COMMITTEE ON RESEARCH (COR)
Wednesday, December 3, 2014
3:00 – 4:30 pm
KL 324
UCMCROPS/COR1415/Resources

I.   **Guest –** *Peter Schuerman*   **3:00 – 3:30**
        AVC for Research and Economic Development Peter Schuerman will provide an
        overview of his services.

II.   **Chair's Report –** *David Noelle*
        A. Updates from December 3 Division Council meeting

III.   **Consent Calendar**   **Pg. 1-5**
        Action requested: Approval of November 19 meeting minutes.

IV.   **Senate Faculty Grants Program**   **Pg. 6-12**
        Discussion: continued discussion on program goals. Analyst has collected
        the award winners and budgets from AY 2008-2009 through AY 2013-2014
        which can be viewed at *UCMCROPS/COR1415/Resources/Faculty research
        grants/Merced/AY 14-15*

        Action requested: Committee to draft communication to previous award winners,
        asking if the awards aided them in producing publications, obtaining larger,
        extramural awards, or in graduate student research. Previous award winners will also
        be asked to provide a one-sentence statement on the efficacy of the award. This
        information will be used in a future memo to the Provost/EVC as justification for
        increased funding for the grants program.

        Other relevant background documents, including the previous awardees, proposals,
        and calls, as well as information from the other UC campuses, are posted at:
        UCMCROPS/COR1415/Resources/Faculty research grants

V.   **Other Business**

Committee on Research (COR)
Minutes of Meeting
November 19, 2014

Pursuant to call, the Committee on Research met at 3:00 pm on November 19, 2014 in Room 324 of the Kolligian Library, Chair David C. Noelle presiding.

I.   Chair's Report
        Chair Noelle updated the COR members on the following:

        UCORP met on November 10 and discussed the following issues:
        --UCORP members were asked to submit their campuses' policies on the establishment and review of research units. Chair Noelle will submit COR's newly-approved policies.
        --the decision to increase tuition was made without appropriate Senate consultation
        --UCORP remains concerned about the commercialization of research in light of President Napolitano's focus on innovation. The President has recently appointed, on a one-year basis, a Special Advisor on Innovation. Senate leadership met with the new appointee and found that he was sensitive to the faculty members' concerns in the debate over commercialization and the UC's research mission.
        --The President's Innovation Council met with Senate leadership and expressed concern over tech transfer. UCORP members were asked to provide tech transfer updates from each of their campuses.

        ACTION: COR will invite AVC for Research and Economic Development Peter Schuerman to the December 3 COR meeting to provide an overview of UCM's tech transfer policies.

        --UC PATH continues to be a challenge that systemwide staff are still addressing.
        --The Portfolio Review Group (PRG)'s recommendations for funding MRPIs will be announced on December 15. These recommendations will have significant implications for the AY 15-16 budget. The PRG indicated that they

were pleased to receive so many meritorious proposals that contained remarkably robust research.

--UCORP continued its conversation about proposals for conducting research at national laboratories, including the establishment of a graduate fellowship program to support graduate students who conduct research at a national laboratory.

--UCORP members discussed a new policy about openness in the reporting of research and there are concerns about exemptions. One of the suggested proposals is to expand the policy to include a national security exemption whereby a campus will accept proposals that involve working with individuals who have access to classified material but will not require the PIs to reveal the classified materials in order to publish results.

--The heads of the national reserve systems provided a lengthy presentation to UCORP members that conveyed the need for increased funding for field stations and to rebuild their deteriorating infrastructure.

The Meeting of the Division was held on November 14.   Major topics of discussion included Strategic Academic Focusing, where there is a difference of opinion in the next phase and timeline, and the history, context, and value of general education.

II.   Consent Calendar
         ACTION: Minutes from the November 5 meeting were approved as presented.

III.   Preliminary Feedback on Strategic Academic Focusing Proposal
         Prior to this meeting, the authors of the Entrepreneurship strategic academic focusing proposal asked COR for its informal feedback on whether the proposal has the potential to be transformed into an ORU proposal. COR previously agreed to provide feedback with the caveat that COR input does not constitute Senate consultation or approval.

         A COR member assumed the lead on reviewing the proposal and indicated to the committee that the proposal, though brief, contains good concepts. It also contains a significant teaching component which would not be the focus of a

future ORU proposal. Due to the proposal's brevity, it is too difficult to discern whether it could potentially succeed as an ORU proposal. Furthermore, it must be made clear to the proposal's authors that this should not be a means to receive FTE lines, as ORUs do not hire faculty, rather, the hiring process occurs in the Bylaw 55 units. Lastly, the proposal needs to more fully explain its research agenda, identify its intellectual product, and state how it is different from the existing Blum Center.

ACTION: The lead COR reviewer will draft a memo with the aforementioned observations and suggestions. The memo will be circulated among the committee for review and approval. A final memo will be transmitted to the proposal's lead author in addition to the approved proposals from SNRI and HSRI to be used as examples of successful proposals.

IV.   Library Issues

In the last academic year, the Senate-Administration Library Working Group recommended to the Senate Chair and Provost/EVC that the Senate establish a standing committee to address library and scholarly communication issues. This year's Division Council tabled the item at its recent meeting. COR's position is that library issues should not be enveloped into a subcommittee under COR, as the Library's mission is broader than that of research: the library also supports education and deals with resource allocation. Secondly, contrary to Division Council's concern, the resource demand for a new standing committee will not be that onerous.

Prior to this meeting, the COR chair drafted a memo stating COR's position but will now revise the memo to point out that as the campus moves towards 2020, the library's resources must grow commensurate with the growth in student and faculty numbers.

ACTION: COR chair will circulate the revised memo among the committee for review and approval. The final memo will be submitted to the Senate Chair in advance of the December 3 Division Council meeting.

V.   Limited Submission Proposals
Prior to this meeting, COR members expressed an interest in more transparency in the limited submission process. Ex-officio committee member VCR Traina submitted a document detailing the procedures for the limited submission process. COR members voiced approval of the document but requested that the VCR add the criteria for selecting reviewers of the proposals. In addition, the document should include a statement that for any given limited submission opportunity, a faculty member may only be on one group proposal.

ACTION: VCR Traina will revise the limited submission proposal document and circulate among the committee members for approval.

VI.   Systemwide Review Item
Prior to this meeting, COR members reviewed a systemwide proposal to extend the existing open access policy for Senate members to non-Senate members.   COR members discussed various issues, such as the requirement from some federal agencies that PIs deposit their papers in open access venues, and, the fact that a number of commercial publishers such as Elsevier charges PIs and not all PIs budget for this expense.

ACTION: A memo will be transmitted to the Senate Chair that COR endorses this proposed policy extension of open access for non-Senate members.

VII.   Senate Faculty Grants Program
COR members continued their discussion about the long-term goals of the grants program and the short-term goal of gathering data in preparation for submitting a memo to the Provost/EVC with a justification for increased funding of the program.   In the memo to the Provost, COR will explain its clarity of purpose and how it plans to distribute the funds across the four priority areas of juniority, evidence of need, bridge funding, and catalyst

grant funding. This prioritization will be listed in the call for proposals that will be submitted to the faculty in spring 2015.

COR members want to hear from the past award winners whether obtaining these Senate awards led to extramural grants, publications, or graduate student research projects. This information will be included in the memo to the Provost/EVC to convey the efficacy of the Senate faculty grants program and its need for increased funding. Funding has not increased commensurate with the growth in faculty numbers.

ACTION: Committee analyst will gather the award winners of the past five academic years, the number of faculty in each of those years, and the budget for the grants program during that time and provide this information to COR for the next meeting. COR members will draft a communication to send to these previous award winners, explaining that the committee is trying to obtain more funding from the Provost/EVC. The communication will ask the aforementioned questions of whether these awards led to extramural grants, publications, or graduate student research and will request that the faculty members provide a one-sentence response on the usefulness of the grant award.   This information will be compiled into a graph and a memo to send to the Provost/EVC.

There being no further business, the meeting adjourned at 4:30 pm.

Attest: David C. Noelle, COR Chair

Minutes prepared by: Simrin Takhar, Senate Analyst

Academic Senate Faculty Research Grants Call For Proposals

Deadline For Submission: March 14, 2014

PURPOSE

Faculty research grants are designed to support the research activities of UC Merced faculty and provide seed funds to assist in the development of extramural proposals to support research at UC Merced.

ELIGIBILITY CRITERIA

1. Each full-time member of the UC Merced Division of the Academic Senate, including emeritus members, is eligible to submit one grant proposal in response to this call.

2. Each faculty member may request up to $5000 in research funding. Funds may be requested for most research costs, with some exceptions. (See Allowable and Unallowable Expenses, below.)

3. Faculty members may collaborate to submit a joint proposal, in which case the collaborators may not also submit individual proposals. Each faculty member may participate in only one proposal. Joint proposals may request funding up to an amount which is a multiple of $5000, with the multiple being the number of collaborators contributing to the proposal. Regardless of the number of participating faculty, awards may not exceed $20000, however.

4. Faculty on sabbatical leave or leave of absence (in residence or elsewhere) may apply for research funds. Grants will not be awarded, however, without assurance that the awardee will return to UC Merced after the absence.

5. Undergraduate students, graduate students, and postdoctoral researchers are not eligible to submit proposals, but faculty members may request funds to support student research activities under the supervision of the faculty member, provided that such activities are integral to a program of research being pursued by the

faculty member. Funds may not be applied to the support of postdoctoral researchers or of other research staff, however.

6. Non-tenured faculty members without extramural support are particularly encouraged to apply.

PROPOSAL CONTENT AND FORMAT

Each proposal must include all of the following:

1. **Cover Sheet:** This must include the name(s) of the participating faculty member(s), academic title(s), school affiliation(s), graduate group affiliation(s), electronic mail address(es), a proposal title, and a proposal abstract. The abstract must not exceed 350 words.

2. **Proposed Research:** This section should explain the research to be conducted with the requested funds, providing adequate background information and context to allow for a clear understanding of the proposal by an academic but non-expert reader. This description should be as specific and detailed as possible, given space limitations and the need to remain accessible to non-experts. This section should explain the potential impact that funding will have on the research program(s) of the proposing faculty member(s), as well as how this funding could assist in the development of research group(s) and faculty career trajectories. All requests for equipment, or other forms of infrastructure, must include an equipment management plan in this section. *The contents of this section may not exceed 3 single-spaced pages, with margins no smaller than 1 inch and fonts no smaller than 11 point.*

3. **Reference List:** This section should provide a bibliography of work referenced elsewhere in the proposal document. *This section may not exceed 1 single-spaced page, with margins no smaller than 1 inch and fonts no smaller than 11 point.*

4. **Budget:** How provided funds are to be used should be presented in a tabular format, listing the amount required for each line item.

5. **Budget Justification:** Each line item in the budget should be explained and justified, particularly with regard to constraints on allowable expenses (see below).

6. **Extramural Funding:** This section must list all pending and awarded extramural grants and contracts received by the proposing faculty member(s) for at least the last five years. For each award, the project title, funding amount, start date, and duration should be specified.

7. **Internal Funding:** This section must list all pending and awarded funds received by the proposing faculty member(s) from UC Merced sources, including Academic Senate funding programs, covering at least the last five years. For each award, the

project title, funding amount, start date, and duration should be specified. For each award granted by an Academic Senate program, a single-paragraph report on the results of the award should be included.

8. **Alternative Funding:** A brief justification of the proposed request for funding when alternative sources of extramural funding for the budgeted items are currently available to the proposing faculty member(s) should be provided in this section. If no such alternative sources of extramural funding are available, that fact should be clearly stated and justified. *This section may not exceed 1 single-spaced page, with margins no smaller than 1 inch and fonts no smaller than 11 point.*

9. **Seed Funding:** If the requested funds will support the preparation of one or more proposals for extramural funding, details concerning the extramural funding programs to which such proposals are to be submitted should be provided in this section. If recent attempts to secure extramural funding for the proposed budget items have been made, details concerning those submissions should be itemized. If the requested funds are not to be used as seed funding to assist in the preparation of extramural funding proposals, then that fact should be clearly stated. If extramural funds have not and will not be pursued for the proposed work due to the lack of an appropriate existing extramural funding program, this section should provide evidence that no such programs exist, describing efforts that have been made to identify possible funding sources.

10. **Human Subjects Approval:** If the proposal involves research on human subjects, information concerning institutional ethical review and approval of the proposed work should be presented in this section.

11. **Animal Subjects Approval:** If the proposal involves research on non-human animals, information concerning institutional ethical review and approval of the proposed work should be presented in this section.

12. **Curriculum Vitea:** This section must contain a CV for each faculty member participating in the proposal.

These sections should be assembled into a single document file in Adobe's *Portable Document Format* (PDF). While sections should appear in the order shown above, each section does *not* need to begin on a fresh page, but each section must be clearly labeled. The proposal file should have a name that begins with "COR_2014", followed by the last names of all participating faculty, separated by underscore characters. For example, a proposal submitted by faculty members Smith and Jones should be named "COR_2014_Smith_Jones.pdf".

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ALLOWABLE EXPENSES

Categories of allowable expenses include the following:

- **Research Assistance:** Proposals requesting support for assistants must include a statement of each assistant's exact duties, budgeted hours of labor, and rate of pay. For graduate student support, the student to be supported must be identified. This information is to be included in the Budget Justification section of the proposal document.

- **Supplies and Equipment:** Awarded funds may be used to purchase research equipment and supplies. The purchase of such items is subject to the policies outlined in *UC Business and Finance Bulletin BUS 29*. Equipment purchased with awarded funds will be the property of the University of California. Books, reports, journals, video or audio recordings, and similar research materials may be purchased with awarded funds, but these should be itemized and their purchase justified in the Budget Justification section of the proposal. Similarly, budget line items for computer equipment or computer software are allowed, but they should be explicitly justified as essential for the research activities proposed, providing capabilities not present in the computer equipment currently available to the proposing faculty member(s). Miscellaneous supply and service costs (e.g., telephone, fax, copying, postage) must be justified as essential for the proposed work.

- **Recharge Fees:** Awarded funds may be applied to recharge fees associated with the use of core research facilities or other shared or institutional research resources. The Budget Justification section should explain how each requested recharge payment is required by the proposed work.

- **Travel for Research Purposes:** Expenses incurred for investigative travel and field work may be allowed if such travel is important for the proposed research. For example, such travel may be necessary to collect data or to inspect materials that cannot be procured by other means. Travel expenses for both the participating faculty member(s) and supervised graduate students may be budgeted. The Budget Justification section should explain the need for the proposed travel, and the Budget should break down such expenses into standard travel categories (e.g., flight costs, ground travel costs, housing costs, food costs, etc.).

- **Dissemination of Research Findings:** Expenses incurred for travel to academic conferences or other meetings to present research results arising from the proposed work are allowed. Travel expenses for both the participating faculty member(s) and supervised graduate students may be budgeted. The Budget Justification section should specify and describe intended forums for presenting research findings, and the Budget should break down such expenses into standard travel categories (e.g., flight costs, ground travel costs, housing costs, food costs, etc.). Research findings may also be disseminated through publication, and reasonable required publication fees may also be included in the Budget section.

Other kinds of expenses may be considered, but they will require special justification in the proposal document.

UNALLOWABLE EXPENSES

Categories of expenses that are *not* allowed to be covered by awarded funds include:

- **Research Assistance:** Awarded funds may *not* be used for faculty salary support, salary support for postdoctoral fellows, or salary support for other research staff. These funds may *not* be used to support curricular, administrative, or teaching aids.

- **Supplies and Equipment:** In general, awarded funds may *not* be used to purchase equipment that serves routine productivity purposes (e.g., printers, scanners, mobile telephones, mobile telephone service, calculators). Similarly excluded are standard office and computer supplies (e.g., paper, pens, pencils, flash drives), office furniture, and costs associated with the maintenance, operation, or repair of standard office equipment. Individual subscriptions to periodicals and professional society dues are also considered inappropriate budget items.

- **Travel:** If a participating faculty member will be on sabbatical leave or a leave of absence during the period of an award, then, except under special circumstances, awarded funds may *not* be used for travel between the Merced campus and the locale of leave. Also, subsistence during the period of leave is not fundable.

HUMAN AND ANIMAL SUBJECTS

- **Human Subjects:** Proposed research involving the use of human subjects must be approved by the Institutional Review Board before funds will be allocated. A copy of the approval or protocol number and applicable dates must be provided prior to the awarding of funds.

- **Animal Subjects:** Proposed research involving the use of non-human animals must be approved by the Institutional Animal Care and Use Committee. A copy of the approval or protocol number and applicable dates must be provided prior to the awarding of funds.

USE OF FUNDS

- **Budget Adaptation Post-Award:** Each line item in the proposal Budget must be justified in terms of the specific research activities being proposed. Expenditures of awarded funds are expected to generally conform to budgeted allocations by category and purpose. Faculty who receive awards must request approval from the Committee on Research (COR) prior to any change in the use for which funds were allocated. Reasonable requests within the scope of the proposed research activities will typically be granted.

- **Award Period:** Grants awarded by this program have a period of a single year. All award monies must be spent before June 1, 2015. Funds will not be provided for expenses incurred prior to the date upon which a grant is awarded. Faculty awardees are responsible for the administration of their grants, including the covering of overdrafts. Faculty awardees are expected to promptly return any funds that will not be spent before their grants expire. Any unexpended funds remaining on the grant expiration date will automatically revert to the Executive Vice Chancellor and Provost for redistribution.

- **Equipment:** Any equipment purchased with awarded funds will be the property of the University of California, and possession is retained by the University of California beyond the completion of the period of the grant.

- **Compliance:** All expenditures are subject to applicable University of California regulations.

EVALUATION CRITERIA

Proposals will be reviewed and evaluated by the Committee on Research (COR) of the Academic Senate. Proposals that are incomplete or do not meet minimum conformance standards to the requirements outlined in this document will not undergo further review. The remaining proposals will be ranked according to the following criteria, in the specified order:

1. *Evidence of funding need:* Proposals that demonstrate a lack of alternative available extramural funds for the proposed research activities will be preferred over those for which other extramural funds are available.

2. *The existence of past efforts to secure extramural funding for the proposed research activities:* Proposals for which any such past efforts exist will be preferred over requests for funds that have not been previously sought from some extramural source. Proposals that make a convincing case that no appropriate extramural funding programs exist will be ranked highly, along with those for which previous extramural proposals have been submitted.

3. *Time since the receipt of a research award from the Academic Senate:* Faculty members who have not recently received support through this program (or its predecessor) will be ranked above those who have recently received such support. For proposals involving multiple faculty members, the time since last award will be ascertained for each faculty member, and the largest value across participants will be used to rank the proposal. In this way, recent award recipients benefit by teaming with faculty members who have not previously received an award, or have not received an award in a while.

4. *Targeted extramural funding programs:* Proposals that request seed funds to support the preparation of one or more proposals to explicitly specified extramural

funding programs will be preferred over proposals for which no specific plan for the pursuit of extramural funds is provided.

5. *Juniority:* All other factors being equal, junior tenure track faculty will be preferred over more senior tenure track faculty, and tenure track faculty will be preferred over other members of the Academic Senate. For proposals involving multiple faculty members, the rank of the most junior participant will be used to assess the joint proposal.

While many of these criteria can be determined in a fairly objective manner, assessments requiring judgment will be resolved by majority vote of the COR membership.

It is anticipated that available funds will be insufficient to fully fund all ranked proposals. In general, funds will be allocated to proposals in the order in which they have been ranked, according to the above criteria, until available funds are exhausted. In some situations, however, COR may, based on a majority vote, reduce the size of some awards below requested amounts so as to increase the number of awards granted. Also, in an effort to produce an award portfolio that reflects the range of research being conducted at UC Merced, COR reserves the right to adjust rankings, using an approach that is regularly employed by federal funding agencies.

The proposal rankings and award recommendations produced by COR will be communicated to the Academic Senate Divisional Council, and they will be provided to the Vice Chancellor for Research and the Executive Vice Chancellor to guide the administration in the delivery of award funds. Once an award is made, funds will become immediately available to the participating faculty member(s).

APPLICATION PROCESS

Each proposal must consist of a single PDF file, formatted and named according to the instructions provided above. Completed proposal documents should be delivered to the Academic Senate Office c/o Simrin Takhar: stakhar@ucmerced.edu. Proposals must be received by the end of the day (i.e., before midnight) on March 14, 2014.

If an award is made, funds will become available immediately. All award monies must be spent before June 1st, 2015.

UNIVERSITY OF CALIFORNIA

OFFICE OF THE PRESIDENT

TASK FORCE ON UNIVERSITY-WIDE RESEARCH PRINCIPLES, PROCESSES AND ASSESSMENT

REPORT TO THE VICE PRESIDENT OF RESEARCH AND GRADUATE STUDIES

JUNE 2012

BACKGROUND AND INTRODUCTION

In Fall 2011, the Vice President of Research and Graduate Studies convened a Task Force on the University-wide Research Principles, Processes and Assessment (PPA Task Force) and charged the group with examining the current principles and processes that guide UCOP-funded research programs, and recommending a comprehensive framework to guide future decision-making and assessment of UCOP research investments. The task force was charged with re-examining the purpose of investing in universitywide research, the principles that guide those investments, the processes for decision making and evaluation, and the objectives and measures we use to evaluate research investments when considering whether or not to initiate or continue funding. The task force was asked specifically to set aside examinations of any specific programs, projects, or areas of research.

The PPA Task Force was a joint effort between UCOP, Academic Senate and campus administration. Membership was comprised of representatives from the Office of the President, and the full membership of the University Committee on Research Policy (UCORP) and the Council of Vice Chancellors for Research (COVCR). The task force was convened in late fall of 2011 and took several months to discuss these complex and difficult questions. Monthly discussions were held together as a group (by videoconference), as well as within the monthly meetings of the constituent subgroups which comprised our membership (UCORP, COVCR). A drafting workgroup was formed, with representatives from each constituent subgroup (UCOP, UCORP and COVCR) to help put words to the ideas of the group and produce draft proposals and recommendations for consideration and refinement by the greater task force membership.

The PPA Task Force is pleased to transmit the following report to the Vice President in response to its original charge. These recommendations reflects a good deal of work, discussion and debate over several months, not only among task force members, but also among the staff at the Office of the President who supported this work, and the many individuals from the campus research community who provided advice and input.

The task force appreciates the opportunity to provide input on a topic of such importance to the health of the University of California. We hope that our collective efforts will achieve lasting and effective change in the ways we envision, implement and assess the research investments we make together as a University.

PPA Task Force

JUNE 2012

PPA TASKFORCE MEMBERS:

Co-Chairs:
John Crawford, Chair of the University Committee on Research Policy
Jenny Gautier, Deputy to the Vice President of Research and Graduate Studies

Council of Vice Chancellors for Research:
Graham Fleming, Vice Chancellor for Research, UC Berkeley
Harris Lewin, Vice Chancellor for Research, UC Davis
John Hemminger, Vice Chancellor for Research, UC Irvine
James Economou, Vice Chancellor for Research, UC Los Angeles
Sam Traina, Vice Chancellor for Research, UC Merced
Charles Louis, Vice Chancellor for Research, UC Riverside
Sandra Brown, Vice Chancellor for Research, UC San Diego
Susanne Hildebrande-Zanki, Associate Vice Chancellor for Research, UC San Francisco
Michael Witherell, Vice Chancellor for Research, UC Santa Barbara
Bruce Morgan, Vice Chancellor for Research, UC Santa Cruz
David Clark, Los Alamos National Laboratory
Edward Turano, Lawrence Berkeley National Laboratory
John Knezovich, Lawrence Livermore National Laboratory

University Committee on Research Policy:
Michael Kleeman, Vice Chair, UCORP
Michael Tarter, UC Berkeley
Leslea Hlusko, UC Berkeley (alternate)
Sally McKee, UC Davis
Hugh Roberts, UC Irvine (Fall 2011, Spring 2012)
James Brody, UC Irvine (Winter 2012)
Timoth Tangherlini, UC Los Angeles
Mike Cleary, UC Merced
Robert Clare, UC Riverside
Frank Wuerthwein, UC San Diego
Shlomo Dubnov, UC San Diego (alternate)
Ralph Marcucio, UC San Francisco
Srikantan Nagarajan, UC San Francisco (alternate)
Jianwen Su, UC Santa Barbara
Scott Oliver, UC Santa Cruz
Greg Wiley, Graduate Student Representative
Sabrina-Anne Wuu, Undergraduate Student Representative

UC Office of the President:
Michael Reese, Associate VP-Business Operations
Jan Corlett, Chief of Staff, Academic Affairs
Mary Croughan, Executive Director, Research Grants Program Office
Kathleen Erwin, Director, UC Grants

University-wide Research Funding Principles, Process and Assessment

Contents

I. Report Overview

The UC Office of the President (UCOP) provides limited funds to support UC-wide programs and initiatives across all fields of scholarship that might benefit from collaborative work. These UC-wide investments can range from small initiatives that reach across campuses to combine ideas, expertise or resources, to large shared-infrastructure projects that can leverage UC's influence and resources to benefit research throughout the system. With ten campuses, five medical centers, and over twenty-five thousand faculty and research employees, UC can launch and advance unique research efforts that extend well beyond a single campus or university's capabilities.

To help guide UC-wide research investments and ensure these systemwide funds are successful in advancing the University's research goals, it is incumbent upon UCOP to establish a mature framework to carefully evaluate both the overall and relative merits of its investments, and to help make decisions and plans for any future university-wide research initiatives.

The purpose of this document is to detail the principles, process and metrics for assessment that will guide the investment of university-wide resources in research at the University of California. This includes:

1. Providing **clear guiding principles** to:
    - Define the purpose and scope of systemwide research funding, and
    - Describe the benefits of systemwide research funding and how its purpose differs from campus-funded research objectives.
    - This document will NOT recommend specific areas for university-wide funding.

2. Defining a **rigorous process** to guide and periodically review UC-wide research investments, in order to:
    - Evaluate new opportunities, and
    - Decide which UC-wide research programs to initiate or continue, and
    - Determine when and how to transition programs to other sources of funding, in order to allow room for new investments.
    - This document will NOT recommend specific programs or projects for funding or for elimination.

3. Identifying a list of high-level **objectives and measures**, both quantitative and qualitative, by which UCOP can assess (and compare) any UC-wide or multicampus program, initiative or investment. If successful, a well-implemented assessment framework will provide the following benefits:
    - Provide mandatory and comprehensive assessments of UC-wide research which can be compared across all disciplines;
    - Provide transparency and accountability for systemwide expenditures on research;
    - Provide practical information and benchmarks for programs seeking systemwide funding;
    - Inform systemwide funding allocations, budgeting and strategic planning;
    - Advance programs that deliver benefits to the UC system and to California above and beyond what a single campus can accomplish.

II. Rationale for Investment in Systemwide Research

Each UC campus has a unique and competitive research enterprise that is responsive to its faculty and students, and to its sponsors and stakeholders in research. What do UC-wide research investments have to add to these campus

investments, and how do they differ from what is funded by the campuses directly? In addition to the objective of supporting research of the highest quality and impact, the following three principles define the goals and purpose that drive and distinguish UC-wide research investments.

1. **Principle #1: Act as one system of multiple campuses to enhance UC's influence and advantage.**

With ten campuses, three national laboratories, state-wide resources and networks, the UC system offers researchers access to opportunities and a competitive advantage that a single campus cannot provide on its own. Acting as a network of multiple campuses, UC can invest in efforts that bring the best and most diverse minds together to define challenges, secure funding, and solve significant problems. This provides more opportunities for UC's world-class faculty and creates larger and stronger collaborative resources and networks that can enhance the entire research community.

2. **Principle #2: Promote efficient inter-campus collaborations and systemwide economies of scale.**

Finding ways for UC researchers and administrators to cross campus boundaries and work together effectively is a key goal of UC-wide investments. Not only does this generate energy and ideas among UC researchers across the system, but it leads to shared innovation and efficiencies in how we conduct and manage research, resulting in savings or financial gains that can be reinvested in UC-wide research.

3. **Principle #3: Serve the State of California.**

As California's research university, we implement research on behalf of the state in a fair and impartial basis. UC research has a unique capability to address many of the greatest challenges facing California today. UC seeks to create and grow industries that support California regional economies and to educate a culturally literate, knowledgeable workforce that will continue to lead the growth of California and optimize the State's return on its investment in UC.

III. Proposed Process for Systemwide Research Funding

A. Glossary of Terms

- The **Systemwide Research Portfolio** describes all research and graduate research efforts funded through the UC Office of the President.
- A **Program** is a coordinated set of projects undertaking related research or fulfilling a common theme such as multi-campus research.
- An **Initiative** is a research effort that is limited in time or scope. Initiatives may become Programs if they become funded on an extended basis.
- A **Project** describes a time-limited, focused research undertaking, generally funded by a research grant.

B. Background, Objectives and Scope

The UC Office of the President (UCOP) provides limited systemwide funds for the support of UC-wide research programs and initiatives. These investments range in size from small seed funds that encourage planning or networking in new or emerging fields, to larger development grants that can launch or develop successful collaborations or initiatives, to multi-million dollar investments over multiple years that support large-scale initiatives or shared-infrastructure projects that can benefit research throughout the system. Each investment may differ widely in scope, scale and objectives, as well as in fields of research or levels of campus involvement. These investments should align with the Principles outlined in Section II above.

UCOP manages several research programs directly. Other funds are sent directly to UC campuses and managed by local programs. For these campus-managed funds, UCOP maintains an obligation for regular program oversight and review.

The following sections propose a process to advise the Vice President for Research and Graduate Studies on how best to align UC's research investments with the Principles outlined in Section II above, and how to continually assess, adjust and revitalize those investments over time.

C.   General Constraints and Requirements

1.   Availability of Funding

Commitment of systemwide funds to support UC-wide research programs and projects is contingent upon availability of resources. UCOP will determine availability of systemwide funds on an annual basis.

2.   Eligibility of Programs or Initiatives for Systemwide Funding

In order to qualify for systemwide research funds, programs and initiatives should preferably:
- Exemplify at least two of the principles of UC-wide research outlined in this document; and
- Demonstrate meaningful collaborations between UC campuses or affiliated national labs. See assessment for additional details on collaborations.

3.   Applicability of the Proposed Process

The process proposed below will apply to all research and graduate research efforts which receive funding through the UC Office of the President.

D.   Description of Proposed Processes

1.   Roles and Responsibilities

The **Vice President** of Research and Graduate Studies has oversight for systemwide-funded programs and initiatives, and advises the President on the effectiveness of those research investments in promoting the overall quality and welfare of UC research.

To assist the Vice President in maintaining a vital and dynamic systemwide research portfolio, the Vice President will convene a **Portfolio Review Group** (PRG) to advise him or her on the size, shape and quality of current UC-wide research investments, and make recommendations for new priorities or directions. See **Appendix A** for a proposed charge which includes details on the group's role and operations, and a discussion of its make-up and governance.

The PRG will be asked to carefully review materials on the systemwide research portfolio and individual programs and initiatives. Materials will be assembled by UCOP staff from internal and external sources, and from information provided by the programs. The PRG may request additional information or input, as needed. Materials may include:

- Summaries of systemwide research investments prepared by UCOP analysts;
- Annual reports or program evaluations, issued by programs or initiatives;
- Reports from External Reviews (when applicable);
- White papers (internal or external to UC) analyzing or forecasting the potential for new areas of research;
- Other materials or information, as needed.

Directors of systemwide-funded programs and initiatives are responsible for providing annual reports to the Vice President, describing the financial vitality, scientific quality of the program, key program goals and accomplishments and how the program or initiative demonstrates the three Systemwide Research Principles (see Section II). Programs may be subject to a periodic external review, depending upon the size and nature of the investment.

2. Group Recommendations

Portfolio Review Group recommendations will be used throughout the year to guide the Vice President in making fair and transparent recommendations and funding decisions, and will assist program directors in the strategic planning and management of their programs.

Recommendations will help guide:

- The development of requests for proposals for current or new funding opportunities;
- Levels of investment in current programs and initiatives;
- The assessment of new funding opportunities or investments when funds become available.

3. Program Assessments and Evaluation

Systemwide Research Portfolio Review. All ongoing funding commitments will be reviewed on an annual basis by the Portfolio Review Group to ensure that investments are aligned with systemwide funding principles (detailed in Section II) and that the systemwide research portfolio is well-balanced according to its size and focus of funding.

Programs must provide an annual report, describing the full program budget, sources of funding, scientific quality of the program, key program goals and accomplishments and how the program or initiative demonstrates the three UC-wide Research Principles (see Section II). Supplementary information may be requested by the Portfolio Review Group.

Individual Program Review. Programs receiving ongoing funding will also be rigorously reviewed once every five years by a panel of experts in a two stage process.

During the first stage, a Scientific Review Committee will evaluate the quality of the science or the quality of the research produced. Maintaining high quality science or research is a minimal requirement for continued inclusion in the UCOP Research Portfolio.

In the second stage, the Portfolio Review Group will review the program to: (a) assess whether the program is meeting all systemwide requirements; (b) consider how well aligned programs goals and accomplishments are with systemwide funding principles, and (c) determine the opportunity cost of continuing ongoing funding commitments.

Areas of Priority for Future Research Funding. In addition to reviewing ongoing funding commitments, the PRG will be asked to assess new research opportunities or directions for funding. This includes assessing the opportunity cost of current research investments against new proposals, and making recommendations to help guide new investments. The PRG may make recommendations to fund specific emerging or critical fields of research, research types or categories requiring more support (such as graduate studies or research computing), or specific programs where appropriate. Whenever possible, the PRG will be asked to rank these priorities.

IV. Assessment Framework

Available systemwide funding can only support a small fraction of the world-class projects that could be conducted in each of the program areas. This oversubscription of available systemwide funds creates a system of healthy competition between the programs within the overall UC-wide research portfolio. The Portfolio Review Group will use a set of objectives and measures to assess and compare UC-wide or multicampus programs, initiatives or investments to support the most competitive programs that best contribute to systemwide objectives. This assessment will recognize the variety of sizes, goals, strategies, activities and fields of research within each program.

Defining Review Criteria and Metrics. UCOP and the Portfolio Review Group will work closely with each program to define a rigorous set of criteria and metrics that can clearly demonstrate how the program's funded activities contribute to systemwide objectives and how these measurements demonstrate the program's success in achieving systemwide principles.

- Define the specific goals and criteria which may apply to the program and "map to" the principles of UC-wide research,
- Define how the program's funded activities "map to" or demonstrate performance against each of these goals and criteria;
- Define which specific metrics will be provided to the review panel to demonstrate that performance.

The primary goal of these metrics will be to demonstrate (both quantitatively and qualitatively) how well a program or initiative delivers against the principles of UC-wide research. While good management and scientific achievements may be key factors in a program's success, these are baseline requirements for any systemwide investment and will only be considered in relation to how well they demonstrate a program's achievements towards one or more of the UC-wide research principles.

Areas of Focus. Questions, concerns, or specific areas of focus for the review will be solicited from the Chancellors, the Council of Vice Chancellors for Research, the Academic Senate, Institute Directors, key program stakeholders, the Portfolio Review Group, and the external review panel (when applicable). These areas of focus should be directly addressed in the review criteria and metrics, as well as in the materials provided to the Portfolio Review Group and the external review panel.

Benchmarking Performance. Wherever possible, programs, initiatives, and projects should benchmark their performance against comparable institutions within UC or at other academic institutions. Programs, initiatives, and projects may also choose to provide trend data, benchmarking performance in specific areas across time. All programs, initiatives, and projects committed to continual self-evaluation and improvement should have developed strong metrics for internal use to measure and benchmark their own performance. However, in the event that a program under review does not have readily identified benchmarking data, the Portfolio Review Group and the external review panel (when applicable) may suggest some options. These options will be evaluated for feasible inclusion in the current review, and may be required for future evaluations.

Evaluation. Based on the metrics and materials defined jointly by UCOP, the program, and the Portfolio Review Group, the PRG would rate a program's performance against each systemwide objective.

Principle-Guided Assessment Framework. Defining a strong assessment framework based on UC-wide principles will enable UCOP to benchmark and compare a diverse set of systemwide investments, and evaluate their performance against a common set of systemwide goals. Specific review criteria and metrics can be flexible, allowing programs to demonstrate – both quantitatively and qualitatively – the diverse activities and accomplishments of each program. However, the goals themselves should remain constant across programs, mapping the review criteria back to UC-wide principles for research investments. The basic structure mapping the principles to goals and review criteria can be seen below:

- *Principle #1: Act as one system of multiple campuses to enhance UC's influence and advantage.*
  - Goal: Provide UC faculty and students with access to unique facilities or resources that set UC apart.
    - The benchmarking of resources or facilities against similar efforts, resources or facilities.
    - The demonstration of broad access, participation, usage and/or support from UC faculty and students systemwide.

- - The demonstration of how funded programs have helped to attract faculty, technical staff, and students systemwide. Special note should be made of efforts to assist with campus faculty recruitment and retention.
  - The demonstration of how funded programs have helped increase UC's competitiveness in other arenas: e.g., by improving academic program rankings, increasing public engagement and support for UC, developing unique and valuable relationships with external parties, etc.
  - o Goal: Enable, where available, successful competition for large research projects and grants that single campuses could not access, shown by:
    - The demonstration of how investment by the State and UCOP in the funded program is used to maximize opportunities for external funding.
- *Principle #2: Promote efficient inter-campus collaborations and systemwide economies of scale.*
  - o Goal: Efficient operation of shared research facilities, which can be demonstrated by:
    - The benchmarking of basic operations costs against similar facilities.
    - The demonstration of the access and value provided to faculty, students and the research community.
  - o Goal: Demonstrate systemwide engagement through long-range planning, transparent governance, reporting and accountability, characterized by:
    - The development of a long-term strategic plan used to guide future research direction.
    - The involvement of key constituents in the strategic planning process, and the clear communication of the strategic plan to staff and key stakeholders.
    - Regular assessment of strategic priorities and adjustment of these priorities as necessary.
    - An engaged governance and advisory structure.
    - An open and transparent program administration, which includes clearly communicating performance and direction to academic partners and the provision of more detailed administrative and fiscal information to appropriate oversight structures.
- *Principle #3: Serve the State of California*
  - o Goal: Collectively impact Californians through research at multiple campuses in multiple regions of the state, demonstrated by:
    - An assessment of the program's contribution to the University's research mission.
    - An assessment of the economic, cultural, and societal benefits brought to multiple regions in California resulting from program activity.
    - An assessment of the program's ability to actively engage and inform the California public.

Appendix A: Recommended UC Portfolio Review Group Charge

The UC Office of the President currently invests in various UC-wide research programs and facilities to serve systemwide needs and take advantage of UC's wide distribution of talent for addressing emerging research areas of scale. The amount of this investment fluctuates owing to changes in the UC budget. To ensure that the total amount is optimally spent to provide the best support for UC UC-wide research, UCOP will establish the **Portfolio Review Group (PRG)**. The purpose of the **Portfolio Review Group** is to:

1) Provide guidance to the **Vice President** for Research and Graduate Studies on the size, shape and quality of current UC research investments. Assess the systemwide research portfolio to ensure that investments are aligned with systemwide funding principles and that the systemwide research portfolio is well-balanced according to its size and focus of funding.
2) Provide recommendations to guide the Vice President in making fair and transparent funding decisions, and assist program directors in the strategic planning and management of their programs.
3) Recommend opportunities for new investments in systemwide research to strengthen or balance the research portfolio.

The Portfolio Review Group will provide written reports to the Vice President for Research and Graduate Studies at UCOP. The recommendations will be made available to the UC community to ensure transparency in decisions about systemwide research funding.

The PRG will meet on an annual basis to review the UC-wide research investment portfolio, assess its alignment to the three principles, and make recommendations to the Vice President on research priorities for the upcoming three to five years. The Vice President may also call on the PRG throughout the year for advice on specific research funding issues.

The PRG will be asked to make recommendations on:

- **Areas of Priority for Future Research Funding.** The PRG will be asked to assess the quality and vitality of current research investments against the potential for new opportunities or directions, and make recommendations to help guide new investments. These recommendations could be for specific emerging or critical fields of research, for types or categories of research that require more support (such as graduate studies or research computing), or specific programs, where appropriate. Where possible, the PRG will be asked to rank these priorities. The PRG may recommend or establish a UC-wide task force to carry our strategic planning for UC-wide research.
- **Programs to Continue, Transition or Sunset.** The PRG will also be asked to help identify programs that may be appropriate to sunset or transition to other funds. These may include: (a) programs that are not well-aligned with UC-wide goals (see Principles in Section II above); (b) programs that are less cost-effective at meeting UC-wide goals than other investments; or (c) well-established programs that have outgrown the need for systemwide funding.
- **Guidance on the direction of specific programs or funds.** Where appropriate, and on a limited basis, the PRG will be asked to provide guidance or advice on the direction, alignment, or use of systemwide funds within specific programs. These recommendations are primarily to provide feedback on specific concerns or opportunities related to these programs, and to advise the Vice President and program directors on how to best address these.

Portfolio Review Group Membership

A. Members will be appointed by the Vice President from a slate of nominees drawn from UC faculty from across the UC system, administrators from the campuses and UCOP; and individuals not employed by UC (External), as deemed necessary by the Vice President.

B. The Vice President will select administrators and external members with nominations from campus chancellors, taking into account representation of a broad range of roles and academic disciplines on the PRG by current and prospective members.

C. At least three Vice Chancellors of Research (VCR) from UC campuses will be members of the PRG, with staggered terms so that one new VCR will rotate on each year.

D. Nominations for Academic Senate faculty will be provided by the Chair of the systemwide Academic Senate to the Vice President.

E. Academic Senate Faculty will comprise at least half of the UC internal membership.

F. The period of membership will be three (3) years. There is no specific limit on the number of times a member may be reappointed. However, each individual reappointment will be subject to the approval of the Vice President, and the candidate's acceptance of the new term.

Portfolio Review Group Officers

A. Group officers shall be a Chair and a Vice Chair, both of whom are current PRG members.

G. Officers shall be invited to serve by the Vice President, who will provide the PRG with its charge. The Vice Chair, after a year of service will be invited to advance into the Chair role..

Portfolio Review Group Officers

B. Group officers shall be a Chair and a Vice Chair, both of whom are current PRG members.

C. Officers shall be invited to serve by the Vice President, who will provide the PRG with its charge. The Vice Chair, after a year of service will be invited to advance into the Chair role.

Responsibilities of Portfolio Review Group Officers

The **PRG Chair** shall, in consultation with the Vice President, determine the agenda for, convene, and preside over all meetings. The Chair shall work with UCOP staff to assure that reasonable notice of meetings is provided to the general membership.

The **PRG Vice Chair** shall assume the duties of the Chair in the Chair's absence.

Meetings

Regular meetings shall be held once a year. Additional meetings may be called, as needed. A regular meeting quorum shall consist of a minimum of one half of general members.