

RESEARCH INFRASTRUCTURE/SUPPORT
A WORKING PAPER FOR *UCR 2020*
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Concerns about UCR's research infrastructure and, in particular, the Office of Research (OR) were identified by three of the eight strategic planning subcommittees: academic excellence; research and creative activity; and resources, budget, planning and infrastructure. Similar concerns were also frequently mentioned in a faculty survey conducted in conjunction with the strategic planning process. The academic excellence subcommittee developed a separate topic paper on OR, and considerable discussion about these issues took place during meetings of the *UCR 2020* steering committee. This working paper attempts to summarize those issues and suggest some possible solutions.

An overriding principle of the strategic plan is academic excellence. Many criteria exist for defining excellence (see working paper "Excellence Matters"), but among them is having research-productive faculty and a robust profile of research funding, with significant contract and grant activity. While UCR's research profile is solid, it is not yet on a par with our comparison AAU institutions,* nor with most other UC campuses. Indeed, the campus will have to more than triple its current grant funding to be competitive at this level. The 12 most recent universities to be inducted into the AAU averaged \$178 million per year in federal research expenditures in FY2008; UCR's federal research expenditures during that year were \$54 million.

To achieve this requires a sound, smoothly functioning Office of Research with a culture of serving the campus' research enterprise. At UCR, OR is responsible for three primary areas: (1) submission of faculty grant proposals, (2) assuring that the campus is compliant with federal and state regulations governing responsible conduct of research, and (3) technology transfer, or assisting with the patenting and licensing of intellectual property developed by faculty.

Within the realm of grant submission, OR supports the faculty in research development, pre-award proposal administration, award negotiation, and post-award administration. For government contracts and grants, administration has become increasingly complex. Audit standards have tightened and training and documentation requirements have increased. For OR, the need for compliance must be carefully balanced with the vital role of catalyst and facilitator.

* For purposes of UCR 2020, the campus identified 11 AAU comparison institutions. They are: Iowa State University, SUNY Buffalo, SUNY Stony Brook, Texas A&M, University of Arizona, UC Davis, UC Irvine, UC Santa Barbara, University of Kansas, University of Missouri-Columbia, and University of Oregon.

Recurring Themes

Through extensive analysis and consultation, the three subcommittees independently reached the conclusion that changes are necessary within OR to adequately perform these functions and to position UCR to achieve its goal of excellence in research and creative activity. Following are a few of the recurring themes that appeared in the subcommittee reports:

1. **OR is overly focused on compliance** rather than facilitation of faculty efforts. Note the following statements from the reports of the three subcommittees:

Academic Excellence (topic paper #1): “The OR operates as a command and control organization rather than a service organization... A recurring complaint the committee heard is that the OR is too risk averse and is primarily focused on issues of compliance.”

Research and Creative Activity: “We must change the culture that has given UCR the reputation of a campus that is difficult to work with... The Office of Research in particular must adopt a posture that its mission is to get to yes – to find ways to meet sponsor requirements on proposals, and to find ways of coming to terms with sponsors on agreements.”

Resources, Budget, Planning and Infrastructure: “At UCR, the role of administration appears to have evolved from one of *support and facilitation* of the academic mission to one of *control and compliance* with regulations.” (Note: This refers not only to OR, but to other administrative functions as well.)

2. **OR should engage in more research development activities.** In comparison with other UC campuses, UCR’s research development efforts fall short. This failure has resulted in a relative paucity of large program project and training grants on the campus. Insufficient emphasis is placed on cultivating faculty research leadership and bringing together groups of faculty to pursue these large grants.
3. **The research infrastructure must be enhanced** in order to increase UCR’s research productivity and achieve the profile of an AAU institution. This need was clearly identified in *UCR 2020*’s first strategic goal of excellence in research and creative activity, which included an action to build the research structure, including development of state-of-the-art facilities and adequately staffing OR (see page 15 of *UCR 2020*).
4. **Improved staff training is needed**, both within OR and among departmental analysts whose role it is to assist the faculty in the submission of contracts and grants. This is exacerbated

by the isolation of analysts within departments, which is viewed as an impediment to quality and uniformity of service. Often these individuals have difficulty keeping current on changes in grant program requirements. UCR also needs a cadre of professional staff who specialize in proposal development.

5. **OR can play a more vital role in the oversight of UCR's centers and institutes.** Centers are an important part of the research infrastructure, both for the enhancement of faculty research capabilities and attraction of industrial or foundation support of center-related research. Currently, UCR's centers form a disparate group with minimal supervision or fiscal oversight. Some are doing well; others appear to be inactive. No mechanism is in place to routinely review centers and to sunset any that are no longer viable.

Recommendations

Increased Service Orientation – OR must do more to perform the important role of catalyst and resource for bringing faculty together in pursuit of large center, training, or multi-investigator grants. Simply e-mailing faculty lists of federal funding opportunities is neither strategic nor effective. OR can serve as a champion for faculty research by encouraging the submission of proposals, streamlining submission protocols, and improving communications. At the same time, the effectiveness of OR can be improved through a shift in its core values and adoption of a service orientation. As pointed out by the research and creative activity subcommittee, OR abides by the same rules as the other UC campuses, but appears to apply these rules more rigidly. UC Berkeley, for instance, was identified by *Inc.* magazine in 2006 as one of the “five universities you can do business with.” UCR's Office of Research can benefit by looking at what other campuses have done and applying appropriate discretion and flexibility in negotiating awards. Simply adopting a stance of courtesy, professionalism, and prompt responsiveness will go a long way toward reversing the current perception that OR views faculty as a burden rather than as valued customers. To the extent that compliance is a necessary component of OR's function, OR staff and leadership can do a better job of educating faculty about these requirements and developing constructive and streamlined means of assuring regulatory mandates are met.

Engaged Leadership – The tone for OR is set at the top. The office will increase its service orientation only to the extent that its leadership is personally committed to this value. Further, the vice chancellor for research (VCR) must exert strong, effective leadership in promoting research for UCR. The VCR should also cultivate contacts within funding agencies so that UCR faculty can take best advantage of emerging funding opportunities. He or she must be highly visible and actively engaged with faculty throughout the campus – attending departmental meetings, meeting with center directors, and participating in seminars and workshops. The VCR must have a solid knowledge of the research areas in which UCR's faculty are working in order

to act as catalyst, bringing them together in pursuit of large, multi-investigator grants and helping to direct newly hired faculty to others with similar research interests. In addition to being proactive in promoting research, the VCR must be both approachable and accessible to faculty seeking guidance or input. Ultimately, he or she can best serve the campus by not getting in the way of faculty pursuing contracts and grants, but instead encouraging and facilitating such efforts. The deans, too, must play an active and engaged role in promoting research, both within and across colleges. Only with fully engaged leadership will UCR elevate its research profile.

Improved Research Development – A more proactive approach by OR would encourage the development of research collaborations and clusters, facilitate the submission of large programmatic research proposals, and identify and nurture potential research leaders early in their careers. While OR has joined with the colleges to offer a series of funding workshops for graduate students as well as both novice and experienced PIs, it may be that the office is not adequately staffed to fully perform this important function. Ideally, OR will take the lead in staying abreast of funding trends and communicating them to the deans, faculty, departments, and research centers, ensuring that all PIs are aware of opportunities relevant to their areas of expertise. The vice chancellor for research – as well as the deans – should meet with program officers regularly to obtain information about federal priorities and upcoming funding opportunities. OR can perform a valuable role in facilitating and supporting the establishment of teams of PIs capable of leading efforts for major research or training funds. OR can also work toward providing resources for required cost sharing and other necessary institutional commitments, as described below. Another valuable service would be maintenance of an up-to-date and searchable database of faculty expertise, databases designed to facilitate searches for funding opportunities, and the creation of listserves of faculty with similar research interests to assist in exchanging ideas and establishing collaborations.

Optimized Research Support Framework – The research and creative activity subcommittee concluded that there is no one, “right” way to organize research support operations. The subcommittee did, however, identify some key questions that should be addressed to optimize the effectiveness of UCR’s existing research support framework. For example: What is the appropriate staffing level for research administration, given regulatory requirements? How much authority and responsibility should reside with OR as opposed to departments or centers? Should OR have control over extramural accounting? How can automated resources better help our faculty and staff? These questions – and more – should be addressed by an implementation task force for the research enterprise. Best practices should be monitored and adopted.

Expanded Staff and Staff Training – OR staff must be of an adequate size and configuration to not only provide timely and responsive assistance to PIs, but also to act as a catalyst for major program and training grants while, at the same time, meeting necessary compliance requirements. Equally important is a culture of service. As mentioned above, departmental staff

also lack necessary training to do their jobs effectively. Systematic training should be put in place both for new staff and for informing established analysts about changes to grant program requirements. UCR would also benefit greatly from development of a “strike team” of proposal specialists, who can be assigned to a specific proposal for a period of time to help PIs complete the process. These teams would work closely with the PIs on a grant, developing boilerplate, ensuring requisite forms are completed correctly, gathering data and/or preparing tables, developing graphics, formatting proposals, and writing portions of the proposal itself. As competition for grants increases, more universities are investing in specialists whose role it is to improve proposals, including not only grant writers, but also graphic artists, research assistants, and administrative staff. Ideally, each school and college should have a highly skilled, professional grant writer (or, in some cases, two) who can assist with major grants and, as needed, participate on the strike team.

Improved Centers and Center Oversight – Research centers or institutes are an important mechanism for bringing faculty together to work collectively around an important and focused research topic. They are also an important part of the research infrastructure. To enhance the research culture at UCR, consideration should be given to returning a percentage of indirect funds to centers or institutes, particularly those with a high likelihood of becoming self-sustaining. At UCR, some centers are administered by deans and others by OR. Regardless of oversight, the campus has not uniformly exercised the process of conducting 5-year-reviews of these centers. OR should develop clear criteria for establishment of and expectations for what it means to be a center. A mechanism should be put in place to ensure that comprehensive reviews are conducted on a routine basis (including a cost-benefit analysis) and that non-performing centers are either strengthened or phased out. The subcommittee on research and creative activity proposed establishment of an Office for Interdisciplinary Programs to stimulate interdisciplinary research and support proposal development. The idea is to take advantage of existing networks of engaged researchers at UCR, and to help grow this network to introduce faculty across disciplines that might not otherwise interact. The strategic planning implementation task force on research should also investigate the feasibility of establishing such an office.

Enhanced Incentives for Research – UCR can use a number of mechanisms to stimulate proposal submission. The Office of Research can and should provide assistance with the construction of proposals. Other options include rewarding PIs who are actively seeking and succeeding in obtaining grants, perhaps through reduced teaching or credit on merits. Likewise, faculty should be incentivized to lead major research programs. The campus may want to explore new ways to allocate indirect cost recovery to provide incentives for large-scale, multi-investigator grants. A simple but highly useful strategy for increasing large, interdisciplinary grant efforts would be to expand opportunities for faculty from multiple departments and disciplines to get to know one another formally and informally through interdepartmental

seminars, a distinguished lecture series, coffees/mixers, or other events that bring researchers together.

Increased Seed Funding and Cost Sharing – UCR researchers who have identified common interests and promising ideas for collaboration need the resources to get started. These early collaborations are important for refinement of ideas and establishment of a track record that will attract significant funding. The vice chancellor for research currently has a small fund for such preliminary work, as well as for conferences. These seed funds should be increased and a mechanism put in place to evaluate proposals and to assure that the most promising efforts are targeted and that some form of accountability is put in place. Once formal proposals are underway, the campus should provide high quality cost sharing in the form of cash, equipment, space, and/or faculty lines.

Benchmarks and Best Practices – UCR should examine best practices among research offices both within UC and among the 11 AAU comparison institutions. These should be adapted and implemented to best serve the campus. Appropriate benchmarks should be established to assess performance and progress.

Reduced Obstacles – As stated by the academic excellence topic paper, “The OR at UCR needs leadership that is enthusiastic about research and fulfilling its mission. The OR leadership should undertake significant initiatives to seek to remove bureaucratic obstacles to research within UCR.” For example, many faculty are confused about the split of responsibilities between the accounting and research offices for grant administration. The accounting system must be accessible, current, accurate, and easy to understand.

In the end, the single most important factor in enhancing UCR’s research enterprise is a strong commitment from the highest levels of campus leadership. An unmistakable message of institutional commitment will provide the incentives, the resources, and the infrastructure necessary to spur the faculty to achieving the vigorous level of research productivity that will propel UCR in its pursuit of excellence.