

Continuity of Operations Plan (COOP) for Simcox 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 |
|------------------|--|
| Judith Simcox | jsimcox@wisc.edu |
| Gisela Geoghegan | ggeohegan@wisc.edu |
| Raghav Jain | rjain63@wisc.edu |
| Helaina Von Bank | hcvonbank@wisc.edu |
| Edrees Rashan | erashan@wisc.edu |
| Alana Caldwell | acaldwell2@wisc.edu |
| Wenbo Lu | Wlu54@wisc.edu |
| Ira Tandon | itandon@wisc.edu |
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| | |
| | |

2. Non-essential Personnel

| Name | Email |
|----------------|--|
| Michael Gilpin | mgilpin@wisc.edu |

External resources

- **Bio safety contact** – Andrea Ladd. Email: andrea.ladd@wisc.edu
- **Chem safety contact** – Tilak Chandra. Email: tilak.chandra@wisc.edu
- **Facilities contact** – Julie Kennedy. Email: jakennedy4@wisc.edu

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.

- (PI) Judith Simcox, jsimcox@wisc.edu
- Postdoc Gisela Geoghegan, ggeohegan@wisc.edu
- Graduate Student Raghav Jain, rjain63@wisc.edu

Communication Plan

All members of the lab communicate via email, phone(text), SimcoxLab Slack, and Zoom.

Remote Data access, exchange, and security

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

Research Priorities:

1. Essential care and maintenance of animal colony: Daily checks are performed by vivarium staff and veterinary technicians from the RARC to ensure the mice have adequate food and water and that the animals are in good health. Gisela Geoghegan checks on the mice three times a week, during these checks she is responsible for weaning, ear punch identification, providing special diets, and performing regular weight assessments. Judith Simcox serve as a backup to Gisela Geoghegan, and will serve as alternates for essential care in case of work absence. Strains in the Simcox lab colony include the ATF6 F/F NOD, ATF6 F/F Backcross, Rictor F/F C57BL6J, and C57BL6J mice.
2. Maintenance of mammalian cell lines: Mammalian cell lines will be maintained by Raghav Jain, Helaina Von Bank, Edrees Rashan, Gisela Geoghegan, Ira Tandon, Wenbo Lu, and Judith Simcox. Cell lines that are not being used for priority experiments are stored in a liquid nitrogen dewar located in room 6419. The liquid nitrogen level in the dewar must be checked weekly using the yard stick store in the same location. The nitrogen level should be maintained at 3"-4". Checking and refilling the dewar requires approximately 20 minutes of one person's time once weekly. Cell culture incubators will be monitored for CO₂ levels, water levels, and temperature weekly by Judith Simcox.
3. Maintenance of essential equipment: Simcox lab microscopes, including a Zeis and EVOS fluorescent microscopes will be maintained by Helaina Von Bank. Scope maintenance requires alignment, cleaning, and software updates typically once a week. Other instruments that require incremental

maintenance include the qPCR machine, Tecan plate reader, and seahorse XF96 analyzer. Bacterial cultures for cloning require LB plates. The maintenance of the plate pouring station to keep it free of contamination, which requires daily care.

4. Wet-lab experiments: Gisela Geoghegan, Raghav Jain, Helaina Von Bank, Ira Tandon, Wenbo Lu, Edrees Rashan, Alana Caldwell, and Judith Simcox will perform experiments that are essential to complete the Aims of a federally funded NIH K01, UW2020, NIH pilot grants, and NIH R01 grant directed at understanding the molecular basis lipid signaling; the students' experiments are essential for them to complete their theses. The completion of these projects requires the genetic manipulation of cell lines using CRISPR/Cas9 mediated KO cells, retroviral over expression, and respiratory measurements as well as mouse experiments of metabolic and physiologic stress. All researchers in the lab will conduct lipid, metabolite, and protein extractions for mass spectrometry and other standard molecular biology techniques. Edrees Rashan focuses on enzymatic assays of proteins isolated from cell culture. All personnel are expected to work efficiently with the minimum amount of time possible spent in the laboratory. All personnel will work on a staggered schedule so that no more than one person per 350 ft.² is present in the laboratory space at any given time. Experiment design and data analysis will be performed from home.

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. The lab has a contactless thermometer that will be used to check all researcher temperatures every day. If any researcher in the lab exhibits an elevated temperature or feels unwell, they will conform to the following protocol:

1. They will immediately seek testing for COVID-19.
2. They will remain at home and quarantine; if symptoms are severe they will consult with a doctor.
3. They will notify researchers in the lab and on the floor. Any researchers who have been in the lab at the same time (within the past two weeks) will also stay home and quarantine until the affected researcher has a COVID test result. A positive COVID test will be reported to the lab PI, department chair and to other department PIs.
4. 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.
5. 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.

OPERATIONS UNDER DIFFERENT RISK LEVELS

1. Operation as normal

- Labs will be staffed only by essential employees who need to work at the bench and for limited hours. Lab meetings will be held by videoconferencing during regular lab meeting schedule.
- General SOPs in place for minimizing community spread (see below).

All lab personnel now have offices at home and will conduct their computer work remotely. This will include writing, database searching, data analysis, figure making, and learning new skills from online tutorials.

2. Operation with limited risk – e.g., no known cases in the municipality.

- General SOPs in place for minimizing community spread (see below).
- Particular vigilance for
 - Personal hygiene
 - Space hygiene
 - Social distancing
 - Symptom monitoring (see above)
- Lab meetings per videoconferencing.
- Heightened communications - Look for text, slack message, and email messages from PI

3. ****WE ARE HERE**** Operation with heightened risk – e.g., known cases on campus.

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. We will strictly enforce access to all laboratory spaces by authorized lab personnel only. All other personnel entering laboratory spaces must seek permission from the PI first. This includes researchers from other labs, as well as personnel from external contractors. Exceptions are emergency situations that pose immediate risk, such as fire.
2. 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. 363 – no more than four people at a time
 - b. 373 – no more than two people at a time
 - c. 364, 371, 366, 363A, 363B, and 353. These are small rooms adjoining the primary lab space. Only one person at a time will be permitted and they will come from primary lab so will not add population density.
3. Only healthy personnel, regardless of the level of symptoms, are allowed to enter the lab spaces.
4. Upon entering any laboratory space, personnel must wash hands immediately and in accordance with CDC guidelines, before touching any surfaces (see above).
5. Working surfaces will be sterilized with 70% Ethanol prior to assuming work.
6. In-person communication will use at least 6 feet distancing and wearing masks.
7. 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. Upon entering and leaving any laboratory space, personnel 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 Simcox lab occupies the third floor of the DeLuca Labs building with several other labs, the following additional SOPs have been agreed upon and will be followed by all labs (also see Floor Integration Plan):

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 occupants at a time as per departmental guidelines and lab-specific break rooms are limited to one occupant at a time with 10 minute vacancy between users. 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. Personnel needing to use the elevator buttons will be encouraged to press button with something other than their fingers (e.g. an object or elbow). 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 (e.g. microscopes) 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.
6. Self-monitoring for COVID-19 symptoms.
 - All Simcox 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
- 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 the community of the lab:

The group will meet weekly via Zoom to discuss lab issues of all types. Regular (daily) communication by email will come from the PI and through Slack. Email and text communications between lab members will also be carried out.

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, reagents and freezers secured. Equipment 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.
- 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

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 will be halted. Reagents and freezers will be secured. Equipment will be shut down or placed in an idle state.
- The only work to be continued will be essential work to maintain the mouse colony.
- Researchers will remain at home.

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 Simcox lab research program are in the –80 degree freezers, which are all on emergency power. None of these place the community at risk.
- All lab equipment (other than freezers and refrigerators) can and will be shut down.
- No staff is required in this lab during a shutdown, although a periodic check to ensure no freezers have malfunctioned is 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
 - a. (PI) Judith Simcox, jsimcox@wisc.edu
 - b. Postdoc Gisela Geoghegan, ggeohegan@wisc.edu
 - c. Graduate Student Raghav Jain, rjain63@wisc.edu

APPENDUM, INFORMATIONAL, the information below was shared with by Vice Chancellor for Research & Graduate Education on March 15, 2020 with the VCRGE Center Directors to assist them in continuity planning. It is included here to further assist your planning activities.

Center directors;

See the message below from the Chancellor. The message provides guidance to ensure the safety of our community while offering the least disruption to our work. To summarize:

- *Please maintain your center research activities to the extent possible.*
- *Review your COOP plans and activate as appropriate.*
- *Formulate and disseminate plans that guide ramping down and then suspension of research if needed.*
- *Encourage remote work for those staff that can do so without disruption, while others (i.e., those you identified as essential personnel in your COOP plans) are expected to be on campus.*
- *Continue to practice recommendations and procedures that reduce the spread of the virus.*

While most research can be conducted with appropriate social distancing and typical hygienic steps, the COVID-19 outbreak has presented us with significant challenges. I thank you for your continued leadership in these challenging times. The RSP webpage, which is updated regularly, is an excellent source of information about sponsored projects: <https://rsp.wisc.edu/COVID.cfm>

Some specific actions you can take include:

- *Identify critical equipment that must remain in service, then plan for how to manage or shut down this equipment if necessary.*
- *Strive to keep all lab activities within reasonable business hours — including those involving work with hazardous material or processes. Doing so enhances the ability of Research Safety to respond if services are needed.*
- *Continue or expand cross-training among your staff to support critical functions.*
- *Identify personnel who are essential to maintain critical research and ensure they know what to do if operations are interrupted or suspended.*
- *Distribute your communications plan to personnel. If necessary, develop this plan and designate contacts to help disseminate information in a timely manner.*
- *Identify priorities and plan for critical experiments in case of limited access.*
- *Take steps to ensure remote access to files, data, servers, etc., except with regard to research with sensitive or restricted data.*
- *Research must be conducted within appropriate space designated for research activities. Personnel should not remove research materials other than laptops, data storage devices, etc. to alternative locations, including home.*
- *Plan for remote proposal submission.*
- *Be sure to check travel restrictions in advance of making travel plans.*