PROPOSAL
TO ESTABLISH A
SCHOOL OF MEDICINE
AT
THE UNIVERSITY OF CALIFORNIA
RIVERSIDE

Approvals:

Committee on Academic Personnel: February 6, 2008
Committee on Diversity and Equal Opportunity: February 8, 2008
Committee on Educational Policy: February 7, 2008
Committee on Faculty Welfare: February 6, 2008
Committee on Library & Scholarly Communication: February 6, 2008
Committee on Planning and Budget: February 21, 2008
Committee on Physical Resources Planning: February 6, 2008
Committee on Research: February 7, 2008
Graduate Council: January 23, 2008
Executive Council: February 25, 2008

January, 2008
To be adopted:

The Executive Council of the Academic Senate, at its meeting held on February 25, 2008, approved the establishment of a School of Medicine at the University of California, Riverside as submitted by Acting Chancellor Robert Grey.

Thomas Cogswell, Chair
Executive Council

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Committee on Planning and Budget: February 21, 2008
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Committee on Research: February 7, 2008
Graduate Council: January 23, 2008
Executive Council: February 25, 2008
Executive Summary:

This document provides a summary of the UCR Senate Planning & Budget Committee’s assessment of the proposed Business Plan (BP) for the UCR research-based School of Medicine (SOM) developed by the UCR administration under the leadership of Acting Chancellor Robert Grey. The SOM basic plan is to open with a class size of 50 students in the fall of 2012 which will grow to be four classes of 100 students each by fall of 2017. By 2021 the SOM will consist of 138 faculty FTE, 160 residents, 400 medical students and 160 Ph.D. students. Years 3 and 4 of the medical curriculum will feature a distributed clinical education experience between Inland Empire medical centers and community based clinical practices; this education model thus avoids the necessity to finance and build de novo a large and extremely expensive teaching hospital (e.g. > $500 million for a 300 bed facility).

The SOM BP articulates the many starting assumptions (enrollment growth, staffing resource requirements, non-salary expenses and revenue funding) necessary to model in extensive detail the multitude of activities that are essential to operating a fully functional and accredited SOM. The Operating Budget Plan projects revenue and operating expenses for a 14 year period from 2008-2009 to 2021-2022. By fiscal year 2020-2021, the SOM will attain a level of self-sustaining breakeven operations with an annual budget of $87.5 million. Approximately $25 million of the total revenue will be annually provided by State of California funds, $7.4 million from student fees, $27.2 million from Grant and Contract revenue (direct), $13.2 million from Graduate Medical Education (residents) payments and $20-25 million annually from UCR fund raising. Given that every dollar spent by a medical school or teaching hospital indirectly generates up to $5 – $8 when it is "re-spent" on other businesses or individuals (see Appendix C), P&B notes that the annual expenditure of $87 million by the
SOM has the potential to raise the economic vitality of the Inland Empire to a significantly higher level.

The capital building plan for the SOM is projected to cost a total of $556.3 million. The capital plan is composed of two phases; (i) Transitional Space (a Surge lab/office building and a Surge Vivarium plus other smaller renovation projects) on the existing east campus to be started in 2009 and completed by 2012 for the opening of the SOM (cost $48.4 million), and (ii) three permanent buildings on the 40 acre west campus to be started in 2010 and finished by June 2015 (cost $507.9 million). It is proposed that funds for the west campus capital building plan would be provided by a California voter-approved Bond Issue; this project can not be initiated until the UC Board of Regents approves the UCR SOM proposal.

It is Planning and Budgets' view that the SOMP describes an enormous and complex undertaking that requires an enormous and complex budget. The committee finds that the SOM Business plan is rational, informative and transparent and will permit the establishment at UCR of a research-based SOM. P&B notes that the Business Plan is dependent upon significant financial resources for one-time capital funds and also significant funds to be provided annually by the State of California through its budget for the University. P&B hopes that the ongoing vagaries of California's financial state can be overcome to permit realization of the UCR SOMP so that the people of the Inland Empire area and the Coachella Valley can have access to a high standard of medical care and therefore an increased quality of life.

Six strong letters of recommendation were received from medical schools (4 from UC medical schools) that were thorough in their analysis, and highly supportive of the UCR SOMP and its curriculum.

It is anticipated at build-out the UCR medical school will meet the standards for excellence in research, medical training and health care that are expected of University of California medical schools. In addition, P&B believes that the SOM will fulfill its mission of providing greater access to quality health care to the underserved of the region. The UCR Senate Planning and Budget Committee unanimously support the Business Plan for the UCR School of Medicine with the requisite state funding.
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Introduction:

This document provides a summary of the UCR Senate’s Planning & Budget Committee’s assessment of the proposed Business Plan (BP) for the UCR research-based School of Medicine (SOM). The School of Medicine Proposal (SOMP) basic plan is to open with a class size of 50 students in the fall of 2012 which will grow to be four classes of 100 students by fall of 2017. By 2021 the SOM will consist of 138 faculty FTE, 160 residents, 400 medical students and 160 Ph.D. graduate students. Years 1 and 2 of the curriculum will utilize a problem-based learning approach (in groups of 8 students) to the science of human biology and disease. Years 3 and 4 of the medical curriculum will feature a distributed clinical education experience between Inland Empire medical centers and community based clinical practices; this distributed clinical education model represents the latest evolution in improving medical education. P&B’s evaluation and endorsement of the proposed SOM medical curriculum is provided in a separate P&B report to the Senate Executive Committee. Appendix A contains P&B’s assessment of the need for a sixth allopathic UC medical school. Appendix B contains P&B’s assessment of the 6 letters (4 from UC medical school Deans) of recommendation received in support of the proposed SOM Curriculum. Appendix C provides examples of fundraising accomplishments by medical schools. Appendix D describes the impact on California’s economy due to medical schools. The remainder of this document provides P&B’s analysis of the SOM Business Plan.

Mission and Vision of the UCR School of Medicine:

*(NOTE: In this document the opinion(s) and/or conclusion(s) of P&B are italicized and centered on the page.)*

The P&B Committee strongly endorses the Mission Statement of the SOMP (SOMP, page ii) which focuses on (a) improving the health of people in Southern California and particularly the presently underserved Inland Empire by training a diverse population of physicians and also (b) establishing a biomedical research based environment to facilitate development of innovative health care delivery programs which can provide examples that will be emulated throughout the state and country. P&B believes that fulfilling the Mission is consonant with the academic standards and research orientation and research productivity of the other five flagship UC medical schools and all nine UC general campuses. Also the Vision Statement defines the standards of operation of the SOM as a nationally eminent biomedical research institution and at the same time a nationally recognized medical education institution which then directly defines the scope of the budget needs to be included in the Business Plan.
Distributed Clinical Model:

The UCR SOM will use a ‘distributed clinical model’ as the primary framework for both its four year medical student curriculum and also the Postgraduate Training Program. The hallmark of the distributed model for the medical school curriculum is that clinical instruction is an integral feature of the both the problem-based learning approach (in groups of 8 students) for the curriculum in years 1 and 2 and then, in years 3 and 4, there is a distribution of clinical clerkship instruction between the traditional medical center (hospital) portion of the curriculum and an innovative community-based portion of the curriculum centered in the medically underserved regions of the Inland Empire.

_The SOM Mission and Vision statements (SOMP, page ii) link the goal of the UCR SOM becoming a recognized national leader in medical education and biomedical research with the goal of training future physicians that are dedicated to serving the underserved._

Mission of the Postgraduate Graduate Medical Educations (GME) Training Programs:

Medical residents, in two respects, are an integral component of the overall graduate medical education experience of a school of medicine. First the success of the UCR SOM year 3 clerkships and year 4 academies is totally dependent on the presence of a large cadre of 160 M.D. residents. These residents are the day-to-day ‘faculty’ for the 3rd and 4th year medical students. Second, the residents are postgraduate medical students for the Clinical Faculty and M.D Fellows who are the faculty who supervise and deliver to the residents their postgraduate medical education in one of the seven core residency programs of the SOMP (Internal Medicine, Family Practice-Rural, Family practice-Urban, Pediatrics, Psychiatry, General Surgery, and OB/GYN; see Table 8, page 37). The presence of the 160 residents (to be achieved by 2016-2017 (see Table 2, page 20 or Figure 8, page 18) as part of the medical school, will in turn require 29 additional medical faculty FTE to administer and maintain the academic standards of the seven core residency programs (see Table 7, page 34).

_P&B endorses the Graduate Medical Education Mission and Vision statements (see SOMP, page 35). Also, P&B endorses the establishment of the seven residency programs that will constitute the core of the Graduate Medical Education program of the SOMP. This GME will require a significant budget allocation for start-up costs (projected to be $4.8 million for a 2.5 year interval starting in July 2009; see Tables 10 and 11, page 39). After a steady-state operation of the complete SOM GME is achieved in 2014-2015, the GME will operate in a break-even fashion (see Table 13, page 41). P&B also recognizes and endorses the diversity commitment of the GME process so that both the residents and the medical students will develop cultural sensitivity to the needs of the underserved population in the Inland Southern California._
Research Enterprise of the School of Medicine:

The SOM proposed for the UCR campus will have a major focus on basic and applied biomedical research. The basic and clinical faculty of the SOM, like all faculty in the five existing UC medical schools, will be expected to maintain productive extramurally funded research laboratories that address fundamental issues in understanding disease and how to improve the standards of health, particularly for the people of the Inland Empire region. The SOM proposal has identified five potential research priorities in the areas of cardiovascular diseases, insulin-resistant diabetes and metabolic syndrome, emerging infectious diseases, neurodegenerative diseases and health services research, including public health and health care access.

*P&B endorses the Research Enterprise Mission and Vision statements (see SOMP, page 42). The presence of the SOM on the UCR campus will build and strengthen collaborations with existing UCR departments, centers and institutes. P&B believes that the collective impact of the general campus and the medical school research programs will be to increase the national and international reputation of UCR.*

Proposed Business Plan for the School of Medicine:

*Background:* The typical US allopathic medical school educational experience is divided into three phases; these are as follows: (a) the introduction to human biology and its disease processes in years 1 and 2; (b) the formal introduction to the various clinical medicine specialties in years 3 and 4; and (c) participation in postgraduate training programs as residents, interns and fellows. The M.D. degree is awarded after completion of phases a + b. However, mandatory additional training in the postgraduate phase c is required in order to qualify for specialty board certification and medical licensure. Thus, the total medical educational experience for a licensed allopathic physician in the US is the sum of the 4 years of medical school plus the specialty training of the medical school-based postgraduate training. In addition, standardized national board examinations must be successfully completed by all US medical students after years 2 and 4 of medical school and then again at the end of their specialty residencies.

*P&B endorses the UCR SOMP which follows this traditional blueprint for our SOM medical education plan. We understand that UCR’s SOM will have significant financial commitments for each of the three educational components of an allopathic medical school.*
Business Plan Financial Modeling Assumptions

Faculty: The primary resource requirements and operating expenses which define the projected SOM funding requirements are driven by the overall student enrollment which is composed of medical students, Ph.D., graduate students, and M.D. residents. Each of these student categories has a characteristic UC faculty FTE ratio requirement that collectively defines the total number of faculty necessary for the medical school. The medical student-to-faculty ratio is 3.5:1.0; that is the salary and benefits for one FTE faculty member is supported by State of California funds for every 3.5 medical students. Similarly, the FTE ratio is 18.7:1 for Ph.D. students and 10:1 for medical Residents.

The timeline for the hiring of the 138 SOM faculty includes the start-up phase in academic years 2008-2009 to 2011-2012 (see Table 18, page 63), the growth phase in years 2012-2013 to 2019-2020 (see Table 19, page 64) and at full build-out in year 2020-2021 (see Table 16, page 61). Thus by 2019-2020, there would be a total of 138.0 FTE resources (see SOMP Table 19, page 64) dedicated to provide the salary support + benefits for the SOM faculty necessary for medical student, Ph.D. student and Resident instruction and training. The 138 FTE of the medical school faculty will be distributed among the following categories: existing Biomedical Sciences faculty (19), Research Leader Faculty (4). Basic Science/Clinical Research Faculty (49), Clinical Education Faculty (43), Community Clinical Physicians for 1st/2nd years (3.2) and Community Clinical Physicians for Clerkships (24.8); see SOMP Table 2, page 20.

Based on the experience garnered at the five existing UC medical schools, P&B is confident that the 138 FTE for the UCR SOM are appropriate and adequate to staff the critical beginning years (2012–2020) of the UCR SOM 4 year medical curriculum, to support the Graduate Medical Education requirements for the medical Residents, to engage in Ph.D. training and to conduct biomedical research at the high level expected of University of California faculty.

School of Medicine Research Model:

While it is anticipated that a high proportion of both the basic research and clinical faculty of the SOM will have extramurally funded research programs at build-out (2021), the Business Plan model takes a conservative approach when projecting possible income in the pre-build out era (2010-2020) to be derived from Indirect Cost Recovery (ICR). Based on faculty funding and SOM projected staffing models, there will be 68 of the 138 SOM faculty FTE that will be assigned as basic sciences or clinical research scientist positions. Each of these FTE positions will be allocated to fund one Principal Investigator (PI) position according to the assumption of a 1:1 FTE to PI ratio. This group of faculty will be devoted to teaching in the SOM years 1 and 2 of the curriculum and, particularly, to their research program (SOMP Table 2, page 20). This model predicts that by 2014-2015 and 2021-2022, respectively, the total grant dollars awarded to UCR will be $16.6 and $33.2 million, respectively and, also, an Indirect Cost
Recovery of $5.1 and $5.9 million. The ICR will pay a portion of the salary of the research faculty (see below) and staff salaries, wages and benefits and cover the Supply and Expenses of the research programs.

P&B understands the need for this aggressive Research Model where a significant proportion of the SOM faculty are expected to continuously maintain their Principal Investigator status on extramurally funded grants. This is a standard expectation of all the highest ranking research oriented medical schools, including the five sister UC medical schools. Also, P&B supports the conservative approach of modeling only 68 of 138 faculty FTE for ICR calculations. Inherent in this Research Model is the assumption that the US government will continue its 60 year history of providing generous funding to the National Institutes of Health and the National Science Foundation and other governmental agencies to support independent investigator initiated grant applications.

Revenue Sources Available to Support the Operating Expenses of the SOM:

The UCR SOM projected operating budget plan (Exhibit 1) and a functional summary (Exhibit 2) is presented in Appendix F of the SOMP (pages 274 and 275). Each of these tables summarizes budget details for each year of the interval from 2008-2009 to 2021-2022. These tables indicate that by the end of the first year of operation of the SOM in 2012-2013 that the aggregate revenue income will total $17.2 million. By full build-out of the SOM in 2021-2022, the revenue income will total $74.4 million (SOMP Appendix F, Exhibit 1, page 274).

The individual revenue sources that contribute to the total revenue income of the SOM will come primarily from the five sources listed below (see SOMP page 75).

(a) State Funds:

The State of California provides standard amounts of support funds each year for each medical student ($50,266), each Ph.D. student ($8,036) and each GME intern or residents ($27,008). Thus, on opening of the SOM in 2012-2013, the UCR SOM will receive $8.4 million of support funds from the State of California; this amount will increase to provide in aggregate $25.3 at build-out in 2021-2022 up, reflecting a steady state of 400 medical students, etc (SOMP Appendix F, Exhibit 1, page 274).

(b) Student Fees:

The UCR SOM will receive annually a defined proportion of the total Professional ($14,004) and Education ($3,417) fees paid by each medical student and a defined allocation from the State for Ph.D. students ($3,126). In aggregate, for a steady state of 400 medical students, the UCR SOM will receive the amount of $7.47 million in 2021-2022 (SOMP Appendix F, Exhibit 1, page 274)
(c) Federal and Private Research Grant Funding Indirect Cost Recovery

In the Business Model, it is assumed that there will be an Indirect Cost Recovery (ICR) revenue source accruing to the SOM derived from UCR SOM faculty PI’s grants and contracts. The Model assumes that 75% of direct grant and contract revenue is federal (with a 32% cost recovery factor) and 25% is private (with a 17% cost recovery factor). As shown in the SOMP (Appendix F, Exhibit 1, page 274; Table 14, page 51) the putative grant income is estimated to be $8.4 million in 2012-2013 when there are 26 medical school FTE filled and when the first medical students will be matriculated (SOMP Table 2, page 20). This grant revenue will grow to be $27.2 million by 2021-2022 when the full compliment of 138 FTE are filled (SOMP Appendix F, Exhibit 1, page 274; Table 14, page 51).

(d) Intern and Resident Affiliation Payments

Because each UCR SOM M.D. resident will be employed by a hospital or clinic, the UCR SOM will receive annually for each resident $82,500 or for all 160 residents by 2017-2018 $13.2 million annually (SOMP Appendix F, Exhibit 1, page 274).

(e) Fund raising, Endowments, and Restricted gifts

UCR SOM fundraising is projected to develop a stream of funds that will provide a crucial augmentation of the operating and capital support that will be required from the state to launch and maintain the SOM. As part of developing the SOMP, an analysis was conducted by UCR Acting VC for University Advancement, Susan Harlow of the potential development activities – the summary data she obtained is contained in Appendix C of this document. Based on this data, UCR has set its annual fundraising target to be an average of $20-$25 million per year (SOMP, page 69). Achieving this goal will take the focused attention of the UCR administration. P&B has been advised of the plans for the fundraising efforts of the medical school and assured that these efforts will not be in competition with the rest of the general campus.

The SOMP proposal provides a list of the specific operating assumptions related to fundraising, gifts and endowments (SOMP, page 69-70). UCR currently has three full-time individuals assigned to the medical school initiative. P&B is pleased that to date $30 million in gifts and endowments have already been raised for the SOMP. However, P&B understands that the UCR administration must make every effort to ensure an average fundraising income of $20–25 million over the critical years of 2012-2022 to keep the SOMP budget in balance.
Capital and Infrastructure Requirements for the SOM:

The capital building plan for the SOM is projected to cost a total of $556.3 million (See Table 20, page 65 of the SOMP). The capital plan is composed of two phases; (i) Transitional Space on the existing east campus to be started in 2009 and completed by 2012 for the opening of the SOM ($43.4 million), and (ii) three permanent buildings on the 40 acre west campus (Infrastructure, Medical Instruction and Research buildings I & II, and a Vivarium) to be started in 2010 and finished by June 2015 ($507.9 million).

The Health Sciences Surge building (with offices and research labs) and the Surge Vivarium to be built on the east campus (with a projected cost of $30 and $10 million, respectively Table 20, page 65), will only be used by the UCR School of Medicine for the interval of ~ June 2011 to June 2015 to house the early hires for the SOM until the move to the west campus. After this interval, these two facilities will revert to the central administration for general campus usage. Since both buildings will be used by faculty with extramural funding, the expectation is that the contract and grant level for both direct and indirect cost will be sufficiently high to generate a good return on investment.

It is proposed that funds for the capital building plan for the west campus (~$507 million) would be raised by a California voter-approved Bond Issue; this project cannot be initiated until the UC Board of Regents approves the UCR SOM proposal.

Recapitulation of the School of Medicine Business Plan:

To put the SOM Business Plan in perspective, some background information on the total UC and UCR budgets is provided. The 2007-08 UC-System-wide operating budget of $18 billion consists of a variety of sources of which state funds total $3 billion. UCR’s current annual state funded budget is $220M. Under the compact with the Governor, increased student enrollments (including medical students and graduate students) are funded on an annual basis, based upon the growth increments. This funding would begin in 2012-2013 (matriculation of the first class of medical students) and would increase incrementally each year until 2020-2021 (when the UCR SOM achieves its total planned student enrollment with 138 faculty) when the State would be providing annually $25 million (in 2006-07 dollars); this would represent an incremental increase of 11% to the current (2007–2008) UCR budget.

In order for UCR to both create the administration and support services infrastructure and to pay for the supplies-and-expenses of the SOM as well as to front-load the hiring of founding medical faculty over the interval from 2008–2016, a one-time start-up fund of $100 million is necessary, to be provided by the State at the rate of $15 million per year for the first four years of operation and $10 million per year for the next four years.

The SOM BP articulates the many starting assumptions (enrollment growth, staffing resource requirements, non-salary expenses and revenue funding) necessary to model in extensive detail the multitude of activities that are essential for a fully functional and accredited SOM. The SOM Operating Budget projects the necessary revenue and...
operating expenses for a 14 year period from 2008-2009 to 2021-2022. By fiscal year 2020-2021, the SOM will attain a level of self-sustaining breakeven operations with an annual budget of $87.5 million. Approximately $25 million of the total revenue will be provided by State of California funds, $7.4 million from student fees, $27.2 million from Grant and Contract revenue (direct), $13.2 million from Graduate Medical Education (residents) payments and $20-25 million from UCR fund raising. In addition the SOM will also require $508 million in bond funds to support the infrastructure and facilities on the West Campus.

Given the present poor condition of the State of California’s fiscal situation (February 2008), it is unclear if funds can be available to start a new UC School of Medicine.

P&B’s support of the SOM is contingent on the required state contribution for start-up funds being a supplement to its current contribution to UCR’s budget.

Critical Milestones for Medical School Implementation:

The SOMP presents a proposed set of timelines for eleven essential projects that will be required to open the accredited UCR SOM in 2012-2013 (see page xi, figure iii and pages 77-79, figure 11).

P&B endorses the Administrations’ ‘critical milestones’ for implementing the proposed Curriculum by achieving the following goals: (a) Approvals (campus, system-wide, and Regental approval of the SOMP); (b) Leadership Hiring (the proposed time line for hiring the Founding Dean of the SOM by 2009, the critical departmental Chairs of the key clinical departments as well as some modest proportion of the 138 FTE faculty of the SOM; (c) Accreditation (the proposed time-line for obtaining official accreditation of the two clinical years 3 and 4 as well as the overall accreditation of the UCR School of Medicine curriculum by the Liaison Commission on Medical Education); and (d) Implementation (the capital building time-line, as well as the time-line for ramping-up of the student enrollment starting for the opening class of 50 students in 2012 so that UCR will reach in 2020-2021 a steady state of four classes of 100 medical students at full build-out)

Advantages of a Medical School to UCR:

The Planning & Budget committee endorses the following as examples of why it is advantageous to UCR to establish a four year medical school.

(a) Cross collaboration research projects with present faculty in the areas of macromolecular structure/function, regulation of gene expression and signal
transduction, bioinformatics, biophysics, bioengineering, infectious diseases, behavioral/psychosocial aspects of medicine

(b) **Pipeline:**
Generate additional enrollment growth
Draw undergraduate and graduate students to other areas across campus
Increase student diversity
Support the success of students who are underrepresented minorities and/or socio-economically disadvantaged

(c) **Research enterprise:**
Generate additional direct and indirect cost recovery
Create additional opportunities for collaborative efforts
Stimulate additional industry partnerships

(d) **Transitional planning:**
Construct surge Office + Lab Building and surge Vivarium that will revert to general campus after completion of the permanent SOM buildings on the west campus
Remodel existing space (anatomy facility and classrooms)

(e) **Investment in campus resources:**
Research Office Infrastructure:
Increased resources for campus-wide information technology and computing
Library and electronic resources

(f) **Reputation:**
Increase national and international visibility for the UCR campus.

(g) **Effect of medical schools on the California economy.**
See pages 15-16 of SOMP and Appendix A, page 14, of this document.

**P&B Summary of the School of Medicine Business Plan:**

It is the view of Planning and Budget Committee that the SOMP describes an enormous and complex undertaking that requires an enormous and complex budget. The Committee believes that UCR Administration has created a rational and efficient and transparent Business Plan that will permit the establishment at UCR of a research based SOM that includes an innovative and future-oriented curriculum and a community-based training program. It is anticipated at build-out, the UCR medical school will meet the standards for excellence in research, medical training and health
care that are expected of University of California medical schools. In addition, P&B believes that the SOM will fulfill its mission of providing greater access to quality health care to the underserved of the region. P&B notes that Business Plan is dependent upon significant financial resources for one-time capital funds to be endorsed by the California Legislature and approved by citizen votes. Also significant operating funds must be provided annually both from the State of California through its budget to the University and from UCR fundraising activities. P&B hopes that the ongoing vagaries of the State of California’s financial state can be overcome to permit realization of the UCR SOMP so that the underserved residents of the inland southern California region will have better access to higher standards of medical care and have the opportunity to realize an increased quality of life.

Planning and Budget unanimously supports the Business Plan for the UCR School of Medicine with the requisite State funding.

Background of P&B Activities:

The Planning and Budget Committee has had two of its members’ actively participating (over sixteen 2 hour meetings) in the UCR administrations’ overall planning and budget formulation of the SOMP. In addition P&B has met on two occasions, each for approximately 2 hours, with Dr. Phyllis Guze, M.D., [UCR Executive Director, Medical School Planning and Professor of Medicine, David Geffen School of Medicine at UCLA] to review in detail the SOM proposed Curriculum. Also linked to this ‘planning’ assessment has been two approximate 2 hour P&B meetings with Vice Chancellor for Planning and Budget, Gretchen Bolar who explained in detail the aspects of the budget and capital plan. Both Dr. Guze and VC Bolar were available in these meetings and in other communications to answer all the questions raised by the Committee and the Committee found their responses thorough and well reasoned. The P&B committee also had a 1.5 hr meeting with Interim Vice Chancellor for University Advancement, Susan Harlow concerning development and fund-raising for the SOM.

This assessment of the proposed Business Plan for the UCR School of Medicine is respectfully submitted by the members of the Academic Senate Planning and Budget Committee on February 21, 2008:

Jay Farrell, Electrical Engineering
Mary Gauvain, Psychology
Subir Ghosh, Statistics
Paul Hoffman, Philosophy
Carol Lovatt, Botany & Plant Sciences
Tony Norman, Biochemistry & Biomedical Sciences, Chair
Conrad Rudolf, History of Art
Shuba Srinivasan, AGSM Management & Marketing
APPENDIX A

Why is There a Need for a Sixth UC Medical School?

To justify preparation of the Business Plan, it is essential to understand why there is a need for a sixth UC medical school.

The proposal for the University of California to establish a sixth allopathic medical school at UC-Riverside is derived from the American Association of Medical Colleges 2006 report and policy statement that called for a 30% increase in medical school enrollment nationwide. Also a California focused report in 2007 by the UC Advisory Committee on Future Growth in the Health Professions recommended that there be a 34% increase in UC medical student enrollment by 2020. This increase is essential to meet projected population growth in California and particularly in the Inland Empire area of Southern California, as well as to significantly increase the ratio of physicians/population in the major medically underserved counties of California, namely, Riverside, San Bernardino and Imperial counties.

P&B finds that the UCR School of Medicine (SOM) can be justified in part, by the conclusions of the AAMC [American Association of Medical Colleges] 2006 policy that calls for a 30% increase in medical schools that would lead to graduation of an additional 5000 new medical students annually.

The primary justification for establishing a sixth University of California medical school presented in the SOM Proposal [SOMP] is based on national, California and regional population demographics as well as physician demographics. A major impetus behind the plan is the fact that the U.S. population will increase by 25 million people each decade up to at least 2050, and that there will be a doubling of people over age 65 between 2000 and 2030. The population of California, presently 38 million, is projected to grow by 12 million to 50 million by 2030. Riverside County (population 2 million in 2007) and San Bernardino County (population 1.9 million in 2007) are predicted by the California Department of Finance to experience the highest population growth in California of 47% by 2020; this is the highest growth rate for all counties in the state. The expectation that this growth will include a substantial proportion of families with young children and senior citizens is an additional and significant consideration in the planning of the medical school for this region of the state.

There are currently eight accredited allopathic medical schools and two osteopathic accredited medical schools in the state of California. The allopathic schools include the five UC medical schools (UCSF, UCD, UCLA, UCI and UCSD) and three private schools (Stanford, USC and Loma Linda). The two private osteopathic schools are Touro University-California College of Osteopathic Medicine (Mare Island, Vallejo, CA) and the Western Osteopathic Medical School (Pomona, CA). There has not been a new allopathic medical school started in California since 1975, when the population of the state was 22 million or 58% of the present state population of 38 million people.
California also has a shortage of residency programs and residency positions. It is a reality that 75% of California's physicians received their MD education outside of the US and immigrated to California following their training.

The SOMP cites data that clearly document that by 2015/2020, the state of California will experience a shortfall of generalist and specialist physicians. This is in part, due to the fact that in the present physician workforce one of every three active physicians is over the age of 55 and is likely to retire by 2020. The shortage of physicians and residency programs is of such magnitude that it cannot be solved by simply adding additional seats at the existing medical schools. Letters in support of the UCR SOM from Gerald S. Levy, M.D., Vice Chancellor of Medical Sciences and Dean of the David Geffen School of Medicine, UCLA, David N. Bailey, M.D., Vice Chancellor for Health Affairs and Dean of the School of Medicine, UC-Irvine, UC-Davis Vice Chancellor and Dean Claire Pomeroy, Interim Dean Sam Hawgood at UC-San Francisco in collaboration with the UC-San Francisco Vice Dean for Education, Dr. David Irby, and Haile Debus, M.D., former UC-San Francisco Chancellor and now Executive Director, Global Health Sciences, UCSF, attest to California’s need for a new medical school and support UCR’s proposed SOM’s.

The Inland Empire (Riverside + San Bernardino Counties) + Imperial County currently have a population in 2007 of 4.2 million which is 11% of the state’s population and an area of 31,433 square miles. The total area of these three California counties is slightly greater than the combined area of the states of Vermont, New Hampshire, Massachusetts and Rhode Island which have a total of 7 allopathic medical schools. The strongest demographic argument presented by the SOMP for establishing a sixth medical school at UCR is that combination of the long standing shortage of physicians in California, coupled with the dramatic population increase in the Inland Empire will result in the largest geographical area in the state (approximately Riverside + San Bernardino + Imperial counties) with the lowest number of physicians per 100,000 citizens (<60 physicians/100,000) as compared to the comparable ratios for Beverly Hills and San Francisco (>100 physicians/100,000).

The Planning & Budget Committee finds the combination of the expected population growth in the greater Inland Empire region coupled with the reality of the aging of the current physician population and the medical needs of the underserved population to collectively be compelling reasons for the University of California supported by the state of California to establish a sixth medical school at UCR.

The proposed UCR SOM will benefit tremendously from the 3-year foundation in medical student education provided by UCR’s participation in the first two years of the UCR/UCLA Program in Biomedical Sciences. Since 1977, UCR has had a core of 14 FTE Biomedical Sciences faculty, supported by the Health Sciences budget, who have matriculated, each year, 24 students into medical school and provided them their first two years of medical school education. UCR’s students then transfer to the third year of medical school at UCLA and graduate two years later with their M.D. degree.
Approximately 700 students who started their medical education at UCR have received the MD from UCLA. Over this 30 year period, the medical curriculum taught at UCR received full accreditation approximately every 5–7 years in collaboration with the UCLA medical school from the national medical school licensing board, the Liaison Commission on Medical Education (LCME).

*From the perspective of the P&B Committee, this 30 year medical education heritage at UCR provides our campus with an extremely strong foundation for the formulation and implementation of the SOMP.*
APPENDIX B

P&B’s Assessment of the Letters of Recommendation for the SOM that have been Received by Interim Chancellor Robert Grey.

P&B has had access to copies of six letters of highly supportive recommendations for the UCR School of Medicine (SOMP, Exhibits 1 – 6, pages 289 – 299).

Dr. Haile T. Debas, M.D., currently Executive Director of UCSF Global Health Sciences and a former Chancellor of UCSF fully supports both the proposed UCR SOM medical curriculum and “look(s) forward to its (UCR SOM) launch in 2012”. Four other Deans of UC medical schools, Dr. David Bailey, M.D. at UCI, Dr. Gerald S. Levey, M.D. at UCLA, UC-Davis Vice Chancellor and Dean Claire Pomeroy, and Interim Dean Sam Hawgood at UCSF in collaboration with the UCSF Vice Dean for Education, Dr. David Irby all provide a critical and supportive analysis of the UCR SOM curriculum. A fifth strongly supportive letter was received from Dr. R. J. Simons, M.D. and Vice-Dean for Educational Affairs of the Penn State College of Medicine; he stated “I am confident that the classroom and clinical experiences outlined in the proposed curriculum will provide graduates a strong educational and experiential foundation for a career in medicine.”

In addition, a detailed analytical and highly supportive letter was received from the UCLA David Geffen School of Medicine, Medical Education Committee (MEC). This committee unanimously supports the proposed curriculum and writes “the MEC believes that the curriculum proposed for the new UCR 4-year medical school is innovative, well-designed and compatible with the most current thinking regarding medical education”.

Also, over 30 letters have been received by the UCR Chancellor’s office from interested citizens, community leaders, and other concerned groups; these are available on-line at http://www.medschool.ucr.edu/endorse.html.

From P&B's perspective, it is both reassuring and complimentary that four active Deans and one former Dean of UC medical schools as well as the UCLA School of Medicine Medical Education Committee are supportive of our UCR SOMP. The letter from UCSF is quite detailed in its analysis of our UCR SOMP and concludes with an exceptionally strong statement, namely that “the curriculum being proposed is excellent and meets the existing and emerging standards for medical education.”
APPENDIX C

Examples of Fundraising Accomplishments by Medical Schools

Presented below are some historical examples of fund raising by Schools of Medicine. Two categories of institutions are tabulated; (a) three UC medical schools that own their own teaching hospitals and which do not use the distributed model of medical education; and (b) medical schools that do not own their hospital or which use the distributed model of training for at least years 3 and 4 of their medical curriculum. Note that the UCR SOM will use the distributed model in its curriculum.

P&B understands that the fundraising goal of $20-25 million is a good estimate for annual fundraising for the SOM based on what comparable institutions are currently achieving (see below). P&B also understands that the actual goal will be determined as a result of a full scale feasibility study which will be conducted as a first step towards the preparation of a comprehensive capital campaign. This study will be conducted after a permanent chancellor and vice chancellor are named.

This data below was provided by UCR Acting Vice Chancellor for University Advancement, Susan Harlow.

(a) UC medical schools [own a teaching hospital]

<table>
<thead>
<tr>
<th>Institution</th>
<th>Year</th>
<th>Total Private Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>David Geffen School of Medicine at UCLA</td>
<td>2006</td>
<td>$145,437,385</td>
</tr>
<tr>
<td>David Geffen School of Medicine at UCLA</td>
<td>2005</td>
<td>$139,466,647</td>
</tr>
<tr>
<td>David Geffen School of Medicine at UCLA</td>
<td>2004</td>
<td>$124,292,657</td>
</tr>
<tr>
<td>David Geffen School of Medicine at UCLA</td>
<td>2003</td>
<td>$121,605,283</td>
</tr>
<tr>
<td><strong>Average &gt;&gt;</strong></td>
<td></td>
<td><strong>$132,700,493</strong></td>
</tr>
<tr>
<td>UC-Davis Health System</td>
<td>2006</td>
<td>$21,491,480</td>
</tr>
<tr>
<td>UC-Davis Health System</td>
<td>2005</td>
<td></td>
</tr>
<tr>
<td>UC-Davis Health System</td>
<td>2004</td>
<td>$17,674,221</td>
</tr>
<tr>
<td>UC-Davis Health System</td>
<td>2003</td>
<td>$12,352,273</td>
</tr>
<tr>
<td><strong>Average &gt;&gt;</strong></td>
<td></td>
<td><strong>$17,172,658</strong></td>
</tr>
<tr>
<td>UC-Irvine School of Medicine</td>
<td>2007</td>
<td>$42,545,139</td>
</tr>
<tr>
<td>UC-Irvine School of Medicine</td>
<td>2006</td>
<td>$62,795,939</td>
</tr>
<tr>
<td>UC-Irvine School of Medicine</td>
<td>2005</td>
<td>$21,642,405</td>
</tr>
<tr>
<td>UC-Irvine School of Medicine</td>
<td>2004</td>
<td>$15,762,985</td>
</tr>
<tr>
<td>UC-Irvine School of Medicine</td>
<td>2003</td>
<td>$26,211,897</td>
</tr>
<tr>
<td><strong>Average &gt;&gt;</strong></td>
<td></td>
<td><strong>$33,791,673</strong></td>
</tr>
</tbody>
</table>
(b) Schools of Medicine that have a distributed model of medical education.

<table>
<thead>
<tr>
<th>Institution</th>
<th># of Medical Students</th>
<th>Year first class enrolled</th>
<th>Total Private Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eastern Virginia Medical School</td>
<td>420</td>
<td>1973</td>
<td>$3,500,000</td>
</tr>
<tr>
<td>Texas A &amp; M Health Science Center; College of Medicine</td>
<td>300</td>
<td>1981</td>
<td>$1,500,000</td>
</tr>
<tr>
<td>Northeast Ohio Colleges of Medicine</td>
<td>115</td>
<td>1981</td>
<td>$3,900,000</td>
</tr>
<tr>
<td>Wayne State University: School of Medicine</td>
<td>1000</td>
<td>1880s</td>
<td>$18,000,000</td>
</tr>
<tr>
<td>University of Washington College of Medicine</td>
<td>800</td>
<td>1946</td>
<td>$106,000,000</td>
</tr>
</tbody>
</table>

**Note:** The University of Washington College of Medicine owns two teaching hospitals in the Seattle area. In addition the University of Washington operates an extensive distributed model of medical education in western Washington and by agreement (for specified numbers of medical students) with the states of Wyoming, Alaska, Montana and Idaho. This is distributed component is known as the WWAMI Program of the University of Washington College of Medicine.
APPENDIX D

Impact on California’s Economy Due to Medical Schools:

- **Economic impact:** The attached report (Umbach 2005) from the Association of American Medical Colleges (AAMC) reveals that its member medical schools and teaching hospitals had a combined U.S economic impact of $451 billion on the in 2005. In California alone, academic medical centers had a combined economic impact of nearly $35.5 billion in 2005. This overall economic impact of institutions on California and the national economy takes into account the direct and indirect business volume generated by medical schools and teaching hospitals, including institutional spending, employee spending and spending by patients, their families and visitors (excluding spending for patient care and medical services). According to the report, every dollar spent by a medical school or teaching hospital indirectly generates an additional $1.30 when it is "re-spent" on other businesses or individuals, resulting in a total impact of $2.30 per dollar. According to a more recent study (Health Care News-In Depth, May 28, 2007), for each dollar spent on medical education in New York the state sees a five fold benefit, i.e. $5. Further, the second study argues that this effect is about $8 for every dollar spent in areas where the economy lags the most (e.g. upstate New York). Given that the economy in the Inland Empire may be considered similar to upstate New York (i.e. this economy lags that of major CA cities such as Los Angeles), the latter figure might be appropriate.

- **Jobs:** California’s medical schools and major teaching hospitals are directly and indirectly responsible for more than 200,069 full-time jobs. Nationally, the report found that the 125 accredited U.S. medical schools and more than 400 major teaching hospitals represented by the AAMC employ nearly 1.67 million individuals and are directly and indirectly responsible for more than 3 million full-time jobs - one out of every 48 wage earners in the United States.

- **State revenues:** California’s medical schools and teaching hospitals also generated more than $1.72 billion in state tax revenue in 2005 through income and sales taxes, corporate income taxes and capital stock/franchise taxes paid by businesses that collect revenue from state institutions.

References:

1. Tripp Umbach (2006), The Economic Impact of AAMC Member Medical Schools and Teaching Hospitals, 2005 (Washington, DC: Association of American Medical College, 2007). Note: The AAMC report, "The Economic Impact of AAMC-Member Medical Schools and Teaching Hospitals," does not include the economic impact of patient care-related spending at hospitals, nor does it account for the economic benefits of physician training programs and community service programs. The
report was prepared for the AAMC by the consulting firm Tripp Umbach. For a copy of the report, visit http://www.aamc.org/economicimpact.

February 20, 2008

TO:  THOMAS COGSWELL, CHAIR
     ACADEMIC SENATE

FM:  K. VAFAI, CHAIR
     PHYSICAL RESOURCES PLANNING COMMITTEE

RE:  SCHOOL OF MEDICINE PROPOSAL

The Physical Resources Committee met on Wednesday, February 6, 2008, to consider the proposal to establish a School of Medicine at the University of California, Riverside. The committee voted unanimously to approve the proposal.
February 12, 2008

TO:THOMAS COGSWELL, CHAIR
ACADEMIC SENATE

FM: J. ALLISON, CHAIR
COMMITTEE ON DIVERSITY AND EQUAL OPPORTUNITY

RE: SCHOOL OF MEDICINE PROPOSAL

At its meeting on February 8, 2008, the Committee on Diversity and Equal Opportunity unanimously approved the Medical School Proposal. They appreciated the commitment to diversity, affirmative action and need based scholarships.
February 11, 2008

TO: THOMAS COGSWELL, CHAIR  
RIVERSIDE DIVISION

FR: DAVID CROHN, CHAIR  
COMMITTEE ON LIBRARY & SCHOLARLY COMMUNICATION

RE: PROPOSAL FOR THE UCR SCHOOL OF MEDICINE

The Senate Committee on Library and Scholarly Communications met February 6, 2008 to discuss the proposed medical school. Vice Chancellor Gretchen Bolar and Dr. Phyllis Guze attended and offered a brief presentation on aspects of the proposal related to the Library. Library staff also provided a report to the committee just prior to the meeting. Library committee members did not feel competent to evaluate all aspects of the proposal, but offer the following recommendations:

Because the medical school will require significant resources, it will be important for medical school expenses to appear as a separate item within the overall Library budget. This will assure that the medical school receives the resources it needs while preventing existing Library functions.

The Library will need additional staff to meet its new obligations.

It will be vitally important for all University academics to have access to medical school library electronic resources, regardless of their physical location.

The location of study space and other medical school library space decisions should be consistent with the Library's overall accreditation needs.

The Committee looks forward to the establishment of a UCR medical school and believes that this institution will greatly strengthen the Library's collection.

The medical school should be represented on the Senate Committee on Library and Scholarly Communications to assist in the development of needed resources.
February 8, 2008

TO:      THOMAS COGSWELL, CHAIR
          ACADEMIC SENATE

FM:      R. REDAK, CHAIR
          COMMITTEE ON FACULTY WELFARE

RE:      SCHOOL OF MEDICINE PROPOSAL

The Committee on Faculty Welfare met on Wednesday, February 6, 2008, to consider the proposal to establish a School of Medicine at the University of California, Riverside. The committee had no specific concerns and voted to approve the proposal.
February 7, 2008

TO: THOMAS COGSWELL, CHAIR
ACADEMIC SENATE

FM: ANIL DEOLALIKAR, CHAIR
COMMITTEE ON RESEARCH

RE: SCHOOL OF MEDICINE PROPOSAL

At its meeting on Thursday, February 7, 2008, the Committee on Research considered the proposal to establish a School of Medicine at the University of California, Riverside. There were no specific concerns with the proposal and the committee voted unanimously to approve.
February 7, 2008

TO: THOMAS COGSWELL, CHAIR
     RIVERSIDE DIVISION

FR: PIERRE KELLER, CHAIR
     COMMITTEE ON EDUCATIONAL POLICY

RE: SCHOOL OF MEDICINE BUSINESS PLAN

The Committee on Educational Policy (CEP) was invited to attend the roll-out meeting concerning the Business Plan of the School of Medicine in January. At this meeting, attended by several of our members, a very thorough summary of the plan was presented by Dr. Phyllis Guze and Vice Chancellor Gretchen Bolar. At our CEP meeting today, Dr. Guze again met with the CEP to discuss the plan further and to answer any questions we had.

The CEP has already opined on the medical school curriculum. This is the aspect of the School of Medicine business plan that most directly falls under the purview of CEP.

There is another aspect of the School of Medicine Business Plan to which we would like to draw positive attention. We welcome the decision to reserve a substantial number of slots in the Medical School for UC Riverside undergraduates. We think that this will serve as an important link to the other Colleges and make UC Riverside more attractive to the very best undergraduates.

We have some concern about the funding situation for the School of Medicine, especially in the current fiscal environment. However, our concern is considerably mitigated for the committee by three considerations. First, the resource requirements for the School of Medicine and the funding streams needed to support those resource requirements have been given careful reflection in the Business Plan. It is crucial, to be sure, that a Dean for the School of Medicine be recruited with all dispatch who can set the structures in place to secure the funding streams required. Second, Dr. Guze has assured us that the School of Medicine is conceived of as an institution of distinction that will only be realized if resources adequate to an institution of distinction are forthcoming. Finally, should the anticipated funding sources fail to materialize in the order of magnitude required by the Business Plan, the sharp separation of the School of Medicine from the financial resources that help support the existing Colleges, should ensure that the campus as a whole does not suffer.

In light of the benefits to the campus and the community of having a School of Medicine on this campus, and with due awareness of the fiscal pitfalls that still may lie ahead for the School of Medicine, the CEP voted in favor of the plan (7 yes votes, 0 No votes, 5 members unavailable).

Best wishes in further reviews of the proposal.
The UCR Senate Committee on Academic Personnel (CAP) has been asked to provide comments on the draft Proposal to Establish A School of Medicine at UCR. CAP met with Phyllis Guze to discuss the proposal and to consider what CAP will need to do in order to evaluate the performance of the Senate members in the new School of Medicine.

Members of CAP expressed the wish that both the medical needs of the Inland Empire and the existing and potential future research strengths of UCR should be important factors in developing the research specializations of the new Medical School. In particular, the existing expertise in silencing in gene expression was mentioned as a focus that has huge potential medical applications and that should be one of the main foci of research that would build upon a current strength. There are undoubtedly other research strengths at UCR that can be used to help to build a strong, innovative and cutting-edge research-oriented medical school. CAP recognizes that planners cannot impose rigid requirements on the founding Dean of the Medical School, but faculty need to be encouraged to help the planners and the new Dean to understand those existing and potential strengths at UCR that can be used to attract top researchers to our campus.

Our discussion with Dr. Guze about CAP's role in evaluating Medical School personnel led to the following: It is expected that within the next 13 years the Medical School will employ about 80 members of the UCR Division of the Academic Senate. In order to evaluate these members for appointment, promotion and merit increases CAP will need to have two members from the School of Medicine, one to represent the clinical side and one to represent the research side.

CAP will include a plan for dealing with the Medical School as it becomes a reality in our report that is due in July of 2008.
January 28, 2008

Thomas Cogswell, Chair
Academic Senate
Riverside Division

At its meeting of Wednesday, January 23, 2008, the Graduate Council considered the proposal to establish a School of Medicine at the University of California, Riverside. I am pleased to inform you that the Council voted to approve the proposal. In discussion of the proposal however, the question of academic governance of the school arose. The Council wonders whether a timetable for development of guidelines for academic governance (e.g., by-laws for the School of Medicine, review of Senate regulations to ascertain whether amendments of any kind are necessary, etc.) has been discussed. If no timetable for development of guidelines has been discussed, the Council suggests that the matter be given consideration.

Ilya Dumer, Chair
Graduate Council