

## Department of Chemistry and Biochemistry

### COVID-19 Research Relaunch Plan

Maryland Governor Larry Hogan has issued a “Stay at home order” effective March 30, 2020 until further notice. Under this order, all non-essential employees are required to shelter in their homes with travel restricted to essential activities as defined within the order. University faculty and staff, including postdoctoral and graduate research associates, are considered non-essential and thus are required to stay at home. All research efforts that require access to laboratories have been stopped and only remote activities are continuing.

In preparation of the lifting of some of the restrictions on travel and work the following protocol for restarting UMBC’s research programs specifically within the Chemistry and Biochemistry Department is proposed. This protocol is developed with the belief that the goals of protection of public health and to control the spread of COVID 19 can be balanced with the need to open our research facilities.

This plan is subject to change as guidance from the University and State of MD is updated.

#### **COVID-19 contamination mechanisms**

The CDC suggests that COVID 19 is thought to spread through multiple mechanisms:

- Between people who are in close contact with one another.
- Through respiratory droplets produced when an infected person coughs, sneezes or talks.
- These droplets can land in the eyes, nose, or mouths of people who are nearby or possibly be inhaled into the lungs.
- Droplets containing virus can remain active on surfaced which, when touched, can be transferred to eyes, nose or mouth and pass the infection.

#### **Avoiding exposure to COVID-19**

The best way to prevent illness is to avoid exposure. It is possible to minimize potential exposure through social distancing (maintaining a 6-foot buffer between you and others). The use of cloth masks and eye protection, along with frequent washing of hands with soap and water or sanitizer solutions can largely mitigate the spread of the virus. Cloth mask cannot prevent the spread of virus but they will limit the travel of respiratory droplets from you to others and act as a barrier and reminder to avoid transfer of virus from your hands to eyes, nose, and mouth. Therefore, **face mask will be required at all times in the Chemistry building (*bags of masks are given on request by Brian Moravec*)**. Eye protection is also recommended (e.g., goggles, face shield, etc). Gloves are not considered protection for COVID 19. The use of **gloves** will be limited to protection for you from chemicals and biological agents, and **should not be worn in the public areas of the building** as is the standard policy in the department (only exceptions are to reach the autoclave and temperature-regulated rooms). All researchers are deemed susceptible to COVID 19 even if they have been diagnosed as having had the virus. As such all researchers must follow the outlined protocol at all times.

**Criteria for Selection of Personnel to return to work**

**Personnel will return** to the research labs **in waves** depending upon the following criteria.

- i) If you have any symptoms of illness (any illness, not limited to COVID 19)- **STAY AT HOME**. Do not return to work until:
  - o You have had no fever for at least 72 hours (that is three full days of no fever **without** the use of medicine that reduces fevers)  
**AND**
  - o other symptoms have improved (for example, when your cough or shortness of breath have improved)  
**AND**
  - o at least 10 days have passed since your symptoms first appeared
- ii) If you have been exposed to someone who has the symptoms of COVID19, or has been confirmed a COVID 19 carrier, within the last two weeks: **STAY AT HOME**. These symptoms include: fever (>100.4 F), persistent dry cough, trouble breathing (bluish lips or face), loss of taste or smell, persistent pain or pressure in the chest and headache, or other symptoms that may be reported in the future by the CDC or federal agencies as being indicative of potential COVID 19 infection .
- iii) If you have the underlying risk factors: please stay at home. These factors include being an older adult (65 years or older), having heart or lung disease, having asthma , being diabetic or severely obese (BMI over 40). Having one or more of these factors may lead to more serious complications from COVID 19 infection. Please discuss concerns with your research mentor.
- iv) If you are responsible for someone who is in a higher risk category: you may want to consider staying at home. Please discuss concerns with your research mentor.
- v) If you have any concerns about rejoining research activities: please discuss your concerns with your research mentor.

**COVID-19 Training Certification**

In addition to meet the *Criteria for Selection of Personnel to return to work* above, personnel will be allowed back in the Chemistry building only after (i) it has been certified online that they have viewed the COVID-19 training video, (ii) they confirm by email that they are voluntarily coming back to the laboratory, (iii) they confirm that they understand and will abide by both the departmental and PI COVID-19 safety plans.

**Entrance into the Chemistry building, to the common areas in the building and to each lab**

Only the two entrances from the second floor of the Chemistry building should be used: hand sanitizer will only be provided next to these entrances. The building should be accessible by authorized personnel only with a UMBC card key. The bridge between the Chemistry and the Biology buildings will be locked and limited to only authorized personnel as well.

**Anybody entering the building must use the hand sanitizer** next to the entrance door.

**Only one person will be allowed in an elevator at a time.** It is highly encouraged to take stairs.

The department prohibits all in-person meetings of any size (even in groups of two): all meetings should be conducted remotely. Very short conversations (few minutes) between two persons following social distancing are allowed if necessary for research purpose.

The department will equip the entrance of every common room in the building with hand sanitizer and disinfecting wipes.

While on campus, all individuals must use Occupancy Logs for all rooms they enter and for any shared equipment they use.

Every laboratory space will be equipped with soap and paper towels near the sink

### **Number of researchers per laboratory unit – Social distancing and safety precautions in lab/offices**

It is proposed that the research programs within the department be restarted in waves. **Only potential researchers that do not fit into any of the criteria above will be considered for the initial restart.** Second and third waves will be delayed relative to the initial restart to allow evaluation of the exposure levels within the department between waves.

As described above, the initial wave of research personnel will be low-risk, currently healthy researchers. Researchers are required to wear **facemask** within the department at all times. It is also recommended to wear eye protection (goggles or face shields) while in the department. **The number of researchers per laboratory unit will be determined by the individual research mentor and approved by the departmental COVID-19 Safety Committee (see members at the end of this document). All individual PI plans must conform to the departmental rule that researchers MUST MAINTAIN A MINIMUM OF 6 FEET OF SEPARATION AT ALL TIMES.**


Guidelines for populating research labs include the following suggestions based on general safety and social distancing guidelines. **Minimally two researchers should be available per PI's laboratory as per standard safety precautions.** If two researchers cannot occupy a laboratory unit while maintaining social distancing, please consider avoiding that laboratory unit or using other means for buddy system (e.g. WebEx session on frequent phone calls, neighbor lab's members regular checks, text-check-in, etc). *Exceptionally, a mentor and one of his students can agree that the buddy system is not needed in cases when the tasks to be accomplished are completely safe and of short duration.*

Mentors should also **consider assigning spaces as either singular or shared laboratory spaces.** Singular spaces should include lab bench space occupied by a single researcher and being over 6 feet away from other singular space or shared lab spaces. For example, one researcher per fume hood and isle of lab benches. A personal office desk could be considered

singular only if it is located further than 6 feet away for any other desk or shared space. Shared spaces may include common research equipment and office areas where occupancy can overlap within 6 feet (i.e. desks back-to-back in one lab isle). **Shared spaces in any laboratory unit should be considered “contaminated” at all times** and a researcher should decontaminate these spaces (wipe down benches, keyboards, surfaces, before use and immediately after use). Disinfectant wipes\* or Kimwipes with 60 % or 70% isopropyl alcohol may be used for decontamination. Mentors should aim to minimize occupancy in overlapping spaces whenever possible and researchers should avoid infringing upon others who may be currently occupying shared space (one researcher using space at a time – decontaminate before and after use). Researchers should report to their mentor or the GPD when they witness any violation at any time.

\* *Important note:* Be aware that the departmental disinfecting wipes contain ***bleach*** and may negatively affect some surfaces!

Time any individual spends in the department should be limited to conducting experiments or using instruments that require in-person presence; main lab notebook reporting and data analysis should be done at home.

 The PI of each lab must develop their own Research Relaunch Plan, following a template that will be provided as guidance (attached). The PI plan (and any subsequently proposed changes) must be approved by the Departmental COVID-19 Safety Committee (see members at the end of the document) *and supersedes the departmental plans in case of differences in lab management.*

**When entering your lab,** wash your hands with soap and water.

**When leaving a shared space and entering your singular space** – wash your hands with soap and water (or use hand sanitizing solution).

**When leaving your lab,** remove gloves (should you have them on) and eye protection.

When you return home, even if you feel fine, you should assume you are carrying the virus on your person. Remove shoes and outer clothing immediately upon entering your home. Set clothing aside for washing. Wash your hands, remove your mask. Your mask should be washed only if it is a re-usable one: otherwise, discard it. Wash your hands again right after removing the mask.

### **Food and drinks**

If it can be avoided, food should not be consumed on site.

If it is really necessary, it should be consumed preferably outside or only *in areas designated for food/drink* inside the Chemistry building (tutorial center, 120, 256, 272, 351, 432, 475D and 545): social distance must be maintained, and all surfaces must be decontaminated before and after use by wiping tables and the immediate area with disinfectant wipes or paper towel with 60 % or 70% isopropyl alcohol.

Water fountains are not to be used. Individuals must bring their own drinks and food to campus.

### Departmental common areas

**Common areas** such as the graduate lounge and copier room will be locked.

**Individuals must practice social distancing at all times**, even when going from PI lab spaces to shared facilities. **Mask should be worn at all times in the department**, but not gloves in hallways or office space unless allowed by the PI supervisor for biohazard safety.

**Common research areas** such as cold rooms, autoclave, centrifuges, liquid nitrogen, dry ice and departmental equipment areas, should be used **sparingly** and should be **considered contaminated**.

**Google Calendars** specific to each of these areas must be used to schedule time in advance and ensure that (i) only one person will be in the room at a given time and (ii) there is at least 15 min dead time between users. *FACES calendar must be used for NMR reservations, and since time slots are 20 minutes, a deadtime of 20 min between users is required when reserving the 400 MHz NMR instrument.* Enter only if the door sign says “Not in Use”. Turn the sign to “in Use”. These areas will be equipped with hand sanitizer, disinfecting wipes\* and gloves at their entrances. Common shared equipment (e.g. autoclave, dish washers, freezers, centrifuges, etc.) **must be logged in** using the log books at the time of usage or operation every time. Such spaces should be decontaminated before and after use (wipe them down with a sanitized towel). Recent studies have suggested that COVID-19 may be spread by people who are not showing symptoms. You should consider your co-workers and yourself as contaminated and possible carriers.

\* **Important note:** Be aware that the departmental disinfecting wipes contain **bleach** and may negatively affect some surfaces!

Moving through the department shared spaces will be accomplished using disinfecting wipes. You should remove gloves while in these spaces and use the disinfecting wipes to open doors, to grasp handles or handrails, turn on lights, push elevator buttons, or when touching any shared surface.

**Restrooms** are shared spaces and should be considered contaminated. Enter restroom only if the door sign says “Not in Use”. Turn the sign to “In Use”. **Hands must be washed with soap and water** immediately upon entering, and immediately before leaving, the bathroom. If the towel dispenser has exposed a towel, dispose of it. Dry your hands with freshly dispensed towel. Turn off the water with your towel. Open the door using your towel *and turn the door sign back to “Not in Use”*. Open your lab door using your towel and dispose of the towel in your lab wastepaper basket. Re-glove if working with chemicals and/or biological agents.

### Individual Health Monitoring

All individuals allowed back to the Chemistry building must maintain a personal contact log, on and off campus. This information will be kept personal and will be asked to be shared only if the person contracts COVID-19.

We recommend that you take your temperature in the morning (if possible) before you come to work and when you return home from work. **Anyone with a fever of 100.4 F or greater should not come to work and should report the fever to their PI/supervisor.**

**If you feel ill at any time, leave the lab and return home. Let your mentor know via email** about your conditions and symptoms. It is **up to your mentor to decide when you are welcome to return to lab.** If symptoms suggest COVID 19 infection is possible, it is very strongly recommended that **you contact the Health Center** and that you get tested for COVID 19. The entire department will be made aware of the potential case of COVID 19 and the mentor should also report the potential of exposure to fellow students with whom contact, either directly or through shared space, could have occurred. All researchers must then stay at home for two weeks to avoid possibly endangering the rest of the department. When the test result is received, if it is negative, the researchers can stop this quarantine and return to the lab.

### **In case of Non-compliance**

The department will assign designated personnel to randomly check lab spaces for compliance with these COVID-19 safety protocols. Violations will be reported to the PI and the Departmental COVID-19 Safety Committee.

In addition, at any time during research, if you feel there are problems with the procedures or feel there is a lack of understanding of these practices, please bring your concerns to the attention of your research mentor or the COVID-19 Safety Committee so that corrections can be made. Any person who is not complying with these guidelines will receive one warning, and will then have access to the Chemistry building revoked in the case of continued non-compliance. If the persons not complying are from facilities or cleaning crew, let Brian Moravec or directly Mike Pound ([michaelp@umbc.edu](mailto:michaelp@umbc.edu)) know.

The success of this restart program is dependent upon all researchers behaving responsibly.

### **Next Waves toward “full-capacity” Research**

After 2-3 weeks of the research relaunch program there will be an electronic town-hall meeting to discuss potential improvements.

Assuming there are no reported exposures to COVID 19 **after 3-4 weeks, the second wave of researchers could be added.** Second wave researchers will be those deemed to be at minimal risk (not in a high-risk category themselves and do not have over-riding concerns about exposure). Finally, 3-4 weeks later, the third wave of researchers, including any remaining researcher that feels comfortable doing so, can return to campus. Please note, campus will not have returned to “normal” but social distancing and PPE use will likely continue into the foreseeable future. If you are uncomfortable returning to campus, discuss your concerns with your research mentor, GPD, or Department Chair, so that your concerns can be allayed or

suitable remote activities can be instituted. During the last wave, each mentor will decide when high-school interns are welcome to return to lab.

**Links to PI Plans:**

[Allen Lab PI Plan](#)

[An Lab PI Plan](#)

[Arnold/Kelly/Singh Labs PI Plan](#)

[Bennett Lab PI Plan](#)

[Chen Lab PI Plan](#)

[Cullum Lab PI Plan](#)

[Daniel Lab PI Plan](#)

[Kyoung Lab PI Plan](#)

[LaCourse Lab PI Plan](#)

[Liebman PI Plan](#)

[Ptaszek Lab PI Plan](#)

[Rosenzweig Lab PI Plan](#)

[Seley Lab PI Plan](#)

[Aaron Smith Lab PI Plan](#)

[Paul Smith Lab PI Plan](#)

[Summers Lab PI Plan](#)

**Useful links**

[COVID-19 symptoms checklist](#)

[CDC guidelines and instruction on cloth face mask use](#)

[How much protection do face masks offer?](#)

[CDC COVID-19 guidance site](#)

[How long does COVID-19 live on surfaces?](#)

[Info about COVID 19 testing in MD](#)

[University Health Services](#)

**The COVID-19 Safety Committee:**

Dr. Zeev Rosenzweig

Dr. Brian Cullum

Dr. Bradley Arnold

Dr. Songon An

Dr. Marie-Christine Daniel

Dr. James Fishbein

Dr. Michael Summers