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House Science, Space and Technology Committee 2321 Rayburn House Office Building Washington, D.C. 20515

Via email: SST.Stimulus@mail.house.gov

To Whom It May Concern:

Thank you for the opportunity to provide input into the House Science, Space and Technology Committee's compilation of research priorities for anticipated legislation to address the coronavirus pandemic. Like many large research institutions, Boston University (BU) is committed to supporting our researchers, students and staff during this challenging time. As a member of the Association of American Universities (AAU), we support the legislative proposals for federal research support sent to Congressional leadership by AAU and other research organizations on April 7. We'd like to highlight some specific federal actions that would impact BU.

Support the Next Generation Scientific Workforce

BU conducted a <u>survey</u> of our PhD students and postdocs to assess their greatest needs in the aftermath of coronavirus disruptions. One of the most frequently cited concerns was financial insecurity due to their research being put on hold, and how that will impact their careers down the line.

Here are some specific actions Congress and federal agencies can take to alleviate the immediate challenges our junior researchers face:

- Augment National Science Foundation (NSF) Graduate Research Fellowships (GRF) with two additional years of funding to allow awardees to make up for time lost due to coronavirus interruptions. BU currently hosts 40 members of this prestigious award, often an early indication of a researcher's potential.
- Augment NSF National Research Traineeships (NRT) with two additional years of funding to allow the programs to accomplish the goals set out in their applications. NRT's allow research institutions to create new, interdisciplinary research fields. For example, BU's <u>URBAN NRT</u> is a first-of-its kind, cross-disciplinary training for graduate students to acquire the scientific and policy skills necessary to implement real world solutions to addressing climate change.

- **Reestablish the EPA STAR Graduate Fellowship**. Similar to BU's NRT, the STAR Graduate Fellowship program served as a workforce pipeline for multidisciplinary researchers trained to address complex environmental challenges. It could help meet workforce needs in environmental research and management while also providing students with an interest in environmental protection and policymaking additional options for employment while they navigate the new research landscape.
- **Fund internships**. The National Science Foundation, Department of Energy, NASA, and other research agencies could consider expanding the AAAS Policy Fellowship program to include a larger range of employers that engage on policy issues. They could also consider replicating a program at the <u>Massachusetts Life Sciences Center</u>, which matches businesses with graduate students to tackle important projects on a short-term basis. Businesses can still achieve their research goals while keeping their payroll low, and graduate students receive hands on learning and workforce experience in a time where academic employment options are limited.
- **Provide temporary bridge funding for postdoctoral researchers**. Postdoctoral positions by definition are short-term training experiences meant to launch postdoctoral scholars into an independent career. Short-term delays in an already short-term role present serious limitations to the progress these scholars can achieve during the duration of their current appointments. Coupled with an uncertain job market, this population of early career scientists could be eliminated from the workforce if bridge funding cannot be secured to ensure they can both continue their research and stay in the STEM pipeline while the research and innovation economic recovers. This will be particularly important for postdocs from underrepresented groups, who we know already leave careers in STEM and within academia at a higher rate than their majority counterparts.

Additional Funds for Existing Grants and Infrastructure Specifically, our researchers will require:

- **Provide grant supplements for COVID-19 research.** Innovation in the war on COVID-19 is coming, not only in biological laboratories, but in the convergence of the understanding of the disease with the physical sciences, engineering and computer science. The rapid creation of apps for contact tracing, while respecting data privacy is an example of the rapid repurposing of research to join the fight. Researchers across our universities are repurposing their labs to pursue COVID-19 research with the hope of finding solutions quickly, or are offering resources such as equipment to their colleagues. Agencies will need financial resources above their usual appropriated amounts to reimburse these scientists for their work and goodwill.
- **Provide grant supplements for restarting labs.** For many others, our nation's research workforce is effectively idled due to closed laboratories and severely limited research activities. Their federally-supported research is delayed or will be set back because they are unable to access their laboratories and research facilities. Many researchers will need supplemental funding to support the additional salary for their staff and students and to ramp up their work again when they are able to resume lab operations. This may include supporting students to complete laboratory rotations, or supporting students for additional years so that they can complete research essential to their degree.

- **Provide financial support for lab reconfiguration.** While BU is eager to resume research operations, we anticipate that new protocols will be needed to ensure proper social distancing and COVID-19 mitigation measures to protect our researchers' health. This will likely necessitate a reconfiguration of many laboratory spaces and rethinking how scientists and their staffs interact with one another. While difficult to quantify, having additional funds to make these changes would minimize further research disruptions.
- **Provide grant supplements to institutions as a whole, rather than on a grant-bygrant basis.** Congress should consider allowing research agencies to issue grant supplements to institutions in proportion to their existing federal grants portfolio. This would reduce the administrative burden of issuing individual grant supplements for thousands of awards.

International Students and Scholars

While issues concerning student visas are not part of the Committee's jurisdiction, international students and postdoctoral scholars are a critical component of BU's research enterprise, and the nation's STEM workforce. Therefore, we'd be remiss if we didn't raise the issue of the enormous obstacles international students currently face. In addition to lengthy backlogs of visa applications due to limited or shuttered operations at embassies across the globe, many current students remain on BU's campus with no recourse or ability to return home for fear that they would not be able to return to the US for the research and academic programs. Anything you can do to remove this backlog, once the public health concern subsides, will be greatly appreciate by all universities.

We also are devising innovative ways to assist international undergraduate and graduate students and postdocs financially. Any grant programs that NSF, Department of Energy, NASA, and other research agencies could augment to help provide international researchers a lifeline while they navigate their new situations would ensure these scholars are not lost from our innovation ecosystem.

We appreciate all of your efforts to keep the science and technology of our country strong, especially during this crisis and your understanding of the role of our research universities in this effort.

Sincerely,

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Jean Morrison University Provost and Chief Academic Officer