY OF LOS ANGELES CITY OF LOS ANGELES Subtotal Pass-Through and Partial Pass-Through Awards  Total Department of Labor - WIA/WIOA Cluster  PEPARTMENT OF TRANSPORTATION - FEDERAL TRANSIT CLUSTER  Pass-Through and Partial Pass-Through DAVIS, CITY OF  Total Department of Transportation - Federal Transit Cluster	A-CITYOFLA/DOL C-121135 LOEHER 6/13 LA/USDOL T4976C-119143 LOEHER 06/12	17 17	259 259	571 (252) (253) 66 66	-
PASS-Through and Partial Pass-Through CALIFORNIA EMPLOYMENT DEVELOPMENT DEPARTMENT CITY OF LOS ANGELES CITY OF LOS ANGELES Subtotal Pass-Through and Partial Pass-Through Awards  Total Department of Labor - WIA/WIOA Cluster  PASS-Through and Partial Pass-Through DAVIS, CITY OF  Total Department of Transportation - Federal Transit Cluster  DEPARTMENT OF TRANSPORTATION - Federal Transit Cluster  DEPARTMENT OF TRANSPORTATION - Federal Transit Cluster	A-CITYOFLA/DOL C-121135 LOEHER 6/13 LA/USDOL T4976C-119143 LOEHER 06/12  201016490	17 17 20	259 259 - 500	571 (252) (253) 66 66 41,346	-
PEPARTMENT OF LABOR - WIA/WIOA CLUSTER  Pass-Through and Partial Pass-Through  CALIFORNIA EMPLOYMENT DEVELOPMENT DEPARTMENT  CITY OF LOS ANGELES  CITY OF LOS ANGELES  Subtotal Pass-Through and Partial Pass-Through Awards  Total Department of Labor - WIA/WIOA Cluster  PEPARTMENT OF TRANSPORTATION - FEDERAL TRANSIT CLUSTER  Pass-Through and Partial Pass-Through  DAVIS, CITY OF  Total Department of Transportation - Federal Transit Cluster  PEPARTMENT OF TRANSPORTATION - HIGHWAY SAFETY CLUSTER  Pass-Through and Partial Pass-Through  CALIFORNIA OFFICE OF TRAFFIC SAFETY	A-CITYOFLA/DOL C-121135 LOEHER 6/13 LA/USDOL T4976C-119143 LOEHER 06/12  201016490  CALIFORNIA OFFICE OF TRAFFIC SAFETY (18978)	17 17 20	259 259 500	571 (252) (253) 66 66 41,346 41,346	-
PASS-Through and Partial Pass-Through CALIFORNIA EMPLOYMENT DEVELOPMENT DEPARTMENT CITY OF LOS ANGELES CITY OF LOS ANGELES Subtotal Pass-Through and Partial Pass-Through Awards  Total Department of Labor - WIA/WIOA Cluster  PASS-Through and Partial Pass-Through DAVIS, CITY OF  Total Department of Transportation - Federal Transit Cluster  DEPARTMENT OF TRANSPORTATION - Federal Transit Cluster  DEPARTMENT OF TRANSPORTATION - Federal Transit Cluster	A-CITYOFLA/DOL C-121135 LOEHER 6/13 LA/USDOL T4976C-119143 LOEHER 06/12  201016490	17 17 20	259 259 - 500	571 (252) (253) 66 66 41,346	

### Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

				FY 2	
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier		ederal A Number	Total Federal Expenditures	Pass-Through to Subrecipients
	or other identifier	CIT	A Nullibei	Experiultures	Subrecipients
Total Department of Transportation - Highway Safety Cluster				293,813	
EPARTMENT OF EDUCATION - TRIO CLUSTER					
Direct Awards					
DEPARTMENT OF EDUCATION	Various	84	042	1,424,540	
DEPARTMENT OF EDUCATION	Various	84	044	2,941,022	
DEPARTMENT OF EDUCATION	Various	84	047	2,532,033	
DEPARTMENT OF EDUCATION	Various	84	047	419,056	
DEPARTMENT OF EDUCATION	Various	84	217	557,138	
Subtotal Direct Awards				7,873,789	
Pass-Through and Partial Pass-Through					
TEHAMA, COUNTY OF	P044A110708	84	044	199,177	
STATE CENTER COMMUNITY COLLEGE DISTRICT	STATE CENTER COMMUNITY COLLEGE-Y16-	84	047	2,576	
Subtotal Pass-Through and Partial Pass-Through Awards				201,753	
Total Department of Education - TRIO Cluster				8,075,542	
EPARTMENT OF HEALTH AND HUMAN SERVICES - AGING CLUSTER ADMINISTRATION ON AGING					
Pass-Through and Partial Pass-Through COUNTY OF SONOMA	COUNTY OF SONOMA-XX-2013-33			(0.000)	
		93	044	(2,820)	
COUNTY OF SONOMA	XX201433	93	044	(1,473)	
COUNTY OF SONOMA	XX-2015-33	93	044	49,793	
Subtotal Pass-Through and Partial Pass-Through Awards				45,500	
Total Department of Health and Human Services - Aging Cluster				45,500	
DEPARTMENT OF HEALTH AND HUMAN SERVICES - HEALTH CENTER PROGRAM CLUSTER					
HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION					
Direct Awards					
HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	Various	93	224	1,283,248	
Pass-Through and Partial Pass-Through					
ALTAMED HEALTH SERVICES CORPORATION	H80CS00142	93	224	24,618	
NORTHEAST VALLEY HEALTH CORPORATION	20141037	93	224	394,134	
Subtotal Pass-Through and Partial Pass-Through Awards				418,752	
Total Department of Health and Human Services - Health Center Program Cluster				1,702,000	

DEPARTMENT OF HEALTH AND HUMAN SERVICES - TEMPORARY ASSISTANCE FOR NEEDY FAMILIES (TANF) CLUSTER

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY :	
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
ADMINISTRATION FOR CHILDREN AND FAMILIES				
Pass-Through and Partial Pass-Through				
AMADOR, COUNTY OF	EW-2015-02	93 558	11,874	
BUTTE, COUNTY OF	C000113325	93 558	5,530	
BUTTE, COUNTY OF	EW201403	93 558	660	
BUTTE, COUNTY OF	EW-2015-03	93 558	18,960	
COLUSA, COUNTY OF	COLUSA, COUNTY OF-EW-2013-05	93 558	(1,821)	
COLUSA, COUNTY OF	CW-2015-05	93 558	4,200	
COLUSA, COUNTY OF	EW201405	93 558	616	
COLUSA, COUNTY OF	EW-2015-05	93 558	41,746	
CONTRA COSTA COUNTY	196993	93 558	5,204	
CONTRA COSTA COUNTY	19-699-5	93 558	240,275	
CONTRA COSTA COUNTY	CONTRA COSTA COUNTY 19-699-1	93 558	75	
COUNTY OF MARIN	EW201417	93 558	(1,830)	
COUNTY OF MARIN	EW-2015-17	93 558	17,815	
COUNTY OF SAN BERNARDINO	EW-2015-50	93 558	7,110	
COUNTY OF SOLANO	WK201432	93 558	1,449	
COUNTY OF SOLANO	WK-2015-32	93 558	50,955	
COUNTY OF SONOMA	COUNTY OF SONOMA-WK-2013-33	93 558	(945)	
COUNTY OF SONOMA	CW201433	93 558	(2,559)	
COUNTY OF SONOMA	WK201433	93 558	(453)	
COUNTY OF SONOMA	WK-2015-33	93 558	102,158	
DEL NORTE COUNTY	EW-2015-06	93 558	24,885	
EL DORADO, COUNTY OF	EW201407	93 558	(676)	
EL DORADO, COUNTY OF	EW-2015-07	93 558	14,220	
FRESNO COUNTY	EW-2015-08	93 558	178,521	
HUMBOLDT COUNTY	EW-2015-10	93 558	48,890	
IMPERIAL COUNTY	EW201444	93 558	425	
KERN COUNTY	273-2015	93 558	145,365	
KERN COUNTY	4202014	93 558	(48)	
KINGS, COUNTY OF	EW-2015-13	93 558	36,735	
LAKE, COUNTY OF	EW201414	93 558	528	
LAKE, COUNTY OF	EW-2015-14	93 558	96,515	
MADERA, COUNTY OF	CW-2015-16	93 558	12,245	
MADERA, COUNTY OF	EW201416	93 558	1,221	
MARIPOSA, COUNTY OF	EW201418	93 558	476	
MARIPOSA, COUNTY OF	EW-2015-18			
MERCED, COUNTY OF	MERCED, COUNTY OF-UCD13-06864	93 558	25,787	
		93 558	2,288	
MERCED, COUNTY OF	A14517EW201419 EW-2015-19	93 558	(7,554)	
MERCED, COUNTY OF		93 558	114,267	
MODOC, COUNTY OF	EW-2015-20	93 558	20,145	
MONO, COUNTY OF	EW-2015-21	93 558	20,145	
MONTEREY COUNTY	A13362EW201422	93 558	5,019	
MONTEREY COUNTY	EW-2015-22	93 558	98,611	
NAPA, COUNTY OF	NAPA, COUNTY OF-EW-2013-23	93 558	(923)	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

and Direct ( Dans Through and Destiral Dans T'	A / P   1 M		FY 2	
eral Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through
NAPA, COUNTY OF	or Other Identifier EW201423	CFDA Number	Expenditures	Subrecipients
		93 558	176	
NAPA, COUNTY OF	EW-2015-23	93 558	45,124	
NEVADA, COUNTY OF	EW201424	93 558	447	
NEVADA, COUNTY OF	EW-2015-24	93 558	62,250	
OWENS VALLEY CAREER DEVELOPMENT CENTER	OWENS VALLEY CAREER -13-14-127	93 558	(212)	
PLACER, COUNTY OF	EW-2015-25	93 558	26,070	
PLUMAS, COUNTY OF	EW201426	93 558	(896)	
RIVERSIDE COUNTY	WK-2015-48	93 558	4,740	
SACRAMENTO, COUNTY OF	SACRAMENTO, COUNTY O-DHAT0313	93 558	2,076	
SACRAMENTO, COUNTY OF	SACRAMENTO, COUNTY OF-DHA-T-03-14	93 558	2,640	
SACRAMENTO, COUNTY OF	DHAT0315	93 558	3,965	
SAN BENITO, COUNTY OF	EW201427	93 558	(216)	
SAN BENITO, COUNTY OF	EW-2015-27	93 558	18,960	
SAN JOAQUIN COUNTY	SAN JOAQUIN COUNTY-EW-2013-28	93 558	284	
SAN JOAQUIN COUNTY	EW-2015-28	93 558	94,800	
SAN JOAQUIN COUNTY	WK-2015-28	93 558	7,110	
SANTA BARBARA, COUNTY OF	GENT201454	93 558	(45)	
SANTA BARBARA, COUNTY OF	GENT-2015-54	93 558	26,070	
SANTA CRUZ, COUNTY OF	CW-2015-56	93 558	18,762	
SANTA CRUZ, COUNTY OF	EW201456	93 558	4,698	
SANTA CRUZ, COUNTY OF	EW-2015-56	93 558	153,173	
SHASTA, COUNTY OF	SHASTA, COUNTY OF-CW-2013-29	93 558	(604)	
SHASTA, COUNTY OF	SHASTA, COUNTY OF-EW-2013-29	93 558	(1,646)	
SHASTA, COUNTY OF	GENT201429	93 558	1,150	
SHASTA, COUNTY OF	GENT-2015-29	93 558	37,990	
SIERRA, COUNTY OF	EW-2015-30	93 558	11,623	
SISKIYOU, COUNTY OF	EW201431	93 558	(1,386)	
SISKIYOU, COUNTY OF	EW-2015-31	93 558	30,262	
STANISLAUS, COUNTY OF	8909sc	93 558	21,330	
STANISLAUS, COUNTY OF	EW-2015-34	93 558	11,850	
STANISLAUS, COUNTY OF	GENT-2015-34	93 558	21,330	
SUTTER COUNTY	EW-2015-35	93 558	32,838	
TEHAMA, COUNTY OF	EW201436	93 558	284	
TEHAMA, COUNTY OF	EW-2015-36	93 558	15,514	
TRINITY, COUNTY OF	EW201437	93 558	1,923	
TRINITY, COUNTY OF	EW-2015-37	93 558	27,255	
TULARE, COUNTY OF	EW-2015-38	93 558	28,045	
TUOLUMNE, COUNTY OF	EW-2015-39	93 558	11,850	
VENTURA COUNTY	VENTRUA COUNTY PC5320B130217	93 558 93 558	34,725	
YOLO COUNTY	VENTRUA COUNTY PC5320B130217 EW201440			
YOLO COUNTY	EW201440 EW-2015-40	93 558	(2,081)	
		93 558	2,370	
YUBA COUNTY	EW-2015-41	93 558	31,919	
INYO, COUNTY OF (ARRA) Subtotal Pass-Through and Partial Pass-Through Awards	EW-2015-11	93 714	36,735	

# Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY 2	
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	Federal CFDA Number	Total Federal Expenditures	Pass-Through to Subrecipients
Total Department of Health and Human Services - Temporary Assistance for Needy Families (TANF) Cluster			2,161,358	-
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	281,590	
CALIFORNIA DEPARTMENT OF EDUCATION	CAL DE(DHHS)CSPP3528 VOSS 6/14	93 575	(11,222)	
CALIFORNIA DEPARTMENT OF EDUCATION	CAL DE(DHHS)CCTR-3272 VOSS 614	93 575	(18,189)	
CALIFORNIA DEPARTMENT OF EDUCATION	Cal DE (DHHS)CSPP5510 Voss 616	93 575	24,483	
CALIFORNIA DEPARTMENT OF EDUCATION	CCTR-4269	93 575	113	
CALIFORNIA DEPARTMENT OF EDUCATION	CCTR-5162-cyc1	93 575	180,715	
CALIFORNIA DEPARTMENT OF EDUCATION	CCTR-5264	93 575	55,095	
CALIFORNIA DEPARTMENT OF EDUCATION	CAL DE(DHHS)CSPP3528 VOSS 6/14	93 596	(11,170)	
CALIFORNIA DEPARTMENT OF EDUCATION	CAL DE(DHHS)CCTR3272 VOSS 6/14	93 596	(6,385)	
CALIFORNIA DEPARTMENT OF EDUCATION	CAL DE(DHHS)CCTR4269 VOSS 6/15	93 596	118	
CALIFORNIA DEPARTMENT OF EDUCATION	Cal DE (DHHS)CCTR5264 Voss 616	93 596	102,286	
CALIFORNIA DEPARTMENT OF EDUCATION	CSPP-4331-CYC1	93 596	(591)	
CALIFORNIA DEPARTMENT OF EDUCATION	CSPP-5325-cyc1	93 596	94,540	
CALIFORNIA DEPARTMENT OF EDUCATION	CSPP-5510	93 596	48,703	
CALIFORNIA DEPARTMENT OF EDUCATION	A14-0002-001	93 596	702	
Subtotal Pass-Through and Partial Pass-Through Awards			740,788	
Total Department of Health and Human Services - Child Care and Development Fund (CCDF) Cluster			740,788	
Total Department of Teath and Turnian Contract China Care and Development and (COD) / Creater			740,700	
PEPARTMENT OF HEALTH AND HUMAN SERVICES - TITLE IV-E FOSTR CARE PROGRAM CLUSTER				
ADMINISTRATION FOR CHILDREN AND FAMILIES				
Pass-Through and Partial Pass-Through				
Pass-Through and Partial Pass-Through CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	14-2025	93 658	7,555,105	
Pass-Through and Partial Pass-Through CALIFORNIA DEPARTMENT OF SOCIAL SERVICES CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	15-IA-00850	93 658	18,203,429	7,508 15,625.
Pass-Through and Partial Pass-Through CALIFORNIA DEPARTMENT OF SOCIAL SERVICES CALIFORNIA DEPARTMENT OF SOCIAL SERVICES CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	15-IA-00850 13-2011	93 658 93 658	18,203,429 33,188	
Pass-Through and Partial Pass-Through CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	15-IA-00850 13-2011 142009	93 658 93 658 93 658	18,203,429 33,188 1,850,791	
Pass-Through and Partial Pass-Through CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	15-IA-00850 13-2011 142009 142021	93 658 93 658 93 658 93 658	18,203,429 33,188 1,850,791 153,944	15,625
Pass-Through and Partial Pass-Through CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	15-IA-00850 13-2011 142009 142021 15-IA-01124	93 658 93 658 93 658 93 658 93 658	18,203,429 33,188 1,850,791 153,944 1,740,997	15,625
Pass-Through and Partial Pass-Through CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	15-IA-00850 13-2011 142009 142021 15-IA-01124 CALIFORNIA DEPARTMEN-132007	93 658 93 658 93 658 93 658 93 658 93 658	18,203,429 33,188 1,850,791 153,944 1,740,997 38,843	15,625
Pass-Through and Partial Pass-Through CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	15-IA-00850 13-2011 142009 142021 15-IA-01124 CALIFORNIA DEPARTMEN-132007 CALIF DEPT SOCIAL SERVICES; 12-2006	93 658 93 658 93 658 93 658 93 658 93 658 93 658	18,203,429 33,188 1,850,791 153,944 1,740,997 38,843	15,625
Pass-Through and Partial Pass-Through CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	15-IA-00850 13-2011 142009 142021 15-IA-01124 CALIFORNIA DEPARTMEN-132007 CALIF DEPT SOCIAL SERVICES; 12-2006 CALIFORNIA DEPARTMENT OF SOC-15-IA-	93 658 93 658 93 658 93 658 93 658 93 658 93 658 93 658	18,203,429 33,188 1,850,791 153,944 1,740,997 38,843 869 1,786,403	15,625
Pass-Through and Partial Pass-Through CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	15-IA-00850 13-2011 142009 142021 15-IA-01124 CALIFORNIA DEPARTMEN-132007 CALIF DEPT SOCIAL SERVICES; 12-2006 CALIFORNIA DEPARTMENT OF SOC-15-IA-00008508	93 658 93 658 93 658 93 658 93 658 93 658 93 658 93 658	18,203,429 33,188 1,850,791 153,944 1,740,997 38,843 869 1,786,403	15,625
Pass-Through and Partial Pass-Through CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	15-IA-00850 13-2011 142009 142021 15-IA-01124 CALIFORNIA DEPARTMEN-132007 CALIF DEPT SOCIAL SERVICES; 12-2006 CALIFORNIA DEPARTMENT OF SOC-15-IA-00008508 00008907:01	93 658 93 658 93 658 93 658 93 658 93 658 93 658 93 658 93 658	18,203,429 33,188 1,850,791 153,944 1,740,997 38,843 869 1,786,403 893 1,119,299	15,625
Pass-Through and Partial Pass-Through CALIFORNIA DEPARTMENT OF SOCIAL SERVICES COUNTY OF SONOMA	15-IA-00850 13-2011 142009 142021 15-IA-01124 CALIFORNIA DEPARTMEN-132007 CALIF DEPT SOCIAL SERVICES; 12-2006 CALIFORNIA DEPARTMENT OF SOC-15-IA-00008508 00008907:01 CW-2015-33	93 658 93 658 93 658 93 658 93 658 93 658 93 658 93 658 93 658 93 658	18,203,429 33,188 1,850,791 153,944 1,740,997 38,843 869 1,786,403 893 1,119,299 31,497	15,625
Pass-Through and Partial Pass-Through CALIFORNIA DEPARTMENT OF SOCIAL SERVICES COUNTY OF SONOMA FRESNO COUNTY	15-IA-00850 13-2011 142009 142021 15-IA-01124 CALIFORNIA DEPARTMEN-132007 CALIF DEPT SOCIAL SERVICES; 12-2006 CALIFORNIA DEPARTMENT OF SOC-15-IA-00008508 00008907:01 CW-2015-33 EW201408	93 658 93 658 93 658 93 658 93 658 93 658 93 658 93 658 93 658 93 658 93 658 93 658	18,203,429 33,188 1,850,791 153,944 1,740,997 38,843 869 1,786,403 893 1,119,299 31,497	15,625
Pass-Through and Partial Pass-Through CALIFORNIA DEPARTMENT OF SOCIAL SERVICES COUNTY OF SONOMA FRESNO COUNTY GLENN, COUNTY OF	15-IA-00850 13-2011 142009 142021 15-IA-01124 CALIFORNIA DEPARTMEN-132007 CALIF DEPT SOCIAL SERVICES; 12-2006 CALIFORNIA DEPARTMENT OF SOC-15-IA-00008508 00008907:01 CW-2015-33 EW201408 C000107165	93 658 93 658 93 658 93 658 93 658 93 658 93 658 93 658 93 658 93 658 93 658 93 658 93 658	18,203,429 33,188 1,850,791 153,944 1,740,997 38,843 869 1,786,403 893 1,119,299 31,497 907	15,625
Pass-Through and Partial Pass-Through CALIFORNIA DEPARTMENT OF SOCIAL SERVICES COUNTY OF SONOMA FRESNO COUNTY GLENN, COUNTY OF	15-IA-00850 13-2011 142009 142021 15-IA-01124 CALIFORNIA DEPARTMEN-132007 CALIF DEPT SOCIAL SERVICES; 12-2006 CALIFORNIA DEPARTMENT OF SOC-15-IA-00008508 00008907:01 CW-2015-33 EW201408 C000107165 C000113218	93 658 93 658 93 658 93 658 93 658 93 658 93 658 93 658 93 658 93 658 93 658 93 658	18,203,429 33,188 1,850,791 153,944 1,740,997 38,843 869 1,786,403 893 1,119,299 31,497	15,625
Pass-Through and Partial Pass-Through CALIFORNIA DEPARTMENT OF SOCIAL SERVICES COUNTY OF SONOMA FRESNO COUNTY GLENN, COUNTY OF	15-IA-00850 13-2011 142009 142021 15-IA-01124 CALIFORNIA DEPARTMEN-132007 CALIF DEPT SOCIAL SERVICES; 12-2006 CALIFORNIA DEPARTMENT OF SOC-15-IA-00008508 00008907:01 CW-2015-33 EW201408 C000107165	93 658 93 658 93 658 93 658 93 658 93 658 93 658 93 658 93 658 93 658 93 658 93 658 93 658	18,203,429 33,188 1,850,791 153,944 1,740,997 38,843 869 1,786,403 893 1,119,299 31,497 907	

# Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY 2	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
MADERA, COUNTY OF	CW201416	93 658	1,665	
MADERA, COUNTY OF	EW-2015-16	93 658	38,492	
MENDOCINO, COUNTY OF	MENDOCINO, COUNTY OF-C000112646	93 658	18,047	
MENDOCINO, COUNTY OF	C000113345	93 658	12,314	
MERCED, COUNTY OF	A14516CW201419	93 658	4,979	
MERCED, COUNTY OF	CW-2015-19	93 658	26,347	
NAPA, COUNTY OF	CW201423	93 658	438	
NEVADA, COUNTY OF	NEVADA, COUNTY OF-C000106112	93 658	(11)	
NEVADA, COUNTY OF	NEVADA, COUNTY OF-C000113176	93 658	17,666	
PLACER, COUNTY OF	CW-2015-25	93 658	5,925	
PLUMAS, COUNTY OF	CW-2015-26	93 658	1,975	
SACRAMENTO, COUNTY OF	SACRAMENTO, COUNTY OF-720500014314	93 658	(613)	
SACRAMENTO, COUNTY OF	7205000-15-314	93 658	(6,032)	
SACRAMENTO, COUNTY OF	7205000-16-314	93 658	78,363	
SACRAMENTO, COUNTY OF	7205000-16-585	93 658	59,360	
SACRAMENTO, COUNTY OF	7205000-16-589	93 658	34,272	
SAN BENITO, COUNTY OF	CW-2015-27	93 658	7,900	
SAN JOAQUIN COUNTY	SAN JOAQUIN COUNTY-CW-2013-28	93 658	(1,670)	
SAN JOAQUIN COUNTY	CW-2015-28	93 658	11,850	
SAN LUIS OBISPO, COUNTY OF	SAN LUIS OBISPO, COU-25007671	93 658	115	
SAN LUIS OBISPO, COUNTY OF	PO25009029	93 658	27,272	
SUTTER COUNTY	C000112496	93 658	2,873	
YOLO COUNTY	YOLO COUNTY-PQCR-2014-05	93 658	(653)	
YUBA COUNTY	CW-2015-41	93 658	5,925	
Subtotal Pass-Through and Partial Pass-Through Awards			33,013,935	23,153,078
Total Department of Health and Human Services - Title IV Foster Care Program Cluster			33,013,935	23,153,078
DEPARTMENT OF HEALTH AND HUMAN SERVICES - MEDICAID CLUSTER				
HCFA CENTERS FOR MEDICARE AND MEDICAID SERVICES				
ALPINE, COUNTY OF	GENT-2015-01	93 778	1,845	
CALIFORNIA DEPARTMENT OF AGING	CA DEPT AGING, #MS-1112-12	93 778	16,021	
CALIFORNIA DEL AITMENT OF AGING	CDHW; MS-1011-12	93 778	12,405	
CALIFORNIA DEL AITMENT OF AUTHOR	14-10012	93 778	228,980	
TEHAMA, COUNTY OF	XX-2015-36	93 778	2,370	
YUBA COUNTY	XX-2015-30 XX-2015-41	93 778	2,370	
Subtotal Pass-Through and Partial Pass-Through Awards	7/-2010 <del>-4</del> 1	93 116	2,370	
Subitian ass-mitough and rattain ass-mitough Awards			203,991	-
Total Department of Health and Human Services - Medicaid Cluster			263,991	-

#### OTHER PROGRAMS

DEPARTMENT OF AGRICULTURE

# Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

				FY 2	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	F	ederal	Total Federal	Pass-Through to
	or Other Identifier	CFD	A Number	Expenditures	Subrecipients
Direct Awards					
DEPARTMENT OF AGRICULTURE	Various	10	001	56,013	
DEPARTMENT OF AGRICULTURE	Various	10	025	18,783	
DEPARTMENT OF AGRICULTURE	Various	10	025	1,092,130	
Subtotal Program - Direct Awards				1,110,913	-
DEPARTMENT OF AGRICULTURE	Various	10	170	34,650	
DEPARTMENT OF AGRICULTURE	Various	10	173	17,424	
DEPARTMENT OF AGRICULTURE	Various	10	200	18,218	
DEPARTMENT OF AGRICULTURE	Various	10	202	12,375	
DEPARTMENT OF AGRICULTURE	Various	10	206	71,032	
DEPARTMENT OF AGRICULTURE	Various	10	210	560	
DEPARTMENT OF AGRICULTURE	Various	10	303	119,610	23,11
DEPARTMENT OF AGRICULTURE	Various	10	304	211,477	
DEPARTMENT OF AGRICULTURE	Various	10	307	87,541	13,53
DEPARTMENT OF AGRICULTURE	Various	10	309	136,181	
DEPARTMENT OF AGRICULTURE	Various	10	310	20,202	
DEPARTMENT OF AGRICULTURE	Various	10	311	(917)	
DEPARTMENT OF AGRICULTURE	Various	10	329	254,325	
DEPARTMENT OF AGRICULTURE	Various	10	460	26,085	
DEPARTMENT OF AGRICULTURE	Various	10	612	79,813	
DEPARTMENT OF AGRICULTURE	Various	10	652	323	
DEPARTMENT OF AGRICULTURE	Various	10	680	409,487	
DEPARTMENT OF AGRICULTURE	Various	10	688	21,468	
DEPARTMENT OF AGRICULTURE	Various	10	777	53,400	
DEPARTMENT OF AGRICULTURE	Various	10	868	17,380	
DEPARTMENT OF AGRICULTURE	Various	10	962	203,950	
DEPARTMENT OF AGRICULTURE	Various	10	UNKNOWN	687,306	12,89
Subtotal Direct Awards				3,648,816	49,54
Pass-Through and Partial Pass-Through					
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	140592SF	10	025	9,362	
RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	RUTGERS; 5126-AYR2	10	025	9,898	
Subtotal Program - Pass-Through and Partial Pass-Through				19,260	-
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	201402716-01	10	170	364	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	CDFA SCB12040	10	170	861	5,15
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	CALIFORNIA DEPARTMEN-SCB13043	10	170	146,717	55,62
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	CALIFORNIA DEPARTMEN-SCB13046	10	170	123,525	8,54
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	CA DEPT FOOD AND AG; SCB12005	10	170	983	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB13009	10	170	12,881	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB13022	10	170	80,998	
CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE	SCB15029	10	170	89,498	
RANCHO CALIFORNIA WATER DISTRICT	RANCHO CALIFORNIA WATER DISTRI-Y13-	10	170	13,672	
Subtotal Program - Pass-Through and Partial Pass-Through		10		469,499	69,32
AMERICAN SHEEP AND GOAT CENTER	See Replacement Fund 28A95	10	173	(17,424)	00,02
CALIFORNIA STATE UNIVERSITY FULLERTON/CSU FULLERTON AUXILIARY SERVICES	20113841130536	10	217	(459)	
	2000	10	411	(439)	

# Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

				FY 2	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	F	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFD	A Number	Expenditures	Subrecipients
UNIVERSITY OF MARYLAND	UNIV OF MARYLAND; Z552804	10	310	209,405	
UNIVERSITY OF MISSOURI	C000501441 Amd 02	10	310	76,732	30,554
Subtotal Program - Pass-Through and Partial Pass-Through				286,137	30,554
OREGON STATE UNIVERSITY	C0494AB	10	328	8,045	
KASHIA BAND OF THE POMO INDIANS OF THE STEWARTS POINT RANCHERIA	KASHIA BAND OF THE POMO INDIAN-Y15-	10	329	3,646	
FRESNO AREA WORKFORCE INVESTMENT CORPORATION	FRESNO AREA WORKFORCE INVESTME-936	10	443	8,129	
FRESNO COUNTY ECONOMIC OPPORTUNITIES COMMISSION	Fresno County EOC - Award #Y14-2507	10	443	4,379	
Subtotal Program - Pass-Through and Partial Pass-Through				12,508	-
CALIFORNIA DEPARTMENT OF EDUCATION	003376	10	558	80,000	
CALIFORNIA DEPARTMENT OF EDUCATION	301466-1A-CYC33	10	558	13,935	
CALIFORNIA DEPARTMENT OF EDUCATION	301466-1A-cyc34	10	558	39,970	
Subtotal Program - Pass-Through and Partial Pass-Through				133,905	-
CITY AND COUNTY OF SAN FRANCISCO	201503850	10	568	21,330	
YOLO COUNTY	201602102	10	575	3,329	
WATERSHED RESEARCH AND TRAINING CENTER	WATERSHED RESEARCH AND TRAI-194_201	10	664	27,376	
CALIFORNIA DEPARTMENT OF FORESTRY AND FIRE PROTECTION	CALIFORNIA DEPARTMENT OF FORES-8GA1	10	675	214,957	
NATIONAL FOREST FOUNDATION	ZH-501	10	682	181,729	
CALIFORNIA DEPARTMENT OF FORESTRY AND FIRE PROTECTION	CALIFORNIA DEPARTMENT OF FORES-S-00	10	UNKNOWN	25,584	
COUNTERPART INTERNATIONAL, INC	1028A4	10	UNKNOWN	99,306	
CSU SAN BERNARDINO/UNIVERSITY ENTERPRISES CORPORATION	UCD2014G55	10	UNKNOWN	22,913	
FOOD BANK COALITION OF SAN LUIS OBISPO COUNTY	FOOD BANK COALITION -ADVANCE	10	UNKNOWN	11,433	
STANISLAUS, COUNTY OF	STANISLAUS, COUNTY OF-Y14-2149	10	UNKNOWN	99,577	
CALIFORNIA EMERGENCY MANAGEMENT AGENCY	AT15011141	10	UNKNOWN	225,000	
Subtotal Pass-Through and Partial Pass-Through Awards				1,850,577	99,882
Total Department of Agriculture				5,499,393	149,425
DEPARTMENT OF COMMERCE					
Direct Awards					
DEPARTMENT OF COMMERCE	Various	11	008	145,657	
DEPARTMENT OF COMMERCE	Various	11	417	90,366	
DEPARTMENT OF COMMERCE	Various	11	429	2,439	
DEPARTMENT OF COMMERCE	Various	11	463	84,468	20,200
DEPARTMENT OF COMMERCE	Various	11	UNKNOWN	154,629	99,525
Subtotal Direct Awards				477,559	119,725
Pass-Through and Partial Pass-Through					
NATIONAL MARINE SANCTUARY FOUNDATION	15-11-B-00042	11	011	5,330	
Subtotal Pass-Through and Partial Pass-Through Awards				5,330	_
Total Department of Commerce				482,889	119,725
DEPARTMENT OF DEFENSE					
Direct Awards					
DEPARTMENT OF NAVY	Various	12	300	38	
DEPARTMENT OF ARMY	Various	12	400	37,437	
DEPARTMENT OF ARMY	Various	12	420	646,807	
DEPARTMENT OF ARMY	Various	12	431	6,155	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

		_		FY 2	
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier		ederal A Number	Total Federal Expenditures	Pass-Through to Subrecipients
SEPARATE AGENCIES	Various	12	431	(1,795)	Subrecipients
Subtotal Program - Direct Awards		12	401	4,360	_
SEPARATE AGENCIES	Various	12	900	358,169	
DEPARTMENT OF ARMY	Various	12	UNKNOWN	19,132	
DEPARTMENT OF NAVY	Various	12	UNKNOWN	7,398,461	138,7
SEPARATE AGENCIES	Various	12	UNKNOWN	55	100,1
Subtotal Direct Awards		· <del>-</del>		8,464,459	138,7
Pass-Through and Partial Pass-Through				2,121,122	
THE NATIONAL MARINE MAMMAL FOUNDATION	UCD-0580	12	300	184,023	
AMERICAN BURN ASSOCIATION	UCSF#A119525	12	420	3,913	
THE UNIVERSITY OF ALABAMA AT BIRMINGHAM	000507860-014	12	420	29,930	
Subtotal Program - Pass-Through and Partial Pass-Through				33,843	_
INSTITUTE OF INTERNATIONAL EDUCATION	NSEP-U631073-UCLA-RUS:3	12	550	311,983	
INSTITUTE OF INTERNATIONAL EDUCATION	PO# 0054-UCLA-10-SSR-280-PO2	12	550	15,000	
Subtotal Program - Pass-Through and Partial Pass-Through				326,983	_
UNIVERSITY OF MINNESOTA	UMINN-A002292501-PACKARD-8/14	12	800	114	
AMERICAN BURN ASSOCIATION	201015946	12	UNKNOWN	45,917	
AMERICAN BURN ASSOCIATION	201121873	12	UNKNOWN	(3,141)	
AMERICAN BURN ASSOCIATION	201121883	12	UNKNOWN	(2,586)	
AMERICAN BURN ASSOCIATION	ABA #W81XWH-08-1-0683	12	UNKNOWN	1,142	
AMERICAN BURN ASSOCIATION	ABA W81XWH-10-1-0527	12	UNKNOWN	808,466	
AVITA MEDICAL AMERICAS LLC	201119925	12	UNKNOWN	262	
POWER ANALYTICS CORPORATION	13-C-0064-05(W912HQ-13-C-0064)	12	UNKNOWN	7,192	
Subtotal Pass-Through and Partial Pass-Through Awards			01111101111	1,402,215	
Total Department of Defense				9,866,674	138,7
HOUSING & URBAN DEVELOPMENT					
Pass-Through and Partial Pass-Through					
CITY AND COUNTY OF SAN FRANCISCO	UCSF#A124764	14	267	137,208	
METROPOLITAN TRANSPORTATION COMMISSION	METROPOLITAN TRANSPORTATION CO-2015	14	UNKNOWN	(425)	
Subtotal Pass-Through and Partial Pass-Through Awards				136,783	-
Total Housing & Urban Development				136,783	-
DEPARTMENT OF INTERIOR					
Direct Awards					
DEPARTMENT OF INTERIOR	Various	15	512	38,571	
DEPARTMENT OF INTERIOR	Various	15	631	910	
DEPARTMENT OF INTERIOR	Various	15	656	16,000	
DEPARTMENT OF INTERIOR	Various	15	808	17,039	
DEPARTMENT OF INTERIOR	Various	15	922	6,309	4,7
DEPARTMENT OF INTERIOR	Various	15	933	185,322	
DEPARTMENT OF INTERIOR	Various	15	945	70,955	
DEPARTMENT OF INTERIOR	Various	15	UNKNOWN	1,868,532	
Subtotal Direct Awards				2,203,638	4,7
Pass-Through and Partial Pass-Through					

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

Federal Direct / Pass-Through and Partial Pass-Through				FY 2	
	Agency / Pass-Through Number or Other Identifier		ederal A Number	Total Federal Expenditures	Pass-Through to Subrecipients
CHUCK & JUDY WHEATLEY	CHUCK & JUDY WHEATLE-Y13-1811	15	631	2,242	Subrecipients
NATIONAL WILDLIFE REFUGE ASSOCIATION	NATIONAL WILDLIFE REFUGE AS-C000111	15	632	2,242	
NATIONAL FISH AND WILDLIFE FOUNDATION	NFWF 010410036436 PALKVCS 4/15	15	663	3,750	
Subtotal Pass-Through and Partial Pass-Through Awards	141 WI 010410030430 I ALIXVOS 4/13	15	003	6,085	_
Total Department of Interior				2,209,723	4,77
DEPARTMENT OF JUSTICE					
Direct Awards					
DEPARTMENT OF JUSTICE	Various	16	525	102,519	
DEPARTMENT OF JUSTICE	Various	16	526	85,551	
DEPARTMENT OF JUSTICE	Various	16	562	11,068	
DEPARTMENT OF JUSTICE	Various	16	UNKNOWN	318,081	35,10
Subtotal Direct Awards				517,219	35,1
Pass-Through and Partial Pass-Through					
NATIONAL COUNCIL OF JUVENILE AND FAMILY COURT JUDGES	32514-SR-1	16	585	4,281	
NATIONAL COUNCIL OF JUVENILE AND FAMILY COURT JUDGES	32615-SR-4	16	585	52,921	
NATIONAL COUNCIL OF JUVENILE AND FAMILY COURT JUDGES	37015-SR-1	16	585	46,767	
Subtotal Program - Pass-Through and Partial Pass-Through				103,969	_
NATIONAL 4-H COUNCIL	National 4-H Council - Y14-2350	16	726	50,511	19.8
Subtotal Pass-Through and Partial Pass-Through Awards				154.480	19,8
Total Department of Justice				671,699	54,98
DEPARTMENT OF LABOR					
Direct Awards					
DEPARTMENT OF LABOR (ARRA)	Various	17	275	(128,558)	
DEPARTMENT OF LABOR	Various	17	502	223,614	28,5
DEPARTMENT OF LABOR	Various	17	UNKNOWN	16,154	
Subtotal Direct Awards				111,210	28,5
Pass-Through and Partial Pass-Through					
CITY OF LOS ANGELES	CITYLA/USDOL C115878 LOEHER 6/10 5%	17	267	(35)	
CITY OF LOS ANGELES	T5793	17	502	1,643,588	
Subtotal Pass-Through and Partial Pass-Through Awards				1,643,553	-
Total Department of Labor				1,754,763	28,58
DEPARTMENT OF STATE					
Direct Awards					
DEPARTMENT OF STATE	Various	19	001	1,360,451	13,1
DEPARTMENT OF STATE	Various	19	424	10,263	
DEPARTMENT OF STATE	Various	19	UNKNOWN	9,158,598	5,729,4
Subtotal Direct Awards				10,529,312	5,742,5
Pass-Through and Partial Pass-Through					
INTERNATIONAL RESEARCH AND EXCHANGES BOARD, INC.	FY16YALIENUCD01	19	009	38,265	
INTERNATIONAL RESEARCH AND EXCHANGES BOARD, INC.	S-ECAGD-15-CA-1125	19	009	96,046	
Subtotal Program - Pass-Through and Partial Pass-Through				134,311	-
INSTITUTE OF INTERNATIONAL EDUCATION	201403851	19	010	(2,200)	

## Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

				FY 2	
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier		ederal A Number	Total Federal Expenditures	Pass-Through to Subrecipients
INSTITUTE OF INTERNATIONAL EDUCATION	3067UCDAVIS	19	010	239,922	Oubrecipients
INSTITUTE OF INTERNATIONAL EDUCATION	INSTITUTE OF INTERNATIONAL EDU-2015	19	010	238,137	
INSTITUTE OF INTERNATIONAL EDUCATION	INSTITUTE OF INTERNATIONAL EDU-Adva	19	010	42,132	
Subtotal Program - Pass-Through and Partial Pass-Through	morrore of international esociation	10	010	517,991	
UNITED STATES-INDIA EDUCATIONAL FOUNDATION	USIEF/OSI/2014/03	19	014	50,056	30,980
INTERNATIONAL RESEARCH AND EXCHANGES BOARD, INC.	FY15-YALI-UCB-02	19	021	44,117	00,000
INSTITUTE OF INTERNATIONAL EDUCATION	20160641:1	19	401	47,957	
GLOBAL TIES U.S.	20153845	19	402	21,604	
GLOBAL TIES U.S.	20161491	19	402	11,114	
GLOBAL TIES U.S.	GLOBAL TIES US 20161491 ERICK 09/16	19	402	1,647	
Subtotal Program - Pass-Through and Partial Pass-Through		.0	102	34,365	_
SAINT PETERSBURG NATIONAL RESEARCH UNIVERSITY OF INFORMATION TECHNOLOG (ARRA)	20152071	19	700	28,515	
Subtotal Pass-Through and Partial Pass-Through Awards		10	700	857,312	30.980
Total Department of State				11,386,624	5,773,565
DEPARTMENT OF TRANSPORTATION					
Direct Awards					
DEPARTMENT OF TRANSPORTATION	Various	20	215	20,967	
DEPARTMENT OF TRANSPORTATION (ARRA)	Various	20	701	256,228	
DEPARTMENT OF TRANSPORTATION	Various	20	UNKNOWN	15,000	
Subtotal Direct Awards				292,195	-
Pass-Through and Partial Pass-Through					
CALIFORNIA OFFICE OF TRAFFIC SAFETY	CALIFORNIA OFFICE OF TRAFFIC (18205)	20	608	(468)	
APPLIED PAVEMENT TECHNOLOGY, INC.	2010026RR01SUB021	20	UNKNOWN	88,508	
APPLIED PAVEMENT TECHNOLOGY, INC.	TOPR710026RR07UCD1	20	UNKNOWN	14,120	
APPLIED PAVEMENT TECHNOLOGY, INC.	TOPR810026RR08UCD1	20	UNKNOWN	12,066	
DAVIS, CITY OF	201121523	20	UNKNOWN	27,131	
DAVIS, CITY OF	201401317	20	UNKNOWN	335,031	
DAVIS, CITY OF	201502866	20	UNKNOWN	31,242	
Subtotal Pass-Through and Partial Pass-Through Awards				507,630	-
Total Department of Transportation				799,825	-
LIBRARY OF CONGRESS					
Direct Awards	Various	42	UNKNOWN	246,828	
Total Library of Congress				246,828	
NATIONAL AERONAUTICS & SPACE ADMINISTRATION					
Direct Awards					
NATIONAL AERONAUTICS & SPACE ADMINISTRATION	Various	43	001	543,606	
NATIONAL AERONAUTICS & SPACE ADMINISTRATION	Various	43	002	46,000	
NATIONAL AERONAUTICS & SPACE ADMINISTRATION	Various	43	800	27,707	
NATIONAL AERONAUTICS & SPACE ADMINISTRATION	Various	43	009	17,801	
NATIONAL AERONAUTICS & SPACE ADMINISTRATION	Various	43	UNKNOWN	71,148	
Subtotal Direct Awards				706,262	-
Pass-Through and Partial Pass-Through					

# Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

				FY 2	016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	F	ederal	Total Federal	Pass-Through to
	or Other Identifier	CFD	A Number	Expenditures	Subrecipients
BAY AREA ENVIRONMENTAL RESEARCH INSTITUTE	201602561	43	001	4,140	
NATIONAL SPACE BIOMEDICAL RESEARCH INSTITUTE	PF03001	43	001	(3,478)	
Subtotal Program - Pass-Through and Partial Pass-Through				662	-
SCIENCE MUSEUM OF MINNESOTA	SCIENCE-040642-PORCELLO-07/16	43	002	7,806	
JET PROPULSION LABORATORY	1473024	43	UNKNOWN	616	
JET PROPULSION LABORATORY	1516993	43	UNKNOWN	160	
JET PROPULSION LABORATORY	JPL JET-1510728-TOSHI K-09/14	43	UNKNOWN	(2,004)	(1,760
Subtotal Pass-Through and Partial Pass-Through Awards				7,240	(1,760
Total National Aeronautics & Space Administration				713,502	(1,760
NATIONAL FOUNDATION ARTS & HUMANITIES					
Direct Awards					
NATIONAL FOUNDATION ARTS & HUMANITIES	Various	45	024	203,812	
NATIONAL FOUNDATION ARTS & HUMANITIES	Various	45	130	220,744	
NATIONAL FOUNDATION ARTS & HUMANITIES	Various	45	149	300,000	
NATIONAL FOUNDATION ARTS & HUMANITIES	Various	45	149	214,113	
Subtotal Program - Direct Awards				514,113	-
NATIONAL FOUNDATION ARTS & HUMANITIES	Various	45	160	8,689	
NATIONAL FOUNDATION ARTS & HUMANITIES	Various	45	161	229,375	
NATIONAL FOUNDATION ARTS & HUMANITIES	Various	45	163	363,643	
NATIONAL FOUNDATION ARTS & HUMANITIES	Various	45	164	31,927	
NATIONAL FOUNDATION ARTS & HUMANITIES	Various	45	169	88,306	
NATIONAL FOUNDATION ARTS & HUMANITIES	Various	45	301	359,025	68,669
NATIONAL FOUNDATION ARTS & HUMANITIES	Various	45	309	289,636	
NATIONAL FOUNDATION ARTS & HUMANITIES	Various	45	312	90,014	3,297
NATIONAL FOUNDATION ARTS & HUMANITIES	Various	45	313	235,048	122,377
NATIONAL FOUNDATION ARTS & HUMANITIES	Various	45	853	1,122	
Subtotal Direct Awards				2,635,454	194,343
Pass-Through and Partial Pass-Through					
ARHOOLIE FOUNDATION, THE	20122751:1	45	149	17,225	
AMERICAN LIBRARY ASSOCIATION	007530	45	164	7,140	
UNIVERSITY OF MASSACHUSETTS AMHERST	15-008716 A 00	45	169	30,308	
Subtotal Pass-Through and Partial Pass-Through Awards				54,673	_
Total National Foundation Arts & Humanities				2,690,127	194,343
SMALL BUSINESS ADMINISTRATION (SBA)					
Direct Awards					
SMALL BUSINESS ADMINISTRATION (SBA)	Various	59	007	1,767,366	1,218,303
SMALL BUSINESS ADMINISTRATION (SBA)	Various	59	058	35,926	12,828
Total Small Business Administration				1,803,292	1,231,131
DEPARTMENT OF VETERANS AFFAIRS					
Direct Awards	Various	64	UNKNOWN	2,271,005	
Total Department of Veterans Affairs				2,271,005	-

# Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

				FY 2	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier		ederal A Number	Total Federal Expenditures	Pass-Through to Subrecipients
ENVIRONMENTAL PROTECTION AGENCY				•	·
Direct Awards					
ENVIRONMENTAL PROTECTION AGENCY	Various	66	514	14,852	
ENVIRONMENTAL PROTECTION AGENCY	Various	66	716	230,999	74,427
ENVIRONMENTAL PROTECTION AGENCY	Various	66	UNKNOWN	964,875	185,778
Subtotal Direct Awards				1,210,726	260,205
Pass-Through and Partial Pass-Through					
CALIFORNIA DEPARTMENT OF PESTICIDE REGULATION	15-C0052	66	306	89,134	
THE NATIONAL ASSOCIATION OF STATE DEPARTMENT OF AGRICULTURE RESEARCH	THE NATIONAL ASSOCIA-2013CAPSEP\$10K	66	716	3,900	
Subtotal Pass-Through and Partial Pass-Through Awards				93,034	-
Total Environmental Protection Agency				1,303,760	260,205
NUCLEAR REGULATORY COMMISSION					
Direct Awards	Various	77	008	52,564	
Total Nuclear Regulatory Commission				52,564	-
DEPARTMENT OF ENERGY					
Direct Awards					
DEPARTMENT OF ENERGY	Various	81	049	1,041,845	
DEPARTMENT OF ENERGY	Various	81	121	463,538	
DEPARTMENT OF ENERGY	Various	81	124	312,896	
DEPARTMENT OF ENERGY	Various	81	136	136,822	
DEPARTMENT OF ENERGY	Various	81	UNKNOWN	2,322,541	
DEPARTMENT OF ENERGY (ARRA)	Various	81	UNKNOWN	(61)	
Subtotal Direct Awards				4,277,581	-
Pass-Through and Partial Pass-Through					
ARGONNE NATIONAL LABORATORY	ARGONNE NATIONAL LABORATORY-3681712	81	UNKNOWN	15,000	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B599115	81	UNKNOWN	29,743	
LAWRENCE LIVERMORE NATIONAL SECURITY, LLC	B611823	81	UNKNOWN	60,473	
LOS ALAMOS NATIONAL SECURITY, LLC	325537	81	UNKNOWN	17,389	
LOS ALAMOS NATIONAL SECURITY, LLC	LOS ALA-301588-ANTON T-09/14	81	UNKNOWN	25,883	
SANDIA NATIONAL LABORATORIES	1384040	81	UNKNOWN	40,000	
SANDIA NATIONAL LABORATORIES	1486765	81	UNKNOWN	35,000	
Subtotal Pass-Through and Partial Pass-Through Awards				223,488	-
Total Department of Energy				4,501,069	-
DEPARTMENT OF EDUCATION					
Direct Awards					
DEPARTMENT OF EDUCATION	Various	84	015	2,765,962	55,171
DEPARTMENT OF EDUCATION	Various	84	021	94,965	46,485
DEPARTMENT OF EDUCATION	Various	84	022	753,052	
DEPARTMENT OF EDUCATION	Various	84	031	1,497,924	
DEPARTMENT OF EDUCATION	Various	84	170	(10,978)	
DEPARTMENT OF EDUCATION	Various	84	200	36,749	
DEPARTMENT OF EDUCATION	Various	84	200	2,333,254	

# Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

				FY 2	
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal		Total Federal	Pass-Through to
O IV LID BY LAND	or Other Identifier	CFD	A Number	Expenditures	Subrecipients
Subtotal Program - Direct Awards				2,370,003	-
DEPARTMENT OF EDUCATION	Various	84	220	(1,455)	
DEPARTMENT OF EDUCATION	Various	84	229	133,300	
DEPARTMENT OF EDUCATION	Various	84	305	402,934	
DEPARTMENT OF EDUCATION	Various	84	324	91,724	
DEPARTMENT OF EDUCATION	Various	84	326	67,000	
DEPARTMENT OF EDUCATION	Various	84	334	3,289,990	
DEPARTMENT OF EDUCATION	Various	84	334	5,518,197	345,82
Subtotal Program - Direct Awards				8,808,187	345,82
DEPARTMENT OF EDUCATION	Various	84	335	739,227	
DEPARTMENT OF EDUCATION	Various	84	336	1,881,253	258,96
DEPARTMENT OF EDUCATION	Various	84	365	125,419	
DEPARTMENT OF EDUCATION	Various	84	367	39,256	
DEPARTMENT OF EDUCATION	Various	84	407	143,130	29,81
DEPARTMENT OF EDUCATION	Various	84	411	688,356	311,86
DEPARTMENT OF EDUCATION	Various	84	UNKNOWN	615,468	
Subtotal Direct Awards				21,204,727	1,048,11
Pass-Through and Partial Pass-Through					
UNIVERSITY OF SOUTHERN CALIFORNIA	55655151	84	015	183,372	
UNIVERSITY OF SOUTHERN CALIFORNIA	55655350	84	015	91,574	
Subtotal Program - Pass-Through and Partial Pass-Through				274,946	-
SANTA MONICA COLLEGE	A121646NC:3	84	031	301,186	
SAN JOSE CITY COLLEGE	A16-0099-001	84	031	14,287	
Subtotal Program - Pass-Through and Partial Pass-Through				315,473	-
UNIVERSITY OF MINNESOTA	A004497001	84	116	81,030	
SAN MATEO COUNTY	A16-0055	84	120	8,017	
CALIFORNIA DEPARTMENT OF REHABILITATION	28632	84	126	(1,240)	
CALIFORNIA DEPARTMENT OF REHABILITATION	29716	84	126	303,813	
CALIFORNIA DEPARTMENT OF REHABILITATION	UCSF#A121902	84	126	613,587	
Subtotal Program - Pass-Through and Partial Pass-Through				916,160	-
NEWTOWN PUBLIC SCHOOL DISTRICT	S184S140014	84	184	17,294	
MISSION ECONOMIC DEVELOPMENT AGENCY	A121767	84	215	30,401	
MISSION ECONOMIC DEVELOPMENT AGENCY	UCSF #A121828	84	215	71,864	
Subtotal Program - Pass-Through and Partial Pass-Through				102,265	-
WESTED	S12-173:3	84	283	481,601	
LOS ANGELES UNIFIED SCHOOL DISTRICT	1200264/4400002260:3	84	334	48,343	
RANCHO SANTIAGO COMMUNITY COLLEGE DISTRICT	DO-14-1517-02-cyc1	84	334	142,842	
Subtotal Program - Pass-Through and Partial Pass-Through				191,185	-
CALIFORNIA STATE UNIVERSITY, DOMINGUEZ HILLS FOUNDATION	F15-449	84	336	1,044	
CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	NCLB11CWPUCD	84	363	496	
STANFORD UNIVERSITY	STANFORD UNIVERSITY-201400635	84	365	133,261	
YOLO COUNTY OFFICE OF EDUCATION	201402994	84	366	247,128	
CALIFORNIA DEPARTMENT OF EDUCATION	NCLB11-CMP-UCLA	84	367	(993)	
CALIFORNIA DEPARTMENT OF EDUCATION	NCLB11-CRLP-UCLA	84	367	(628)	
CALIFORNIA DEPARTMENT OF EDUCATION	NCLB11-CSP-UCLA	84	367	(574)	

# Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
CALIFORNIA DEPARTMENT OF EDUCATION	NCLB11-CWP-UCLA	84 367	1,083	
CALIFORNIA DEPARTMENT OF EDUCATION	15-15196-3004-00	84 367	72,174	
CALIFORNIA DEPARTMENT OF EDUCATION	CA DOE/US DOE CN140132 MOORE 12/15	84 367	841,288	816,081
CALIFORNIA DEPARTMENT OF EDUCATION	CN150131	84 367	74,705	
CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	007865	84 367	20,468	
CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	007866	84 367	37,805	
CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	NCLB11A-CHSSP-SO	84 367	(3,780)	
CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	NCLB11-CHSSP-SO	84 367	(1,515)	
CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	NCLB12-CHSSP-SO	84 367	138,916	
CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	NCLB12-CHSSP-UCB	84 367	45,703	
CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	NCLB12-CHSSP-UCD	84 367	45,000	
CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	NCLB12-CMP-UCD	84 367	21,770	
CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	NCLB12-CWLP-UCB	84 367	27,648	
CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	NCLB12-CWP-UCD	84 367	37,808	
NATIONAL WRITING PROJECT	005709	84 367	9,536	
NATIONAL WRITING PROJECT	01-CA18-SEED#1TLP	84 367	3,390	
NATIONAL WRITING PROJECT	NATIONAL WRITING PROJEC-92-CA05-SEE	84 367	16,544	
NATIONAL WRITING PROJECT	92CA05SEED2012	84 367	20,000	
NATIONAL WRITING PROJECT	92-CA05-SEED2016	84 367	1,630	
NATIONAL WRITING PROJECT	92-CA09-SEED2012	84 367	8,257	
NATIONAL WRITING PROJECT	92-CA09-SEED2012:3	84 367	5,687	
NATIONAL WRITING PROJECT	92-CA09-SEED2016	84 367	420	
NATIONAL WRITING PROJECT	92-CA14-SEED2012	84 367	3,833	
NATIONAL WRITING PROJECT	92-CA15-SEED2012-02A	84 367	9,999	
NATIONAL WRITING PROJECT	A15-0020	84 367	133	
CALIFORNIA DEPARTMENT OF EDUCATION	NCLB11-CRLP-UCB	84 367	14,186	
CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	A16-0409-001	84 367	45,710	
CALIFORNIA DEPARTMENT OF EDUCATION CURRICULUM AND INSTRUCTION	NCLB11-CWP-UCSC	84 367	(8,861)	
NATIONAL WRITING PROJECT	A16-0524-001	84 367		
STATE OF CALIFORNIA DEPARTMENT OF JUSTICE	NCLB12-CHSSP-UCI-cyc1		2,681	
STATE OF CALIFORNIA DEPARTMENT OF JUSTICE  STATE OF CALIFORNIA DEPARTMENT OF JUSTICE		84 367	43,975	
	NCLB12-CMP-UCI-cyc1	84 367	23,000	040.004
Subtotal Program - Pass-Through and Partial Pass-Through	DE COACION COADIDDOWN SIA		1,556,998	816,081
CALIFORNIA STUDENT AID COMMISSION	DE-CSAC/CALSOAP/BROWN 8/12	84 378	61,666	
SAN JOSE CAL-SOAP CONSORTIUM(STUDENT OPPORTUNITY & ACCESS)(UCSC ADMIN)	CALSOAP SC1415 ROCH-RUI 9/14	84 378	56	
Subtotal Program - Pass-Through and Partial Pass-Through			61,722	-
CALIFORNIA CHILD DEVELOPMENT DIVISION	CN130102	84 UNKNOW	( -, - ,	
CALIFORNIA STUDENT AID COMMISSION	SUB C-14-005 (NONE)	84 UNKNOW		
CALIFORNIA STUDENT AID COMMISSION	Sub G-14-006 (none)	84 UNKNOW	,-	
SAN DIEGO COUNTY	F EDUC/SDUSD BARTON 0% 6/2999	84 UNKNOW	,	
CALIFORNIA STUDENT AID COMMISSION	AA CALSOAP THOMSPSON	84 UNKNOW	N 51,224	
CALIFORNIA STUDENT AID COMMISSION	CALSOAP THOMPSON G-09-006	84 UNKNOW	N (64,916)	
KOOTENAI TRIBE OF IDAHO	KOOTENAI TRIBE OF IDAHO-201402102	84 UNKNOW	N (312)	
Subtotal Pass-Through and Partial Pass-Through Awards			5,530,750	816,081
Total Department of Education			26,735,477	1,864,200

# Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

				FY 2	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier		ederal A Number	Total Federal Expenditures	Pass-Through to Subrecipients
VIETNAM EDUCATION FOUNDATION				•	•
Direct Awards					
VIETNAM EDUCATION FOUNDATION	Various	85	802	10,226	
VIETNAM EDUCATION FOUNDATION	Various	85	UNKNOWN	6,750	
Total Vietnam Education Foundation				16,976	-
DEPARTMENT OF HEALTH AND HUMAN SERVICES					
Direct Awards					
ADMH PHS (SAMHSA) MENTAL HEALTH - CENTER FOR MENTAL HEALTH SERVICES	Various	93	243	520,512	48,000
ADMH PHS (SAMHSA) PREVENTION - CENTER FOR SUBSTANCE ABUSE PREVENTION	Various	93	243	2,124,076	697,787
ADMH PHS (SAMHSA) TREATMENT - CENTER FOR SUBSTANCE ABUSE TREATMENT	Various	93	243	358,562	
Subtotal Program - Direct Awards				3,003,150	745,787
Subtotal ADMH PHS (SAMHSA)				3,003,150	745,787
CDC CENTERS FOR DISEASE CONTROL AND PREVENTION	Various	93	067	3,442,659	473,087
CDC CENTERS FOR DISEASE CONTROL AND PREVENTION	Various	93	116	1,621,013	
CDC CENTERS FOR DISEASE CONTROL AND PREVENTION	Various	93	136	3	
CDC CENTERS FOR DISEASE CONTROL AND PREVENTION	Various	93	262	3,122,914	2,751
CDC CENTERS FOR DISEASE CONTROL AND PREVENTION	Various	93	270	283,602	
CDC CENTERS FOR DISEASE CONTROL AND PREVENTION	Various	93	283	16,879	
CDC CENTERS FOR DISEASE CONTROL AND PREVENTION	Various	93	304	1,325,074	187,401
CDC CENTERS FOR DISEASE CONTROL AND PREVENTION	Various	93	542	209,136	
CDC CENTERS FOR DISEASE CONTROL AND PREVENTION	Various	93	735	808,565	
CDC CENTERS FOR DISEASE CONTROL AND PREVENTION	Various	93	939	1,023,766	10,947
CDC CENTERS FOR DISEASE CONTROL AND PREVENTION	Various	93	947	(614,182)	
CDC CENTERS FOR DISEASE CONTROL AND PREVENTION	Various	93	977	1,091,636	258,456
CDC CENTERS FOR DISEASE CONTROL AND PREVENTION	Various	93	UNKNOWN	517,619	
Subtotal Center for Disease Control and Prevention				12,848,684	932,642
FDA PHS FOOD AND DRUG ADMINISTRATION	Various	93	103	11,047	
FDA PHS FOOD AND DRUG ADMINISTRATION	Various	93	448	397,951	
Subtotal PHS Food and Drug Administration				408,998	-
HCFA CENTERS FOR MEDICARE AND MEDICAID SERVICES	Various	93	610	186,526	
HCFA CENTERS FOR MEDICARE AND MEDICAID SERVICES	Various	93	UNKNOWN	68,844	
Subtotal Centers for Medicare and Medicaid Services				255,370	-
HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	Various	93	059	2,688	1,987
HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	Various	93	107	1,355,966	1,121,157
HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	Various	93	110	3,700,627	1,031,484
HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	Various	93	117	453,930	
HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	Various	93	127	7,190	
HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	Various	93	145	6,432,925	1,504,811
HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	Various	93	153	468,639	99,010
HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	Various	93	156	512,369	
HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	Various	93	157	255	
HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	Various	93	186	708,598	
HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	Various	93	191	210,475	
HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	Various	93	243	308,388	
				555,550	

# Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

				FY:	
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number		Federal	Total Federal	Pass-Through to
	or Other Identifier		OA Number	Expenditures	Subrecipients
HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	Various	93	247	657,604	63,82
HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	Various	93	250	38,514	
HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	Various	93	253	1,758,999	
HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	Various	93	265	164	
HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	Various	93	358	350,000	
HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	Various	93	359	573,139	99,99
HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	Various	93	510	2,772,718	350,70
HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	Various	93	884	1,194,873	33,58
HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	Various	93	918	(52,031)	
HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	Various	93	928	789,443	60
HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	Various	93	969	1,164,442	205,30
HRSA PHS HEALTH RESOURCES AND SERVICES ADMINISTRATION	Various	93	UNKNOWN	142,755	
Subtotal PHS Health Resources and Services Administration				23,552,670	4,512,46
OHDS ADMINISTRATION FOR CHILDREN AND FAMILIES	Various	93	551	973,051	
OHDS ADMINISTRATION FOR CHILDREN AND FAMILIES	Various	93	600	1,589,348	
OHDS ADMINISTRATION FOR CHILDREN AND FAMILIES	Various	93	604	267,762	
OHDS ADMINISTRATION FOR CHILDREN AND FAMILIES	Various	93	632	21	
Subtotal Administration for Children and Families				2,830,182	-
PHS AGENCY FOR HEALTHCARE RESEARCH AND QUALITY	Various	93	225	1,130,090	
PHS AGENCY FOR HEALTHCARE RESEARCH AND QUALITY	Various	93	226	506,196	
Subtotal Agency for Healthcare Research and Quality				1,636,286	-
SEC ADMINISTRATION FOR COMMUNITY LIVING	Various	93	631	467,091	
SEC ADMINISTRATION FOR COMMUNITY LIVING	Various	93	632	495,941	
Subtotal Administration for Community Living				963,032	-
SEC HHS OFFICE OF THE SECRETARY	Various	93	UNKNOWN	2,699	
Subtotal Direct Awards				45,501,071	6,190,89
Pass-Through and Partial Pass-Through				,	2,,
POPULATION COUNCIL - NEW YORK	SH1112C-17	93	061	69,214	11,89
COLUMBIA UNIVERSITY	A126704	93	067	287,220	,
ELIZABETH GLASER PEDIATRIC AIDS FOUNDATION	CP-05-9-170-04073-5-00	93	067	3,259	
MAKERERE UNIVERSITY	METS-A-01	93	067	382,239	9,87
MAKERERE UNIVERSITY	METS-B-01	93	067	72,146	5,67
MAKERERE UNIVERSITY	METS-C-01	93	067	226,798	
MAKERERE UNIVERSITY	METS-D-01	93	067	134,511	
Subtotal Program - Pass-Through and Partial Pass-Through	mero s or	93	007	1,106,173	9,87
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	1321081	93	070	191,854	9,07
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	15-10250				
SAN DIEGO WORKFORCE PARTNERSHIP	SAN DIEGO WORKFORCE PARTNERSHIP BEC (87)	93	074	1,161,155	
	•	,	093	(1,951)	
NATIONAL COUNCIL FOR BEHAVIORAL HEALTH CENTER FOR COMPREHENSIVE CARE & DIAGNOSIS OF INHERITED BLOOD DISORDERS	2390.0002 CIBDIX2012HRSA-UCD-4	93	098	104,969	
		93	110	47,885	
CENTER FOR COMPREHENSIVE CARE & DIAGNOSIS OF INHERITED BLOOD DISORDERS	CIBDIX2012HRSA-UCSF-1	93	110	1,356,991	
CHILDREN'S HOSPITAL OF ORANGE COUNTY	CHILDREN'S HOSPITAL OF ORANGE COUNT (8745	4) 93	110	(344)	
Subtotal Program - Pass-Through and Partial Pass-Through				1,404,532	-
NORTHWESTERN UNIVERSITY	NORTHWESTERN UNIVERSITY-60030225UCD	93	134	6,222	
RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY	8196	93	145	183,062	

# Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

			FY 2	
deral Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number or Other Identifier	Federal CFDA Number	Total Federal Expenditures	Pass-Through to Subrecipients
UNIVERSITY OF WASHINGTON	755641	93 155	23,766	•
CITY AND COUNTY OF SAN FRANCISCO	DPHC16000677	93 157	504,196	
CENTER FOR COMPREHENSIVE CARE & DIAGNOSIS OF INHERITED BLOOD DISORDERS	CCCDIBD/DHHS CIBDIX2011CDC BAKER 9/	93 184	(24)	
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	10-95221	93 217	10,462	
CALIFORNIA FAMILY HEALTH COUNCIL, INC.	1324-5320-71209-15	93 217	86,836	
CALIFORNIA FAMILY HEALTH COUNCIL, INC.	2495-5320-71209-14	93 217	139,094	
UNIVERSITY OF MASSACHUSETTS AMHERST	UMASS/DHHS 20160127 OSBORNE 9/30 8%	93 217	154,048	
Subtotal Program - Pass-Through and Partial Pass-Through			390,440	-
AZUSA PACIFIC UNIVERSITY	S-1H79T1026021-1	93 243	25,846	
RAND CORP	9920130076:03	93 243	166,450	
Subtotal Program - Pass-Through and Partial Pass-Through			192,296	-
CSU SAN MARCOS/UNIVERSITY AUXILIARY & RESEARCH SERVICES CORPORATION	SUB 14-35DB (HP26952-01-00)	93 247	197,957	
UNIVERSITY OF BERN	032503	93 262	(2,913)	
UNIVERSITY OF WASHINGTON	759280 PRIOR 751195	93 266	387,492	
ASIAN PACIFIC PARTNERS FOR EMPOWERMENT, ADVOCACY AND LEADERSHIP	1U58DP004976	93 283	7,927	
BOSTON COLLEGE	5101962-9	93 310	15,423	
CALIFORNIA STATE UNIVERSITY, SAN FRANCISCO STATE UNIVERSITY	TL4MD009638	93 310	52,090	
Subtotal Program - Pass-Through and Partial Pass-Through			67,513	-
PUBLIC HEALTH FOUNDATION ENTERPRISES, INC.	201600514	93 323	59,462	
DARTMOUTH COLLEGE	1590	93 350	15,032	
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	5101832	93 351	16,210	
ALTAMED HEALTH SERVICES CORPORATION	20143247	93 359	138,346	
WOMENS COMMUNITY CLINIC	UCSF#A124307	93 359	86,031	
TEXAS HEALTH AND HUMAN SERVICES COMMISSION	529-12-0138-00001:5	93 505	433,293	
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	1320985	93 507	11,034	
CALIFORNIA DEPARTMENT OF INSURANCE	8209SC	93 511	98,861	
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	1110674	93 521	2,417,693	
IMPERIAL VALLEY REGIONAL OCCUPATIONAL PROGRAM	CW-2015-44	93 556	1,975	
SISKIYOU, COUNTY OF	SISKIYOU, COUNTY OF-EW-2013-31	93 556	(4,375)	
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	1210097	93 566	56,533	
Subtotal Program - Pass-Through and Partial Pass-Through			54,133	
AMERICAN ACADEMY OF PEDIATRICS	719104-UCLA	93 600	57,548	41,42
AMERICAN ACADEMY OF PEDIATRICS	719150 UCLA	93 600	546,165	81,30
CALIFORNIA MEDICAL CENTER	20111273	93 600	165,078	
Subtotal Program - Pass-Through and Partial Pass-Through			768,791	122,73
SISKIYOU, COUNTY OF	CW201431	93 645	660	
SISKIYOU, COUNTY OF	CW-2015-31	93 645	4,835	
Subtotal Program - Pass-Through and Partial Pass-Through			5,495	
HUMBOLDT COUNTY	CW-2015-10	93 652	11,850	
TEHAMA, COUNTY OF	TEHAMA, COUNTY OF-GENT-2015-36	93 659	16,590	
KERN COUNTY	Kern County; 258-2012	93 667	7,047	
LASSEN, COUNTY OF	LASSEN, COUNTY OF-C000113234	93 667	14,443	
LASSEN, COUNTY OF	EW201415	93 667	(703)	
LASSEN, COUNTY OF	EW-2015-15	93 667	18,218	
PLUMAS. COUNTY OF	EW-2015-26	93 667	8.295	

# Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

		<u> </u>	FY	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	Federal	Total Federal	Pass-Through to
	or Other Identifier	CFDA Number	Expenditures	Subrecipients
SISKIYOU, COUNTY OF	SISKIYOU, COUNTY OF-XX-2013-31	93 667	(460)	
SISKIYOU, COUNTY OF	XX201431	93 667	660	
SISKIYOU, COUNTY OF	XX-2015-31	93 667	2,370	
TEHAMA, COUNTY OF	WK201436	93 667	(182)	
TEHAMA, COUNTY OF	WK-2015-36	93 667	2,475	
CALIFORNIA DEPARTMENT OF SOCIAL SERVICES	15-IA-00965	93 667	32,157	
Subtotal Program - Pass-Through and Partial Pass-Through			84,320	-
CITY AND COUNTY OF SAN FRANCISCO	2002-08/09	93 670	87,617	
SAN DIEGO COUNTY (ARRA)	SD COUNTY 532636 ZIVE ARRA	93 724	103	
TOIYABE INDIAN HEALTH PROJECT INC.	TOIYABE INDIAN HEALTH PROJECT-Y15-2	93 738	17,472	
ALZHEIMER'S ASSOCIATION CALIFORNIA SOUTHLAND CHAPTER	90AL0002-01-00	93 763	41,768	
COUNTY OF LOS ANGELES	A-COUTNYLA/DHHS H300159 DUNNE 06/13	93 889	12,261	
COUNTY OF LOS ANGELES	A-CONTYLA/DHHS H-701039 DUNNE 06/13	93 889	1,077	
COUNTY OF LOS ANGELES	H705761	93 889	7,956	
COUNTY OF LOS ANGELES	H705762	93 889	291,909	
Subtotal Program - Pass-Through and Partial Pass-Through			313,203	-
CITY AND COUNTY OF SAN FRANCISCO	BPHC10000121-UCSF#A117134	93 914	62,192	
CITY AND COUNTY OF SAN FRANCISCO	BPHC10000131	93 914	1,661,255	
CITY AND COUNTY OF SAN FRANCISCO	BPHC11000128	93 914	155,774	
PUBLIC HEALTH FOUNDATION ENTERPRISES, INC.	PHFE INC/DHHS 0101 DEVILLE 7/12	93 914	(433)	
Subtotal Program - Pass-Through and Partial Pass-Through			1,878,788	-
DEMOCRACY COUNCIL OF CALIFORNIA	S-LMAQM-15-GR-1051	93 928	88,337	
UNIVERSITY OF PITTSBURGH	0026510(119618-2)	93 928	(507)	
Subtotal Program - Pass-Through and Partial Pass-Through			87,830	-
INDIAN HEALTH COUNCIL, INC.	NARCH 5	93 933	124,494	
FHI 360	953/0080.0142:4	93 936	32,272	
AIDS PROJECT LOS ANGELES	20164271	93 939	28,270	
AIDS PROJECT LOS ANGELES	AIDS PROJECT/DHH C114174 DONOHOE 3/	93 939	(61,258)	
AIDS PROJECT LOS ANGELES	C-115181	93 939	167,239	
CITY AND COUNTY OF SAN FRANCISCO	DPHC15000749- COHAN, D	93 939	113	
Subtotal Program - Pass-Through and Partial Pass-Through			134,364	-
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	15-10840	93 940	333,450	
CITY AND COUNTY OF SAN FRANCISCO	BPHC12000084	93 940	472,480	
Subtotal Program - Pass-Through and Partial Pass-Through			805,930	-
CITY AND COUNTY OF SAN FRANCISCO	BPHC110000999 / DPHC	93 943	221,012	
NATIONAL FAMILY PLANNING & REPRODUCTIVE HEALTH ASSOCIATION INC.	FPRPA006059	93 974	54,148	
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	1410332	93 991	159,265	
ASSOCIATION OF OCCUPATIONAL AND ENVIRONMENTAL CLINICS	AOEC BALMES	93 UNKNOW		
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	1010403	93 UNKNOW	N 1,201,499	
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	1312010	93 UNKNOW		
EMMES CORPORATION, THE	201301565	93 UNKNOW		
LEIDOS BIOMEDICAL RESEARCH, INC.	13XS113 PRADOS	93 UNKNOW		
LEIDOS, INC.	201400268	93 UNKNOW		
LEMON GROVE SCHOOL DISTRICT	SUB 20121358 (HRSA)	93 UNKNOW	N 73,216	
MINNEAPOLIS MEDICAL RESEARCH FOUNDATION	A126633	93 UNKNOW		
		55 S.M.10W	22,000	

# Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

				FY 2	
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number		ederal	Total Federal	Pass-Through to
	or Other Identifier	CFD	A Number	Expenditures	Subrecipients
MONO, COUNTY OF	CW-2015-21	93	UNKNOWN	12,838	
NATIONAL ALLIANCE OF STATE AND TERRITORIAL AIDS DIRECTORS	NASTAD - RUTHERFORD	93	UNKNOWN	(6,169)	
NATIONAL ASSOCIATION OF HEALTH DATA ORGANIZATIONS	MISCELLANEOUS SPONSORS-UCDMCBCNN-27	93	UNKNOWN	113,804	
RADIOLOGICAL SOCIETY OF NORTH AMERICA INC	RADIOLOGICAL SOCIETY OF NORTH-S13-0	93	UNKNOWN	11,083	
SAN DIEGO WORKFORCE PARTNERSHIP	SAN DIEGO WORKFORCE PARTNERSHIP BEC (88059)	93	UNKNOWN	970	
STANFORD UNIVERSITY	60687621104939	93	UNKNOWN	558,087	
SUPERIOR COURT OF CALIFORNIA, COUNTY OF SAN FRANCISCO	15-029	93	UNKNOWN	2,603	
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	11-10828	93	UNKNOWN	5,355,629	
CALIFORNIA HEALTH BENEFIT EXCHANGE	MISCELLANEOUS SPONSO-201302286	93	UNKNOWN	(2,024)	
Subtotal Pass-Through and Partial Pass-Through Awards				21,775,378	144,49
Total Department of Health and Human Services				67,276,449	6,335,38
CORPORATION FOR NATIONAL AND COMMUNITY SERVICE					
Direct Awards		94	013	397,621	
Pass-Through and Partial Pass-Through					
CALIFORNIAVOLUNTEERS	007793	94	006	248,095	
JUMPSTART FOR YOUNG CHILDREN, INC.	900200	94	006	141,777	
Subtotal Program - Pass-Through and Partial Pass-Through				389,872	-
NEW PROFIT, INC.	ONAL AND COMMUNITY SERVICE 201	94	019	396,609	
Subtotal Pass-Through and Partial Pass-Through Awards				786,481	-
Total Corporation for National and Community Service				1,184,102	-
SOCIAL SECURITY ADMINISTRATION					
Pass-Through and Partial Pass-Through					
DEL NORTE COUNTY	CW-2015-06	96	UNKNOWN	11,850	
Total Social Security Administration				11,850	
AGENCY FOR INTERNATIONAL DEVELOPMENT					
Pass-Through and Partial Pass-Through					
FHI 360	100210	98	001	13,666	
INTERNATIONAL AIDS VACCINE INITIATIVE INC.	2092	98	001	146,282	
KANSAS STATE UNIVERSITY	S15115	98	001	482,891	87,79
MANAGEMENT SCIENCES FOR HEALTH, INC	A295-2013-001	98	001	167,278	
UCP WHEELS FOR HUMANITY	WFH-2015-010-UKRTEAM	98	001	22,248	
UNIVERSITY OF WISCONSIN-MADISON	UNIV OF WISCONSIN; 188K565	98	001	(188)	
Subtotal Program - Pass-Through and Partial Pass-Through				832,177	87,79
JOHNS HOPKINS UNIVERSITY	15-SBA-013	98	011	155,662	
GLOBAL AIDS INTERFAITH ALLIANCE	GAIA RANKIN	98	012	26,071	
HIGHER EDUCATION FOR DEVELOPMENT	HED135-9722-RWA-12-01	98	012	84,301	14,06
NATHAN ASSOCIATES INC.	3001910UCD1001	98	012	19,876	. 1,00
Subtotal Program - Pass-Through and Partial Pass-Through				130,248	14,06
ARCADIA BIOSCIENCE, INC.	201300322	98	UNKNOWN	62,235	14,00
DEVELOPMENT ALTERNATIVES, INC.	AVCDhaka004	98	UNKNOWN	128,690	
INTERNATIONAL MAIZE AND WHEAT IMPROVEMENT CENTER	201400223	98	UNKNOWN	1,263,400	540.47
KNCV TUBERCULOSIS FOUNDATION	1.00.708.1	98	UNKNOWN	497,692	5-10,47

# Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

				FY 2	
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number		ederal	Total Federal	Pass-Through to
	or Other Identifier		A Number	Expenditures	Subrecipients
MICHIGAN STATE UNIVERSITY	RC102095	98	UNKNOWN	34,417	
NATIONAL ACADEMY OF SCIENCES	2000006396	98	UNKNOWN	9,341	
UNIVERSITY OF ILLINOIS	20140623001	98	UNKNOWN	313,495	20,504
PURDUE UNIVERSITY	PURDUE UNIVERSITY-14098851-207495	98	UNKNOWN	15,668	
Total Agency for International Development				3,443,025	662,834
OTHER FEDERAL AGENCIES					
Direct Awards					
LEGISLATIVE BRANCH		99	UNKNOWN	163	
Subtotal Direct Awards				163	-
Pass-Through and Partial Pass-Through					
ACTION	PC158043/PC-16-8-006	99	UNKNOWN	21,060	
ADVANCED BIOSCIENCE LABORATORIES, INC.	ABL/NIH DGSOM140050165 ANTON 11/14	99	UNKNOWN	31	
AMERICAN EDUCATION SOLUTIONS, INC.	20145175	99	UNKNOWN	115,054	
AMERICAN INSTITUTES FOR RESEARCH IN THE BEHAVIORAL SCIENCES	0352400204:01	99	UNKNOWN	100,656	
ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY	HST-HF-51307.01-A	99	UNKNOWN	17,892	
CALIFORNIA DEPARTMENT OF EDUCATION	NCLB12-CHSSP-UCLA	99	UNKNOWN	45,003	
CALIFORNIA DEPARTMENT OF EDUCATION	NCLB12-CRLP-UCLA	99	UNKNOWN	44,604	
CALIFORNIA DEPARTMENT OF EDUCATION	NCLB12-CSP-UCLA	99	UNKNOWN	45,932	
CALIFORNIA DEPARTMENT OF EDUCATION	NCLB12-CWP-UCLA	99	UNKNOWN	28,366	
CALIFORNIA DEPARTMENT OF EDUCATION	CA/DEP ED CN150131 MOORE 12/16	99	UNKNOWN	1,119,237	1,059,625
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	14-90487	99	UNKNOWN	697,992	
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	15-10047	99	UNKNOWN	1,375,301	523,287
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	15-92030	99	UNKNOWN	1,965,252	
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH	10-95452 BRINDIS	99	UNKNOWN	46,526	21,276
CALIFORNIA EMERGENCY MANAGEMENT AGENCY	RC14 30 1141	99	UNKNOWN	37,663	
CALIFORNIA POSTSECONDARY EDUCATION COMMISSION	CA/PEC/ITQSG ITQ03360 HAKANSSON 5/	99	UNKNOWN	(30)	
CALIFORNIA POSTSECONDARY EDUCATION COMMISSION	CA/DOED ITQ03360 HAKANSSON 10/12 8%	99	UNKNOWN	(894)	
CALIFORNIA POSTSECONDARY EDUCATION COMMISSION	CA/PEC/ITQSG ITQ10708 PRISELAC 12/1	99	UNKNOWN	36	
CALIFORNIA POSTSECONDARY EDUCATION COMMISSION	ITQ-09-T600	99	UNKNOWN	169,940	
CARNEGIE FOUNDATION FOR THE ADVANCEMENT OF TEACHING (THE)	REPLACE TO 77561 GOMEZ 6/14 10%	99	UNKNOWN	1	
COUNCIL OF CHIEF STATE SCHOOL OFFICERS	ELPA21:1	99	UNKNOWN	123,271	
DELOITTE CONSULTING OVERSEAS PROJECTS LLC	101478	99	UNKNOWN	9,878	
GOLDBELT GLACIER-HEALTH SERVICES, LLC	GBG-UCLA-2013-0001	99	UNKNOWN	57,523	
LOS ANGELES COUNTY DEPARTMENT OF HEALTH SERVICES	PH-002389:2	99	UNKNOWN	626,391	
LOS ANGELES UNIFIED SCHOOL DISTRICT	LAUSD/USDOE 1000068 LOEHER 6/10 5%	99	UNKNOWN	94	
LOS ANGELES UNIFIED SCHOOL DISTRICT	LAUSD/USDOE 1000068 LOEHER 6/14	99	UNKNOWN	57	
NEAR EAST SOUTH ASIA CENTER FOR STRATEGIC STUDIES	20151131	99	UNKNOWN	205,996	
NEAR EAST SOUTH ASIA CENTER FOR STRATEGIC STUDIES	NESACSS 20162078 SPIEGEL 9/16 16%	99	UNKNOWN	145,713	
PUBLIC HEALTH FOUNDATION ENTERPRISES, INC.	PHFEI/DHHS 0123018001 DEVILLE 03/11	99	UNKNOWN	(1,116)	
SANDIA NATIONAL LABORATORIES	SANDIA/DOE PO1495661 DIMOCK 3/19	99	UNKNOWN	1,096,986	
VA BOSTON HEALTHCARE SYSTEM	IPA FOR FRANK MENG	99	UNKNOWN	49,379	
WESTAT	6049.03-S02	99	UNKNOWN	24,266	
CALIFORNIA DEPARTMENT OF EDUCATION	A16-0070-001	99	UNKNOWN	65,468	
CALIFORNIA DEPARTMENT OF EDUCATION	A16-0071-001	99	UNKNOWN	192,449	

# Schedule of Expenditures of Federal Awards For the Fiscal Year Ended June 30, 2016

				FY 2	2016
Federal Direct / Pass-Through and Partial Pass-Through	Agency / Pass-Through Number	F	ederal	Total Federal	Pass-Through to
	or Other Identifier	CFD	A Number	Expenditures	Subrecipients
NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH AND EDUCATION, INC	84232 - 01 - 404958	99	UNKNOWN	114,217	
SAN JOSE CAL-SOAP CONSORTIUM(STUDENT OPPORTUNITY & ACCESS)(UCSC ADMIN)	A00-1729-001	99	UNKNOWN	155,425	
Subtotal Pass-Through and Partial Pass-Through Awards				8,695,619	1,604,188
Total Other Federal Agencies				8,695,782	1,604,188
Total Other Programs			_	153,754,181	18,420,290
Total Federal Award Expenditures			9	5,497,385,751	469,108,695

Notes to Schedules of Expenditures of Federal Awards Year Ended June 30, 2016

# 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 Children's Hospital & 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 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 Schedules of Expenditures of Federal Awards (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. 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 "unknown." When the federal agency and the federal identification number are not available, "99 unknown" is used.

# 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 2016, the University paid Cal Grant A and B funds in the amount of \$842,324,583; however, CSAC is unable to determine the exact amount of TANF funds, if any, represented in those awards. Therefore, the Schedule of Expenditures of Federal Awards does not include State Cal Grant A and B awards.

Notes to Schedules of Expenditures of Federal Awards Year Ended June 30, 2016

# 5. Outstanding Balances on Loan Programs

Outstanding balances on federal loans programs as of June 30, 2016 are as follows:

	CFDA	Principal Outstanding
Federal Perkins Loan Program	84.038	\$219,880,308
Health Professions Student Loans, Loans for Disadvantaged Students, Primary Care Loans	93.342	\$54,583,779
Nursing Student Loans	93.364	\$1,448,792
Nurse Faculty Loans	93.264	\$1,158,348
ARRA - Nursing Faculty Loans	93.408	\$201,618

# 6. Facilities and Administrative Costs

The University uses its negotiated indirect costs rates instead of the 10% de minimis rate allowed by 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 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, 2016, 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, 2016 and the related notes to the financial statements and have issued our report thereon dated October 12, 2016. We conducted our audit 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 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 opinion 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 significant deficiency in internal

control as described in 2016-001, in the accompanying Schedule of Findings and Questioned Costs concerning IT access, based upon the existence of control deficiencies at each of the individual campuses.

# **Compliance and Other Matters**

As part of obtaining reasonable assurance about whether the 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 accompanying management's response 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.

San Francisco, California

PricewaterhouseCoopers 22P

October 12, 2016



# 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 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, 2016. 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 Children's Hospital & Research Center Oakland, which expended \$45,240,433 in federal awards which is not included in the schedule of expenditures of federal awards during the year ended June 30, 2016. Our audit, described below, did not include the operations of University's 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 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, 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, 2016.

#### **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 2016-002, 2016-003, 2016-004, 2016-005, 2016-006, 2016-007 and 2016-008. 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 response 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 deficiencies in internal control over compliance, as described in the accompanying schedule of findings and questioned costs as items 2016-006 and 2016-008 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 response 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.

San Francisco, California

PricewaterhouseCoopers 22P

February 27, 2017

## **SECTION I – SUMMARY OF AUDITOR'S RESULTS**

<b>Financial</b>	<b>Statements</b>
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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?

 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:

Program Name CFDA Number

Research and Development Cluster Various

Student Financial Assistance Cluster 84. Various & 93. Various

Cooperative Extension Cluster 10.500

Dollar threshold used to distinguish between type A and type B programs: \$16,492,157

Auditee qualified as a low-risk auditee? Yes

# SECTION II – FINANCIAL REPORTING FINDINGS

# Finding 2016-001: IT Privileged Access

#### **Observation:**

As part of our 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, 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 "inscope" for purposes of our audit and do not represent all financial or information technology systems and is 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;
- 3) Developer access to migrate changes to production environment.

We observed that the access to programs and data controls procedures noted above varied in their level of performance and are 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, 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.

# Criteria:

IT controls should ensure that privileged users are assessed on a periodic basis to ensure access rights are appropriate, that regular monitoring of such access is accomplished and developers are restricted from migrating changes into the production environment.

# **Recommendation:**

We recommend 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 recommend that Management perform a direct access to data risk assessment to 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 recommend 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.

# **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.

# SECTION III – FEDERAL AWARD FINDINGS AND QUESTIONED COSTS

## 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, we selected 50 students who received Federal Loans disbursements during the year. For each student we tested that the student received the notification of the loan and the borrower's right to cancel all or part of the disbursement for each disbursement made during the year. For 33 of the students sampled, the notification of the right to cancel for the winter quarter was not sent. 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.

#### **Citation:**

34 CFR 674.16(a)

#### **Criteria:**

School must notify the borrower of each disbursement of a Perkins Loan made under the MPN. This notification should inform the borrower of the amount disbursed and provide the borrower with an opportunity to cancel the disbursement or cancel the Perkins Loan. The school may send notice either 30 days before or 30 days after the date of disbursement.

#### **Questioned Cost:**

None

# Cause:

In the prior year, this same campus received a finding due to loan notifications not being sent within 30 days of disbursement. Refer to prior year finding 2015-002. As a result, management implemented steps to ensure that the Information Technology ("IT") department runs a report simultaneously to when loans are disbursed and sends e-mail loan notifications to the applicable students. Although the report did automate the loan notifications as planned, in one quarter the disbursement run for loans was run on an ad-hoc basis due to a government holiday and, as such, the IT department did not run the aforementioned report. Thus, the loan notifications were not sent to any of the students at this campus who received loan disbursements for the winter quarter, although they were sent in other quarters.

#### Effect:

Students were not notified of the borrower's right to cancel all or part of the disbursement in the time required.

#### **Recommendation:**

For any ad hoc disbursement requests that get processed on a day the University is closed, the Student Financial Aid office should ensure that the IT department is aware and will still run the report in a timely manner such that the University is in compliance with requirements mentioned above

# **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.

# 2016-003 - Disbursements to and on Behalf of Students - Credit Balances

**Program:** Student Financial Assistance 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, we selected 40 students from the disbursement detailed listing. We tested that all credit balances within our population were paid within the required timeframe. Within our sample there were 40 credit balances tested. We noted two students 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.

#### **Citation:**

34 CFR 668.164(e)(1)&(2)

#### Criteria:

If FSA disbursements to the student's account at the school create an FSA credit balance, you must pay the credit balance directly to the student or parent as soon as possible but no later than 14 days after:

- the date the balance occurred on the student's account, if the balance occurred after the first day of class of a payment period,
- or the first day of classes of the payment period if the credit balance occurred on or before the first day of class of that payment period.

## **Questioned Cost:**

None

#### Cause:

The credit balances noted above relate to off cycle disbursements due to requests for additional funding. A review of credit balances was not performed by the Financial Aid Office and the Student Business Services Office for students who received disbursements outside of the normal disbursement window.

#### Effect:

FSA credit balances were inappropriately held by the Institution outside of the required time frame from the respective student.

#### **Recommendation:**

Management should implement a policy to run credit balance reports on a regular basis, to capture credit balances created by disbursements outside of the normal period.

# **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.

# 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, we selected 25 assets from the detailed listing provided. In order to test existence of these assets, we physically observed each item within our selection. We noted one asset, valued at \$8,576, which could not be observed. This selection could not be observed as it was consumable supplies rather than an inventoriable and capitalizable asset. The supplies had been inappropriately capitalized and tracked within the campus equipment management system. The same purchase order used for a piece of equipment was used to order the consumable supplies. As the value of the supplies was greater than \$5,000, both the equipment and the supplies were assigned asset numbers and capitalized into the system. 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.

# **Citation:**

2 CFR 200 Subpart A Paragraph 33, Circular A-21 Subpart J Paragraph 18

#### Criteria:

"Equipment" is defined as an article of nonexpendable, tangible personal property having a useful life of more than one year and an acquisition cost which equals or exceeds the lesser of the capitalization level established by the institution for financial statement purposes, or \$5,000.

## **Questioned Cost:**

None.

#### Cause:

Although the Equipment Management team performed a review of the equipment purchase prior to capitalization, that review did not detect the fact that the items being capitalized were supplies. Additionally, even though inventory equipment counts were performed subsequent to the date of acquisition, the department did not report these assets as missing, primarily because they were supplies that the department continuously had on hand.

#### Effect:

Supplies were inappropriately capitalized and included in the equipment management system.

## **Recommendation:**

The campus should implement an annual audit process whereby the Equipment Management team performs a sample of independent verifications of department inventory certifications to ensure count accuracy and diligence.

# **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.

# 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 Education; Department of Health and Human Services

CFDA Number: 10. Various; 11. Various; 14. Various; 15. Various; 16. Various; 19. Various; 43. Various;

47. Various; 66. Various; 81. Various; 84. Various; 93. Various

**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, we selected 25 drawdowns for which reimbursement was requested and cash was received during the fiscal year. We agreed the detailed listing of expenditures within the drawdown requests to the amounts which were requested. We then selected 25 individual transactions which are included in the draw request in order to determine that the cash was paid prior requesting reimbursement. We identified

that management does not have a process in place to ensure that all expenditures are paid prior to requesting reimbursement.

#### 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:

Management 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.

## **Recommendation:**

The campus should implement a control whereby drawdown requests are reviewed to ensure payments have been made prior to the request for drawdown of federal funds. The University should also takes steps to ensure that the appropriate methodology is consistently applied and used when completing drawdown requests.

#### **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.

# 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 (93.857); 93.RD (93.855); 93.RD (93.855);

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.

#### **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 in accordance with Subpart E—Cost Principles of this part or 45 CFR Part 74 Appendix E, "Principles for Determining Costs Applicable to Research and Development under Awards and Contracts with Hospitals," or 48 CFR Part 31, "Contract Cost Principles and Procedures," as applicable. (5) The transfer of funds budgeted for participant support costs as defined in §200.75 Participant support costs to other categories of expense. (6) Unless described in the application and funded in the approved Federal awards, the subawarding, transferring or contracting out of any work under a Federal award. This provision does not apply to the acquisition of supplies, material, equipment or general support services. (7) Changes in the amount of approved cost-sharing or matching provided by the non-Federal entity. No other prior approval requirements for specific

items may be imposed unless a deviation has been approved by OMB. See also §\$200.102 Exceptions and 200.407 Prior written approval (prior approval).

# **Questioned Cost:**

None.

#### Cause:

Select campuses operate in a decentralized environment with no standardized process to ensure a consistent control for the monitoring of key personnel.

#### Effect:

Changes in key personnel may not be identified timely and appropriate approvals might not be obtained as required.

# **Recommendation:**

The campus should implement a standardized process for monitoring key personnel and obtaining necessary approvals, which includes regular oversight by Campus management and requirements of documents to obtain in order to evidence approval.

# **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.

# 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 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 2016-001 for additional detail.

# **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.

# 2016-008 - Enrollment Reporting

**Program:** Student Financial Assistance Cluster

Sponsor Award Number: Federal Perkins Loan Program; Federal Pell Grants; 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:** 2015 - 2016

#### **Condition:**

In testing the University's conformity with compliance requirements for enrollment reporting, we sampled 160 students across four campuses. Approximately 50% of the students sampled the date reported as received by the NSLDS was beyond 60 days from the effective date transmitted by the institution.

In addition we 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. Please refer to finding 2015-001 for details of the issues identified by the prior year auditor.

# **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. (2) Unless it expects to submit its next updated enrollment report to the Secretary within the next 60 days, an institution must notify the Secretary within 30 days after the date the school discovers that— (i) A loan under title IV of the HEA or the Act was made to a student who was enrolled or accepted for enrollment at the institution, and the student has ceased to be enrolled on at least a half-time basis or failed to enroll on at least a half-time basis for the period for which the loan was intended; or (ii) A student who is enrolled at the institution and who received a loan under title IV of the HEA or the Act has changed his or her permanent address.

# **Questioned Cost:**

None.

#### Cause:

All campuses utilize the services of National Student Clearinghouse (NSC) to assist in the reporting of enrollment status changes to National Student Loan Date System (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 is untimely, in certain other instances the reporting was timely but appears to be untimely due to the convention used in selecting the effective date.

# **Effect:**

Changes in student statuses may not be updated timely and as such the student loan limits as well as conversion to repayment status may not be updated accurately.

## **Recommendation:**

We recommend that each of the affected campuses update their policies and procedures to ensure timely and accurate reporting to the NSLDS to ensure that information reported by NSC 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.

# University of California Summary of Status of Prior Year Schedule of Findings and Questioned Costs

Year Ended June 30, 2016

# **Finding 2015-001: Enrollment Reporting**

Late reporting of student's change in status to National Student Loan Data System (NSLDS)

#### Status:

The following corrective actions were implemented by the affected campuses.

The first affected campus has modified their process to submit an enrollment report as of the first day of instruction instead of waiting for the campus census date (Friday of 3<sup>rd</sup> week). However, the supplemental feed is not necessary because the National Student Loan Clearinghouse (NSC) is now reporting all students, including previously withdrawn students, to the National Student Loan Data System (NSLDS), and this campus verifies via a monthly review. While the on-going monthly review fell behind due to the implementation challenges of a new student information system in October 2016, the campus is working to bring this monthly review up to date by March 31, 2017.

The second affected campus Registrar Office is adhering to sending files to NSC in accordance with the prescribed schedule. Also, NSC has developed and deployed the SSCR Error Correction Tool, which enable instant online correction of SSCR errors. Since the deployment of this tool in late December, there have been no SSCR errors to test this functionality, but this campus plan to fix all errors within a 24-hour timeframe. In addition, the Registrar's office is sending data on a weekly basis instead of every 30 days.

The third affected campus is sending weekly enrollment files to NSC through the last day of each semester and submitting an additional file on the last day of the month in which the semester ends. Furthermore, NSC has changed their process to report any new changes received from UC more frequently to NSLDS. Additional monitoring procedures have been added to ensure timely and accurate enrollment reporting. These procedures include confirming each file was sent and received timely and verifying the accuracy of the data sent to NSLDS by sampling.

## Finding 2015-002: Disbursement to and on behalf of Students

Loan notification for each disbursement was late.

#### Status:

The following corrective actions were implemented at the affected campus.

During the 2015-16 academic year, the affected campus has instituted electronic right-to-cancel notifications to borrowers when the student receives a disbursement instead of relying on the monthly billing statements as notification of loan disbursements. In addition, this campus provided instructions to borrowers to access NSLDS website for specific information regarding loan amounts, dates and servicer information. However, due to a scheduling issue one quarter's notification was not sent in error. Please refer to Finding 2016-002 for further details.

# Finding 2015-003: Matching - GEAR UP program

This finding pertains to the GEAR Up program only. Costs contribution certifications reported by the project partner organizations lack proper documentation supporting cost contribution requirement, and the review of the contribution certifications did not include verifying the accuracy of costs reported on the contribution statements.

# University of California Summary of Status of Prior Year Schedule of Findings and Questioned Costs

Year Ended June 30, 2016

#### **Status:**

The following corrective actions were completed by the affected campus.

The program responsible official (i.e. Principal Investigator) with the assistance of the Contracts and Grants Officer have revised the contribution certifications to provide additional details of the type of expenditures and to require proper signatures of a program officer of the partner organization. Detailed instructions were provided to and reviewed with all contributing partners by the program responsible official. Additional steps have been added in which these certifications and substantiating documentations from contributing partners are reviewed and signed by the program responsible official. The Annual Performance Report submitted to the Department of Education on April 15, 2016 has been adjusted for the amounts of questioned costs reported in the 2015 audit report.

## Finding 2015-004: Procurement, Suspension and Debarment

Lack of documentation of suspension and debarment verification was done prior to paying the vendor.

#### Status:

The following corrective actions were completed by the affected campus.

The University's purchasing agreements general terms has been modified to include the appropriate suspension and debarment clauses. This ensures self-certification by the vendor is done when agreements are executed.

In addition, the University has communicated this change via its awareness and training process: (1) with an email communication on July 11, 2016 to all Single Points of Contact (SPOCs) who are responsible for distributing to the appropriate users at each location, and (2) followed up by a webinar presentation on July 22, 2016.

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OFFICE OF THE EXECUTIVE VICE PRESIDENT—CHIEF FINANCIAL OFFICER

OFFICE OF THE PRESIDENT 1111 Franklin Street. 6<sup>th</sup> Floor Oakland, California 94607-5200

February 24, 2017

# 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, 2016

# 2016-001 – 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

Management's Response and Corrective Action Plan February 24, 2017

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.

# 2016-002 - Disbursements Notification

The affected campus recognizes that the Loan Disclosure notices to students for the January 1, 2016 disbursement did not occur due to ad hoc processing during the school winter break. This was a special run completed on the break to assure students would receive their funds in a timely manner for the start of the new winter quarter to cover both their tuition/fees and living expenses. Unfortunately, the right-to-cancel program within the mainframe program schedule did not run with the disbursement program. Students received notices for every other disbursement processed throughout the year.

This campus will create program dependencies that will ensure that the disbursement program cannot be scheduled without the right-to-cancel program and that a notification be generated if the right-to-cancel process fails, in which case, the necessary file will be recreated and the necessary notifications will be sent within the 30-day timeframe. This will be completed prior to our next special disbursement run which will occur the beginning of January 2018. This year the disclosures were run on January 1, 2017 and students received those notifications.

# 2016-003 – Disbursement – Credit Balance

The affected campus management concurs with the auditors' observation that the two students' credit balance extended longer than the 14-day regulatory time frame. These instances were off cycle disbursements due to requests for additional funding.

The identified extended credit balances were due to special circumstances and limited specifically to the break between the Fall and Winter quarters. During this time period the campus automated batch refund process did not include these off cycle disbursements.

The campus is working to enhance the current process of identifying students eligible for late aid disbursements. The immediate solution includes an exception list that will identify the students who will be off cycle so the students will be refunded manually during the 14-day regulatory time frame while this campus works on a permanent automated solution with the university Information Technology Services.

Campus expects to implement a permanent solution by the beginning of next Academic - Fall Quarter (September 2017).

# **2016-004 – Equipment Additions**

The affected campus management concurs with the finding and has implemented additional actions to improve the process. Since the initial capitalization of these particular supplies in 2011, the

review performed by the Equipment Management accounting team has already been enhanced through system changes and additional manual checks; therefore, the campus does not need to change or enhance this particular control. However, since the physical equipment inventory count performed by the department did not identify the issue post capitalization, the campus Equipment Management team will be enhancing its oversight of this process which is the focus of this finding. As such, on an annual basis, after the equipment inventory counts have been completed and the department certifications have been submitted, campus Equipment Management team will select a sample of equipment items from selected departments to ensure existence of the equipment.

# 2016-005 – Cash Management – Timing of reimbursement requests

The affected campus agrees with the auditor's finding and will design and implement appropriate controls to ensure cash draws under the reimbursement method are reviewed and completed after all payments have been made. This campus will modify current procedures to include paid invoices instead of prior days' operating ledger postings except salaries which are generally one week in arrears. In addition, campus will work with university Information Technology Services to determine an automated solution to enhance controls over the drawdown from federal funds. Campus expects completion by September 30, 2017.

# 2016-006 - Key Personnel Monitoring

The two affected campuses agree with the auditor's finding and will design and implement appropriate controls to ensure consistent control for the monitoring of key personnel.

At the first affected campus, each department is responsible for tracking, monitoring the key personnel and obtaining the written approval as needed. To strengthen the controls in key personnel monitoring, this campus will develop and implement a standardized process at the central offices to capture all the key personnel named in the Notices of Awards for all active awards. Additional procedures will be developed to monitor and identify key personnel's changes so timely written approval from the agencies can be obtained when required. While this campus works on a permanent automated system solution to aid this standardized process, a manual process will be put in place by September 30, 2017.

To strengthen the campus' decentralized process for monitoring the key personnel compliance requirement, the second affected campus will develop a process to identify and monitor all key personnel changes within active awards to ensure timely, written approval is received from the relevant agencies. This manual monitoring process will be developed and implemented by September 30, 2017; however, a systematic monitoring option will be evaluated as a long-term solution.

# 2016-007 -IT Privilege Access over Federal Awards

For Management Response and Corrective Action Plan, refer to Financial Statement Finding 2016-001.

# 2016-008 - Enrollment Reporting

In the fiscal year ended June 30, 2016, the University of California continued its effort to enhance its controls to ensure timely submission of the Enrollment Reporting. While progress has been made, one campus has partially implemented the corrective action to address the late reporting issue identified in the last audit. Management at the affected campuses in the current year will review and make necessary modifications to their processes to ensure timely and accurate reporting of enrollment files to the National Student Loan Data System (NSLDS). In addition, post-reporting monitoring procedures will be added to confirm that enrollment reporting to NSLDS is both on-time and accurate.

Joao Pires

Director

Costing Policy and Analysis