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June 16, 2011

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

Dear Senate Member Leno:

Pursuant to Item 6440-001-0001, Provision 14, of the 2010 Budget Act, enclosed is the University of California's report on the Progress of the School of Medicine at the University of California, Riverside.

With best wishes, I am,

Sincerely yours,

+ Mark G. Yudof

## Enclosure

cc: M:

Mr. Gregory Schmidt, Secretary of the Senate

Ms. Jody Martin, Joint Legislative Budget Committee

Ms. Tina McGree, Legislative Analyst's Office

Ms. Sara Swan, Department of Finance

Mr. Dotson Wilson, Chief Clerk of the Assembly

Ms. Amy Leach, Office of the Chief Clerk of the Assembly

Ms. Diane Anderson, Legislative Counsel Bureau

Provost and Executive Vice President Lawrence Pitts

Senior Vice President John Stobo

Vice Provost Russell Rumberger

Executive Vice President Nathan Brostrom

Vice President Patrick Lenz

Associate Vice President and Director Steve Juarez

Associate Vice President Debora Oblev

Associate Vice President Cathryn Nation

Executive Director Jenny Kao

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

May 2011 Legislative Report

An investment in UC pays dividends far beyond what can be measured in dollars. An educated, high-achieving citizenry is priceless.

### UNIVERSITY OF CALIFORNIA

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

The following report is submitted by the University of California in compliance with Item 6440-001-0001, Provision 14, of the 2010 Budget Act, which states in part:

"14. **UCR School of Medicine: funding, recruitment, hiring, and outcomes**Of the funds appropriated in Schedule (1), \$10,000,000 is for University of
California Riverside (UCR) Medical School startup costs. Should the state receive

California Riverside (UCR) Medical School startup costs. Should the state receive additional federal funds for medical purposes, the federal funds shall be used instead of General Fund moneys for this purpose, to the extent allowed by law.

- (b) No later than 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 UCR School of Medicine. Specifically, the report shall include, but not be limited to, information consistent with the published mission and vision for the UCR School of Medicine in 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 fund source, and an explanation of how such funding affects base funding for other university purposes. 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

The developing School of Medicine at the University of California, Riverside was approved for establishment by the University of California Board of Regents in July 2008 and received its initial start-up State funding in the Budget Act of 2010, adopted and signed in October 2010. As the first public medical school to be established in California in more than 40 years, the UCR School of Medicine has the mission to expand and diversify the physician workforce in the rapidly growing and diverse Inland

Southern California area and to develop research and health care delivery programs that will improve the health of underserved populations living in the region.

Establishment of the operational and capital infrastructure of the UCR medical school is well underway in preparation for its planned opening in August 2012, and start-up funding is crucial to meeting this aggressive timeline. UCR's existing two-year medical education program in partnership with UCLA – the UCR/UCLA Thomas Haider Program in Biomedical Sciences – is the platform for UCR's medical school. The program currently instructs 28 first- and 28 second-year medical students at UCR (which includes four UCLA/UCR PRIME students per year), after which students transfer to the David Geffen School of Medicine at UCLA to complete their third and fourth years and receive their M.D. degrees.

With founding Dean G. Richard Olds, M.D. in place, the UCR campus has thus far recruited and appointed most of the medical school leadership, completed one building and begun renovations on a second, achieved "candidate" status for preliminary accreditation by the Liaison Committee on Medical Education (LCME), signed affiliation agreements with the medical school's initial inpatient and outpatient training partners, and begun developing Graduate Medical Education residency training programs, with an emphasis upon primary care and specialty shortage areas.

**Leadership:** In addition to Dr. Olds and Phyllis A. Guze, M.D., the Senior Executive Dean, the medical school has appointed senior associate deans in the areas of education (Paul Lyons, M.D.), academic affairs (Craig V. Byus, Ph.D.), student affairs (Neal Schiller, Ph.D.), community engagement and partnerships (Raul Ruiz, M.D.), and finance and administration (Jocelyn Nakashige, M.A.). Mahendr S. Kochar, M.D. has been appointed Associate Dean for Graduate Medical Education to establish the medical school's initial residency programs. Recruitments are underway for an associate dean for clinical affairs and an associate dean for student affairs.

Capital Facilities: Construction on the first research building solely dedicated to the medical school has been completed. The School of Medicine Research Building will provide modern biomedical research laboratories and associated support space to house new faculty and their research groups. Three faculty recruitments are currently underway and anticipated to be completed in 2011. The scientific areas in which these faculty members are being recruited are population-based health outcomes/effectiveness research, the role of inflammation in the onset or progression of disease, and the molecular mechanisms of central nervous system neurological disease. Construction will also be undertaken to enlarge and renovate UCR's existing biomedical sciences teaching complex to accommodate expanded medical student enrollment in August 2012. This building, which currently houses the instructional facilities of the UCR/UCLA Thomas Haider Program in Biomedical Sciences, will become the School of Medicine Education Building, providing nearly 24,000 assignable square feet of space. This capital project will accommodate medical student enrollment of up to 80 students per class, or 320 students total once enrollment is fully built out.

Accreditation: Preliminary accreditation is required before the UCR School of Medicine can recruit its first class of medical students. Additionally, accreditation establishes eligibility for selected federal grants, including Title VII funding administered by the Public Health Service, and enables graduates to take the United States Medical Licensing Examination. A survey team of the Liaison Committee on Medical Education (LCME), the organization recognized by the U.S. Department of Education for accreditation of educational programs leading to the M.D. degree, conducted a site visit to UCR February 27 to March 2, 2011. The visit team's report of findings and recommendations will be submitted to the LCME, with a decision on preliminary accreditation anticipated in June 2011.

**Training partnerships:** Affiliation agreements for training of medical students in regional health care facilities have been executed with Riverside County Regional Medical Center, Riverside Community Hospital, the Riverside County Community Health Agency, Riverside Medical Clinic, and Desert Regional Medical Center. In addition, letters of intent have been secured with the Southern California Permanente Medical Group and the Borrego Community Health Foundation, the latter of which is a Federally Qualified Health Center that operates clinics in Riverside and San Diego counties.

**Graduate Medical Education:** As part of developing a comprehensive medical training program, the UCR School of Medicine will partner with hospitals in the region to establish new residency training programs. Within the next few years, it is anticipated that the medical school will be the sponsoring institution for training programs in internal medicine, family medicine, general surgery, internal medicine/pediatrics, pediatrics, obstetrics/gynecology, and psychiatry.

#### II. STUDENT MATRICULATION

Upon receiving preliminary accreditation from the LCME, the UCR School of Medicine will immediately begin accepting applications for the inaugural medical student class enrolling in August 2012. The UCR School of Medicine admissions process will use a holistic review of applicants to select outstanding future physicians who are most likely to fulfill the mission of the medical school to educate and retain a diverse physician workforce needed to help address the underserved patient care needs of the people of California and, in particular, the Inland Southern California region. The School of Medicine will benefit from the experience of the UCR/UCLA Thomas Haider Program in Biomedical Sciences, which in the fall of 2010 had an entering class with nearly 36 percent of the students self-identified as underrepresented in medicine.

The UCR/UCLA Haider Program annually admits 24 first-year medical students from among the campus' undergraduate student population. Since 2008, the UCR/UCLA Haider Program has enrolled an additional four students annually into the University of California's PRograms In Medical Education (PRIME), which aims to train leaders in medicine who will address policy, care, and research in health care for underserved populations. The five-year, dual-degree program leads to an M.D. and a master's degree in an area that complements the mission of the program (e.g., MPH, MBA, public policy, information technology). Students currently enrolled at UCR (UCR/UCLA Haider Program students and UCLA/UCR PRIME students) complete their first two years of medical training at UCR, then transfer to the David Geffen School of Medicine at UCLA to complete years 3 and 4. Establishment of the UCR School of Medicine will enable students to complete all four years of medical school at UCR. Because UCR does not yet have an entering class on which to report ethnicity and gender, tables illustrating the diversity of the UCR Haider and PRIME programs medical student 2010 entering class and for the entering classes of the previous four years appear below.

Race/ Ethnicity and Gender of 2010 Entering Class of UCR/UCLA Haider Program						
	Applicants Admits Matriculants		Applicants	Admits	Matriculants	
	Female	Female	Female	Male	Male	Male
American Indian/Alaska	1	0	0	1	0	0
Native	1	U	U	1	U	U
Cuban	1	1*	0	0	0	0
Asian	39	4	4	47	7	7
Mexican American***	3	2	2	6	2**	1
African American	6	1	0	7	3	3
Native Hawaiian/Pacific Islander	2	0	0	1	0	0

White	13	2	2	27	5	5
No response	13	0	0	11	1	0
Foreign	3	0	0	1	0	0
Multi-Race	0	0	0	1	0	0
Totals	81	10	8	102	18	16

<sup>\*</sup>Elected to enter UCLA/UCR PRIME and is currently in Year 1 at UC Riverside.

<sup>\*\*\*</sup>Two additional non-UCR Mexican American PRIME students chose to matriculate at UCR.

UCR/UCLA Thomas Haider Program in Biomedical Sciences							
Race/ Ethnicity of Matriculated Students, 2006-2010							
	2006	2007	2008*	2009*	2010*		
Asian	8	9	11	10	11		
Asian, White	1						
Black or African American	3			1	3		
Cuban			1		1		
Mexican American	3	3	4	4	6		
Multi-Race		1					
Native American							
Native Hawaiian or Other Pacific Islander		1					
No Response	2	1	4	1			
Other		2					
Puerto Rican				1			
White	7	7	8	11	7		
Total	24	24	28	28	28		
% Underrepresented in Medicine	25.0%	16.7%	17.9%	21.4%	35.7%		

<sup>\*</sup>Includes four UCLA/UCR PRIME students.

Ethnic groups underrepresented in medicine are: African American, Cuban American, Mexican American, Native American, Native Hawaiian/Pacific Islander, and Puerto Rican.

#### III. FACULTY AND ADMINISTRATION

Given the mission of the medical school and the desire to have faculty, as well as the student body, reflect the cultural, socioeconomic, and ethnic diversity of the region the medical school aims to serve, faculty searches will continue to endeavor to recruit from underrepresented groups in medicine. The Senior Associate Dean for Academic Affairs and Senior Associate Dean for Community Engagement and Partnerships will be responsible for advancement and timely completion of academically-related diversity and equal opportunity initiatives. The School of Medicine will also consult with UCR's Vice Provost for Faculty Equity and Diversity, who provides advice and assistance in developing broadly represented search committees toward developing the broadest pool of highly qualified applicants for available positions. 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. Retention of a diverse faculty will be enhanced by faculty mentoring programs. Although mentors among the medical school faculty will be 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 will be 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

<sup>\*\*</sup>One of these 2 students chose to enter UCLA/UCR PRIME and is currently enrolled at UCR.

the Women's Faculty Association. Both mentoring programs are intended to help new faculty members adjust to their new environment. Whether it is academe itself that is new, or simply the UCR campus and expectations for advancement and tenure (where appropriate), assistance from a well-respected mentor can be an invaluable supplement to the guidance and assistance that a dean, department chair or faculty mentor provides.

The following table illustrates the diversity of the faculty and administrative staff currently in the Division of Biomedical Sciences and School of Medicine. Other than the Associate Dean for Graduate Medical Education at 60%, and the Senior Associate Dean for Community Engagement at 30%, all other faculty positions listed below are full-time positions.

UCR Division of Biomedical Sciences and School of Medicine Faculty and Staff Headcounts by Ethnicity and Gender							
		Faculty			Staff*	Staff*	
Ethnicity	Male	Female	Total	Male	Female	Total	
American Indian or Alaskan Native	0	0	0	0	1	1	
Black/African-American	0	0	0	1	8	9	
Chinese/Chinese-American	1	0	1	4	6	10	
Filipino/Pilipino	0	0	0	1	1	2	
Japanese/Japanese-American	0	0	0	0	1	1	
Latin American/Latino	0	0	0	2	0	2	
Mexican/Mexican-American/Chicano	1	0	1	2	10	12	
Other Asian	1	0	1	1	2	3	
Other Spanish/Spanish-American	0	0	0	0	1	1	
Pakistani/East Indian	1	0	1	1	1	2	
Unknown	0	0	0	0	0	0	
White	9	6	15	5	12	17	
TOTAL	13	6	19	17	43	60	

<sup>\*</sup>Includes part-time undergraduate student employees and part-time interns, as well as research-oriented laboratory support personnel.

Of the current 120 volunteer without salary faculty, approximately 20 percent are female and 80 percent male. African-Americans and Mexican/Mexican-American/Chicanos each comprise approximately 3 percent of the clinical faculty, with approximately 15 percent Asian, 15 percent Pakistani/East Indian, 61 percent white, and 3 percent unknown and/or "decline to state."

#### IV. MEDICAL EDUCATION PIPELINE PROGRAMS

The UCR School of Medicine will be built on the foundation established by the UCR/UCLA Thomas Haider Program in Biomedical Sciences, a collaborative medical education program between the UCR Division of Biomedical Sciences and the David Geffen School of Medicine at UCLA. The biomedical sciences program has a mission compatible with that of the UCR School of Medicine, specifically "to train physicians for distinguished medical careers in service to the people of California, with an emphasis on the needs of the underserved, inland, and rural populations." To accomplish this mission, the program has recruited and mentored UCR undergraduate students who embrace this vision and desire to return to their home or other underserved communities to provide medical care. Many of these students come from socio-economically or educationally disadvantaged backgrounds, including increasing numbers of students who are motivated to help meet the needs of medically underserved groups and communities in Inland Southern California. Funding of the Division of Biomedical Sciences, which also offers a Ph.D.

program in biomedical sciences, is comprised of State General Funds, federal and private research funds, student professional fees, and indirect cost recovery. Permanent state support for this program was \$3.02 million in 2010-11.

The Division of Biomedical Sciences, which will be embedded within the School of Medicine, has developed a series of programs which focus on increasing access to medical school for socioeconomically and/or educationally disadvantaged students. Some of these programs have been in existence for a decade, while the Medical Scholars Program and the Premedical Postbaccalaureate Program are more recent additions to this comprehensive pipeline for diversifying the medical school applicant pool. Through March 15, 2011, expenses for these programs totaled approximately \$257,500, exclusive of a portion of in-kind salary support provided by the Division of Biomedical Sciences. Grants from the Howard Hughes Medical Institute, The California Endowment, The California Wellness Foundation, and other private sponsors comprise the principal financial support for these programs.

Most of these extramural grants have either recently expired or are in the last stages of funding. The UCR School of Medicine is currently seeking major, sustaining financial support for medical education pipeline programs from two foundations and anticipate receiving notification on a decision from one of the potential funders by June of 2011.

These pipeline programs have proven successful in improving graduation rates for disadvantaged UCR students in the sciences with career aspirations in health care and biomedical research. For example, the participants of *FastStart* and the Medical Scholars Program (MSP), which are designed specifically to improve the graduation rates in the sciences for socio-economically and/or educationally disadvantaged students, enroll a majority of students who are underrepresented in medicine. Students participating in these two programs are more than twice as successful at earning undergraduate degrees in the sciences as their non-*FastStart* or non-MSP cohorts at UCR.

These programs and staff will continue with the opening of the UCR medical school. The School of Medicine will also develop new initiatives to widen the pipeline into medical school. In addition to pursuing additional extramural funding to support these programmatic initiatives, the medical school will continue to devote personnel resources to coordinate the programs. Current pipeline programs are organized into four major programs (each described below) beginning with high school outreach and continuing through postbaccalaureate premedical education.

- Health Sciences Partnership (HSP): This program is a collaboration between UCR and eight area high schools through their Health Academy Programs. The academies enroll at least 50 percent at-risk students as required by the California Partnership Academy program. Each year, 20 to 25 undergraduate students from UCR and three to five medical students from the UCR/UCLA Thomas Haider Program in Biomedical Sciences volunteer in health academies and provide study skills workshops, mentoring, tutoring, problem-based learning exercises, and workshops on attending and succeeding in college. This partnership also includes a Faculty-to-Faculty Collaboration component in which UCR faculty and high school faculty discuss students' challenges in English, mathematics, biology, and chemistry. The collaborations allow for a discussion of challenges observed at both the high school and the University along with sharing of best practices to overcome these challenges. The program is currently supported directly by the Division of Biomedical Sciences.
- *FastStart*: This program provides a five-week residential summer program for 24 educationally and/or socio-economically disadvantaged incoming UCR freshmen who have aspirations for a career in health care and are committed to practice in underserved communities. These students are provided with daily biology, chemistry, and mathematics instruction to better prepare them

for science classes in college. Students also receive mentoring from faculty and staff who provide academic and adjustment guidance, as well as advice on how to succeed at the University. Funding support has been provided through various extramural grants (particularly The California Wellness Foundation) and private donors, as well as the Division of Biomedical Sciences.

- Medical Scholars Program (MSP): This program is a developmental 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 encouragement by staff and faculty) at critical transition points in the student's academic career (entering UCR as 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. Since the pilot program started in 2004, MSP has enrolled 488 students, 266 students remain in the program, and 184 students have graduated with a BA or BS degree. Of the 184 alumni, 144 graduated with science degrees (78 are underrepresented in medicine and 82 are women), and 44 have been accepted or are already enrolled in medical schools (22, or 50 percent, of these students are underrepresented in medicine). This program is in the last year of support from the Howard Hughes Medical Institute. Proposals have been submitted to enable continuing support this program into the next fiscal year and the School of Medicine is awaiting a decision no later than June 2011.
- Postbaccalaureate Premedical Program (PPP): This program is designed to assist educationally and/or socio-economically disadvantaged applicants in gaining acceptance to medical school. Initiated in 2008-09, it recruits six to eight students per year who participate in an intensive Medical College Admission Test (MCAT) preparation program during the summer, followed by a year of upper division science courses at UCR. Students also participate in clinical volunteer activities and attend seminars related to health care topics, including health care disparity issues. Because the program is only in its third year, many of the participants are either still in the program, beginning applications for medical school, or awaiting word of acceptances (as of this writing, three graduates of the program have been accepted or are currently enrolled in medical school). Students finance their participation in the program through savings or private loans. The program has been providing a free MCAT prep course and summer stipend to ensure a full-time summer commitment from the students. This program is currently in the last year of partial funding from a private sponsor. A proposal has been submitted to support this program into the next fiscal year from an external funding agency, and the School of Medicine is awaiting a decision at the beginning of June 2011.

### V. OPERATING AND CAPITAL BUDGETS

**Operating budget:** Consistent with the 2010 Budget Act, the University is redirecting \$10 million of State funding to the School of Medicine, providing crucial start-up support to prepare for opening the medical school in August 2012. Specific activities supported by the funding include building the medical school leadership team, including positions required to achieve accreditation; preparing accreditation

materials and bringing an accreditation site visit team to UCR; building and implementing the critical infrastructure to support a School of Medicine, and completing affiliation agreements with the initial training partners and for medical student clinical rotations and Graduate Medical Education training programs. The budget for this funding is presented below.

It should be noted that, while the redirected funding is providing vital support to the School of Medicine at a critical time in its development, the use of funding derived from deferred faculty and staff hiring and other one-time strategies is not sustainable (this type of funding strategy is not capable of providing ongoing or permanent support to the UCR School of Medicine), particularly in times of shrinking resources.

The University must receive new State support, over and above existing support, if it is to succeed in developing a new, high-quality school of medicine in California.

UC RIVER	SIDE SCHOOL OF MEDIC	CINE
Proje	cted Operating Budget	
	FY 2010-2011	
REVENUES		\$\$
Temporary Support		10,000,000
Research		2,250,000
Biomedical Sciences		3,020,000
TOTAL REVENUES		15,270,000
OPERATING EXPENSES		
Research		2,250,000
Instruction		1,221,700
Administration		3,207,000
Executive Management		1,189,000
Project costs Academic Tec	chnology	1,500,000
One-time Research buildir	ng start up	1,000,000
Equipment/furniture		2,000,000
Recruitment startup/inves	tments	2,900,000
TOTAL OPERATING EXPENS	SES	15,267,700

The singular goal of the UCR School of Medicine has been to successfully attain preliminary accreditation, get the infrastructure developed to enable recruitment of the first class of UCR Medical School students in August of 2012 and deliver the curriculum. This has required the expenditure of all effort on a full-time basis of all employees of the UCR School of Medicine.

Because the UCR School of Medicine is so new, the breakout of research, instruction, administration, and executive management cannot yet be addressed. These categories do not yet apply to the UCR School of Medicine; rather, all funds are currently being used to develop this new program.

Capital budget: The UCR campus has made a significant investment in two facilities to launch the School of Medicine, specifically an education building and a research building. The budget for these two buildings totals approximately \$55.68 million, with funding comprised of campus equity funds (\$20.68 million from general funds, a federal grant, campus non-state one-time funding, and indirect cost recovery), external financing (\$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. The first floor of the building remains a cold-shell, awaiting funding for future buildout, The School of Medicine Research building will serve 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. The building currently housing the instructional facilities of the UCR/UCLA Thomas Haider Program in Biomedical Sciences will be renovated to establish the School of Medicine Education Building. This renovation project will substantially increase the educational and administrative space of the School of Medicine. The project will entail seismic upgrades, complete renovations of the basement and second floor, and partial renovation of the first floor. This will provide the School of Medicine nearly 24,000 assignable square feet of 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.

#### VI. MEETING HEALTH CARE DELIVERY NEEDS

A key strategy of the medical school to expand and diversify the physician workforce is to create a broad range of residency training programs in partnership with health care providers in the region. Once the School of Medicine receives preliminary accreditation, it is anticipated it will assume sponsorship of the existing family medicine and general surgery residency programs at the Riverside County Regional Medical Center. Additionally, the School of Medicine plans to seek accreditation from the Accreditation Council for Graduate Medical Education to establish new Graduate Medical Education training programs in internal medicine, pediatrics, obstetrics/gynecology, psychiatry and internal medicine/pediatrics. Mahendr S. Kochar, M.D. has been appointed Associate Dean for Graduate Medical Education to establish the medical school's initial residency programs, which have been designed for larger ambulatory foci than traditional residency programs, which typically provide a 50/50 split of in-patient/outpatient training experiences. The proposals will ultimately be required to be approved by the Residency Review Committees for the respective specialties. The residency training program plan anticipates growth to approximately 180 residents by 2018-19.

The unique geographic and demographic circumstances of Inland Southern California present the opportunity for building a medical school tightly aligned with regional health care needs, but also for developing innovations that will have broad application to the needs of the nation generally. The Center for Promotion of Healthy Communities will address the health care challenges of Inland Southern California through innovative, research-based approaches involving community partnerships, prevention and proactive health screening/monitoring, and the design and implementation of novel health care delivery models – including utilizing information technologies and telemedicine – that break traditional barriers to access. Informed by the Center's health services, community-based, population, and epidemiological research, pilot projects will be undertaken to implement findings likely to have a positive impact on disease prevention and treatment, as well as healthcare access and delivery systems. Projects will will be rigorously evaluated to determine effectiveness and refine execution with the goal of institutionalizing best practices in the region's health care system. One of the current faculty recruitments is in the area of health outcomes research and it is anticipated that this faculty member will actively contribute to, and may be appointed head of, this center.

As data become available once the Riverside School of Medicine has enrolled and graduated its first class, information regarding clinical placements, graduate medical education slots, and medical school graduates will be provided.

#### VII. FACULTY RESEARCH ACTIVITIES

The UCR School of Medicine will expand the current research base at UCR through recruitment and retention of clinical and basic science faculty and an enhanced infrastructure to support the research enterprise. Expanded basic science research will be accompanied by robust clinical and health services research that emphasizes 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.

The School of Medicine research program will create a critical mass of researchers and clinicians that shares intellectual and physical resources to accelerate discovery and rapidly apply knowledge to help patients. Existing research strengths in the Division of Biomedical Sciences (e.g. vascular biology, tumor growth regulation, neuronal development and plasticity, and pathogen-host interactions and host defenses, among other areas) will be further leveraged by collaborations with other UCR departments such as bioengineering and neuroscience and by the recruitment of additional medical school faculty.

New faculty recruitments are underway which align under the following research themes and which will augment the current biomedical sciences teaching faculty, enabling the School of Medicine to deliver the expanded curriculum.

- *Neurodegenerative diseases* such as Alzheimer's and Parkinson's have an increasingly significant medical and economic impact on families. Studies on neurodegenerative processes and neuro-inflammation, already a strength of the Division of Biomedical Sciences, will be an important research focus.
- Cardiovascular diseases disproportionately affect underrepresented minority populations, which are a growing demographic in Inland Southern California. Because UCR does not presently have a significant number of basic science and clinical research labs that focus on cardiovascular disease, strategic recruitment of research groups in this area is expected to be a priority.
- A rapidly growing health concern, with disproportionate effects among African-American, Hispanic, and Native American populations, is *type 2 diabetes and metabolic syndrome*. As with cardiovascular disease, major efforts will be made to establish a significant research presence in this medically and economically important disease topic for all populations.
- Emerging and re-emerging infectious diseases are becoming increasingly important in
  developing countries and UCR's surrounding communities, including Mexico. Growth in the
  number of research groups at UCR addressing host defense mechanisms, immunology, and
  infectious diseases, including insect vectors and vector-borne diseases, will be strongly
  encouraged. Because many infectious diseases still lack effective therapies, research
  enterprises that focus on vaccine development would naturally complement this research
  area.
- Neurodevelopmental disorders associated with mental retardation and autism. The high
  prevalence and heterogeneity of autism spectrum disorders among children have been
  recognized worldwide and in the U.S., including Inland Southern California. Studies of the

- genetic and environmental factors suspected to influence the development of these disorders will greatly contribute to treatment strategies.
- An important issue for Inland Southern California and beyond is *Health Services Research*, *Public Health*, *and Health Care Access*. UCR already has strong programs studying various aspects related to the delivery of medical services in the community, such as physician-patient communication and cultural and medical anthropology. The medical school will expand this research base by undertaking a range of population-health research initiatives to develop, implement, and evaluate projects that address health care access issues, improve health outcomes of people living in the region, and collaborate with community-based organizations.

The current Ph.D. program in biomedical sciences will be continued and expanded by the UCR School of Medicine. The graduate program has been redesigned recently to be more applicable in terms of translational medicine and understanding of the pathophysiology of human diseases. Now included in the graduate program are a series of problem-based learning modules to guide students into thinking critically and creatively as a research scientist early in their career. The program has proven to be highly innovative and quite effective in training young Ph.D. scientists not only in an understanding of the pathophysiology of disease, but also in obtaining a clinician's viewpoint in treating patients with this pathophysiology. Of the 17 students enrolled in 2010-11, two, or 11.7 percent, self-identified as underrepresented minorities.

#### VIII. CONCLUSION

The startup funding for the UCR School of Medicine in the Budget Act of 2010 has enabled the University of California, Riverside to stay on track for the planned opening of its medical school in August 2012. The funding has been used to build the leadership team and administrative staff of the School of Medicine, provide technical/administrative support to ongoing and necessary capital construction, prepare materials for preliminary accreditation of the medical school, secure affiliation agreements with the initial clinical partners, and develop residency training programs. A critical milestone for opening the medical school as planned in August 2012 is securing preliminary accreditation, expected in June 2010. Immediately thereafter, UCR will begin accepting applications from prospective students, launching the medical school's first admissions cycle as a fully independent, four-year school of medicine.

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