

UNIVERSITY OF CALIFORNIA, MERCED

BERKELEY • DAVIS • IRVINE • LOS ANGELES • MERCED • RIVERSIDE • SAN DIEGO • SAN FRANCISCO



SANTA BARBARA • SANTA CRUZ

ACADEMIC SENATE, MERCED DIVISION
COMMITTEE ON RESEARCH
MICHAEL SCHEIBNER, CHAIR
mscheibner@ucmerced.edu

UNIVERSITY OF CALIFORNIA, MERCED
5200 NORTH LAKE ROAD
MERCED, CA 95343
(209) 228-4369

July 13, 2020

To: Tom Hansford, Chair, Division Council

From: Michael Scheibner, Chair, Committee on Research (COR)

A handwritten signature in blue ink, appearing to read "Michael Scheibner", is written over the "From:" line.

Re: COVID-19 Impacts on Research and Recommendations

The Committee on Research (CoR) has been monitoring the constantly evolving situation around COVID-19, and has been discussing the impacts this situation has on research at UC Merced. In its meeting on June 26th 2020 and subsequent email discussion, CoR compiled a list identifying some issues that have arisen for research at UC Merced (as well as more broadly). The CoR is providing a number of recommendations (appended) to be considered by campus leadership for mitigating the short term as well as long term impacts.

The issues concern:

- Depletion of research funds to ensure continued employment for students, postdoc and/or staff during shut-down
- Reduction and redirection of research funding
- Access restrictions to research facilities, labs and offices (on-campus and off)
- Research training
- Inequity of measures to mitigate the spread of COVID-19

We invite the Divisional Council to raise additional issues impacting the research mission and contribute potential solutions on how the issues might be addressed, before forwarding these to campus leadership.

cc: Senate Office

Encl: 1

UNIVERSITY OF CALIFORNIA, MERCED

BERKELEY • DAVIS • IRVINE • LOS ANGELES • MERCED • RIVERSIDE • SAN DIEGO • SAN FRANCISCO



SANTA BARBARA • SANTA CRUZ

ACADEMIC SENATE, MERCED DIVISION
COMMITTEE ON RESEARCH
MICHAEL SCHEIBNER, CHAIR
mscheibner@ucmerced.edu

UNIVERSITY OF CALIFORNIA, MERCED
5200 NORTH LAKE ROAD
MERCED, CA 95343
(209) 228-4369

July 13, 2020

To: Juan Sánchez Muñoz, Chancellor
Gregg Camfield, Executive Vice Chancellor & Provost

From: Michael Scheibner, Chair, Committee on Research (COR)

Re: COVID-19 Impacts on Research and Recommendations

The COVID-19 pandemic has drastically impacted the research community. Various work groups have been working tirelessly to enable the campus to start the process of re-opening research buildings and providing researchers the opportunity to slowly and safely ramp up their operations. The ramp-up of research is not an off-on process even if one could right away go back to working without occupancy restrictions. The shut-down has caused issues for, if not damage to, the research capabilities of research groups. In addition, while funding has been made available quickly to combat the virus, research that is not directly related to this particular mission has been on an idle stand-by since our campus, as have other campuses and research facilities around the country, closed, stay-at-home orders and travel restrictions were implemented. The shutdown has already shown profound negative impacts on researchers, first and foremost students, postdocs, early career faculty and of those women in particular. Due to the scale of the crisis, it can be expected that negative impacts will continue to be felt for an extended period of time (even beyond the end of the pandemic).

In order to help the campus research community through this difficult time and emerge as competitive as possible from this crisis, the Committee on Research (CoR) highlights some issues and urges the administration to consider CoR's corresponding recommendations for actions that are listed in the following.

Issues:

1. *Depletion of research funds to ensure continued employment for students, postdoc and/or staff during shut-down:* PIs have been using up start-up, grant and/or other funds to pay salaries to their students and staff despite reduced or lack of access to their research labs, performance spaces and offices on campus resulting in much reduced research productivity. These funds are now missing when research groups returning to on-campus research activities. This aspect means that staff may have to be let go, students may have to teach to support themselves. Consequently, even if the projects are being awarded additional time in form of no-cost extensions (NCEs) they may still be suffering from the reduced availability of their research staff and students. Furthermore, students may have to take time re-learn processes to get back to their skill level before the shutdown. That paired with a decreased availability of funds for materials and supplies, travel, publications, etc., is further reducing research productivity, and potentially jeopardizing the success of the projects and possibly the reputation and career of the PIs.

2. *Reduction and redirection of research funding*: Future funding opportunities are at risk of seeing a reduction in overall available funds. In addition, a large number of new funding opportunities appears to be directed at finding solutions to the pandemic. While directing funds toward this goal is understandable, it bares the risk of marginalizing research that is not COVID-19 related.
3. *Access restrictions to research facilities, labs and offices (on-campus and off)*: The restrictions on accessing on-campus and off-campus research facilities have obvious direct consequences on research, including reduced productivity, inability to conduct certain experiments (in a timely manner or at all), etc. The restriction of access to campus and the need to stay at home come with additional negative side effects that impact research further, and which affect graduate students particularly hard.
 - Those who need on-campus facilities to perform their research often are not at all setup to do research remotely. Software they typically use is only available on machines that are connected to instruments in the lab and tied to research licenses with very limited flexibility when it comes to running them on multiple machines.
 - The researcher may lack adequate cyber infrastructure at home (Wi-Fi, computers, etc.) that provides sufficient bandwidth and computing power.
 - The summer months take a particular toll, especially on student researchers. Either they have to account for much higher utility costs (running their AC 24/7), or the smoldering heat in the Central Valley will slow down their productivity.
4. *Research training*: Many majors include the completion of research courses in their degree requirements. At the graduate level early research training is essential on the one hand side for a student's timely progress to their PhD degree, and on the other hand side for ensuring long term continuity in a research group and thereby the overall success of graduate programs. Restrictions imposed to mitigate the spread of COVID-19 reduce the ability to provide adequate training and mentorship, which directly impacts the students' skill sets and preparation for the job market. In addition, PIs may not be able to provide new students with the experience and impressions needed to attract them to their research group, with the consequence that these research groups face long term challenges in maintaining their research workforce, team knowledge, and ultimately their competitiveness.
5. *Inequity of measures to mitigate the spread of COVID-19*: Research groups at UC Merced have been dealing with space constraints over the past ten years, resulting in large research groups outgrowing their spaces. Of course, the 2020 project will be improving the situation somewhat. Nonetheless, physical distancing tends to disadvantage larger groups and leads to inequity in terms of research instrumentation access among students within a program. Furthermore, the requirement to be ready to shut down anytime disadvantages those whose research requires lengthy and/or complex experiments. Some research may even be potentially unfeasible, such as, where physical contact is required (e.g. performing arts) and/or where direct interaction with people from the broader community (and their children) is required.

Recommendations:

1. *Additional funding streams*: The depletion of PIs' research funds in return for reduced or even no research productivity, the resulting impact on GSR funding, the reduction and redirection of grant funds require strong commitment to the research mission and a concerted effort that allows individual researchers and the research enterprise as a whole to emerge from this crisis in a well enough state to be able to compete afterwards. No single tool will accomplish this task. Instead various measures will be required, for which we recommend to take the following into consideration:
 - a. Lobbying for federal and state programs that provide research funds to mitigate the impacts of COVID-19 on the research productivity and careers of researchers. One such initiative on the federal level is the bipartisan [Research Investment to Secure the Economy \(RISE\) Act](#), which was introduced June 26th by U.S. Reps. Diana DeGette (D-CO), Fred Upton (R-MI), Eddie Bernice Johnson (D-TX), Frank Lucas (R-OK), Anna Eshoo (D-CA) and Anthony Gonzalez (R-OH).
 - b. Increase internal research funding to provide the campus research community with adequate, not-COVID-19 restricted funding opportunities:
 - i. To pay their students,
 - ii. To seed new projects,
 - iii. To leverage existing resources for the broader campus community

- iv. To address special hardship, e.g., where research was disproportionately affected by COVID-19.
- v. For bridge funding

CoR is requesting an increase to its faculty grant program, which would help address some of these points.

- c. Provide additional avenues for graduate students, postdocs and research staff to remain on the job. Potential (temporary) measures may include:
 - i. Make use of the Graduate Student Assistant Researcher (GSAR) category. In addition to TA and GSR appointments, experienced graduate students could be employed as custodians for multi-user instrumentation and core facilities. This measure could also provide an incentive for faculty to seek funding for shared research equipment.
 - ii. In addition to the previous point, for making instrumentation (bought for example on start-up funds) and or specialized research services available to the campus community (and beyond), faculty could receive funding for their graduate students, postdocs, or research staff.
 - iii. As suggested by the University Committee on Affirmative Action, Diversity, and Equity (UCAADE) in their June 16 letter to the Academic Senate Chair Kum-Kum Bhavnani, extended support for current graduate students could be provided by admitting fewer future graduate students. Graduate programs should however carefully weigh this option against the long term impacts such a measure may have on the research in their program.
2. *Research training and access to research resources:* In order to ensure that students, postdocs and research staff can continue to shape their research careers despite the limited access to campus, the following measures are recommended:
- a. Whenever additional resources are being made available to support remote teaching, it should be stated explicitly that such support includes resources that enable remote, or otherwise adequate in suppressing the spread of COVID-19, research training via research courses for all flavors of research.
 - b. Resources for research software and cyberinfrastructure needs to be made available for students, postdocs and research staff to be able to function also from home. This should include as much as possible the acquisition of software site licenses for software tools that enable researchers to generate research results. It is not enough to just provide software tools that allow researchers to analyze data, write up results or that lets them nicely display existing data. The longer the pandemic lasts the more relevant it will become for researchers to have tools available that allow them to at least generate simulated results.
 - c. Research computing infrastructure needs to be maintained and if possibly expanded to meet the higher demand caused by increased computational research.
 - d. A cost of living adjustment should be considered for those who have to stay at home, so they can accommodate increased utility expenses. In addition, or alternatively the economic distress of individual members of the campus research community should be taken into consideration when prioritizing access to campus.
3. *Inequity of measures to mitigate the spread of COVID-19:*
- a. In order to assist physical distancing priority should be given to the moving of research groups and their labs to the new buildings as much as possible. This will help reduce overall density in the individual research buildings and may help also larger research groups to provide equitable campus access to their students, postdocs and research staff.
 - b. In order for research groups to better gauge whether to conduct more lengthy and/or complex experiments, clear communication should be provided on the expectations for shutting down, and frequent updates given on the relevant COVID-19 developments on campus, in county and statewide.
 - c. An extension of the CatTracks schedule through the night should be considered. Physical distancing requires some groups to implement a shift system, which in turn may require some researchers to come to campus at night. Students who lack personal means of transportation will require CatTracks throughout the night.

Thank you for taking the time to consider these issues and CoR's recommendations. CoR recognizes that the above lists are not complete. As the pandemic keeps continuing further issues may gain more relevance and/or new issues may emerge. CoR will continue to observe these developments and provide additional recommendations as needed.