

Research Disrupted:

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

Briefing – Senate Commerce, Justice, Science Subcommittee
and affiliated staff

Wednesday, June 17th, 2020

3:00-3:30pm ET

BRIEFING AGENDA

- Welcome & Introductions (Debbie Altenburg, APLU)
- Relief Recommendations
- Research Disruption Examples
 - **Simon Atkinson, Vice Chancellor for Research, University of Kansas**
 - **Marian McCord, Senior Vice Provost for Research, Economic Engagement and Outreach, University of New Hampshire**
- Questions & Discussion
- Wrap Up (Julia Jester, 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- Graduate student experiments, training, and research delayed; degrees delayed; and job offers limited (or rescinded)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



Impact of Covid-19 on Research at the University of Kansas

Simon J. Atkinson, Ph.D.
Vice-Chancellor for Research
June 17, 2020

KU Research: Actions in Response to Covid-19

"The ides of March are come.

Ay, Caesar, but not gone"

- On-campus and field research suspended week of March 15th (except critical activities and research on SARS-CoV-2/Covid-19)
- Research personnel appointed to sponsored projects (including graduate research assistants) continue to be paid (OMB M-20-17)
- Resuming on-campus and field work in phases, beginning June 1st
- Requiring safety plans for all lab and field work (reduced occupancy in many labs, masks, travel restrictions etc.).

UNIVERSITY OF KANSAS

COVID - Research Impact

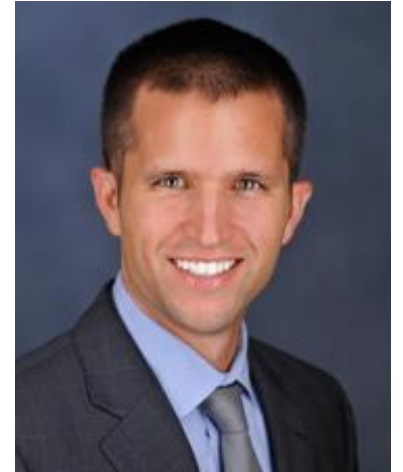
As of 6/11/2020

	FY2020 - Est	FY2021 - Est
	Total (Rounded up to \$10K)	Total (Rounded up to \$10K)
<u>Expenses:</u>		
Payroll Charges	720,000	180,000
Travel cancelation expenses	140,000	-
Fee/supplies additional expenses	480,000	120,000
TOTAL EXPENSES	1,340,000	300,000
 <u>Revenue:</u>		
Loss of Sponsored Research Revenue	(4,730,000)	(11,290,000)
Loss of Clinical Trials Revenue	(1,850,000)	(3,960,000)
Loss of F&A	(3,400,000)	(4,910,000)
Loss from Core facilities, other revenue activity	(1,560,000)	(2,400,000)
TOTAL REVENUE LOSS	(11,540,000)	(22,550,000)

NSF Investment in KU Research is at Risk

Kevin Leonard Chemical and Petroleum Engineering

- *New catalysts to make production of fuels and chemicals more efficient, decrease environmental impact*
- *SBIR Phase I and II – Avlum LLC*
- *Research Traineeship (NRT) award*



Maggie Wagner Ecology and Evolutionary Biology

- *Position made possible by Kansas EPSCoR award*
- *Plant-microbe interactions promoting drought tolerance and crop resiliency*



Impact of Covid-19 on Research at the University of New Hampshire

Marian McCord, Ph.D., Senior Vice Provost for Research, Economic Engagement, and Outreach

June 17, 2020



UNH Research: Actions in Response to Covid-19

- Research suspended on March 26th (exception: essential research and COVID-19 related activity)
- Research personnel appointed to sponsored projects (including graduate research assistants) continue to be paid (OMB M-20-17)
- Resumed limited (40% capacity) on-campus and field research - May 21st.
- Requiring safety plans and project specific SOP for all lab and field work (reduced occupancy in labs, masks, hospital grade cleaning measures, essential travel, etc.).

COVID-19 Financial Impact on Research

As of 06/15/2020		
	<u>FY2020 Projected</u>	<u>FY2021 Projected</u>
<u>Direct Expenses:</u>		
Salary Continuation	\$ 1,321,093	\$ 220,000
Travel Cancellation Expenses	\$ 125,000	\$ -
Loss of Core Facilities Utilization	\$ 350,000	\$ 200,000
Other Direct Costs	<u>\$ 620,000</u>	<u>\$ 100,000</u>
Total Expenses	<u>\$ 2,416,093</u>	<u>\$ 520,000</u>
<u>Revenue:</u>		
Loss of Sponsored Research Revenue	\$ (7,640,000)	\$ (12,050,000)
Loss of F&A	<u>\$ (1,225,000)</u>	<u>\$ (3,010,000)</u>
Total Revenue Loss	<u>\$ (8,865,000)</u>	<u>\$ (15,060,000)</u>

NASA Investments in UNH

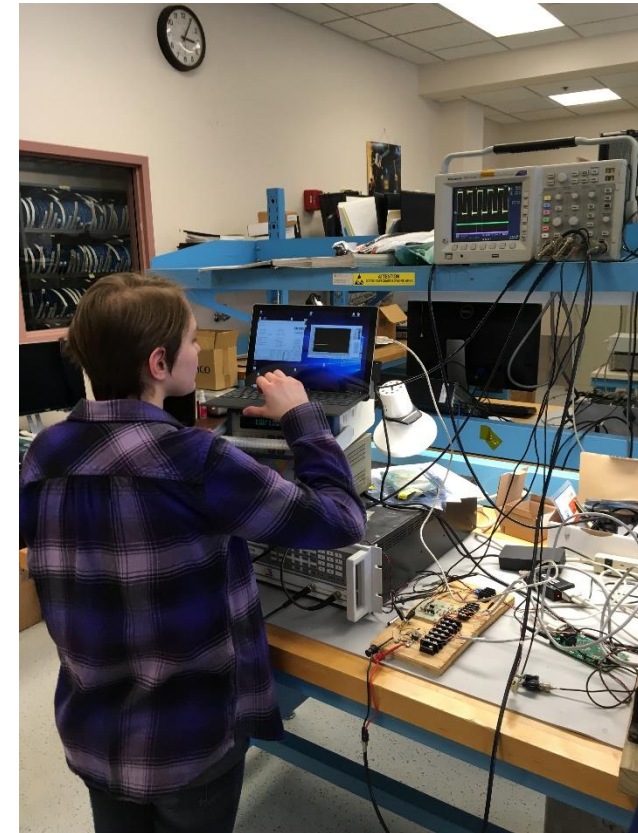
Dynamos, Winds, and Electric Fields in the Daytime Lower Ionosphere (Dynamo 2)

James Clemmons, Prof. of Physics

- Sounding rocket mission to develop and test new instruments to measure electric fields, plasma density, currents, neutral winds, neutral density, temperature and ions mass distribution in near-earth conditions
- Significant undergraduate and graduate student involvement in completing the designs and fabricating, testing, and calibrating the instruments, as well as producing scientific results through analyzing the returned flight data
- Data from the testing, calibration, and flight of these instruments would support a separate NASA-funded concept study considering placing similar instruments on the ISS

Impacts

- Delayed development of instruments and test capabilities
- Planned Aug. 2020 launch has slipped by ~1 year due to related impacts at NASA/Wallops
- Reduced hands-on learning for students
- Potential lengthening of time to degree for involved graduate students
- Challenges retaining the skilled technical workforce required for specialized work
- Reduced ability to contribute to related ISS concept study report



A UNH undergraduate student conducting research for Dynamo 2.

NOAA Investments in UNH

Coastal Response Research Center (CRRC)

Nancy Kinner, Prof. and Co-Director

- Partnership with NOAA's Office of Response and Restoration (ORR) since 2004
- Collaboration stimulates innovation in spill preparedness, response, assessment, and implementation of optimum spill recovery strategies.

Impacts

- Planned 3-day face-to-face Hurricane Summit to prepare for the 2020 hurricane season has been converted to virtual meeting, reducing rapid real-time interaction, planning and feedback among the responders and partners
- As part of the Coordinating Recent Advances in Estimating and Measuring Oil Slick Thickness research project (CAMPRI), vendor validations of equipment/devices at the Bureau of Safety and Environmental Enforcement's Ohmsett large oil test tank in New Jersey have been delayed until least Spring 2021.
- Planned research in Alaska to study marine oil snow has been cancelled. Instead, samples will be shipped from Alaska with research conducted in a constant temperature room at UNH. Delays in acquiring samples and impacts of shipping will compromise results.
- An undergraduate internship with NOAA ORR was cancelled.



Nancy Kinner speaking about advances in oil spill response at a U.S. Senate forum Tuesday, April 21.

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>

CONTACTS

AAU

- Julia Jester
- Associate Vice President for Federal Relations
- Julia.Jester@aau.edu
- 202-408-7500

APLU

- Debbie Altenburg
- Assistant Vice President for Research Advocacy and Policy
- daltenburg@aplu.org
- 202-478-6039

AAMC

- Tannaz Rasouli
- Senior Director, Public Policy and Strategic Outreach
- trasouli@aamc.org
- 202-828-0057

ACE

- Sarah Spreitzer
- Director of Government and Public Affairs
- saspreitzer@acenet.edu
- 202-509-7369

Thank you!

Backup Slides

RESEARCH RELIEF RECOMMENDATIONS

- ❖ Federal research agencies should implement uniform guidance and policies that provide flexibility for research institutions during this national health emergency to cover salaries, benefits, and tuition support for graduate students and research personnel engaged in federally sponsored research grants and contracts.
[implemented through 6/17/20 OMB guidance – extension needed]
- ❖ OMB and federal research agencies should be directed to provide temporary regulatory and audit flexibility during the pandemic period and for a year afterwards.