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April 22, 2019

The Honorable Holly J. Mitchell  
Chair, Joint Legislative Budget Committee  
1020 N Street, Room 553  
Sacramento, California 95814

Dear Senator Mitchell:

Pursuant to Section 16(d) of the 2013 Budget Trailer Bill (AB 94, Chapter 50, Statutes of 2013), enclosed is the University of California's 2019 Progress Report to the Legislature on the School of Medicine at the University of California, Riverside.

If you have any questions regarding this report, Associate Vice President David Alcocer would be pleased to speak with you. David can be reached by telephone at (510) 987-9113, or by email at [David.Alcocer@ucop.edu](mailto:David.Alcocer@ucop.edu).

Yours very truly,

  
Janet Napolitano  
President

Enclosure

cc: Senate Budget and Fiscal Review  
The Honorable Richard D. Roth, Chair  
Senate Budget and Fiscal Review Subcommittee #1  
(Attn: Ms. Anita Lee)  
(Attn: Mr. Kirk Feely)  
The Honorable Kevin McCarty, Chair  
Assembly Budget Subcommittee #2  
(Attn: Mr. Mark Martin)  
(Attn: Mrs. Katie Sperla)  
Ms. Jennifer Troia, Joint Legislative Budget Committee  
Ms. Erika Contreras, Secretary of the Senate

The Honorable Holly J. Mitchell

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Ms. Tina McGee, Legislative Analyst's Office  
Ms. Amy Leach, Office of the Chief Clerk of the Assembly  
Mr. E. Dotson Wilson, Chief Clerk of the Assembly  
Ms. Keely Bosler, Department of Finance  
Mr. Jeff Bell, Department of Finance  
Mr. Chris Ferguson, Department of Finance  
Mr. Jack Zwald, Department of Finance  
Ms. Rebecca Kirk, Department of Finance  
Ms. Tina McGee, Legislative Analyst's Office  
Ms. Carolyn Chu, Legislative Analyst's Office  
Mr. Jason Constantouros, Legislative Analyst's Office  
Chancellor Kim A. Wilcox, UC Riverside  
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## UNIVERSITY OF CALIFORNIA

### Progress Report on the School of Medicine at the University of California, Riverside

Response to Item 6440-001-0001 of Section 2.00 of the Budget Act of 2013-14 states:

“On or before April 1 of each year, the University of California shall provide progress reports to the relevant policy and fiscal committees of the Legislature pertaining to funding, recruitment, hiring, and outcomes for the School of Medicine at the University of California, Riverside. Specifically, the report shall include, but not be limited to, information consistent with the published mission and vision for the School of Medicine at the University of California, Riverside, in all of the following areas:

- (1) The number of students who have applied, been admitted, or been enrolled, broken out by race, ethnicity, and gender.
- (2) The number of full-time faculty, part-time faculty, and administration, broken out by race, ethnicity, and gender.
- (3) Funding and progress of ongoing medical education pipeline programs, including the UCR/UCLA Thomas Haider Program in Biomedical Sciences.
- (4) Operating and capital budgets, including detail by funding source. The operating budget shall include a breakdown of research activities, instruction costs, administration, and executive management.
- (5) Efforts to meet the health care delivery needs of California and the inland empire region of the state, including, but not limited to, the percentage of clinical placements, graduate medical education slots, and medical school graduates in primary care specialties who are providing service within California’s medically underserved areas and populations.
- (6) A description of faculty research activities, including information regarding the diversity of doctoral candidates, and identifying activities that focus on high priority research needs with respect to addressing California’s medically underserved areas and populations.”

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## I. INTRODUCTION

### A. History and Future Enrollment Plans

The University of California, Riverside’s aspirations to develop a full, four-year medical school began nearly four decades ago, when the two-year medical education partnership with UCLA was established. That ambition advanced to a full-fledged planning effort in 2003, resulting in the UC Board of Regents approving establishment of the UCR School of Medicine in 2008. G. Richard Olds, M.D. was appointed Vice Chancellor of Health Affairs and Founding Dean in 2010. UC Riverside received its initial start-up funding in the Budget Act of 2010, which required the University of California to redirect \$10 million from its existing resources to the UCR School of Medicine. The medical school in 2012 received preliminary accreditation from the Liaison Committee on Medical Education (LCME), the national accrediting body for

educational programs leading to the M.D. degree. “Preliminary” accreditation is the first of three steps that all new medical schools must pass to ultimately receive full accreditation. The 2013-14 State Budget Act included \$15 million in State funding as part of UC’s budget augmentation, providing ongoing support to the first public medical school to be established in California in more than four decades. The School was granted “provisional” accreditation in June 2015, the second of the three-step accreditation process for new schools, and achieved full accreditation in June 2017, the status currently held by UC’s five other medical schools. In summer 2015, Dean Olds resigned and leadership of the school was assumed by Interim Dean Neal L. Schiller, Ph.D. In May 2016, Deborah Deas, M.D., M.P.H. was appointed the school’s second Dean and CEO for Clinical Affairs. Dr. Deas came to UCR from her prior position as Interim Dean of the College of Medicine at the Medical University of South Carolina (MUSC). At MUSC, she had held numerous leadership positions in the College of Medicine, including Senior Associate Dean for Medical Education, Senior Associate Dean for Diversity, and Associate Dean for Admissions. The UCR School of Medicine graduated its first class of M.D. recipients in June 2017, its second class in June 2018, and all are pursuing residency training, 80% of them in California.

At the beginning of the 2018-19 academic year, the UCR School of Medicine had enrolled a total of 245 medical students in all four years of medical school and 32 Ph.D. students in biomedical sciences. Residency training and fellowship programs sponsored by the school and by hospitals in partnership with the school have 279 medical residents or fellows in the specialties of family medicine, general internal medicine, general surgery, psychiatry, primary care pediatrics, obstetrics/gynecology, cardiovascular medicine, child and adolescent psychiatry, neurology, gastroenterology, and emergency medicine. As of this writing in spring 2019, the school is admitting its seventh class, planned for 70 medical students, which will start the program in August 2019. Under Dean Deas, and in consultation with UCR campus leadership and the LCME, planned future increases in enrollment of medical students will occur in order for the school to achieve its mission to expand and diversify the region’s physician workforce.

The UCR School of Medicine has significantly expanded its clinical enterprise, UCR Health, with the opening of a multispecialty outpatient clinic in downtown Riverside. The 25,000-square-foot facility contains a suite for psychiatry and a second suite for multispecialty services including family medicine, internal medicine, sports medicine, women’s health, pain medicine, and adult developmental disability. Pediatrics was also recently added. This clinical location expands upon existing services, such as a family medicine clinic in Palm Springs, neurosurgery in Riverside, adult hospitalist services in Riverside, and pediatric hospitalist services in the Coachella Valley.

## **B. Mission and Approach**

The community-based UCR School of Medicine has a mission distinctive among U.S. medical schools. Its mission is to expand and diversify the physician workforce in Inland Southern California and to develop research and health care delivery programs that will improve the health of underserved populations living in the region. Inland Southern California – a geographically large, ethnically diverse, and rapidly growing region of 4.4 million people – has barely half of the primary care doctors it needs – a ratio of 35 primary care physicians for every 100,000

people according to the California HealthCare Foundation. The region also performs poorly in relation to most other California regions in many measurable health outcomes, such as diabetes and coronary heart disease. In undergraduate medical education (UME, or medical student training) and graduate medical education (GME, or residency training), the curricula focuses on care for the underserved, ambulatory settings, prevention, wellness, chronic disease management, health disparities, and cultural competence. The first GME programs to be developed were in primary care and other short-supply specialties – family medicine, general internal medicine, primary care pediatrics, general surgery, psychiatry and OB/GYN. The UME and GME programs are enhanced through a \$2.3 million, five-year grant from the federal Health Resources and Services Administration to deploy a research curriculum to equip medical students, residents, and practicing physicians with the population health skills needed to address Inland Southern California’s poor chronic disease metrics and healthcare disparities.

The medical school’s mission-based scholarship program is one example of the School’s strategy to address workforce shortages by retaining UCR-trained physicians in the region. This scholarship program provides an incentive for students to alleviate medical school debt while remaining in Inland Southern California (Riverside, San Bernardino and Imperial counties) following medical school education and residency training. Should the recipients of the mission-based scholarships practice outside of the region before the end of their commitment, the scholarships become repayable loans. A total of 39 currently enrolled students are recipients of these scholarships. The school itself budgets \$1 million each year for these innovative scholarships, but it has also received extramural funding to support this program. First 5 Riverside has and will support a total of six scholarships for students interested in practicing pediatrics in Riverside County. A Riverside couple is funding two scholarships, a real estate firm has funded three scholarships, the H.N. and Frances C. Berger Foundation, based in Palm Desert, Calif., has funded a scholarship for a student from the Coachella Valley, and Riverside Community Health Foundation is currently funding two students. The medical school is continuing to raise external funds to establish additional such scholarships.

Responding to the physician shortage in Inland Southern California requires more than building a medical school. Consequently, the UCR School of Medicine is executing two additional strategies that will capitalize on the primary drivers of where physicians practice – where they grow up and where they complete residency training. A continuum of student pipeline programs, currently spanning high school through postbaccalaureate studies reached approximately 1,100 students in 2017-18. The programs are designed to help more of the region’s students become eligible for medical school (see Section IV). UCR is continuing to work with healthcare partners in the community to establish new GME programs that physicians need in order to become fully independent and board certified (see Section VI).

## **II. STUDENT RECRUITMENT AND MATRICULATION**

### **A. Recruitment and Application Process**

Recruitment activities focus heavily on schools located within Inland Southern California, including high schools and community colleges involved in the school’s student pipeline

programs and four-year institutions such as California State University, San Bernardino. This regional focus is important for meeting the mission of the medical school to train and retain physicians for this area of California. Additionally, because up to 24 of the medical school seats are reserved for students who earn their bachelor's degree at UC Riverside – a federally designated Hispanic Serving Institution – campus undergraduates learn a great deal about the UCR School of Medicine before they apply, particularly through the undergraduate-focused pipeline programs *FastStart* and the Medical Scholars Program (described in Section IV). These 24 seats exclusively for UCR undergraduate degree holders are made possible by the Thomas Haider Program at the UCR School of Medicine, maintaining the original charter of UCR's former two-year medical education program to recruit, admit and support students from UCR who aspire to become physicians. Finally, medical school staff yearly attend a variety of medical student recruitment events, mostly in Southern California, such as the local Medical and Pre-Health Conference held annually at California State University, San Bernardino.

The medical school admissions process uses a holistic review of applicants to select outstanding future physicians who are most likely to fulfill the mission of the school. Applicants to the UCR School of Medicine submit an application through the American Medical College Application Service (AMCAS). For the sixth class of 70 medical students (Class of 2022), the UCR School of Medicine Admissions Committee evaluated approximately 5,630 applications. Approximately 2,700 applicants were invited to submit and complete secondary applications. A total of 260 applicants were interviewed using the Multiple Mini-Interview (MMI) format. In this process, applicants move through a two-hour circuit of 10 interviews within a cluster of adjacent closed rooms ("stations"). At each station, the applicant is given two minutes to review a standardized question or scripted scenario (with relevance to the UCR medical school mission), followed by an eight-minute period of discussion with an interviewer who scores the applicant's performance on a seven-point scale. The stations and specific prompts used in the MMI process are designed to assist the Admissions Committee in evaluating some of the applicants' core personal attributes. This core set of criteria includes the following: a) integrity and ethics, b) reliability and dependability, c) service orientation, d) social and interpersonal skills, e) capacity for improvement, f) resilience and adaptability, g) cultural competence, h) oral communication, and i) teamwork. These attributes help determine the potential for applicants to succeed in fulfilling the mission of the School of Medicine.

The Committee meets to consider each interviewed applicant and to rank him/her for admission using a holistic process which considers all factors – background, disadvantaged status, how the student has overcome barriers, academic performance, breadth and depth of extracurricular activities, leadership experience, community service, clinical experience, and commitment to the mission of the UCR School of Medicine. For the Class of 2022, 133 applicants were offered admission to the UCR medical school to fill the 70 available seats. This is a very good matriculation rate, strongly suggesting students chose UCR based on its unique mission.

The School of Medicine has a Conditional Admission Program for promising UCR undergraduates who would benefit from an extra year of preparation to apply to medical school. There is also an Early Admissions Program that is only available for applicants to the Thomas Haider Program at the UCR School of Medicine (aforementioned 24 seats). The latter program is

designed to accept the top applicants early before they apply to other medical schools and commit them to UCR.

## B. Medical Student Enrollment

In its first six years of operation, the medical school has recruited six classes of high-quality, diverse students. The current first-year class composition of 70 students is 50% female, 21.4% self-identified as being underrepresented in medicine. Thirty-seven percent of the class come from socioeconomically and/or educationally disadvantaged backgrounds. Approximately 71% of the class has ties to Inland Southern California and 35.7% are the first in their family to complete a bachelor's degree.

Demographic characteristics are illustrated in the following table.

Race and Ethnicity for 2018 Entering Class of the UCR School of Medicine (Self-Reported)				
	Admits Female	Matriculants Female	Admits Male	Matriculants Male
American Indian/Alaska Native	0	0	0	0
Cuban	0	0	0	0
Asian	33	19	22	14
Mexican American/Hispanic	11	3	13	7
African American	7	1	2	1
Native Hawaiian/Pacific Islander	0	0	1	1
White	15	9	12	8
No response	1	2	2	1
Other	6	1	8	3
<b>Totals</b>	<b>73</b>	<b>35</b>	<b>60</b>	<b>35</b>
<b>TOTAL ENROLLMENT CLASS OF 2022: 70 Students</b>				

Notes: Admission data was analyzed from students' self-reported application information. Students are asked to self-report again after matriculating. Filipino was included with Asian.

It is also important to note that the UCR medical school is continuing the tradition of the former UCR/UCLA Thomas Haider Program in Biomedical Sciences in providing a special pathway into medical students for UCR undergraduate degree holders. Section IV contains additional information about the Thomas Haider Program at the UCR School of Medicine.

## III. FACULTY AND ADMINISTRATION

The Associate Dean for Academic Affairs provides leadership for faculty recruitment, with the support and collaboration of all of the medical school's executive leadership, as well as the medical school's academic personnel unit. The Associate Dean oversees the advancement and timely completion of academically-related diversity and affirmative action initiatives and for coordination with relevant systemwide initiatives in concert with the UCR Vice Provost for

Academic Personnel. Achieving diversity among its faculty is crucial to the success of the School of Medicine and the attainment of its mission. The School of Medicine also seeks to recruit and retain faculty who are from disadvantaged backgrounds (socioeconomically and/or educationally); speak English as a second language; completed high school in the region (San Bernardino, Riverside or Imperial counties, preferably from medically underserved areas); and/or are first-in-family to attend college. Demonstrated scholarly, educational or service contributions to diversity is built into the recruitment process and evaluated as part of the academic hiring process. In appointing faculty, the medical school carefully evaluates among applicants contributions to diversity and equal opportunity. Guidelines from the University of California Office of the President enable search committees to give special consideration to a number of factors in faculty and academic appointments. These include, but are not limited to:

- Service to increase participation in science by groups underrepresented in their field, for example an exceptional record mentoring students and junior faculty from groups underrepresented in their field;
- Understanding the barriers facing individuals underrepresented in science careers, as evidenced by life experiences and educational background;
- Significant experience teaching students who are underrepresented in the sciences, for example teaching at a minority serving institution; and
- Potential to bring to their research the creative critical discourse that comes from their non-traditional educational background or training, and/or their experience as a member of a group underrepresented in science.

Once recruited and appointed to the faculty, the School of Medicine strives to provide a supportive and collegial environment, in part through mentorship by peers both within and outside of the medical school. Both academic divisions in the medical school, Biomedical Sciences and Clinical Sciences, provide newly appointed and junior faculty members mentorship to assist them in navigating university systems and culture and to support their scholarly success. Newly appointed faculty are also encouraged to participate in UCR's Faculty Mentorship Program as a supplement to the guidance provided within the School of Medicine. The School of Medicine also provides a new faculty orientation on a bi-annual basis and an extensive array of faculty development workshops. Faculty development workshops cover a variety of topics such as teaching professionalism, teaching in a flipped classroom environment, navigating the advancement process, creating an inclusive working environment, and interpreting teaching evaluations.

The School of Medicine also aims to attract and retain a diverse and talented staff workforce that will contribute to the university's goals, mission and vision. The UCR School of Medicine's hiring practices include the utilization of a number of internal and campus wide resources that ensure equal employment opportunity principles are embedded into the school's recruitment, selection, retention and advancement practices.



The following table illustrates the demographics of the faculty and administrative staff.

UCR School of Medicine								
Faculty and Staff Headcounts by Ethnicity and Gender (Self-Reported)*								
	Faculty**				Non-Faculty Academic and Administrative Staff			
Ethnicity	Male	Female	Decline to state	Total	Male	Female	Decline to State	Total
American Indian or Alaskan Native	1	0		1	0	1		1
Black/African-American	8	6		14	5	21		26
Hispanic	11	2		13	17	76		93
Native Hawaiian or Pacific Islander	0	0		0	0	1		1
Asian	47	25		72	36	45		81
Decline to State	27	15	2	44	16	16	1	33
White	50	29		79	41	61		102
<b>TOTAL</b>	<b>144</b>	<b>77</b>	<b>2</b>	<b>223</b>	<b>115</b>	<b>221</b>	<b>1</b>	<b>337</b>

\*Statistics current as of February 08, 2019. Does not include community-based clinical teaching faculty or student employees.

\*\*Includes administrative leaders who also hold faculty appointments.

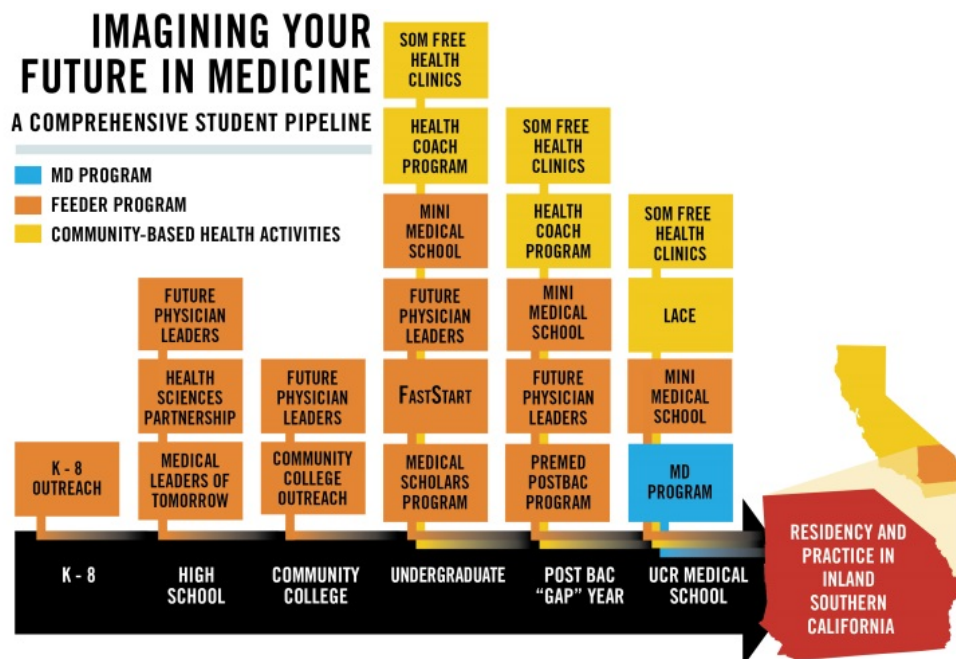
Additionally, the School of Medicine has more than 1,000 community-based clinical teaching faculty. These faculty members from the community have a variety of responsibilities teaching medical students and residents, serving as attending physicians in residency training, delivering selected lectures to medical students, and teaching clinical skills to medical students.

#### IV. MEDICAL EDUCATION OUTREACH AND PIPELINE PROGRAMS

Working in partnership with community stakeholders, the UC Riverside School of Medicine's goal is to produce culturally responsive, service-minded physicians who are drawn largely from Inland Southern California and thus more likely to remain in the region to practice. To that end, the UCR School of Medicine is continuing the tradition of providing a unique pathway into medical school for UCR students, similar to the former UCR/UCLA Thomas Haider Program in Biomedical Sciences, the precursor to UCR's four-year independent medical school. The Thomas Haider Program at the UCR School of Medicine maintains the charter of its predecessor to recruit, admit and support students from disadvantaged backgrounds who attend UC Riverside. Up to 24 of the medical school seats each year are filled by students who attend UCR for at least six consecutive academic quarters and complete their bachelor's degree at UCR.

In addition, the UCR School of Medicine continues to offer a series of student pipeline programs focusing on increasing access to medical school for socio-economically and/or educationally disadvantaged students. These pipeline programs are comprised of activities designed to stimulate an interest in medicine and health careers and assist students for entry into medical school. Activities include academic and career enrichment strategies, development of learning communities, physician shadowing, parental involvement and mentored community service.

Several external funders have and are supporting these initiatives, including The California Wellness Foundation and Riverside Community Health Foundation, as well as a number of generous private donors. In addition to pursuing additional extramural funding, the medical school will continue to devote core personnel resources to coordinate these programs. The current programs are organized into nine major initiatives (each described below) which create a comprehensive pipeline program addressing the needs of aspiring physicians at various stages of their educational pathway.



V2-19

- Mini Medical School:** This program is a collaboration between leaders from the medical profession and from education to prepare students from the undergraduate, post-baccalaureate and medical school levels to collaborate on easily understandable and factually accurate presentations that are presented to the community. Faculty and medical residents offer the students feedback on the content and delivery of their presentations prior to approving them for public demonstration. Examples of some of the presentations approved include: 1) medical - autism, diabetes, hypertension), 2) health - practical demonstrations on how to shop for healthy food alternatives in the local neighborhood, and 3) social - how to handle bullies. Any topic that is of interest to the community and related to improving the health or education of the public is considered. Currently, there are **236** students registered for **27** different topics. Students have presented at multiple venues including health fairs, sober houses, open houses, secondary schools, and after school programs.
- Medical Leaders of Tomorrow:** This program is a one-week residential activity in a UCR residence hall for 80 rising 10<sup>th</sup> graders each summer. The goal is to stimulate interest in higher education and a healthcare career. Students are educated on existing health issues and health disparities in Inland Southern California and use a team model to create a community health education project focusing on these issues. They also receive presentations on preparing for college admissions, careers in the healthcare field, and structured recreational activities. In addition, students take part in interactive activities such as medical simulations and science experiments. A component for parents/guardians includes presentations on applying to college, financial aid, and parental involvement. In summer 2018, the program was conducted in partnership with the Riverside County Office of Education and San Bernardino County Office of Education, which supported program costs for two cohorts, or a total of 80 students.

- **Health Science Partnership:** This program provides enrichment activities and presentations to high school students enrolled in health academies with an “at-risk” student population. Mentor teams comprised of UCR undergraduate health science and medical students visit these students in their classrooms several times during the year presenting information on college life, health careers, medical school, and facilitating problem-based learning activities. The program aims to improve understanding of the college admission process, increase interest in pursuing a post-secondary education, and raise student awareness of careers in medicine/health.
- **Future Physician Leaders (FPL):** Students targeted for this program are high school, community college, and university students who are originally from Inland Southern California and aspire to be physician leaders in their community. The program has three components: Leadership Lecture Series, Summer Physician Shadowing Rotations, and Community Service/Community Health Projects. Initiated in the Coachella Valley, the program has since established two additional branches – in San Bernardino/Riverside in 2012 and in Temecula in 2014. Total enrollment in the summer of 2018 was 135; the health education projects created by FPL students have been presented to several thousand community members in Inland Southern California.
- **Community College Outreach Program:** This program outreaches to local community colleges to provide transfer workshops, UCR campus visits, individual and group advising, and access to the resources of the Medical Scholars Program (see below) once students transfer to UCR. To date, approximately 100 transfer student alumni from this program have been admitted into postgraduate health-related careers, including M.D. and D.O. medical schools. Transfer alumni have also been successful in gaining admissions to other professional programs, including pharmacy, optometry and dental schools. In fall 2017, the School of Medicine was awarded a NIH Bridges to the Baccalaureate grant to help facilitate the transfer of Riverside City College (RCC) students into science, technology, engineering, and mathematics (STEM) majors at UCR. With the grant, the Riverside Bridges to Baccalaureate Program will provide enrichment opportunities, research experience, and support for RCC students in collaboration with existing pipeline programs at UCR.
- **FastStart:** The *FastStart* program, established in 1999, was originally an intensive, five-week summer residential program designed for approximately 30 incoming UCR freshmen who aspire to medical and other science-based careers. In 2017, it was converted to a commuter program but all other aspects of the program remain intact. Preference is given to students identified as coming from a disadvantaged background. Participants attend three gateway classes each day (chemistry, biology, and mathematics) where they are introduced to and prepared for the rigors of a college science curriculum. The program also has a number of social and team-building activities, workshops on study skills, and professional development opportunities. Historically, *FastStart* students have entered UCR with lower high school GPAs and SAT scores than other UCR science students on average, yet have higher pass rates than the general UCR student population in the science and mathematics “gateway” courses for the upper division science curricula. *FastStart* students have first-time pass rates in the crucial gateway sciences and calculus classes of between 90% and 100%

over the past 15 years, compared to about 80% pass rates for non-*FastStart* students. Also, *FastStart* students are strongly encouraged to join the Medical Scholars Program (MSP) described below.

- **Medical Scholars Program (MSP):** Established in 2004, this program each year serves about 165 UCR undergraduates in a learning community designed to provide academic, personal and professional development support for disadvantaged students in the sciences with the goal of increasing their graduation rates and promoting their entrance into medical school or other health profession postgraduate programs. The faculty and staff provide holistic mentoring and advising approaches to develop personalized academic plans based on each student's academic preparation, outside responsibilities (work, family, commuting, etc.), and career plans. Also important is providing key resources (e.g., study groups and academic coaches for gateway science courses, peer mentorship, and positive encouragement by staff and faculty) at critical transition points in the student's academic career (entering UCR as a freshman or transfer student, preparing to apply to graduate or professional schools, etc.). MSP sponsors research internships for undergraduate students paired with faculty mentors for summer and academic year terms. Finally, the program promotes professional and career development to inspire leadership and a sense of community service, both within the MSP community and to underserved communities. Working with socioeconomically and/or educationally disadvantaged students, the School is proud to report that MSP continues to graduate students with science degrees at UCR at levels twice that of non-MSP students. Of the 830 students who have participated in MSP since 2004-05, 737 students have either graduated (573 students, or 69%) or are still enrolled (164 students, or 19.8%) and only 93 (or 11.2%) have transferred, withdrew, or left without a degree. The school anticipates an overall graduation rate for our MSP students of at least 85%.
- **Pre-medical Post-baccalaureate Program:** This is a one-year academic program for 12-15 motivated college graduates from educationally and socio-economically disadvantaged backgrounds seeking to improve their academic preparation for medical school. It provides four key components before guiding students through the application and interview process. The components are a) full-time enrollment in upper-division science courses for one academic year; b) enhancement of critical thinking skills, test-taking, and study skills; c) a structured MCAT preparation course; and d) seminars on health disparities and the health system. Each student receives individual advising and writes a learning agreement each academic term to set goals and create a personalized experience. Each of the selected students meets disadvantaged criteria, states intention to address the needs of medically underserved populations, and approximately two-thirds are underrepresented in medicine. We are proud to report that **86% of all of our graduates** who have applied to medical school **have completed, are currently enrolled, or are recently accepted into medical school.**
- **Health Coach Program:** This program provides critical health education and motivational support for patients suffering from various chronic illnesses in eight different clinics under the auspices of Riverside University Health System (RUHS), the county public health system. The Health Coach (HC) Program was piloted with physicians, nurses and nutritionists at RUHS, our local safety net hospital, in the fall of 2013 with eight coaches. These coaches, all B.S. graduates who were in their gap year applying for medical school or

other health profession school, served two RUHS clinics where they worked with the clinic staff to provide health education and motivational coaching for diabetic patients. Currently, **there are 32 coaches participating at 8 different RUHS clinics, working with almost 1,000 patients.**

Finally, the School of Medicine partners closely with the campus' Health Professions Advising Center, which serves all UCR undergraduate students and alumni interested in careers in the health professions, including medicine. Professional staff and peer mentors are available to guide students in planning pre-health professions course work, gaining health-related experiences, completing service work, and preparing to apply for admission to graduate and professional programs. Approximately 2,000 UCR undergraduates are served by the center each year.

## **V. OPERATING AND CAPITAL BUDGETS**

### **A. Operating Budget**

The state funding provided to the University of California for the UCR School of Medicine has been crucial for its start-up. However, it is not sufficient to fully develop the school's infrastructure or to continue expanding medical student enrollment to a level that will measurably reverse the region's severe physician shortage. The school has currently reached its capacity, and requires more funding to fully meet the requirements of the Liaison Committee on Medical Education (LCME, the accrediting body for medical schools in the U.S. and Canada) and to expand its class size beyond the original class of 50 students. During the past two years, the School of Medicine expanded its incoming class to 66 students in FY18, and 70 students in FY19 without additional State funding, instead relying on one-time campus support. The current state funding is insufficient to fully develop the school's infrastructure or to expand to 125 students per class over the next five years as planned. Without this expansion, the school will fall short of its goal of addressing the physician shortage in Inland Southern California.

In its first five years of operation, the School of Medicine received subsidy funding from the UC Office of the President and substantial subsidy funding from the UCR campus. The Office of the President agreed to provide \$2M of annual support over ten years through FY21. Further campus subsidization is not sustainable without impacting other UCR programs.

During the last six fiscal years, the state funding was used to open the new medical school, hire faculty, and to build the full, four-year M.D. curriculum. These components are necessary for an LCME-accredited medical school to ultimately achieve full accreditation, which was secured in June 2017. Infrastructure development included expanding both the basic science and clinical faculty necessary to teach an expanded number of medical students and to build capacity in population-based health research that is directly supporting the mission to improve the health of people living in the Inland Southern California region (described in Section VII).

The FY18/19 operating budget appears on the following page, and shows a net profit of \$428K. However, each year the total revenue received includes several sources that are intended to cover expenses over multiple years. For example, for FY18/19 when the multi-year start-up funds for ladder-rank faculty are excluded, the adjusted net profit/loss is negative \$5.7M. In addition, UC Riverside School of Medicine received an advance appropriation for a four-year Telemedicine Program of \$15M in FY18/19. The entire \$15M was received as revenue but will be expended over four years. These two examples help to illustrate the ongoing operating deficit that is accumulating.

School of Medicine Operating Budget FY18/19 - Projected	
(\$ in 000's)	
Revenue by Fund Source	
Classification	Amount
<b>Core Support</b>	<b>\$ 23,116</b>
State Start Up <sup>1</sup>	\$ 15,000
UCR Support (General State Funds) <sup>2</sup>	\$ 3,408
Indirect Cost Recovery (ICR)	\$ 821
Student PDST Fees (gross)	\$ 5,802
Student PDST Financial Aid Set-aside	\$ (1,915)
<b>Clinical</b>	<b>\$ 20,278</b>
Clinical Affiliations	\$ 10,816
Professional Fees (Patient Billing)	\$ 9,462
<b>Research</b>	<b>\$ 10,193</b>
Sponsored Research (direct costs)	\$ 7,580
Sponsored Research (indirects)	\$ 2,613
<b>Strategic Support</b>	<b>\$ 30,511</b>
GME Affiliations	\$ 8,106
Gifts and Programmatic Grants	\$ 1,225
Other Strategic Support <sup>3</sup>	\$ 6,180
Telemedicine Appropriation (advance for 4-year program)	\$ 15,000
<b>Total Revenue</b>	<b>\$ 84,098</b>
Expenses	
<b>Salaries and Benefits Total</b>	<b>\$ 57,816</b>
Academic Salaries	\$ 32,744
Academic Benefits	\$ 6,354
Staff Salaries	\$ 12,600
Staff Benefits	\$ 6,118
<b>Non-Salary Support Total</b>	<b>\$ 25,854</b>
General Supplies and Expenses	\$ 21,550
Facilities	\$ 1,261
Equipment	\$ 373
Financial Aid Other	\$ 57
Sponsored Research (indirects)	\$ 2,613
<b>Total Expenses</b>	<b>\$ 83,670</b>
<b>Net Profit (Loss) - Projected</b>	<b>\$ 428</b>
<b>Ladder Rank Faculty Salary/Start-up Funds Reserve</b>	<b>\$ (5,780)</b>
<b>Adjusted Net Profit (Loss) - Projected</b>	<b>\$ (5,352)</b>
Footnotes:	
<sup>1</sup> Original \$15M State allocation approved in FY12-13.	
<sup>2</sup> UCR State support for Biomedical Sciences, new ladder rank hires and Campus costing augmentations.	
<sup>3</sup> Includes 1) \$2M UCOP Start-up; 2) \$5.7M UCR State Support for new ladder rank faculty hires salary and start-up commitments; 3) -\$1.6M in Other Transfers Out.	



## B. Capital Budget

The 2018-19 budget for the University of California did not contain funding for additional capital facilities for the UCR School of Medicine. Prior to the school's opening, the UCR campus made a significant investment in the two facilities needed to open the medical school – the School of Medicine Research Building and a major renovation to create the School of Medicine Education Building. The budget for these two buildings totaled approximately \$59 million, with funding comprised of campus equity funds (\$24 million from campus discretionary funds and indirect cost recovery), external financing of \$30 million (with debt service being provided by the campus), and state general obligation bond funds (\$5 million).

The School of Medicine Research Building (\$37M project) is a three-floor, 58,000-square-foot building, of which two floors were entirely constructed. One floor was constructed as “shell” space, to be completed as the research faculty ranks grow and when financial resources are identified for this capital improvement. Buildout of the first floor “shell” space was completed in fall 2018 at a cost of \$9.6M and provides laboratory and office space for approximately seven additional faculty. This building serves as the initial research platform for the medical school, enabling the recruitment of additional faculty needed to deliver the curriculum to an expanded medical student body at UCR (pre-existing faculty have their laboratories in Webber Hall on the UCR campus). Additional laboratory space for medical school faculty will be provided in the recently completed Multidisciplinary Research Building (MRB) on campus. Construction of the 180,000 gross square feet, five-floor building, approved by the UC Board of Regents in July 2016, provides wet and dry research laboratories, shared instrumentation, a vivarium, and faculty and administrative support. This building is shared among several UCR schools and colleges, and will help accommodate planned growth of the medical school's basic science faculty into the next decade. Occupancy for the MRB is anticipated for mid-2019.

The current School of Medicine Education Building, which originally housed the Statistics Department and Campus IT services, provides educational and administrative space, including a remodeled anatomy lab (12 tables shared by all first-year medical students), a small medical simulation laboratory, and space for small-group problem-based learning sessions and Objective Structured Clinical Examinations (OSCEs). The School of Medicine has a Memorandum of Understanding with the UCR Libraries to provide additional classroom and study space for medical student education. Nevertheless, educational space is still insufficient for the current medical student enrollment and planned future growth. Planning is underway to expand education space in the Orbach Science Library, construction that could be completed in late 2020. The project will expand medical simulation and clinical skills training facilities, and provide one additional large classroom. While this will provide an option for modestly increasing the medical student class size (by perhaps 10 students), ultimately the School of Medicine will require a new education building to meet its goal of enrolling 125 medical students each year (500 total). Note the campus is developing a School of Medicine Education Building project for inclusion in its updated 10-year capital plan.

Growth of the faculty in the Division of Clinical Sciences and of administrative staff has necessitated the medical school to utilize a sizeable portion of the Intellicenter Building, located approximately six miles from UCR, a University of California-owned building that is also the

headquarters of the UCPATH Center, the University's initiative to streamline and centralize human resources and payroll functions. There is still substantial unmet need for academic office space for clinical department chairs and clinical faculty. In order to grow and meet the mandate of its mission, the School of Medicine will need a dedicated education building, estimated at \$80 to \$100 million, for medical and Ph.D. student education, academic office space, student services, and school administration.

In 2018, the UCR campus completed a minor capital project at a cost of \$2.3M to replace the modular units serving as medical student study and lounge space, as well space for the school's student pipeline programs. The project expanded student study/lounge space, which was necessary in order to fully comply with accreditation standards.

## **VI. RESIDENCY TRAINING AND MEETING HEALTH CARE DELIVERY NEEDS**

In addition to expanding its student pipeline programs, another key strategy of the UCR School of Medicine is creating a broad range of residency training programs. This capitalizes on the strong propensity for physicians to practice in the geographic location where they finished residency training. Nationally, approximately 40% of physicians practice near where they completed residency training. Retention is even greater, particularly in California, when a physician attends medical school and completes his or her residency in the state.

The UCR medical school concentrated initially on developing Graduate Medical Education (GME) in the primary care and short-supply specialties of general internal medicine, family medicine, primary care pediatrics, psychiatry, general surgery and OB/GYN. Programs in all of these specialties have been established – sponsored either directly by the School of Medicine or by hospital affiliates. In addition, fellowship programs are established and operating in child and adolescent psychiatry, gastroenterology, and cardiovascular medicine. One medical center affiliate, Riverside Community Hospital, is sponsoring new programs in internal medicine, family medicine and neurology in which the medical school partners. In total, in 2018-19, there are 279 resident physicians and fellows across 15 residency training and fellowship programs either sponsored by or in partnership with the UCR School of Medicine. In 2018, a new fellowship in gastroenterology was launched and, this coming July, an interventional cardiology fellowship will begin.

The medical school continues to be successful in securing extramural funding to partially support the start-up of several GME programs. First 5 Riverside is partially supporting the primary care pediatrics track and the Office of Statewide Health Planning and Development (OSHPD) is partially supporting the psychiatry residency. The family medicine program located in Palm Springs, the internal medicine program in partnership with Riverside University Health System-Medical Center, and the obstetrics/gynecology program with Riverside Community Hospital have been awarded funding from the Song-Brown Program administered by OSHPD.

All 49 graduates of the Class of 2018 matched into residency training programs. Seventeen medical school graduates secured residency training in Inland Southern California, including six in the UCR-sponsored programs of family medicine, psychiatry, internal medicine, and

OB/GYN. Thirty-nine of the 49 graduates remained in California to complete their residency training.

The UCR Family Medicine Residency Program in Palm Springs graduated its inaugural class of residents, with six out of seven graduates choosing to stay and practice medicine within the Coachella Valley and Riverside County. They will help to address the primary care physician shortage in the area and improve healthcare access to the community.

## **VII. FACULTY RESEARCH ACTIVITIES**

The UCR School of Medicine continues to build on the current research strengths at UCR and on its own faculty through recruitment and retention of clinical and basic science faculty and an enhanced infrastructure to support the research enterprise. Faculty are pursuing new medical discoveries and healthcare innovations to serve the needs of the region while training physicians in basic principles of evidence-based medical research and practice. School of Medicine faculty demonstrate success in a broad range of scholarship from traditional “wet-lab” biomedical research, with real potential application to human health as judged by the patent portfolio of faculty, to grants supporting innovation in teaching and health care delivery. The Center for Healthy Communities, established in 2014, pursues research to improve the health of the culturally and economically diverse community in Inland Southern California – a focus directly relevant to the mission of the school. Since its inception, the medical school has established the Center for Molecular and Translational Medicine, a multi-disciplinary center to translate basic science findings into diagnostic therapeutics and tools and the BREATHE Center (Bridging Regional Ecology, Aerosolized Toxins, and Health Effects), which focuses on regional climate modeling, culture and policy studies on air quality and health, environmental justice and health disparities, and health impacts. These three centers join the long-standing Center for Glial-Neuronal Interactions, a “brain health” center that focuses on prevention and therapeutic intervention of neurodevelopmental, neurologic and neurodegenerative diseases, such as Alzheimer’s disease, autism spectrum disorders and epilepsy, among others.

Medical school faculty have been successful competing for research funding from diverse sources including the National Institutes of Health, the Patient-Centered Outcomes Research Institute, and private foundations. Additionally, the medical school is building a clinical trials research infrastructure. Examples of new grant awards from this academic year include:

- A five-year \$2.3 million grant from the National Institute of Neurological Disorders and Stroke of the National Institutes of Health, aimed at finding therapeutics for cancer, amyotrophic lateral sclerosis (ALS), and other neurodegenerative diseases;
- A \$451,000 grant from the National Institutes of Health to study Pacific Islander alcohol prevention;
- A \$390,000 grant from the National Institutes of Health to develop a device to improve outcomes for patients suffering a severe stroke that requires a craniectomy to circumvent debilitating tissue swelling;
- A \$100,000 grant from Genentech to develop and pilot a new home-based telemedicine program.

The school also supports a Ph.D. graduate program in Biomedical Sciences with a mission to bridge the gap between basic research and new clinical innovations. To this end, Ph.D. students are embedded in the first-year medical curriculum so that they can learn the same human pathophysiology required to do medically translational research. However, they are also preparing to be the liaisons between practicing clinicians, experimental clinical trials, patient advocates and basic researchers. The program currently enrolls 32 students, 40.6% of whom are from underrepresented minority groups.

## **VIII. Conclusion**

With \$15 million in annual state funding for the UCR School of Medicine (which has never been adjusted for inflation since originally appropriated in FY13), significant subsidy from the UCR campus, and additional grant and contract revenue generated, UC Riverside has successfully established the state's first public medical school in more than four decades and laid the foundation for future growth. Although campus subsidization has been essential to support the needs of the medical school and meet accreditation standards, it is not fiscally sustainable. The current state funding level of \$15 million annually is insufficient to complete the development of the educational and administrative infrastructure necessary for UCR's medical school. A recent analysis conducted by the UC Office of the President determined that the initial funding for the UCR medical school requires an additional \$25M annually (\$40M/year total in state support). The report also concluded that the school has substantial capital needs. In spite of these challenges, UCR has established a medical school with early positive outcomes for expanding the physician workforce of Inland Southern California. Additional investment is necessary to ensure the long-term success of the UCR School of Medicine.

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