

Continuity of Operations Plan (COOP) for Wickens Lab

Department of Biochemistry

(please check specific department/college/university policies as needed, see <http://covid19.wisc.edu>;
Lists of items are not exhaustive but intended to help think through local situation)

This template addresses three areas: (1) Contacts and background information, (2) Planning to operate under different risk levels, (3) Planning to operate with disruption or shutdown.

CONTACTS AND BACKGROUND

Staffing

1. Essential personnel

Name	Email
Brian Carrick	bcarrick@wisc.edu

2. Non-essential Personnel

Name	Email
Marv Wickens	wickens@biochem.wisc.edu
Carol Pfeffer	cpfeffer@wisc.edu

3. Essential personnel for Phase I who have been removed from Phase II

Name	Email	Date removed
Amy Cooke	cooke2@wisc.edu	July 15, 2020
Alexandra Kushner	ajkershner@wisc.edu	June 20, 2020

3. Essential personnel for Phase I who have been added since Phase II

Name	Email	Date added
MaryGrace Linsley	linsley2@wisc.edu	August 17, 2020

Request to add undergraduate: IPIB student Brian Carrick is the supervisor for requested undergraduate, MaryGrace Linsley. MaryGrace is an entering sophomore (UW GPA 3.8). She has experience with basic laboratory procedures through classes (General Chemistry here at UW, AP

classes in high school, and classes at U of M in Twin Cities during her senior year in high school. She will conduct research on my NIH funded grant project project as a student in Bio 152. Most training will be done remotely, including discussions of experimental design, data analysis and interpretation. When in the lab, she will have her own bay with minimal in person training. The duration of any contact closer than six feet will be minimized and conducted with both people wearing a mask and face shield, and both people separated by a plexiglass shield on the bench and extending about six inches into the bay.

External resources

•**Bio safety contact** – Brian Carrick

•**Chem safety contact** – Brian Carrick

Continuity of authority

Who is responsible for the lab, and who are two backup decision-makers in case the responsible individual is unable to make decisions on operation or shutdown? Provide name, email, and best emergency phone number for each.

- a. (PI) Marv Wickens, wickens@biochem.wisc.edu
- b. Brian Carrick, bcarrick@wisc.edu,

Communication Plan

All members of the lab communicate via email, Slack and Webex.

Remote Data access, exchange, and security

All personnel are using the Biochem server for Data access and exchange.

Research Priorities

1. **Maintenance of essential equipment.** We rely heavily on an expensive MiSeq sequencing apparatus, used for our sequencing of RNA samples. This instrument is central to our work, as supported by my NIH funding. **Brian Carrick** will be responsible for its maintenance. The MiSeq must be washed weekly with buffer. When it is not actively in use, Brian will perform numerous washes that range from 30-60 minutes each, involving repeated changes in reservoirs. If the machine is in use for sequencing, maintenance requires more washes after every run. Washes prevent buildup of salt and bacteria in the microfluidics, which kill sequencing reactions. **Brian Carrick** will also maintain other essential equipment.
2. **Wet-lab experiments.** **Brian Carrick's** experiments are essential to complete the Aims of a federally funded NIH R01 grant on the basis of RNA regulation and its diverse roles in biology. MaryGrace will assist him with these experiments, which are essential to complete his PhD thesis. They will ensure a population density of no more than one person per 200 sq ft is in the laboratory at any given time. Experimental design and data analysis will be performed remotely.

What to do if someone feels unwell?

The following plan assumes that proper social distancing and hygiene has been practiced in the lab and in the research building at all times so that the prospects of COVID spread are minimized. Each lab member will have a personal thermometer that will be used to check each person's temperature every day. If any researcher in the lab exhibits an elevated temperature or feels unwell, they will follow the protocol.

1. **Notify PI.** Immediately notify PI (Wickens), and immediately seek testing for COVID-19.
1. **Quarantine.** Remain at home and in quarantine. If symptoms are severe, the affected person will be encouraged to consult with a doctor.
2. **Notify researchers in the lab and on the floor.** All researchers who were in the lab at the same time (within the prior two weeks) will also stay home and quarantine until the affected researcher has a COVID test result. The result of the COVID test will be reported to the lab PI, department chair and to other department PIs.
3. **If the COVID test is positive,** all researchers in the lab will quarantine for two weeks. The lab itself will be closed and locked. Any shared facilities that the researcher has used will be disinfected.
4. **Criteria for return.** Research will resume only if (a) no other researcher develops symptoms in that two week interval, (b) no other cases have been reported on the same research floor, and (c) after disinfection of all common lab surfaces.

OPERATIONS UNDER DIFFERENT RISK LEVELS

1. **Operation as normal.** Normal operation is not anticipated for the foreseeable future.
2. **Operation with limited risk – e.g., no known cases in the municipality.**
 - a. General SOPs in place for minimizing community spread (see below).
 - b. Particular vigilance for
 - Hand-washing and personal hygiene
 - Space sanitation according to space-specific procedures
 - Social distancing
 - Symptom monitoring (see above)
 - c. Lab meetings per videoconferencing.
 - d. Heightened communications. Communications longer than a few minutes will be done by slack or other tele-conferencing; communications of a few minutes will be done with social distancing of at least 6 feet and both persons wearing masks.
3. **Operation with heightened risk – e.g., known cases on campus.**
 - a. Labs will be staffed only by essential employees who need to work at the bench for limited hours. Lab meetings will be held by videoconferencing during regular lab meeting schedule.
 - b. General SOPs in place for minimizing community spread (see next page).
 - c. All lab personnel will conduct their computer work remotely. This will include writing, database searching, data analysis and learning new skills from online tutorials.

General SOPs for minimizing community spread

Current SOPs in the lab require daily surface sterilization of work spaces using 70% EtOH, and frequent hand washing. In addition, we will implement the following steps to minimize the possibility for virus transmission.

1. **Access.** We will strictly enforce access to all laboratory spaces by authorized lab personnel only. All other personnel entering laboratory spaces must seek permission by PI first. This includes facility personnel, as well as personnel from external contractors. Exceptions are emergency situations that pose immediate risk, such as fire.
2. **Occupancy.** Occupancy of all labs that are assigned to the PI will be limited to ensure adequate distancing to 6 ft, as currently recommended by the CDC. Specifically:
 - a. 0205-307 – no more than three people at a time
 - b. 0205-307A, 307B – small rooms within the primary lab space that are inaccessible from outside the lab. Only one person at a time will be permitted and they will come from the primary lab and so will not add population density.
 - c. 0205-309, 310 and 312 are small rooms adjoining the primary lab space. Only one person at a time will be permitted; they will come from the primary lab and not add population density.
3. **Only healthy personnel,** regardless of the level of symptoms, are allowed to enter the lab spaces.
4. **Immediate hand washing.** Upon entering any lab space, personnel must wash hands immediately and in accordance with CDC guidelines, before touching any surfaces (see above).
5. **Surface sterilization.** *Working surfaces will be sterilized with 70% Ethanol prior to assuming work.*
6. **Social distancing.** *In-person communication will use at least 6 feet distancing and wearing masks.*
7. **Masks.** *Whenever two or more people are present in 0205-345 or 0205-357 at the same time, they must wear a mask that covers the nose and mouth.*
8. **Doors handles and light switches.** *Upon entering and leaving any laboratory space, personel must sanitize door handles and other common surfaces (e.g. light switches).*
9. **Shared equipment within the lab.** Every effort has been made to assign equipment for the personal use of each researcher (e.g. worm dissecting microscopes and PCR machines will not be shared). For those pieces of equipment that must be shared (e.g. confocal, gel doc), all surfaces, including keyboard, mouse, instrument controls, and benches will be sanitized before and after use by spraying with 70% ethanol and wiping.
10. **Shared equipment on the floor.** Every effort has been made to minimize the use of shared equipment on the floor. For equipment that must be shared (autoclaves, shakers), surfaces will be wiped down before and after use (also see Floor Integration Plan).

Because the Wickens lab occupies the third floor of the DeLuca Labs building with other labs, the following additional SOPs have been agreed upon and will be followed by all labs:

1. Traffic flow

-Hallways must accommodate bidirectional traffic. Lab personnel will minimize their use of the hallways, avoid using hallways when someone else is in the hallway, wear masks that cover the nose and mouth and maintain a 6 ft of distance from others.

2. Restrooms

-The 3rd floor has two restrooms. Only one person will be allowed in the restroom at any one time and 10 minutes will be required between uses to replenish the air. The interior and exterior door handles will be sanitized by spraying and wiping with 70% ethanol at least four times a day. Lab personnel will minimize their use of the restrooms, wash their hands when they are finished, and use a paper towel to exit.

3. Lunch / break rooms

- Lab personnel will minimize their use of the floor lunchroom by either eating at home or using lab-specific break rooms when possible. The floor lunch room is limited to two occupant at a time as per departmental guidelines and lab-specific break rooms are limited to one occupant at a time. Surfaces touched in either room (dining table, refrigerator handle, microwave handle and controls) will be sanitized with 70% ethanol before and after use.

4. Elevators

- Lab personnel will minimize their use of the elevator by taking stairs, with the exception of those physically unable. Only one occupant will ride the elevator at a time, and a mask will be worn. Elevator buttons should not be pressed with fingers whenever possible. Gloves used for lab work should not touch any surfaces in the elevator.

5. Shared equipment

-All surfaces, including keyboard, mouse, instrument controls, and benches will be sanitized before and after use by spraying with 70% ethanol and wiping.

-Equipment used for >1 hour will be scheduled online using Google calendar.

-High-touch surfaces such as door handles will be sanitized 4 times per day by spraying with 70% ethanol and wiping.

- All small shared equipment within the main lab (Room 307), including microfuges, PCR machines, balances, and gel-pouring equipment, freezers, stir plates, and balances will be sanitized using ethanol or equivalent before after each use.

- All shared small equipment we use beyond the lab will be sanitized before after each use. This includes the ice machine, equipment in Room 324 (e.g, Gel Imaging System), and in Room 354 (UV box). (See Floor Integration Plan)

14. Self-monitoring for COVID-19 symptoms.

All Wickens lab members are expected to conduct self-monitoring each day before entering the building. Self-monitoring will follow the most recent WIDHS guidance:

<https://www.dhs.wisconsin.gov/covid19/symptoms.htm> and include the symptoms listed below. Temperatures should be taken at least 30 minutes after eating, drinking or exercising and at least 6 hours after taking medications that may lower temperature ex. aspirin, acetaminophen (Tylenol), NSAIDs (ibuprofen/advil).

If self-monitoring detects symptoms, the researcher will stay home and consider contacting his/her healthcare provider if any of the following symptoms are experienced:

- Cough
- Shortness of breath
- Fever $\geq 100.4^{\circ}\text{F}$
- Chills
- Repeated shaking with chills
- Or two or more of the following symptoms:
 - Sore throat
 - New loss of taste or smell
 - Muscle aches
 - Headache

Resource from OSHA, <https://www.osha.gov/Publications/OSHA3990.pdf>,

Maintaining community of the lab.

The group meets regularly – at least once a week – via Webex to discuss lab issues of all types. The PI communicates with lab members regularly by email and phone, as well as by Webex and Slack. Email, text and Slack communications also occur frequently among lab members.

SCENARIO PLANNING FOR DIFFERENT LEVELS OF DISRUPTION

Instructions: Listed below are three potential scenarios that might result from COVID-19. Under the scenarios listed, provide a step by step response detailing how your lab would respond to the scenario. In addition to the 3 scenarios listed, additional lab specific scenarios can be added, if needed. The section, “other concerns” provide additional information that might should be included in your COOP.

Scenario 1 - Disruption: *Several members of the lab are out sick / unavailable for an extended period, and some suppliers or internal dependencies are at risk; Add as many steps/bullets as needed.*

- In general, the plan would conform to the steps listed above for individuals who feel ill or who experience an elevated temperature. Any researcher who feels ill will seek testing for COVID-19. Positive tests will be reported as described above.
- If several members of the lab are out sick and test positive for COVID 19, the entire lab will quarantine for two weeks after ensuring that lab freezers and equipment items are secured and ongoing experiments are halted.
- Research in the lab will resume only if (a) no other researcher develops symptoms in that two week interval, (b) no other cases have been reported on the same research floor, and (c) after disinfection of all common lab surfaces.

Scenario 2 - Suspension: *Students not allowed on campus; research and lab activities suspended; infrastructure support systems remain operational; Add as many steps/bullets as needed.*

- Once suspension is announced, ongoing experiments will be halted, and reagents and freezers secured. All equipment other than the MiSeq will be shut down or placed in an idle state for the period of suspension. The laboratory will be locked.
- All researchers will remain at home, , except for one essential person needed for MiSeq maintenance on a weekly basis.
- Any researcher who experiences symptoms related to COVID-19 will seek testing and report the result to the PI.
- Positive COVID test results will be reported to the department chair and department PIs
- Lab will communicate via email, Slack and Webex.
- Brian Carrick will maintain equipment during suspension.

Scenario 3 - Shutdown: *For a campus shutdown planned for longer than two weeks, or else if the campus is inaccessible, we cannot assume critical infrastructure would be available or is at least unreliable. Place all instruments and experiments in a safe idle state that does not require services. Additional details in this scenario relate to equipment shutdown and the like.*

- Ongoing experiments halted. Reagents and freezers secured. Equipment will be shut down or placed in an idle state.
- Researchers stay home.
- PI continues to communicate with all lab members via email, Slack and Webex.

Other concerns to consider in scenario planning: *What facilities are at risk of harm to the facility, its contents, to campus or to the public (e.g., animals that must be fed, samples that must be secured, equipment or hazardous materials that must be maintained or shut down)?*

- Critical reagents for the Wickens lab research program are in -80 degree freezers, which are all on emergency power. None of these place the community at risk, even should they thaw.
- All lab equipment will be shut down, except freezers, refrigerators and incubators.
- No staff is required during a shutdown, but weekly checks to ensure continuing freezer function and to maintain the MiSeq are highly desirable.

If the lab must be staffed to avoid risk or harm, who will act as the primary minimum essential personnel to keep it operating? If the lab mustn't be staffed, state that it will shut down to ensure no risk or harm. Provide name, email, and best emergency phone number for each.

- Responsible lab personnel and their contact information is provided above under Continuity of Authority and are repeated here
 1. Brian Carrick, bcarrick@wisc.edu,
 2. (PI) Marv Wickens, wickens@biochem.wisc.edu