

Research Disrupted:

Protecting Federal Research Investments and the U.S. Research Workforce from COVID-19 Impacts

Congressional Briefing
Monday, July 27th, 2020
2:30pm

BRIEFING AGENDA

- Welcome & Introductions (Debbie Altenburg, APLU; Matt Owens, AAU)
- Representatives DeGette (D-CO) and Upton (R-MI)
- Research Disruption Examples
 - **Roger Wakimoto, Vice Chancellor for Research and Creative Activities, University of California, Los Angeles**
 - **Mark McLellan, Vice President for Research and Innovation, University of North Texas**
- Questions & Discussion
- Wrap Up (Matt Owens, AAU)
 - Resources
 - Contacts

RESEARCH DISRUPTION

- Vast majority of non-COVID-19, on-site research slowed or halted in mid-March due to pandemic health emergency and social distancing requirements
- Graduate student experiments, training, and research delayed; degrees delayed; and job offers limited (or rescinded)
- Missed time windows for experiments – growing seasons, animal and plant life cycle development, site-specific research postponed (e.g. access to international field sites etc.)
- Inability to acquire needed PPE, specimens, and other materials necessary for research
- Domestic and international collaborators unable to travel
- Scientific conferences cancelled – lost collaborations
- Some research restarting in modified labs and conditions

RESEARCH RELIEF RECOMMENDATIONS

- **At least** \$26 billion in supplemental appropriations to federal research agencies allocated as follows:
 - National Science Foundation (NSF) – \$3 billion
 - National Aeronautics and Space Administration (NASA) – \$2 billion
 - Department of Defense (DOD) – \$3 billion
 - Department of Energy (DOE) – \$5 billion
 - National Institutes of Health (NIH) – \$10 billion
 - U.S. Department of Agriculture (USDA) – \$380 million
 - NOAA, NIST, EPA, the Institute for Education Sciences, other federal agencies with research budgets greater >\$100 million – ~\$2.6 billion

RESEARCH RELIEF RECOMMENDATIONS

❖ Supplemental appropriations to federal research agencies for:

- Grant and contract cost extensions to cover:
 - Research personnel salary support for graduate students, postdocs, principal investigators, and research staff
 - Reacquisition of donated PPE and testing materials – masks, face shields, gloves, reagents, swabs, etc.
 - Costs of restarting research – recalibrating equipment, reconfiguring labs and projects to allow for social distancing, replenishing supplies including new cell cultures, animal costs and care, etc.
- Personnel and base operation costs at core research facilities
- Extension and continuation of graduate and postdoctoral fellowships, traineeships, and support

❖ Extending regulatory flexibilities for federal research agencies

H.R. 7308/S. 4286 RISE Act

- Authorizes approximately \$26 billion in emergency relief for federal science agencies to award to research universities, independent institutions, and national laboratories to continue working on federally-funded research projects and supports our nation's research workforce.
- Provides temporary regulatory relief to allow federal science agencies to continue to interpret regulations consistent with the Office of Management and Budget (OMB) guidance memo [M-20-17](#) issued on March 17, 2020 until universities or nonprofit research institutes can safely reopen research laboratories funded by federal agencies.
- Endorsed by more than 300 higher education, research, industry groups and associations [[Full List Here](#)]
- Co-Sponsored by 80+ Members of the House of Representatives



**Research & Creative
Activities**

UCLA: COVID-19 & Research Disruptions

Roger Wakimoto
Vice Chancellor for Research & Creative Activities

#6 in total research expenditures last year

July 27, 2020

COVID-19 Response Timeline

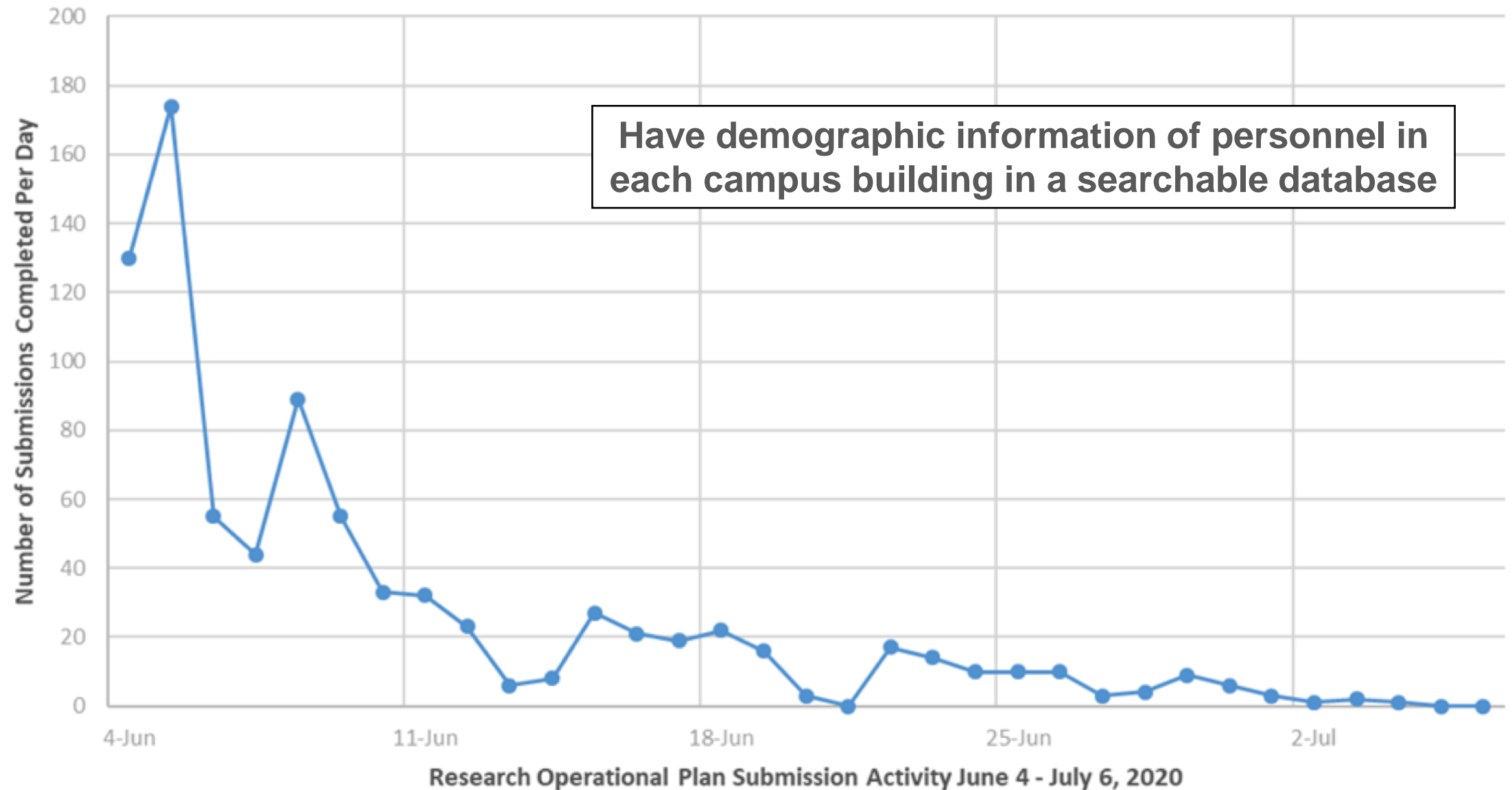
March 17 – Research ramp-down

June 8 – Research ramp-up Phase 2 (25% density of activities)

Working group charged with overseeing ramp-up

- All units submitted detailed operational ramp-up plans
- DocuSign process provides a detailed database
- 4,000 researchers have returned to campus, only 3 confirmed positive cases since June 8 start
- Separate planning process for remote or hybrid instruction

UCLA Research Ramp-Up DocuSign Envelopes (Total Completed Phase 2 = 847)



Research Disruptions at UCLA

Access - Total disruption of laboratory work and field sciences (myself included)

Assets – Loss of time, biomaterial, cell lines, longitudinal data

Facilities – Valuable lab time and fee revenue (e.g., user facilities)

Workforce –

- Students and post-docs' careers delayed; job prospects dim
- Women and underrepresented minorities disproportionately affected
- Highly committed to research (working from home but there are limits)

Examples of UC Impacts by Agency

NIH – UCLA user facilities lost ~\$3M/month

DOE/NSF – UCLA high energy physics and fusion facility major renovation delayed (cost increase)

NOAA – Ship deployments ceased, decreased commercial aviation traffic impacting weather forecasts

NSF – Suspension of Antarctic summer research

NASA – SMD has said publicly that if need be, they would support the workforce and cut 10-20% of new starts in FY21

DOD, DOE, NSF, NASA, NIH – FFRDCs have been impacted

USDA – UC Agricultural & Natural Resources (ANR)

Looking ahead

Research is critical for Innovation & Entrepreneurship and the future workforce (UCLA among the top universities for creating start-ups)

Costs and challenges of ramp-up

Impacts felt across campuses and agencies alike

Must plan strategically regarding the research enterprise post-pandemic – it will look very different



COVID-19 Research Disruptions

Mark McLellan

Vice President for Research and
Innovation

University of North Texas –

Mark McLellan, Vice President for Research & Innovation

❖ McLellan

- Cornell, TAMU, Florida, Utah State, Portland State, University of North Texas
- 10 years as VPR working for 5 different presidents across 3 institutions
- 10 years in US FDA Science Board, 3 years as chair
- Known for building university-wide research programs



❖ University of North Texas

- 40,000 students
- 1,157 faculty
- Newly minted R1 research university
- Known for advanced materials manufacturing, logistics & automation, largest music program in the united states



Covid-19 Crisis

Research Operations

- ❖ 25% Density to control outbreaks – rotating schedules, multiple shifts
- ❖ Stage 1 since May 4 - only 4 positive cases since
- ❖ Lack of oversight-quality & safety worries
- ❖ Reduced Training of techniques
- ❖ Lack of team science
- ❖ Experiments are all slowed

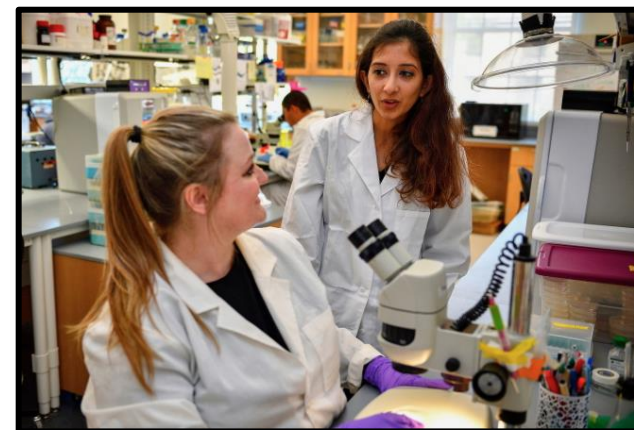
Impacts — Work Products of Research

- ❖ Huge shift to grant writing
- ❖ Loss of contract funding
- ❖ Delay in grant awards
- ❖ Compromised collaborations
- ❖ Added costs to conduct research outside of budget
- ❖ In-person Human Subjects shut down
- ❖ Example: Dr. Kent Chapman — Director, Bio Discovery Institute (BDI)



Covid-19 Crisis – Impacts — Personnel – Workforce

- ❖ Workforce Impact tangible
- ❖ Delays of UNT Research faculty appointments
- ❖ Significant delays of both Master & PhD graduates
 - ❖ Missing cycles of research can lead to year-long set back (Agriculture & Natural Sciences)
 - ❖ Impact nationally as a workforce vacuum!
- ❖ Decrease in ability to recruit grad students & postdocs
 - ❖ Pipeline will empty...
 - ❖ Virtually no Postdocs coming to campus
- ❖ Reduced time to train scientists
- ❖ Negative impact on junior faculty
- ❖ Caregivers (particularly women) are hurt
- ❖ Example: Dr. Brian McFarland — Professor of Applied Physiology - \$2M loss 1st two quarters of year.



Covid-19 Crisis – Impacts — Building new Futures

Department of Defense research partnerships

- Security Concerns with delays
 - ARL/Army Futures – Ballistics research setback
 - ARFL — bio-sensor work
 - research internships cancelled,
 - funding delayed
 - No travel therefore no new relationships/projects
-
- ❖ Training of new researchers with national agencies – setback
 - ❖ Industry/Campus Research
 - Loss of 50% of typical project launches since January
 - Some on-going projects cancelled
 - Basic lab services for industry clients are way down



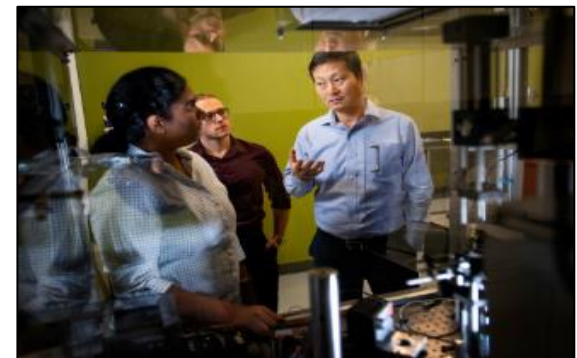
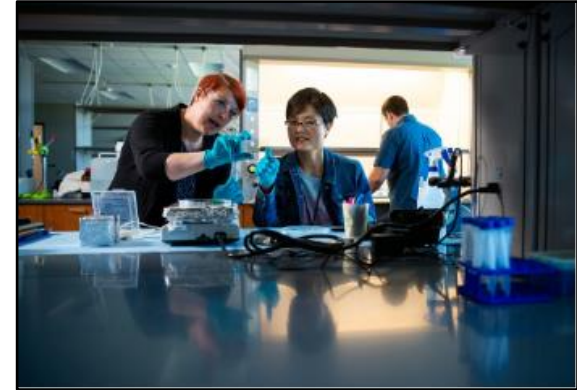


University of North Texas

- Viruses mutate – think flu –
- Different going forward
- Research Vacuum bubble
- Industry will feel a shortfall
- Extensions will come fast
- Reserves are drained empty
- Caregivers (women) are at risk
- Social disruption severe

And

- Efficiencies will emerge
- Creativities will deliver
- Opportunities will be found



Questions & Discussion

Wrap Up

RESOURCES

- CRS Report: Effects of COVID-19 on the Federal Research and Development Enterprise (4/10/20) - <https://crsreports.congress.gov/product/pdf/R/R46309>
- Letter of Support by 33 Senators to Leadership (5/4/20) - <https://www.markey.senate.gov/imo/media/doc/CV4%20Research%20Relief.pdf>
- Letter of Support by 182 House Members to Leadership (4/29/20) - <https://degette.house.gov/sites/degette.house.gov/files/Letter%20to%20House%20Leadership%20on%20Emergency%20Research%20Funding%20Final%204.29.pdf>
- AAU-APLU-AAMC-ACE April 7, 2020 Letter - <https://www.aau.edu/sites/default/files/AAU-Files/AAU-AAMC-APLU-ACE%20COVID19%20Research%20Recommendations%204-7-20.pdf>
- AAU-APLU-AAMC-ACE May 27, 2020 Letter - <https://www.aau.edu/sites/default/files/AAU-Files/Key-Issues/COVID-19/1ResearchReliefSenateLetter5-27-20Final.pdf>
- [RISE Cosponsors: House](#), [Senate](#), and list of [Endorsing Organizations](#)

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Thank you!