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April 4, 2016

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 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)
The Honorable 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. Daniel Alvarez, Secretary of the Senate
Mr. Michael Cohen, Department of Finance

Mr. Jeff Bell, Department of Finance
Mr. Christian Osmena, Department of Finance
Ms. Maritza Urquiza, Department of Finance
Ms. Tina McGee, Legislative Analyst's Office
Mr. Mac Taylor, Legislative Analyst's Office
Mr. Jason Constantouros, Legislative Analyst's Office
Provost and Executive Vice President Aimée Dorr
Executive Vice President and Chief Financial Officer Nathan Brostrom
Executive Vice President John Stobo
Senior Vice President Nelson Peacock
Associate Vice President Cathryn Nation
Associate Vice President Debora Obley
Associate Vice President and Director Steve Juarez
Executive Director Jenny Kao
Executive Director Kieran Flaherty
Director David Alcocer
Manager Bruce Kennedy
Executive Advisor Marsha Sato

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

April 2016

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),

“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 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. 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, adopted in June 2013, 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. Currently, the UCR medical school is preparing for the final step to full accreditation by the LCME (anticipated in 2017), the status currently held by UC’s five other, well-established medical schools. In summer 2015, Dean Olds resigned and leadership of the school was assumed by Interim Dean Neal L. Schiller, Ph.D., who also holds the title of Senior Associate Dean for Student Affairs. Recruitment of a permanent Dean is nearing completion as of this writing.

At the beginning of the 2015-16 academic year, the UCR School of Medicine had enrolled a total of 150 medical students in the first three years of medical school, 15 Ph.D. students in biomedical sciences, and more than 110 medical residents in the specialties of family medicine, general internal medicine, general surgery, psychiatry, and primary care pediatrics. As of this writing in spring 2016, the medical school is admitting its fourth class, planned for 60 medical students, which will start the program in August 2016. This will represent the first enrollment expansion of the UCR School of Medicine, with additional expansions contemplated in future years.

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 thus focus 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 in one of the six specialties referenced previously. 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 24 students in the first three 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 three scholarships, for students interested in practicing pediatrics in Riverside County. A Riverside couple has funded three scholarships, a real estate firm has funded a scholarship, 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 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 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 (GME) 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 yearly attend a variety of medical student recruitment events, 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 350 workshops presented to students interested in the health professions; the conference draws approximately 8,800 students. The School's Senior Associate Dean for Student Affairs (also the current Interim Dean) presented at the local Medical and Pre-Health Conference in January 2016 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 third class of 50 medical students (graduating Class of 2019), the UCR School of Medicine Admissions Committee evaluated approximately 5,600 applications. More than 2,600 applicants were invited to submit and completed 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 mission of the UCR School of Medicine. For the Class of 2019, 103 applicants were offered admission to the UCR medical school (as well as other medical schools), to fill the 50 available seats. This is a very good matriculation rate for a new school – even for an established school – strongly suggesting students chose UCR based on its unique mission.

During the 2014-15 admissions cycles, the School of Medicine initiated a Conditional Admission Program for promising UCR undergraduates who would benefit from an extra year of preparation to apply to medical school. Selected students enter the school's Premedical Postbaccalaureate Program in which they complete a full year of upper division UCR science coursework and a preparatory program for the Medical College Admission Test (MCAT). One member of the entering 2015-16 class was conditionally admitted in 2014-15 and we anticipate one member of the 2016-17 entering class will come from the conditional admission program.

The school also instituted an Early Admissions Program in spring 2015. Only available for applicants to the Thomas Haider Program at the UCR School of Medicine (aforementioned 24 seats), this program is designed to accept the top applicants early before they apply to other

medical schools and commit them to UCR. Applicants are required to submit a full application, have strong academics (particularly in the sciences) but do not need to have completed the MCAT, and participate in a modified MMI. A special admissions subcommittee then determines whether they are acceptable as future medical students in the School of Medicine. These students are typically in their junior year at UCR, and will need to complete their senior year before matriculating. The School of Medicine was able to recruit eight outstanding UCR Haider program applicants this way in the spring of 2015 and they will enter the medical school class starting August 2016. Medical school leadership very pleased at the quality of the students recruited through this process and intends to continue this practice each year.

B. Medical Student Enrollment 2015-16

In its first three years of operation, the medical school has recruited three classes of high-quality, diverse students. The current first-year class composition of 50 students is 54% female, 40% self-identified as being underrepresented in medicine (12 Hispanic/Latino, seven African American, and one 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-eight percent of the class come from socioeconomically and/or educationally disadvantaged backgrounds, in contrast to the national trend that three-quarters of medical students come from the two highest quintiles of family incomes. Sixty-six 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 following table.

Race and Ethnicity for 2015 Entering Class of the UCR School of Medicine (Self-Reported)				
	Admits Female	Matriculants Female	Admits Male	Matriculants Male
American Indian/Alaska Native	0	0	1	1
Cuban	0	0	0	0
Asian	21	7	12	8
Mexican American/Hispanic	15	5	15	7
African American	9	6	4	1
Native Hawaiian/Pacific Islander	0	0	0	0
White	8	3	7	4
No response	5	3	0	0
Other	4	3	2	2
Totals	62	27	41	23
TOTAL ENROLLMENT CLASS OF 2019: 50 Students				

Notes: Admission and matriculation data was analyzed from students’ self-reported application information; Filipino was included with Asian.

Among the total enrollment of 150 medical students, 26% are underrepresented in medicine, 42% come from a socioeconomically or educationally disadvantaged background, 16% are English as a second language students, 58% have ties to Inland Southern California, and more than 18% 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 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

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 and affirmative action 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 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	1	1
Black/African-American	11	5	16	6	16	22
Chinese/Chinese-American	15	4	19	13	10	23
European	6	2	8	0	2	2
Filipino/Pilipino	0	3	3	2	7	9
Hispanic	1	0	1	0	0	0
Japanese/Japanese-American	1	0	1	1	4	5
Korean/Korean-American	0	1	1	0	0	0
Latin American/Latino	2	2	4	2	12	14
Mexican/Mexican-American/Chicano	5	2	7	12	37	49
Middle Eastern	1	2	3	1	0	1
Other Asian	9	8	17	10	14	24
Other Spanish/Spanish-American	0	0	0	1	1	2
Pakistani/East Indian	15	10	25	14	18	32
Unknown	5	1	6	1	1	2
White	45	19	64	39	61	100
TOTAL	116	59	175	102	184	286

*Statistics current as of February 22, 2016. 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 350 community-based clinical teaching faculty. These faculty members 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 continues to expand upon a series of student pipeline programs focusing on increasing access to medical school for socio-economically and/or educationally disadvantaged students. These pipeline programs, reaching approximately 1,100 students, are comprised 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 in 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 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 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. Students admitted to the Haider Program will complete all four years of medical school at UCR, with the M.D. degree awarded by UC Riverside.

Several external funders have and are supporting these initiatives, including Kaiser Permanente Southern California, The California Wellness Foundation, the Desert Healthcare District, and the Howard Hughes Medical Institute, as well as a number of generous private donors. 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 high school students at San Bernardino High School (SBHS), who in turn mentor middle school students at Arrow View Middle School. These students will in turn mentor a class of 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 version 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 less than 10 students, has either a medical student or a post-bac 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. Students have presented at dozens of venues including health fairs, 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 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 comprised of UCR undergraduate health science students and medical students visit these students in their classrooms presenting information on college life, health careers, medical school, and facilitating problem-based learning activities. The program, which reaches nearly 700 students from 10 high schools in the region, 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. Begun 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 FPL each year is more than 170 students and over the last three years, the health education projects created by FPL

students have been presented to more than 3,000 community members in Inland Southern California.

- **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 six 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. For the 2013 *FastStart* cohort, first time pass rates in chemistry and calculus classes are 100%, and for the 2014 cohort, first time pass rates in chemistry is also 100% while calculus pass rate is 87% (the 2015 cohort is in its second quarter of classes at UCR as of this writing). *FastStart* students are strongly encouraged to join the Medical Scholars Program (MSP) described below and, for these three cohorts, 100% of *FastStart* participants who asked to join MSP have been accepted.
- **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 matches 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. There were 53 graduates in 2013, 56 graduates in 2014 and 65 graduates in 2015. Since 2004 when MSP was initiated, the program has worked with almost 600 students, and has an overall graduation rate of 88%. Considering that MSP works exclusively with socioeconomically and/or educationally disadvantaged students, most coming from under-resourced high schools, the first in their family to attend college, and overall >60% under-represented in medicine, this graduation rate is extraordinary. Finally, the program has placed almost 100 MSP students into medical schools over the past seven years.

- **Premedical Postbaccalaureate Program:** This is a one-year academic program for motivated college graduates from educationally and socio-economically 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. Each of the selected students meets disadvantaged criteria, states intention to address the needs of medical underserved populations, and 67% are underrepresented in medicine. Success of this program is measured by matriculation into medical school, either the UCR School of Medicine or other medical schools. To date, 87.5% of participants in the Premedical Postbaccalaureate Program who have applied to medical school have been admitted, and 71% of the accepted students are underrepresented in medicine.
- **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 the county's Riverside University Health System-Medical Center (RUHS). This new program was piloted with physicians, nurses and nutritionists at RUHS in the fall of 2013 with eight coaches, all of whom were bachelor of science graduates 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 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 1,000 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. 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 and will remain vital for fully developing the school. During the last three fiscal years, the state funding was used to open the new medical school, and to expand the educational infrastructure to fully build the M.D. curriculum. These components are necessary for a new LCME-accredited medical school to ultimately achieve full accreditation, which will be sought in the 2016-17 academic year. Infrastructure development includes 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 School of Medicine is retaining an encumbered balance held in reserve to fund initial complements for recently recruited faculty that will span and be expended over several fiscal years as well as capital improvements. The initial complement commitments will be expended for laboratory set-up, lab personnel, and support for research programs of the new biomedical and clinical faculty. It will also support the establishment of the school's clinical enterprise, which is expected to provide additional support the medical school's educational activities when fully established.

Toward the mission of training the physician workforce for the Inland Southern California region, expanding pipeline programs has been and will remain 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, however the School of Medicine will continue to fund the leadership and key staff responsible for these programs.

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, and curriculum management systems were needed, as was information technology staff to support the rapidly growing educational, research and clinical missions.

Recognizing the importance of expanding and linking transition of medical school training to Graduate Medical Education (GME) residency training, the School has continued to work 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 current status and planned expansion of GME is detailed in Section VI below. As numerous workforce studies have validated, there is a high correlation of physicians living and practicing in the communities in which 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 below.

School of Medicine Operating Budget FY15/16 - Projected
(\$ in 000's)

Revenue by Fund Source		
Classification	Amount	% of Total
UCR Core Support	33,567	46.47%
UCR Core Support	15,000	
Biomedical Sciences UCR Funding	3,712	
Health Professions Advising Center Funding	175	
UCR Supplemental Support	2,000	
SOM Medical Student Application Fee	179	
Student Tuition (net of financial aid)	2,024	
2014-15 UCR Core Support Carryforward (encumbered)	10,477	
Clinical	\$24,476	33.88%
Clinical Affiliations	7,520	
Professional Fees	7,000	
GME Affiliations	7,399	
Outside Professional Income & Exhibitor Fees	232	
OSHPD (psychiatry residency) grant	1,088	
Desert Regional Medical Center Clinical Start-up	537	
Desert Health Care District (net of Pipeline Pgms)	700	
Research	\$7,715	10.68%
Sponsored Research (direct costs)	7,080	
Sponsored Research (indirect cost recovery)	635	
Gifts/Other Funding	\$6,475	8.96%
First 5 Contract	1,100	
Riverside County Support Carryforward	1,400	
Kaiser Permanente Grant	1,450	
Gifts	2,464	
Other Sales & Service	11	
Pipeline Programs/Foundation Gifts	50	
Total Revenue	\$72,233	100.00%

Expense by Mission		
Clinical	\$19,654	35.30%
Payroll (Salary & Benefits)	16,613	
Non-payroll	3,041	
Graduate Medical Education	\$8,613	15.47%
Payroll (Salary & Benefits)	7,173	
Non-payroll	1,440	
Research	\$15,058	27.04%
Payroll (Salary & Benefits)	7,938	
Non-payroll	4,956	
Initial Comp. Expenditures	2,164	
Education/Student Affairs	\$6,273	11.27%
Payroll (Salary & Benefits)	4,826	
Non-payroll	1,447	
SOM Administration & Startup	\$6,086	10.93%
Payroll (Salary & Benefits)	5,217	
Non-payroll	869	
Total Expense	\$55,684	100.00%
Balance committed to faculty start-up and capital improvements	\$16,549	

B. Capital Budget

The 2015-16 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 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 (note: this is expected to occur in 2016-17). 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 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. Growth of the faculty in the Division of Clinical Sciences and of administrative staff has necessitated the medical school to utilize a 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. A portion of the balance shown in the table above will enable the School of Medicine to complete the first-floor interior of the School of Medicine Research Building and to expand medical student study space.

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.

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 (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 are currently in place for all but OB/GYN, with more than 110 medical residents currently in training at affiliated hospitals.

The UCR School of Medicine currently has 36 enrolled residents in an internal medicine program, with residents training at the county's Riverside University Health System-Medical Center, St. Bernardine Medical Center in San Bernardino, and Kaiser Permanente Riverside Medical Center. Another hospital affiliate, Riverside Community Hospital, has secured accreditation to begin a residency program in internal medicine, with the UCR School of Medicine providing teaching faculty. This program will have a total of 55 residents by 2018. In the current academic year, the School of Medicine also launched a family medicine residency program in partnership with Desert Regional Medical Center in Palm Springs, a program currently with eight residents and which will have a total of 24 in July 2017. These programs join the existing family medicine and general surgery programs at the Riverside University Health System-Medical Center, a psychiatry program in partnership with the Riverside County Department of Mental Health, and a primary care pediatrics residency "track" in partnership with nearby Loma Linda University and Riverside University Health System-Medical Center. Finally,

the School of Medicine is seeking accreditation to begin a residency training program in obstetrics/gynecology anticipated to open in July 2017 at Riverside Community Hospital.

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 is partially supporting the psychiatry residency. The family medicine program located in Palm Springs and the internal medicine program have been awarded funding from the Song-Brown Program administered by OSHPD. 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 to cancer imaging, 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. Medical school faculty have been successful competing for research funding from diverse sources including the National Institutes of Health, the Department of Defense, and private foundations. To cite one example in the current academic year, a three-year \$1.3 million grant from the U.S. Department of Defense was awarded to faculty members from the medical school and UCR psychology department to improve the understanding of neurodevelopmental problems in Fragile X Syndrome.

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 15 students.

The region's medical needs will drive the growth and expansion of important biomedical research to improve human health. Expanded basic science research is being 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 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. In summer 2015, the center secured its first major extramural funding, a \$250,000 contract from the Patient-Centered Outcomes Research Institute (PCORI) for a community engagement project aimed ultimately at improving the health of Latino residents of the city of Riverside through partnered research.

VIII. Conclusion

With \$15 million in ongoing state funding for the UCR School of Medicine and additional 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. In addition to establishing the four-year M.D. curriculum, the school has built the foundation 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.

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