

COMMITTEE ON RESEARCH
Annual Report 2006-07

To the Academic Senate, Santa Cruz Division:

The following describes the activities of the 2006-07 UCSC Committee on Research (COR).

I. COR Activities Regarding Matters of Research Policy

A. Relations with the VCR and Office of Research

The 2006-07 COR was pleased to welcome Vice Chancellor for Research (VCR) Bruce Margon to UCSC, and to include the VCR in regular COR meetings for discussion of numerous topics. The COR feels that we have established a constructive relationship with the UCSC Office of Research, which should help with addressing goals of mutual interest in the future.

B. Strategic Academic Planning and Conditions for Growth

COR discussed various aspects of the Strategic Academic Plan (SAP) and planning process throughout 2006-07. This effort included preparation of written comments on the SAP and development of a "Conditions for Growth" document, following a request from the Senate Executive Committee. Although the COR was supportive, in principle, of focusing resources on selected topics, programs, and disciplines (as opposed to attempting to grow all existing programs evenly), the COR was unimpressed with the philosophical and policy underpinnings of the draft SAP. In particular, there was a disconnect between the proposed distribution of faculty positions (FTE) relative to enrollment, and no attempt to link FTE to selected areas on the basis of excellence. There was also no accountability with regard to either of these topics (enrollment or excellence), little thought given to strengthening graduate programs having research emphases, or the impacts of growth on facilities and infrastructure. Finally, the emphasis on specific professional school programs was poorly justified.

Following communication of these concerns, the COR prepared an additional document outlining conditions for growth with regard to maintaining and improving the quality and viability of UCSC's research mission. The COR is concerned that, if growth is to occur, it must be planned in a way that includes transparency in funding and operation of research programs. This is not done at present, in large part because indirect costs are commingled in a way that purposely obfuscates funding sources and spending. Proposed undergraduate and graduate growth is likely to have a deleterious impact on UCSC's research mission unless this policy is changed. This topic is discussed later in the context of UCORP recommendations.

The two primary recommendations enunciated in the COR Conditions for Growth document are:

- 1. There should be no growth at UCSC unless and until there is presented to the campus community, economic models that can sustain the campus both during the growth period and after.**
- 2. UCSC should dictate and articulate the economic models for its growth plans, and these models should be discussed widely and in public (within UC overall, within the Santa Cruz community, etc.).**

In addition, COR noted that healthy growth cannot occur until UCSC resolves current problems in research support and funding (in addition to issues of enrollment management, teaching load, and related topics). UCSC can not grow its way out of these difficulties on the basis of current operating models.

C. Institutional Review Boards (IRBs)

The COR offered comments on a systemwide report on the functioning of Institutional Review Boards. The UCSC COR was primarily concerned that adequate resources be made available to support the IRB workload, and to develop consistent cross-campus policies. The COR also agreed that it makes sense to develop separate policies to govern IRB review of social science, arts, and humanities research.

D. Research Compliance and Public Information

The COR met with the VCR and UCSC Office of Research (OR) Compliance Officer Caitlin Deck to discuss the increasing workload regarding compliance issues, and the extent to which the UCSC research mission may require modifications to compliance support and policies. The VCR also discussed with the COR a policy regarding the public release of research funding information.

E. Multicampus Research Unit (MRU) Working Group Recommendations

The COR discussed a system-wide report on potential changes to UCOP funding and management of MRUs. The COR agreed with the primary report recommendations, that MRUs be subjected to programmatic review on a regular basis, and that MRUs be required to justify sustained funding in the context of competing interests. COR also agrees that MRU funds should not, as a rule, be used to support faculty FTE. COR was concerned with development of a standing MRU Advisory Committee through UCOP, and with strict timing for MRU review.

F. Earmarking Requests

The COR chair participated in a review with the VCR and the Director of Government and Community Relations on UCSC "earmarking" priorities. Discussion on this topic at a subsequent COR meeting led to preparation of a recommendation to the administration regarding the annual development of a priority list. The issue is complicated because UCSC maintains two, seemingly contradictory policies: "UC does not encourage earmarks; here is how we will request earmarks." The COR recommended that UCSC develop a more systematic and comprehensive basis for collecting and evaluating information related to earmark priorities, so that those put forward are most representative of campus needs. The COR also recommended that there be regular follow-up with UCOP on what system-wide priorities are communicated to members of Congress in Washington, D.C., and what items are eventually funded.

G. Proposal for Relationships between Pharmaceutical Vendors and Clinicians

The COR commented on a draft policy regarding relationships between pharmaceutical vendors and clinicians. The intent of this policy was to limit involvement of UC faculty, researchers, students and staff in relationships with vendors or others that may create the appearance of bias or misrepresentation of scientific research (not to mention actual bias, fraud, or more serious violations of university policy). The COR was surprised that the specific behaviors to be prohibited under new guidelines are not already covered by university policies on research and academic integrity. Second, the COR wondered how the new policies were to be enforced. Finally, the COR was baffled as to why the proposed policies were so narrowly restricted in their application. If new policies are needed to prevent bias, fraud, and/or misrepresentation, they must be applied equally to all UC employees and students.

H. Extending PI Status to Junior non-Senate Researchers

The VCR's office has a history of approving all requests for exception to PI status for grants, but the VCR was concerned that inexperienced or transient PIs might open the campus to more risk or that post-docs might be exploited. The COR recommended that the sponsor's letter thoroughly explain the situation, motivating factors and benefits to extending PI status, and the VCR prepared documentation emphasizing this need.

I. Funding from Tobacco Companies

The COR was asked to comment on RE89, a proposal to ban funding associated with the Tobacco industry from the University of California. The UCSC COR recommended that the Regents do not adopt RE89, because implementation of this resolution would violate fundamental, long-standing principles that govern the conduct of research within the University of California, would be antithetical to the UC research mission, and would be damaging to UC's standing as a world-class research institution. The COR also requested that its written recommendation be communicated verbatim and in its entirety to the System-wide AC and Academic Assembly (AA).

J. Open Access Policy

The COR commented on system-wide recommendations regarding a proposed open access policy. The COR is broadly supportive of encouraging faculty to retain copyright of published materials, and of policies and programs that lead to wider dissemination of these materials, including making these documents available for free use online. At the same time, COR is concerned that faculty, researchers, and students be able to negotiate successfully with publishers so as to achieve mutually beneficial agreements concerning terms of publication. UC must assist with this negotiation process so that authors are not left to do this alone, and so that consistent agreements can be achieved. The COR is concerned about the impact that the proposed policy may have on nonprofit publishers, especially those associated with professional societies and academic presses. And the COR is not sure what the impact of this new policy might be on the UCSC library system, and would like to hear from the Committee on the Library on this topic.

K. Electronic Communication Resource Purchase and Usage Policy

The COR reviewed a proposed policy and has concerns regarding its applicability to many faculty, researchers, and students and how the terms of the policy are intended to be enforced. It is not clear who is to be affected by this policy, particularly whether it is intended to cover faculty spending external research funding. As proposed, COR finds the new policy to be unreasonably restrictive and probably unworkable.

L. Santa Cruz Institute for Particle Physics (SCIPP) ORU Review

The COR contributed, belatedly, the review of the SCIPP ORU five-year review. The COR was impressed by the extent of important, high-profile research being done by SCIPP researchers, colleagues, and students, and the return on investment that SCIPP brings to the UCSC campus. The SCIPP Review Committee recommended that young researcher positions be added prior to retirements so as to smooth the transition, but COR can not take a position on this recommendation without evaluating alternative uses for scarce funding. The COR encourages SCIPP researchers to develop more extensive interdisciplinary, interdepartmental, and interdivisional research projects and alliances in coming years.

II. COR Activities Involving the University Committee on Research Policy: A Discussion of Policy Regarding Tracking and Use of Indirect Cost Recovery

Several of the issues listed in the preceding section were also discussed by the University Committee on Research Policy (UCORP). In each case, information was transmitted from UCORP to COR mainly through the COR chair, who served as the UCSC UCORP representative. In addition, the UCSC UCORP representative communicated COR positions back to UCORP.

Perhaps the most important issue discussed by UCORP during the 2006-07 year was an exploration of the collection, use, and accounting of Indirect Cost Recovery funds, and the support and accountability of research activities, by UC overall and by individual campuses. This effort was motivated, in part, by publication in May 2006 by the University Committee on Planning and Budget (UCPB) of the UC Futures Report (www.universityofcalifornia.edu/senate/reports/futures.report.0706.pdf). That report describes patterns of funding during the last two decades, with a focus on state contributions, and explores several scenarios for future conditions. The report shows that state funding for UC activities has dropped considerably during the last two decades, both in an absolute sense and on a per-capita basis. The UC Futures report concludes that current trends and plans for changes in the amount and distribution of state funding, even those based on extremely optimistic scenarios, will neither halt UC's overall financial decline nor stop continued weakening of UC's ability to serve the state through research, teaching, and service.

Careful consideration of the UC Futures Report, and evaluation and discussion of additional documents and information provided to UCORP, left UCORP concerned about UC's research mission. In particular, UCORP was uneasy with what appears to be a growing gap between ICR and other funds used to support research facilities and administration (F&A) and the actual indirect costs of research, and what may be a

simultaneous increase in reliance on ICR funds to support activities that are not directly associated with research. At the end of the year, UCORP issued an interim report on this topic to the Academic Council, including a series of recommendations. The executive summary from the UCORP report follows:

"UCORP is concerned that long-term reductions in state support, as described in the UC Futures Report, may have deleterious effects on UC's research mission. Unfortunately, UCORP has been unable to determine the past or potential future impacts of budget reductions on research because of a lack of data concerning the use of Indirect Cost Recovery funds, and of Opportunity Funds and UC General Funds. In addition, UCORP has heard assertions regarding the true Facilities and Administrative costs of doing research, and there are different opinions as to whether ICR funds are sufficient to cover these costs on an annual basis. UCORP is the primary system-wide senate committee responsible for opining on matters of research policy, but the lack of basic budgetary information needed to evaluate many policy decisions hobbles the committee's ability to function. In addition, the lack of transparency in the use of research support funds may contribute to a broad misunderstanding as to the importance and operation of UC's research enterprise. UCORP makes three recommendations in order to address these concerns:

Recommendation #1: Form a joint UCORP-UCPB working group, to operate for the 2007-08 academic year, comprising perhaps 5-6 members, with the charge of gathering data, deliberating on these and related issues, and making specific recommendations regarding matters of ICR and general research budgeting and accounting.

Recommendation #2: Explore options for tracking the use of ICR funds, and use of Opportunity Funds and UC General Funds, so that the extent to which ICR funds are used to support research can be documented and evaluated, and the extent of the research support deficit (if any) can be quantified and tracked over time.

Recommendation #3: UCORP and UCOP should work together to develop strategies for improving UC's research profile throughout the state and country, and to make clear to the public at large the unique importance of UC's research mission."

More details on UCORP activities will be found in the UCORP annual report when it appears (<http://www.universityofcalifornia.edu/senate/committees/ucorp/reports.html>).

Returning more specifically to conditions for research at UCSC, the amount of ICR secured by UCSC researchers has increased considerably in recent years (Fig. 1), but the trends in ICR recovery leave the COR concerned for two main reasons.

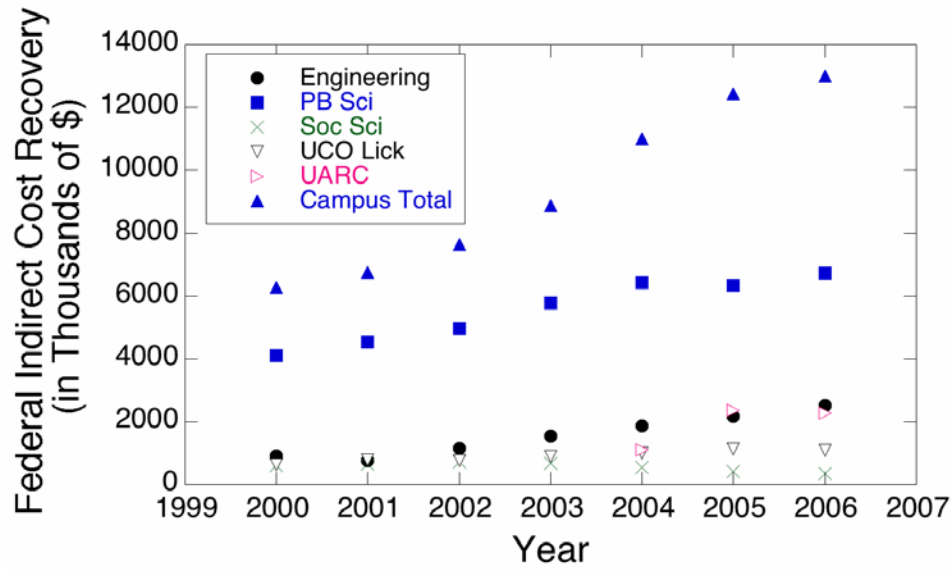


Figure 1. Summary of indirect cost recovery from federal grants awarded to UCSC researchers during the last seven fiscal years.

First, ICR funds recovered have begun to level off in the last several years, after a sharp rise in the early 2000's, despite significant increases in the number of proposals written, number of grants awarded, and the overall UCSC researcher, faculty and student populations. The ICR increases of the early 2000s do not appear to be sustainable. More to the point, these ICR funds comprise an obligation to the university; ICR is generally handled as *reimbursement* for funds *after* they are expended to support research. Thus increasing ICR funds cannot contribute to a significant net gain in general revenue for non-research activities (other than through incidental cost savings based on economies of scale and research-related teaching activities) unless research is not supported as promised. UCORP (and the UCSC COR) would like to see greater transparency and accountability on the use of ICR funds, to make sure that these funds are being used most effectively to support the UC research mission.

It is sometimes asserted that UC (and individual UC campuses) can't track ICR funds and costs accurately because of the complexity of the UC accounting system, but this is not true. Each UC campus must tabulate detailed information on ICR in order to enter into periodic negotiations with the federal government regarding the ICR rate; there must be reliable, quantitative information available that allows these negotiations to take place. In addition, each campus must be prepared for financial audit of its research activities at any time. Indeed, every Principal Investigator (with assistance from a team of financial analysts) tracks research expenditures, both direct and indirect, down to the penny. This could be done with ICR expenditures placed in the General Fund and Opportunity Fund categories, if this were desired. In fact, UCOP recently promulgated a policy with regard to the tracking of ICR from the California Institute for Regenerative Medicine (CIRM). This last policy is quite severe, requiring the routing of ICR to be used only to support CIRM research. COR does not recommend anything this extreme for ICR in general, but

the new CIRM ICR policy shows that determining how ICR is used is possible, if the university wishes to do it.

III. COR Budget and Grants Programs

A. COR Budget

COR funding was increased by a permanent allocation of \$13,200, down sharply from the increase in 2005-06, reflecting a reduction in the increase in campus recovery of indirect costs. The total amount of 2006-07 funds allocated to the COR budget was \$481,144. Given 545 senate faculty eligible for COR support, 2006-07 COR funding comprises \$883/senate faculty member, an increase of 2.3% relative to 2005-06, but this represents a net reduction in COR funding on a per-senator basis, given the rise in the Consumer Price Index of 3.2% during the same period. Taking a longer view, UCSC COR funding continues to slip behind levels during the late 1980s and early 1990s, and remains well below funding levels at most other UC campuses (as documented in the COR 2004-05 annual report and the 2002-03 report on COR funding levels).

B. COR Grants Programs

COR continued to fund three primary grant programs during the 2006-07 year: Faculty Research Grants (FRGs), Special Research Grants (SRGs), and funding for Scholarly Meeting Travel (SMT). The FRG and SRG awards were made in the Spring, whereas SMT awards were made throughout the academic year. In addition, COR funded New Faculty Research Grants (NFRGs) in the Fall for newly-arrived faculty who missed the FRG call during the preceding spring. Total funding in support of these programs was \$599,792 (Table 1). The amount expended by COR in support of research in 2006-07 that exceeded 2006-07 funding was made up by carry-forward from the preceding year.

Table 1. Summary of COR Research Expenditures during the 2006-07 Year

Category	Amount	Comments
FRG (awarded Spring 06)	\$164,939	Paid with 2006-07 funds
NFRG (awarded Fall 06)	\$23,633	New faculty
SRG (award Spring 07)	\$290,106	
SMT	\$121,114	
Total expenditures	\$599,792	

As in 2005-06, the 'basic' award for FRGs and NFRGs was \$2000 for untenured faculty and from \$1500 for tenured faculty, with an additional \$500 available in each category if properly justified. SRG awards were limited to \$15,000 for individual investigators and \$20,000 for investigator teams of two or more Senate members. SMT was limited to \$650, with up to \$1000 available every third year.

The vast majority of FRG, NFRG, and SMT requests were funded in full (Table 2). Although there are restrictions as to how funds can be used in these programs, applicants who follow the instructions and properly justify their requests are generally funded.

Table 2. Summary statistics on the 2006-07 FRG and SMT programs.

Division	N^a	% of faculty^b	FRG apps funded	FRG amount funded	SMT apps funded	SMT amount funded
Arts	65	11.9%	31	\$53,839	30	\$22,742
Engineering	73	13.4%	0	\$0	7	\$5,950
Humanities	99	18.2%	34	\$52,300	43	\$30,999
PBSCI	154	28.3%	18	\$27,671	16	\$12,986
SocSci	154	28.3%	33	\$54,762	66	\$48,437
Campus	545		116	\$188,572	162	\$121,114

^a Number of faculty in each division

^b Percent of faculty in each division

In contrast, the SRG program is much more competitive. Although the COR does not attempt to allocate resources on the basis of divisional or departmental populations or the distribution of applications, SGR funds were distributed broadly and relatively evenly across the campus (Table 3). The overall 2006-07 SRG success rate was ~50%, including SRGs funded in part.

Table 3. Summary statistics on the 2006-07 SRG program.

Division	N^a	% of faculty^b	SRG apps	SRG apps funded	% of apps funded	amount funded	% of total \$amount funded
Arts	65	11.9%	9	4	16.7%	\$36,425	12.6%
Engineering	73	13.4%	6	3	12.5%	\$42,398	14.6%
Humanities	99	18.2%	7	5	20.8%	\$46,000	15.9%
PBSCI	154	28.3%	9	6	25.0%	\$81,054	27.9%
SocSci	154	28.3%	14	6	25.0%	\$84,229	29.0%
Campus	545		45	24		\$290,106	

^a Number of faculty in each division

^b Percent of faculty in each division

COR continued worked with ITS staff to streamline the on-line grants application, tracking, and review system (an effort begun by the 2005-06 COR), and this system continued to improve. In addition, the 2006-07 COR modified the application call and online forms and produced a Frequently Asked Questions (FAQ) document to help clarify important review criteria and funding limitations. The revised call and applications (particularly for the SRG program) emphasizes the need for applications to be written in language understandable to lay reviewers.

IV. COR Representation

In addition to representation on UCORP, COR was represented through its chair on the Senate Executive Committee. That committee also met several times with the Chancellor's Advisory Board. The COR chair also served on a Strategic Academic Plan Implementation Working Group. COR member J. Hankamer represented the committee throughout the year during most Instructional Technology Committee meetings.

V. COR Senate Support

The COR is indebted to Laurie Babka, Senate Committee Advisor, for the careful, thoughtful, detailed support she provided to the committee throughout during the 2006-07 year. Laurie's contributions were enormously important to functioning of the committee.

Respectfully submitted,

COMMITTEE ON RESEARCH

Elisabeth Cameron
Jonathan Fox
Jorge Hankamer
Grant Hartzog
Darrell Long
Mara Mather
Ali Shakouri
Sriram Shastry (W,S)
Andrew Fisher, Chair

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