



1111 Franklin Street
Oakland, California 94607-5200
Phone: (510) 987-9074
Fax: (510) 987-9086
<http://www.ucop.edu>

May 6, 2015


The Honorable Mark Leno
Chair, Joint Legislative Budget Committee
1020 N Street, Room 553
Sacramento, California 95814

Dear Senator Leno:

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 annual 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 Debora Obley would be pleased to speak with you. She can be reached by telephone at (510) 987-9112, or by email at Debora.Obley@ucop.edu.

Yours very truly,



Janet Napolitano
President

Enclosure

cc: Senate Budget and Fiscal Review
The Honorable Marty Block, Chair
Senate Budget and Fiscal Review Subcommittee #1
(Attn: Ms. Anita Lee)
(Attn: Ms. Cheryl Black)
Assemblymember Kevin McCarty, Chair
Assembly Budget Subcommittee #2
(Attn: Mr. Mark Martin)
(Attn: Ms. Amy Rutschow)
Ms. Peggy Collins, Joint Legislative Budget Committee
Ms. Amy Leach, Office of the Chief Clerk of the Assembly
Mr. Jim Lasky, Legislative Counsel Bureau
Mr. E. Dotson Wilson, Chief Clerk of the Assembly
Mr. Danny Alvarez, Secretary of the Senate
Ms. Tina McGee, Legislative Analyst's Office
Mr. Mac Taylor, Legislative Analyst's Office
Mr. Paul Golaszewski, Legislative Analyst's Office
Mr. Jeff Bell, Department of Finance

Mr. Christian Osmena, Department of Finance
Ms. Jillian Kisse, Department of Finance
Executive Vice President and Chief Financial Officer Nathan Brostrom
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Associate Vice President Cathryn Nation
Associate Vice President Debora Obley
Executive Director Jenny Kao
Deputy Marsha Sato
Manager Bruce Kennedy

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

May 2015

Legislative Report



UNIVERSITY *of* CALIFORNIA

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

Response to Section 16(d) of the 2013 Budget Trailer Bill (AB 94, Chapter 50, Statutes of 2013), which 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.”

I. INTRODUCTION

A. History and Future Enrollment Plans

The University of California, Riverside’s aspirations to develop a full, four-year medical school began over three decades ago, when the two-year medical education partnership with UCLA was firmly established. That ambition advanced to a full-fledged planning effort in 2003, resulting in the UC Board of Regents approving establishment of the UC Riverside (UCR) School of Medicine in 2008. Vice Chancellor of Health Affairs and Founding Dean G. Richard Olds, M.D., was appointed 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, adopted in June 2013, directed \$15 million of UC’s State budget augmentation to the School, providing ongoing support to the first public medical school to be established in California in more than four decades. The School is currently preparing for its request for provisional accreditation, the second of the three-step accreditation process for new schools, anticipated to occur in 2015. Ultimately, the School expects to gain full accreditation by the LCME in 2017, the status currently held by UC’s five other medical schools.

At the beginning of the 2014-15 academic year, the UCR School of Medicine enrolled 50 first-year medical students, 50 second-year medical students, 15 Ph.D. students in biomedical sciences (two of whom graduated in December 2014), and more than 80 medical residents in the specialties of family medicine, general internal medicine, general surgery, psychiatry, and primary care pediatrics. The medical school is currently admitting its third class of 50 medical students, who will matriculate in August 2015, and will continue enrolling 50 new students each year until it reaches a total enrollment of 200 medical students. UC Riverside has future plans to expand medical student enrollment, contingent upon approval of the LCME. The first time such an approved expansion could occur is 2017.

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 and, according to the California HealthCare Foundation, Riverside County is the only California county of more than 1 million people to have fewer than 100 M.D. physicians in all specialties per 100,000 people. The region also performs poorly in relation to most other California regions in nearly every measurable health outcome. In undergraduate medical education (UME, or medical student training) and graduate medical education (GME, or residency training), the school has chosen to focus on 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 curricula are primarily focused on care for the underserved, ambulatory settings, prevention, wellness, chronic disease management, health disparities, and cultural competence. Rather than building a university hospital, the school is utilizing a variety of both inpatient and outpatient community sites as its teaching platform, a strategy that is not only less costly but has the benefit of exposing students to a broad range of patients in diverse clinical settings.

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) for at

least five years following medical school education and residency training. Should the recipients of the mission-based scholarships practice outside of the region before the end of those five years, the scholarships become repayable loans. A total of 12 students in the first two classes of medical students are recipients of these scholarships. The school itself has funded several of these innovative scholarships, but it has also received extramural funding to support this program. First 5 Riverside is currently supporting two scholarships, for students interested in practicing pediatrics in Riverside County. A Riverside couple has funded a scholarship for family medicine practice in Riverside County, and the H.N. and Frances C. Berger Foundation, based in Palm Desert, Calif., has funded a scholarship for a student from the Coachella Valley. The medical school is continuing to raise external funds to establish additional scholarships.

Responding to the physician shortage in Inland Southern California requires more than building a medical school. Consequently, the UCR School of Medicine is pursuing two additional strategies that capitalize on the two primary drivers of where physicians practice – where they grow up and where they complete residency training. A continuum of student pipeline programs, currently spanning elementary school through postbaccalaureate studies and reaching approximately 1,100 students, is designed to help more of the region’s students become eligible for medical school (see Section IV). UCR is also working with healthcare partners in the community to establish new Graduate Medical Education programs that physicians need in order to become fully independent and board certified (see Section VI). These include training programs in the primary care specialties of general internal medicine, family medicine and primary care pediatrics, as well as the short-supply specialties of general surgery, psychiatry and OB/GYN.

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 (see Section IV) 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 50 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). Finally, medical school staff attend a variety of medical student recruitment events each year, mostly in Southern California, but including one of the nation’s largest recruiting events, the UC Davis Pre-Medical and Pre-Health Professions National Conference, where more than 100 medical schools are represented and some 300 workshops presented to students interested in the health professions. The School’s Senior Associate Dean for Student Affairs also presented at the local Medical and Pre-Health Conference in January 2015 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 second class of 50 medical students (graduating Class of 2018), the UCR School of Medicine Admissions Committee evaluated approximately 5,400 applications. More than 2,200 applicants were invited to submit and completed secondary applications. A total of 257 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 will 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 2014 entering class, 98 applicants were offered admission to the UCR medical school (as well as other medical schools), which enabled the school to fill the 50 available seats. This is a very high matriculation rate for a new school – even for an established school – strongly suggesting students chose UCR based on its unique mission.

B. Medical Student Enrollment 2014-15

In its first two years of operation, the medical school has recruited two classes of high-quality, diverse students, all of whom are California residents. The current first-year class composition of 50 students is 52% female, 20% self-identified as being underrepresented in medicine (Hispanic/Latino, African American, and Native American), and nearly half identified as disadvantaged (English is a second language, first in family to complete college, socio-economically and/or educationally disadvantaged, and/or grew up in a medically underserved community). Forty-six percent of the class comes from socioeconomically and/or educationally disadvantaged backgrounds. In contrast, nationally three-quarters of medical students come from the two highest quintiles of family incomes. Twenty-seven of the students in the current first-year class speak Spanish fluently as their native language or an additional acquired language. Fifty-eight percent of the class has ties to Inland Southern California – because they grew up or attended high school in the region, earned their bachelor’s degree at UCR, or have family ties to the region.

Demographic characteristics are illustrated in the table that begins on the next page.

Race and Ethnicity for 2014 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	18	12	14	9
Mexican American/Hispanic	11	3	9	4
African American	3	1	5	2
Native Hawaiian/Pacific Islander	0	0	0	0
White	12	4	13	8
No response	3	2	0	0
Other	5	4	2	1
Multi-Race	0	0	2	0
Totals	52	26	45	24
TOTAL ENROLLMENT CLASS OF 2018: 50 Students				

Notes: Admission and matriculation data was analyzed from students' self-reported application information; Filipino was included with Asian and other Hispanic with Mexican American.

Among the total enrollment of 100 medical students, 20% are underrepresented in medicine (self-identified as Hispanic/Latino, African American or Native American). Forty percent come from a socioeconomically or educationally disadvantaged background; 20% are English as a second language students; 24% completed high school in Riverside, San Bernardino or Imperial counties; and 16% are the first in their families to complete a bachelor's degree. 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 school 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

Providing leadership for faculty recruitment is the Associate Dean for Academic Affairs, 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 initiatives and for coordination with relevant systemwide initiatives. Given the mission of the School and the desire to see the faculty, as well as the student body, reflect the cultural, socioeconomic, and ethnic diversity of the region the medical school aims to serve, all faculty searches seek to attract as many faculty applicants underrepresented in medicine as possible. This has been achieved through the use of advertising in publications aimed at such faculty, by use of contacts within professional organizations, and by word-of-mouth or written encouragement to known potential candidates, as well as by advertising positions in widely-read journals such as *Science*, *Nature*, and *Academic Medicine*, and to professional organizations such as the Society of General Internal Medicine, the Association of American of Medical Colleges, the Society of Teachers of Family Medicine, and

the Association of Program Directors in Internal Medicine. 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.

UCR has a Vice Provost for Faculty Equity and Diversity to help UCR recruit and retain high-quality, diverse faculty members. In conjunction with the Office of Faculty and Staff Affirmative Action, the Vice Provost helps search committees and departments develop a diverse pool of applicants for positions, and identify highly-qualified candidates. The Vice Provost also offers assistance with reducing barriers for hiring members of underrepresented groups and suggests ways that biases in the recruitment and treatment of faculty members can be overcome. These services include a “toolkit” to assist campus units and search committees implement best practices for faculty recruiting at the following URL:
http://academicpersonnel.ucr.edu/policies_and_procedures/Academic%20Hiring%20Toolkit.pdf.

Retention of a diverse faculty is enhanced by faculty mentoring programs. Although mentors among the medical school faculty are appointed, experience has shown that mentees often feel more comfortable discussing career issues with faculty outside of their home personnel unit. For this reason, faculty are encouraged to join mentoring programs on the general campus. There are two programs on campus appropriate for young medical faculty, one operated through the Vice Provost for Academic Personnel (described at <http://fmp.ucr.edu/>) and another operated through the women’s faculty association. Both mentoring programs are intended to help new faculty members adjust to their new environment.

The School of Medicine also aims to attract and retain a diverse and talented 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 campuswide 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 in the School of Medicine.

UCR School of Medicine Faculty and Staff Headcounts by Ethnicity and Gender (Self-Reported)*						
Ethnicity	Faculty**			Academic and Administrative Staff		
	Male	Female	Total	Male	Female	Total
American Indian or Alaskan Native	0	0	0	0	0	0
Black/African-American	6	3	9	1	15	16
Chinese/Chinese-American	7	3	10	5	1	6
Filipino/Pilipino	0	2	2	1	4	5
Hispanic	1	0	1	0	1	1
Japanese/Japanese-American	0	0	0	1	2	3
Latin American/Latino	1	1	2	1	7	8
Mexican/Mexican-American/Chicano	2	0	2	8	22	30
Other Asian	12	4	16	0	2	2
Other Spanish/Spanish-American	0	0	0	0	3	3
Pakistani/East Indian	10	7	17	3	4	7
Unknown	2	0	2	1	0	1
White	33	20	53	15	38	53
TOTAL	74	40	114	36	99	135

*Statistics current as of February 26, 2015. Does not include volunteer clinical faculty or student employees.

**Includes administrative leaders who also hold faculty appointments.

Additionally, the School of Medicine has approximately 250 “volunteer” clinical faculty. Volunteer clinical faculty from the community have a variety of responsibilities teaching medical students and residents. These responsibilities include precepting medical students, 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

The UCR School of Medicine has expanded upon a series of student pipeline programs that focus on increasing access to medical school for socioeconomically and/or educationally disadvantaged students. These pipeline programs, reaching a total of 1,120 students in 2014, are composed of activities designed to improve the competitiveness of 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. Working in partnership with community stakeholders, the medical school intends 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. The importance of drawing students from the communities surrounding UCR is underscored by a study completed by researchers at the UCLA medical school and published in the *American Journal of Public Health*. The study found that medical schools and clinics could increase the number of primary care physicians in medically underserved areas by selecting and encouraging students from these communities, as these students demonstrate a strong identification with and sense of responsibility to their communities. 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 new 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 50 seats each year are filled by students who attend UCR for at least six consecutive quarters and complete their bachelor's degree at UCR.

Several external funders have and are supporting the school's medical education pipeline programs, including Kaiser Permanente Southern California, the Desert Healthcare District, and the California Wellness Foundation. In addition to pursuing additional extramural funding to support student pipeline programs, the medical school will continue to devote core personnel resources to coordinate these programs. The current programs are organized into 10 major initiatives (each described below) beginning with elementary school outreach and continuing through postbaccalaureate premedical education.

- **K-8 Outreach Program:** Working closely with the leadership of the San Bernardino Unified School District, the medical school has crafted a unique vertical mentoring program which involves UCR medical and undergraduate students mentoring 12 high school students at San Bernardino High School (SBHS), who in turn mentor 20 middle school students at Arrow View Middle School. These 32 students will in turn mentor a class of 35 elementary students at Riley Elementary School. These schools are feeder schools to each other, which helps create a unique vertical mentoring relationship. The program seeks to encourage primary and secondary school students and their families to explore, experience, and demystify higher education and professional medical careers. A community advisory board consisting of parents, SBHS alumni, and administrators has been formed.
- **Mini Medical School:** This concept, initiated by the University of Maryland School of Medicine and in place at many medical schools, utilizes medical students and faculty inviting members of their communities (barber shops, churches, etc.) to come to the medical school to learn about diseases and public health. The difference with the UCR medical school approach is that students go into the community, rather than requiring the community to come to campus. Students from the undergraduate, postbaccalaureate, and medical school levels collaborate on presentations on such topics as specific medical problems or diagnoses and demonstrations on practical ways to shop for healthy food alternatives in the local neighborhood. Each team, typically fewer than 10 students, has either a medical student or a post-baccalaureate student on it to assist the undergraduate students. Faculty and medical residents offer the students feedback on the content of their presentations, prior to public demonstration. Currently, there are 236 students registered for 27 different topics. Students have presented at dozens of venues including health fairs, open houses, secondary schools, and after school programs.
- **Medical Leaders of Tomorrow:** This new program is a one-week residential activity in a UCR residence hall for 40 rising 10th graders each summer. The goal of the program is to stimulate interest in higher education and the healthcare field as a career goal. 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. Students also receive presentations on preparing for college admission, careers in the healthcare field, and structured recreational activities. In addition, students take part in interactive activities such as a visit to a healthcare facility, medical simulations, and science experiments. The program seeks to increase student awareness and interest in healthcare careers and expand student awareness and interest in higher education. A component for parents/guardians includes presentations on applying to college, financial aid, and parental involvement.

- **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 composed of UCR undergraduate health science students and medical students visit these students in their classrooms, presenting information on college life, health careers, and medical school, and facilitating problem-based learning activities. The program, which in 2014 reached 690 students at high schools in the region, aims to improve understanding of the college admission process, increase interest in pursuing a postsecondary education, and raise student awareness of careers in medicine/health.
- **Future Physician Leaders:** 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. Begun in the Coachella Valley, the program has since established two additional branches – in San Bernardino/Riverside in 2012 and in Temecula in 2014. In 2014, a total of 179 students participated in the program, a 53% increase since 2012. The health education projects reached more than 2,000 community members.
- **Community College Outreach Program:** This program represents outreach 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, nearly half of the 91 transfer student alumni from this program have been admitted into postgraduate health related careers, including 21 in M.D. medical schools and 6 in D.O. medical schools. Transfer alumni have also been successful in gaining admissions to other professional programs, including pharmacy, optometry, and dental schools. The medical school plans to expand efforts to recruit more transfer students to UCR and into the Medical Scholars Program for academic, career, and personal development support. Plans are underway to craft an enhanced pipeline specifically between UCR and Riverside City College, for better transfer success of students from this large (19,000 students) local community college.
- **FastStart:** The *FastStart* program, established in 1999, is an intensive, five-week summer residential program designed for 36 incoming UCR freshmen who aspire to medical and other science-based careers. Preference is given to students identified as coming from a

disadvantaged background. Participants live on campus in residence halls, and 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. In fact, 100% of the 2013 cohort of *FastStart* students passed their first year science courses in 2013-14, and were advanced into the second year in the science college for 2014-15 (in contrast non-*FastStart* science students have on average about an 80% retention rate after one year in this science college). Even more importantly, *FastStart* students are almost twice as likely to graduate from UCR with a science degree as non-*FastStart* students.

- **Medical Scholars Program (MSP):** Established in 2004, this program is 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, both for summer and academic year terms, which match undergraduate students with faculty mentors. 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 412 MSP alumni, 295 (71.6%) graduated with science degrees (compare this to 36% for non-MSP science majors who graduated with science degrees), including 166 underrepresented in medicine students who graduated with a science degree. A significant number of these students continued their training in health or science related graduate programs. In fact, over the past 10 years of the program, 79 MSP alumni are in, or graduated from, allopathic M.D. medical schools and another 12 in D.O. medical schools. It is important to point out that 60% of the MSP cohort is from under-represented in medicine (URiM) populations, and their success rates of graduation and placement into health or science related graduate programs are equivalent to that of their non-URiM counterparts.
- **Premedical Postbaccalaureate Program:** This is a one-year academic program for motivated college graduates from educationally and socioeconomically disadvantaged students 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. Eight of the 10 students from the 2013-14 cohort met or exceeded the science GPA contract of ≥ 3.50 . This is critical as the School has an excellent record of placing students who meet the science GPA contract of ≥ 3.50 into medical school (the historic rate is 87.5%).

- **Diabetes Health Coaches:** The program provides health education and motivational support for patients suffering from this chronic illness in three different clinics under the auspices of Riverside County Regional Medical Center (RCRMC). This new program was piloted with physicians, nurses and nutritionists at RCRMC in the fall of 2013 with eight coaches, all of whom are bachelor of science graduates who are in their gap year applying for medical school or other health profession school. The students spend at least eight hours per week (two shifts of four hours each) at each clinic and are committed for at least one full academic year. This pilot program worked quite well and a third clinic was added in fall of 2014. There are also opportunities to expand the health topics considered (e.g., asthma, obesity, and hypertension). Since its inception, the Diabetes Health Coaches have worked with more than 500 patients.

Finally, the School of Medicine operates 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.

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 and will remain vital for fully developing the school. During the last two fiscal years, the State funding was used to open the new medical school, and to expand the educational infrastructure to continue building the second-, third-, and fourth-year curriculum. These components are necessary for a new LCME-accredited medical school to ultimately achieve full accreditation. This 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).

Toward the mission of training the physician workforce for the Inland Southern California region, developing and expanding the strategies and program opportunities for new pipeline programs has been a priority. Extramural support has been secured from various agencies to build and grow new programs and strengthen the pool of qualified applicants in the region.

State funding has also been critical for the school to continue building the infrastructure necessary to transition from the prior two-year program in partnership with UCLA to the four-year, fully independent UCR School of Medicine. Information systems, including application portals to the national application system for medical schools (AMCAS) and new linkages to central campus systems such as the registrar, student systems, curriculum management systems, and others were needed. While systems development was sufficient to successfully enroll the first two classes of students, it is not completed and work continues.

Recognizing the importance of expanding and linking transition of medical school training to Graduate Medical Education (GME) residency training, the School has been working diligently with its hospital partners to expand residency training options, with the goal of having more first-year residency slots than there are graduating medical school trainees. The planned expansion is detailed in Section VI below. As numerous workforce studies have validated, there is a high correlation between the communities where physicians ultimately live and practice medicine and the communities where they completed their residency training. For this reason, a key strategy for the UCR School of Medicine will be to continue to develop new GME training slots available in its region.

The operating budget appears on the following page.

School of Medicine Operating Budget FY 14/15 - Projected		
(\$ in 000's)		
Revenue by Fund Source		
Classification	Amount	% of Total
UCR Support	\$30,762	54.20%
UCR Core Support	15,000	
UCR Core Support Carryforward	8,793	
Biomedical Sciences UCR Funding	3,422	
UCR Supplemental Support	2,000	
Student Tuition - Professional Fees (net of financial aid)	1,547	
Clinical	\$14,246	25.10%
Clinical Affiliations	6,373	
Professional Fees	1,000	
GME Affiliations	5,200	
OSHPD (psych residency) grant	338	
Desert Regional Medical Center Clinical Start-Up	435	
Desert Health Care District (Net of Pipeline Pgms)	900	
Research	\$6,094	10.74%
Sponsored Research (direct costs)	5,548	
Sponsored Research (indirect cost recovery)	512	
Foundation Gifts	34	
Gifts/Other Funding	5,655	9.96%
First 5 Contract	1,131	
Kaiser Grant (net of scholarships)	1,000	
Riverside County	1,500	
Gifts	1,874	
Desert Health Care District Pipeline Programs	100	
Pipeline Programs/Foundation Gifts	50	
Total Revenue	\$56,757	100.00%
Expenses by Mission		
Clinical	\$15,680	33.55%
Payroll (Salary & Benefits)	13,091	
Non-Payroll	2,589	
Graduate Medical Education	\$6,416	13.73%
Payroll (Salary & Benefits)	5,774	
Non-Payroll	642	
Research	\$13,215	28.28%
Payroll (Salary & Benefits)	6,400	
Non-Payroll	4,593	
Initial Comp. Expenditures	2,222	
Student Affairs/Education	\$5,169	11.06%
Payroll (Salary & Benefits)	4,125	
Non-Payroll	1,044	
SOM Administration & Startup	\$6,254	13.38%
Payroll (Salary & Benefits)	5,223	
Non-Payroll	1,031	
Total Expenses	\$46,734	100.00%
Balance Committed to Faculty Start-up Packages	\$10,023	

B. Capital Budget

The 2014-15 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 new 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 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. It 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). The School of Medicine Education Building provides educational and administrative space, including a remodeled anatomy lab, a new medical simulation laboratory, and expanded space for small-group problem-based learning sessions and Objective Structured Clinical Examinations (OSCEs). Financial resources to build out the simulation and learning center with state-of-the-art curricula and content capture were enabled through UCR's portion of State-funded Telemedicine and PRIME Facilities. The School of Medicine has entered into a Memorandum of Understanding with the UCR Libraries to provide approximately 4,000 square feet of additional classroom and study space for medical student education.

Additional space for the medical school's student pipeline programs and student study and lounge space is provided in two triple-wide modular units and the Health Professions Advising Center occupies space in Pierce Hall. The School of Medicine anticipates planning during 2015-16 for renovation or replacement of the antiquated triple-wide modular units.

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 is concentrating initially on developing Graduate Medical Education in the primary care and short-supply specialties of general internal medicine, family medicine, primary care pediatrics, psychiatry, general surgery and OB/GYN. Programs are currently in place for all but OB/GYN, with more than 80 medical residents currently in training at affiliated hospitals. It is also important to note that the residents themselves have immediately expanded

access to medical care; each resident, on average, cares for about 1,000 patients per year under the supervision of an attending physician who is a member of the school's clinical faculty.

The UCR School of Medicine currently has 24 enrolled residents in a new internal medicine program, with residents training at Riverside County Regional Medical Center (RCRMC), St. Bernardine Medical Center in San Bernardino, and Kaiser Permanente Riverside Medical Center. At full maturity, the program will have 36 residents. Effective July 1, 2014, the medical school assumed sponsorship of the general surgery program (currently 24 residents, training at RCRMC and Kaiser Permanente Riverside) and family medicine program (36 residents, training at RCRMC). Also effective July 1, 2014, the school began a new residency program in psychiatry in partnership with the Riverside County Department of Mental Health; currently, this program has four first-year residents and at full maturity will have a total of 16 residents. A primary care pediatric residency "track" was also initiated in July 2014, in partnership with nearby Loma Linda University and RCRMC (four residents currently, 12 at full maturity in mid-2016). In July 2015, the school will start a second family medicine program, this one in partnership with Desert Regional Medical Center in Palm Springs. It will enroll eight residents each year; therefore, the three-year training program will have a total of 24 residents in mid-2017. Planning has begun for a new Internal Medicine residency program in partnership with Desert Regional Medical Center in Palm Springs, for a 30-resident program.

The medical school has been successful in securing extramural funding to partially support the start-up of several programs. First 5 Riverside is partially supporting the primary care pediatrics track and the Office of Statewide Health Planning and Development is partially supporting the psychiatry residency. The UCR School of Medicine does not yet have medical school graduates and clinical placements to track. This data will be described in subsequent reports.

VII. FACULTY RESEARCH ACTIVITIES

The UCR School of Medicine is building 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. With research expertise spanning the range from neuroscience to endocrinology to inflammation, medical school faculty are making progress on autism spectrum disorders, traumatic brain injury, Alzheimer's disease, obesity, fertility, inflammatory bowel disease, and parasitic infections, as well as safe and effective vaccines. Consequently, faculty have been successful competing for funding from diverse sources including the National Institutes of Health, the Department of Defense, and private foundations.

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. At the beginning of the 2014-15 academic year, the program enrolled 15 students (26% from underrepresented racial and ethnic groups and 53% from disadvantaged backgrounds), with two students graduating in December 2014. Among the research faculty in biomedical sciences, 53% are women, compared to the national average of 38%.

The region's medical needs will drive the growth and expansion of important biomedical research to improve human health. Expanded basic science research will be enhanced by establishing clinical and health services research programs that emphasize population health, preventive medicine, health outcomes, health care disparities, and development of scientific knowledge to spur innovations in health care delivery. Consistent with UCR's longstanding land grant mission of addressing regional needs, the medical school will also focus on diseases and health issues specific to the region and the ethnic and cultural groups residing in Inland Southern California – a focus consistent with the medical school's mission. This is responsive to the relatively poor health outcomes in the region, in such areas as deaths due to coronary heart disease and diabetes, for instance.

The framework for addressing this aspect of the mission is the Center for Healthy Communities, which was established in 2014 with the appointment of a nationally recognized faculty member with expertise in community-engaged research. The Center for Healthy Communities promotes research to improve the health of the culturally and economically diverse communities of Inland Southern California, especially those who are medically underserved. The center fosters collaborations between UCR faculty, community-based organizations, grass-roots community leaders, and investigators at RAND and UCLA. Although the center is housed in the UCR School of Medicine, the intention is for it to be of benefit to all UCR faculty and programs and to community-based partners.

VIII. Conclusion

With \$15 million in ongoing State funding for the UCR School of Medicine, UC Riverside has successfully established the state's first public medical school in more than four decades and laid the foundation for future growth. It has, in fact, done more than open a medical school; it has established the footing for a comprehensive medical education pipeline that extends from the K-12 schools in Inland Southern California through residency training in the region. The UCR medical school has undertaken this expanded portfolio because it is critical for meeting its mission to retain as many of the physicians it trains as possible in a region of California with a severe physician shortage. The student pipeline programs before medical school and the graduate medical education after medical school are designed to capitalize on the strong propensity of physicians to practice in the geographic locations where they grow up or finish residency training.

University of California
Budget Analysis and Planning
UCOP-1111 Franklin Street, 6th Flr.
Oakland, CA 94607

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