The Honorable Denise Moreno Ducheny  
Chair, Joint Legislative Budget Committee  
State Capitol, Room 5035  
Sacramento, California 95814

Dear Senator Ducheny:

Enclosed is the University of California’s *Report on UC Riverside and UC Los Angeles Biomedical Sciences Program* as requested in Supplemental Language of the 2003 Budget Act.

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 e-mail at Debora.Obley@ucop.edu.

Sincerely,

[Signature]

Robert C. Dynes

Enclosure

cc: The Honorable Jack Scott, Chair  
Senate Budget and Fiscal Review Subcommittee #1  
(Attn: Ms. Amy Supinger)  
(Attn: Ms. Cheryl Black)  
The Honorable Julia Brownley, Chair  
Assembly Budget Subcommittee #2  
(Attn: Ms. Sara Bachez)  
(Attn: Ms. Amy Rutschow)  
Ms. Elizabeth Hill, Legislative Analyst  
Mr. Mike Genest, Director of Finance  
Mr. E. Dotson Wilson, Chief Clerk of the Assembly  
Mr. Gregory Schmidt, Secretary of the Senate  
Ms. Diane Boyer-Vine, Legislative Counsel  
Ms. Sara Swan, Department of Finance  
Mr. Steve Boillard, Legislative Analyst’s Office  
Joint Legislative Budget Committee (17)  
Provost Wyatt R. Hume  
Executive Vice President Katherine N. Lapp  
Associate Vice President Cathryn Nation  
Associate Vice President Debora Obley  
Interim Assistant Vice President Karen French
I. THE HAIDER PROGRAM

The UCR/UCLA Thomas Haider Program in Biomedical Sciences (referred to as the Biomedical Sciences Program) is a collaborative effort between the Division of Biomedical Sciences (DBS) at the University of California, Riverside (UCR) and the David Geffen School of Medicine at the University of California, Los Angeles (UCLA). For 30 years, this partnership has provided a unique path to the Doctor of Medicine degree for UCR graduates. Biomedical Sciences Program students complete two years of medical education at UCR before matriculating to UCLA to complete their training.

The DBS mission, reflective of the needs of the State, is “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, it is critical to recruit and mentor 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.

To achieve this mission, and at the recommendation of the Legislature, UCR and the DBS significantly restructured the program in 2003.

In brief, the changes included expanding student access to the program and developing new efforts to increase student success. Improved access to the program has occurred by: allowing all UCR undergraduate majors to apply for the program; increasing the diversity of the admissions committee; providing additional workshops and seminars to help improve entrance examination scores; creating a
pre-medical peer-mentor program focused on assisting students with medical school applications; and developing multiple pipeline programs to increase interest in medical careers. UCR has also developed an innovative, human disease-based medical curriculum to sustain student interest and has created multiple success-oriented programs such as FastStart, the Medical Scholars Program, and the peer-mentoring program.

II. EFFECTS OF THE RESTRUCTURING EFFORT

Last year, UCR re-evaluated the effects of the two-year old restructuring effort. First, the DBS compared characteristics of applicants and matriculates of the 2007 academic year to those from the years before the open admissions policy was put in place. Second, the DBS analyzed the extent to which the policy changes made since 2003 have influenced the number of UCR applicants and matriculates to medical schools nationwide.

Open Admissions Policy, Fall 2007 Medical School Class Information

The undergraduate major in biomedical sciences was eliminated in 2003 as part of the significant restructuring of the program that was mandated by the Legislature. In keeping with this directive, the 2006-07 academic year was the first year of the new open admissions policy through which students who had completed at least two undergraduate years at UCR (in any major) were eligible to apply to the Biomedical Sciences Program. Stated differently, this was the first year for which admissions to the Haider Program was not restricted to UCR students who had entered as freshmen in the biomedical sciences undergraduate major. This report provides an update on recent changes and observations following the second full year of implementation of this new policy.

The open admissions policy continues to have a positive impact on the number of qualified applicants to the biomedical sciences program.¹ For students applying in 2007, 105 met the admissions standards – an increase from the 87 students who had done so after the first year of the policy change. This number also surpassed the number of qualified applicants in each of the five years prior to the implementation of the new policy, which ranged between 36 and 57 students. As was the case during the 2006-07 academic year, approximately 16.2% of the applicants identified their race/ethnicity as Latino, Chicano, or African-

¹ Causality is difficult to prove because DBS staff simultaneously and significantly increased recruitment efforts this year. Regardless of whether the cause was explicitly or implicitly related to changes in the program, there was a significant rise in qualified applicants.
American (students considered to be under-represented minorities or URM students for purposes of this report). This figure is double the five-year average of 8.1% which occurred before the policy change.

The increase in qualified URM applicants to the program also resulted in an increase in the diversity of matriculates. Eight of the 27 admissions (29.6%) self identified as URM, up from 26.9% in 2006-2007. These statistics significantly exceed the five-year average of 14.3% in years prior to restructuring the program. It is important to note, however, that admission to the program is not synonymous with matriculation (i.e., enrollment). For example, a few students decided not to enroll even though offers of scholarships and extensive efforts were made by the Dean to recruit those students. Among the 27 students admitted, three chose to attend another medical school (Uniformed Services, New York University, and the USC Keck School of Medicine). This year, six of the 24 first-year students (25.0%) are URM students, which represents an increase well above the five-year average of 13.9% occurring prior to the policy change. This outcome is also consistent with last year’s enrollment of 25.0% URM students.

The faculty is pleased with the scholastic abilities of matriculates who enrolled under the new open admissions policy. These abilities are reflected both in successful coursework and in standardized test results. Whereas the 2006 cohort’s average GPA (3.62) and MCAT scores (27.79) were lower than the pre-policy-change five-year average GPA (3.80) and MCAT (29.85), this year’s cohort scores improved, with GPA averaging 3.79 and MCAT scores averaging 29.37. During the 2006-07 academic year, students also maintained exceptional academic achievement levels, as have this year’s students who have recently completed their first quarter of the new integrated medical curriculum.

**Success of UCR Students Matriculating into Medical School**

UCR recognizes the importance of assessing the degree to which changes in the program, together with campus-wide efforts, have achieved the goals described in the 2002/2003 Budget Act and Supplemental Report and in the May 2002 letter from UC President Atkinson, which charged the campus to “increase the probability that all interested students from across campus will become successful in obtaining a career in the health sciences, including obtaining an MD degree from the UCR/UCLA Biomedical Sciences Program or from other medical schools throughout the state and country.”

To address this question, the Dean of the DBS obtained data from the American Medical College Admission Service (AMCAS) and updated his 2001-2006 analysis of applicants and matriculates from UCR into other U.S. medical schools for 2007. Only students who listed UCR as their primary
undergraduate university were included in the AMCAS data.\textsuperscript{2} To improve his analysis, the Dean supplemented the AMCAS data with DBS records of students known to have attended other medical schools during this period. These data are shown in Figure 1.

Figure 1. UCR Biomedical Program Medical School Matriculates, 2001-2007

Unfortunately, beginning in 2003 and continuing through 2007, UCR’s total number of medical school matriculates has gradually declined. This includes a further decline in 2006 that might be due to the fact that this was the first year in which there was a smaller pool of students who were graduates of the biomedical sciences major. In 2007, the overall application and acceptance rates into other medical schools from UCR also declined.\textsuperscript{3} This decrease in total matriculates to other medical schools occurred in spite of significantly increased undergraduate enrollments at UCR. It is concerning that not one student in 2007 was accepted into a UC medical school (other than the Haider program). In previous years, the campus generally sent at least three students per year to another UC medical school.

\textsuperscript{2} Some individuals requested to be excluded from these data when they filled out their AMCAS application. This ranged between 10 and 12 percent of applicants per year.

\textsuperscript{3} The 15 students who were accepted to other medical schools attended programs which included those at Arkansas, Jefferson, Loma Linda, Eastern Virginia, Uniformed Services, University of Toledo, and Medical College of Wisconsin.
The campus believes that, despite the goals and objectives of restructuring the undergraduate biomedical sciences major and broadening admissions to program, to all majors, it is possible that top high school graduates with other choices may not choose this option now that the major they believed gave them a strong competitive advantage has been eliminated. Although the outcomes and trends associated with the reorganized program will be monitored closely, it could be that a focused pre-professional, biomedical sciences major does, in fact, offer an effective means to recruit talented URM students into the medical education pipeline.

These challenges underscore the importance of sustaining and expanding efforts by the DBS and the UCR campus to both improve the pipeline of students into the Biomedical Sciences Program and to increase the likelihood that students will be competitively eligible for admission to other medical schools. The campus administration is confident that the FastStart program, Medical Scholars Program, and other initiatives described below will help achieve these goals.

III. PIPELINE PROGRAMS

FastStart

FastStart is a five-week residential summer bridge program for entering freshmen that provides intensive math, biology, and chemistry classroom preparation to prepare students for the corresponding basic science courses required for U.S. medical school admission. This program also provides a social support system to introduce students to college culture and available campus resources. FastStart—now in its ninth year—has a record of success in giving students a head start in these gateway courses and increasing their chances of a successful first year of college. This past year, the DBS received a grant from the California Wellness Foundation that will allow 6 additional students (30 vs. 24) to benefit from the summer program, targeted at economically disadvantaged students. Since its inception, approximately 60% of participants in the program have been URM students.

Medical Scholars Program

Now in its third year, the Medical Scholars Program (MSP) continues to improve the student experience by establishing a community of learners who support one another through peer mentoring, study groups, special seminars, and social activities. The Director and MSP staff members provide academic, career, and personal counseling for each student. In addition, the MSP provides funded research internships and scholarships for standardized tests such as the MCAT, DAT, and GRE. The MSP currently has 200 students, up from 160 last year, and will continue to grow over the next three years. Of these, roughly
60% are URM students. The DBS was successful in obtaining an additional $500,000 from The California Endowment to further expand enrollment in the program in 2007, which will allow additional support for transfer students from five local community colleges. The efforts of this program are beginning to show positive results. Of the 24 matriculates into the Haider program in 2007, six were graduates of the MSP.

**Partnerships for Student Success**

Over the past two years, the DBS has established a vibrant partnership between staff and students in the successful Biology Scholars Program (BSP) at UC Berkeley. Dr. John Matsui, Director of the BSP, serves as the MSP collaborator. Last fall, Dr. Matsui invited UCR to participate in a “Science of Diversifying Science” conference highlighting BSP activities and programs, as well as other effective academic support and enrichment programs. The BSP has successfully developed partnerships with local community colleges, creating pipelines to assist the most motivated students to matriculate to UCB. The DBS intends to build on this model with Inland Empire community colleges. Over the past two years, in fact, 40 transfer students have been recruited into MSP.

The DBS is working to institutionalize these practices by sharing information at UCR through the Special Committee for the Coordination of Outreach, Recruitment, Retention and Research Experiences. On a monthly basis, this Committee brings together key staff and faculty members from the major campus support units, including the Learning Center, the Careers Center, the Health Professions Advising Center, the Honors Program, the three college Student Academic Affairs Centers, the Graduate Division, the Vice Provost’s Office, the Outreach Office, and others, and is facilitated by Dr. Neal Schiller, the MSP Director. The Committee’s goal is to coordinate and oversee the various campus outreach efforts directed primarily at improving the successful recruitment, retention, and graduation of economically disadvantaged UCR undergraduates, providing opportunities for research experiences, and increasing the diversity of UCR’s medical and graduate student populations.

**Medical and Health Careers Program**

The College of Natural and Agricultural Sciences has redesigned their health sciences advising program (previously known as the Health Professions Advising Office), which hired a new director in July and will add three more advisors and a program specialist within the year. This new program recently launched a new website, a new peer advising program, and a new strategy to market their services to students interested in medical school and other health professional careers. Plans are underway to establish a pre-medicine committee to help students prepare for the medical school application process.
IV. Conclusions

The campus concludes that the restructuring of the Biomedical Sciences Program, the elimination of the undergraduate major, and the opening of admissions to all majors on campus has had the desired effect of broadening the diversity of the class, as well as aiding in the selection of a mature, dedicated group of students who are interested in working with underserved populations in Inland Southern California.

While the policy changes mandated by the Legislature appear to have increased the number of applicants to the Haider Program, there has been a disappointing decrease in the number of UCR matriculates to medical programs nationwide. At this relatively early stage, it is probably too soon to fully understand either the causes of this outcome or the likelihood that it will continue. There are, however, many reasons to believe that the total number of students who successfully enter medical school from the Haider Program will improve over time. For example, the student cohorts closest to graduation were not able to take full advantage of the newly created medical curriculum tracks and newly developed student programs that are now available. As future students participate in these programs, they likely will have an increased chance of being admitted to medical school based on improved preparation. As UCR works to expand the FastStart and the Medical Scholars Programs, an increasing number of students are expected to benefit. Given the record of success of these programs, the continuing campus-wide efforts to increase student success in general, and the ability of the DBS staff to secure extramural funding to expand these efforts, the DBS and the campus administration believe that the Haider Program will make steady progress toward achieving the goal of training physicians for distinguished medical careers in service to the people of California. This is expected to occur through both the redesigned and expanded BSP and through ongoing efforts to prepare increasing numbers of UCR graduates for admission to medical school in California and nationally.