Restarting Research at the University of Maryland: A Research 1 University

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Report from the COVID-19 Research Advisory Task Force

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- Our Dedicated Graduate Students

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Setting the Stage: Research today

Most universities shut down on-campus research in March 2020 (UMD Mar 21, 2020)
Most universities planning for a gradual research restart now
Most BIG10 universities planning for a June start
Most universities planning a phased in approach based on occupancy

Current State of UMD Research Funding

- Awards up $36M (+$10M from CARES act)
- Expenditures up $21M over last year
- Indirect cost recovery up $8M
- Proposal submission up $218M (+20M CARES)

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The Task Force examined four areas representing the vast majority of our research activities

1. **Laboratory & Studio Based Research** (including scientific labs, spaces with specialized equipment and instruments for the visual and performing arts and architectural design)

2. **Human Subjects Research**

3. **Farm/Field Based Research** (excluding human subjects research; including outdoor research including agricultural, environmental, archaeological, etc)

4. **Office-Based Research**
Five Major Conclusions/Findings

1. Research should be one of the first activities to resume due to ability to maintain controlled conditions & controlled environment; the risk can be mitigated to a low level.
2. Testing the assumption that risk can be mitigated will be done through health screening, monitoring, and epidemiological analysis.
3. Resumption of on-campus research should be phased in over time according to the type of research and reflecting the Guiding Principles outlined in this document.
4. A preparatory phase for resumption of research should begin now and include intensive planning and preparation of research spaces and buildings before any activity begins.
5. Researchers must attest to abide by the rules of operation to minimize health risk.

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Guiding Principles to Relaunch Research

1. Follow the cognizant Local, State, and National Public Health Authority directives to shelter-at-home and implement social distancing.
2. Prioritize physical & emotional health and safety of our campus community, our visitors, and our human research subjects.
3. Make every effort to accommodate those who are uncomfortable coming to campus.
4. Prioritize the support and cultivation of early-stage researchers: untenured faculty, postdoctoral fellows, and doctoral students. They are the drivers of the future research enterprise.
5. Recognize that undergraduates are students first, researchers second. Graduate students are students first, with research as an integral part of their education.
6. Implement a fair, transparent, and equitable process for granting access.
7. Ensure as rapid a research restart as the public health conditions permit.
8. Build in institutional and individual flexibility as well as resilience in the solutions we adopt in case lockdown must be invoked again.
9. Create a rich learning, mentoring, and discovery experience for researchers in a flexible environment. Cultivate a spirit of radical creativity in research. Decide now what the future of research will be.

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If you can do your research remotely, please stay at home

This helps the entire campus community by keeping us all safer

And allows us to navigate this initial resumption of on-campus activities
A Phased Approach to Restarting On-Campus Research Activities

- Maryland’s Roadmap to Recovery recommends a phased approach to restart the economy: Stages 1-3 moving from low risk activities to high risk activities.
- To ramp up on-campus research activities, we also recommend a phased approach, relaunching research activities in Phases 1-3.
- We will not begin with Phase 1 until we are assured that we have put all of the proper precautions in place to reduce risk to low level based on public health guidance.
- We must continue to prioritize health and safety of our community and take all necessary measures to be safe and healthy.
<table>
<thead>
<tr>
<th>Phase 0</th>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
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</thead>
<tbody>
<tr>
<td>Preparation</td>
<td>Limited Presence</td>
<td>Intermediate Presence</td>
<td>Full Resumption</td>
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<tr>
<td><strong>Campus under Severe Research Restrictions</strong></td>
<td>Progression to this phase based on the Governor’s plan to ease restrictions; Severe Research Restrictions lifted but new guidance put in place as below</td>
<td>Progression to this phase based on comprehensive risk assessment including an understanding of adverse events and adherence to required safety procedures during Phase 1</td>
<td>Progression to this phase based on federal and state authorities lifting all restrictions associated with the COVID19 pandemic.</td>
</tr>
<tr>
<td>● No research activities will be allowed during this phase, except for work granted an exception by Deans and VPR</td>
<td>● Laboratories work at maximum 25% OCCUPANCY (not to exceed 1 person/room or 200ft²) with possible staggered work hours</td>
<td>● Laboratories will work at maximum 50% OCCUPANCY (not to exceed 1 person/room or 150ft²) with possible staggered work hours</td>
<td>Back to work as normal</td>
</tr>
<tr>
<td>● PIs, working with their departments and colleges/schools, will develop plans for reopening labs, consistent with university guidelines, and submit for approval</td>
<td>● Those who can work at home must do so</td>
<td>● Those who can work at home should do so but gradual inclusion of others may occur at the permission of the department or college administration</td>
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<td>● Plans should include specifics such as sq ft per researcher, occupancy logs, PPE use, staging in space and time, disinfectants, contact tracing, laboratory access, personnel safety after normal business hours</td>
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<td>● We anticipate this can be done remotely; however, if absolutely necessary, we will allow no more than one researcher per lab, designated by the PI and approved by dean and VPR to be allowed on site to prepare lab for reopening</td>
<td>Researchers uncomfortable or unable to return safely to work (including those in high risk categories)</td>
<td></td>
<td>● Screening procedures implemented at each building, if warranted</td>
</tr>
</tbody>
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**Phase 0: Prepare**

**Phases 1-3: Relaunch on-campus research activities**
Campus still under Severe Research Restrictions in this Phase

This intensive planning and coordination phase should begin as soon as possible to prepare labs for reopening

Preparation/planning should be done remotely as much as possible

A single designated person per research space will be permitted to access lab for preparation and planning only

This must be highly coordinated in departments

Guidance will be provided by the VPR’s office

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**Phase 0 Preparation**

**Campus under Severe Research Restrictions**

- No research activities will be allowed during this phase, except for work granted an exception by Deans and VPR
- PIs, working with their departments and colleges/schools, will develop plans for reopening labs, consistent with university guidelines, and submit for approval
- Plans should include specifics such as sq ft per researcher, occupancy logs, PPE use, staging in space and time, disinfectants, contact tracing, laboratory access, personnel safety after normal business hours
- We anticipate this can be done remotely; however, if absolutely necessary, we will allow no more than one researcher per lab, designated by the PI and approved by dean and VPR to be allowed on site to prepare lab for reopening
- Researchers will take mandatory training and attest to the fact that they will follow all health and safety guidelines

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Some activities in Phase 0

- Draft plans produced and approved by departments and deans (VPR office will provide information and template)
- Take mandatory training provided by ESSR
- Assure sufficient personal protective equipment exists in the lab
- Determine how a low-density & appropriately socially distanced working environment can be established with staggered work schedule and possible rearrangement of critical equipment
- Put visual cues in labs for 6ft distancing (tape on floor at entrance)
- Post signs on shared equipment to disinfect after use
- Attest to comply with university guidance to maintain safety and health (VPR office will provide form)
- Set up occupancy logs
- Set up hygiene stations with gloves and disinfectant

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Phase 1 is very limited presence on campus!

- No more than 25% occupancy and not to exceed 1 person/200ft$^2$
- In large research intensive buildings, we may need to change this requirement to limit access on a building by building basis
- Lab plans must be approved before the laboratory is allowed to operate
- Those who can work at home must work at home

This Phase will begin when all three are true:

- The governor lifts the stay at home order
- The county lifts the stay at home order
- When labs/buildings are fully prepared and researchers’ plans for use are approved

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Phase 2
Intermediate Presence

Progression to this phase based on comprehensive risk assessment including an understanding of adverse events and adherence to required safety procedures during Phase 1

- Laboratories will work at maximum 50% OCCUPANCY (not to exceed 1 person/room or 150ft²) with possible staggered work hours
- Those who can work at home should do so but gradual inclusion of others may occur at the permission of the department or college administration
- We will work to accommodate those researchers uncomfortable or unable to return safely to work (including those in high risk categories)

- Researchers will take mandatory training and attest to the fact that they will follow all health and safety guidelines

- No more than 50% occupancy and not to exceed 1 person/150ft²
- Those who can work at home should work at home

This Phase will begin when the following are true:

- There is further easing of state and local restrictions
- We have done a comprehensive risk assessment to determine our ability to manage and minimize the risk to researchers as predicted

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• BACK TO NORMAL
• Estimated 75-100% occupancy in labs

This Phase will begin when the following are true:
• Complete lifting of restrictions in our state and local jurisdiction
• Pandemic has subsided
Human Subjects Research

- Continue to conduct human subjects research that can be performed remotely in Phases 0-2
- For data analysis, strongly encourage continuing to work remotely in Phases 0-2 unless specific needs require on-campus resources
- If on-campus resources required, all occupancy guidelines and health and safety guidelines must be addressed in plan
- Initiate face to face human subjects research last (Phase 2-3 depending on scenario)

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Farm/Field Based Research

- May work in Phase 0-2 in field and farm research provided all relevant health and safety guidelines are addressed in plan, including social distancing in transportation and machinery.
Office-based Research

• Strongly encourage continuing to work remotely in Phases 0-2 unless there are specific needs regarding on-campus resources
• When on-campus resources are needed, all occupancy guidelines and health and safety guidelines must be addressed in plan

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Pending Issues

- Decisions on campus health screening and testing guidelines including screening tool
- Decision on contact tracing
- Building preparedness (Signage/entrances/closures/spacing/traffic flow/hygiene stations)
- Initial cleaning of buildings
- Sufficient PPE in labs (contact Procurement & Strategic Sourcing but best to do this by department/college/school)
- Reopening safety planning form* (target distribution 5/22/20)
- Attestation to comply with health and safety guidelines: Commitment to Public Health Practices* (target distribution by 5/22/20)
- Research Survey for reopening* (target distribution 5/22/20)
- COVID19 Safety Training* (early next week)
- Checklist to restart research in BioRAFT* (early next week)