

# Continuity of Operations Plan (COOP) for

## Attie 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
Kathryn Schueler	kschuele@wisc.edu
Donnie Stapleton	Donnie.stapleton@wisc.edu
Shane Simonett	ssimonett@wisc.edu
Kelly Mitok	mitok@wisc.edu
Chris Emfinger	emfinger@wisc.edu
Tara Price	trprice@wisc.edu
Daniel Latyshev	dlatyshev@wisc.edu
Cat Fields	crfields@wisc.edu
Lauren Clark	Leclark4@wisc.edu
Jake Hermanson	Jhermanson2@wisc.edu
Aaditya Kumar	apkumar@wisc.edu


## 2. Non-essential Personnel

### **External resources**

- **Bio safety contact** – Kathy Krasny, kathy.krasny@wisc.edu,
- **Animal Resources** – Dustin Irving, dirving@wisc.edu
- **Chem safety contact** – Tilak Chandra, Tilak.Chandra@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.

- Alan Attie (PI), adattie@wisc.edu,
- Mark Keller, mark.keller@wisc.edu,
- Donnie Stapleton, donnie.stapleton@wisc.edu,

### **Communication Plan**

Group messaging for all lab members through the Attie group list email and Microsoft Teams. See contact information above in staff and authority sections. Video conferencing for remote lab meetings and journal club is via Zoom or Microsoft Teams.

### **Remote Data access, exchange, and security**

- List provisions for cloud data storage systems currently in place (e.g. Box, Google Drive) – Box, Lab Archives.
- Any computer programs gaps and needs will be addressed in consultation with the PI (or other lab member, staff in department etc.)

- Use of VPN to maintain secure access to campus IT systems (see <https://it.wisc.edu/services/wiscvpn/>).

### Research Priorities:

1. Maintenance of our mouse colony.
2. Continuing or appropriately ending any long-term studies.
3. Our research was necessarily delayed due to the COVID-19 outbreak. We wish to resume progress on our NIH funded grants in order to meet the aims of our research program.
  - a. Our research generally focuses on the study of mouse metabolism as it pertains to human disease. We are funded to study the role of missense variants in the Sort1 gene affecting cholesterol and lipid metabolism (MSN181396 The Role of Sorcs1 and Sortilin in Diabetes Susceptibility). In another study we look into how host genetics influence gut microbiome and physiological phenotypes. (MSN185618 Collaborative Cross of the Microbiome and Metabolic Disease). We also wish to resume our experiments involving the effect of genetic background in combination with different diets that affect metabolic phenotypes (MSN228090 Genetic Control of Metabolic Flux in Response to Diet).
  - b. The resumption of research will allow our postdoctoral scholars to maintain progress on their fellowships studying metabolism in mice. This includes experiments studying a transcription factor that affect insulin secretion (MSN231657 Defining the gene regulatory network linking loss of Zfp148 to enhanced insulin secretion). Another fellowship focuses on a phosphatase that affects obesity and insulin secretion (MSN227991 Investigating Ptpn18 as a regulator of diet induced obesity, cell proliferation, and insulin resistance).
  - c. As part of the phase 2 research restart, Daniel Latyshev, our undergraduate scholar, who is able to perform independent research will return to the lab. Daniel will perform research necessary for our adequate progress on our grants, namely the study of genes that affect insulin secretion. He will minimize his time in the lab to tasks that can only be performed in lab. Daniel will follow established safety protocols that include but not limited to wearing masks at all times, gloves, and other PPE dictated by the type of experiment.
  - d. Training of a new Post-Doctoral student, Tara Price- Training will be done with videos, written protocols, and video conferencing when possible. Hands on training will observe mask, gloves, and social distancing requirements. There will be occasions when social distancing will not be possible. In those cases, Tara and the person training her will minimize the time they are less than six feet apart while still using masks, gloves, and lab coats.
  - e. Cat Fields is a graduate student in the Chemistry Department under Martin Zanni. Our labs are working on a collaborative project. She needs access to our lab and equipment to execute her final experiments so that she can finish her Phd thesis. This will amount to an average of 4-6 hours every two weeks. Cat will follow established safety protocols that include but not limited to wearing masks at all times, gloves, and other PPE dictated by the type of experiment.

- f. Lauren Clark is a rotator from Nutritional Science. She will be with us for the 1<sup>st</sup> round of rotations. She will be working remotely most of the time but will come in occasionally to learn a procedure. This will amount to an average of 6-8 hours every week during her rotation. Lauren will follow established safety protocols that include but not limited to wearing masks at all times, gloves, and other PPE dictated by the type of experiment.
- g. Jake Hermanson is a rotator from Nutritional Science. He will be with us for the 2<sup>nd</sup> round of rotations. He will be working remotely some of the time but will also come in to learn procedures. This will amount to an average of 12-16 hours every week during his rotation. Jake will follow established safety protocols that include but not limited to wearing masks at all times, gloves, and other PPE dictated by the type of experiment.
- h. As part of the phase 2 research restart, Aaditya Kumar, a new undergraduate scholar, will return to the lab to work under Chris Emfinger. Aaditya will perform research necessary for our adequate progress on our grants, namely the study of genes that affect insulin secretion. He will minimize his time in the lab to tasks that can only be performed in lab. Aaditya will follow established safety protocols that include but not limited to wearing masks at all times, gloves, and other PPE dictated by the type of experiment.

### **What to do if someone feels unwell?**

If you feel unwell or have been in contact with somebody that is ill or tested positive for COVID-19, alert the PI immediately and please do not come to the lab. The PI will communicate with the group. Follow the campus guidelines (<http://covid19.wisc.edu>).

Posters with symptoms should be posted and are available from the CDC and others (see e.g., <https://www.cdc.gov/coronavirus/2019-ncov/downloads/COVID19-symptoms.pdf>), as should those about handwashing (see e.g., <https://www.cdc.gov/handwashing/materials.html>).

### **OPERATIONS UNDER DIFFERENT RISK LEVELS**

#### **1. Operation as normal.**

Labs/offices staffed during business hours and after hours. Lab meetings in person.

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

Labs/offices staffed during business hours and after hours with essential personnel members only.

- General SOPs in place for minimizing community spread (see below).
- Particular vigilance for
  - Personal hygiene
  - Space hygiene
  - Social distancing
  - Symptom monitoring (see above)
  - Wearing masks at all times
- Lab meetings per videoconferencing.

- Heightened communications - Buddy system in place for animal work. Look for text and email messages from PI

3. Operation with heightened risk – e.g., known cases on campus.

Labs/offices staffed only by essential employees, limited hours. Lab meetings held by videoconferencing during regular lab meeting schedule.

- General SOPs in place for minimizing community spread (see next page).
- Minimal workflows in place
  - Critical spaces that must be staffed daily:
    - vivarium
  - Non-essential spaces and critical check-ups for spaces/equipment
  - Lab room - liquid nitrogen and freezers - check weekly
  - Lab room - freezers, check weekly
- Lab meetings per videoconferencing.

Heightened communications – Buddy system in place for lab areas and collections. Look for text, email messages and Team communications from PI.

**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. Face masks will be worn by all people working and entering the lab at all times. 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 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 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. List individual lab rooms and maximum occupancy
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.
7. In-person training will use at least 6 feet distancing whenever possible. There will be cases of training Tara Price that require distances of less than six feet. In these circumstances, both Tara and the person training her will have mask, gloves, and lab coats and minimize the amount of time needed for less than the six feet of space.

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

### **Maintaining the community of the lab:**

- We encourage everybody to check in with each other via the Microsoft Teams group chat, emails, and zoom lab meetings.
- Remote lab meetings will be held via video conferencing, at the usual scheduled times.

In addition to these measures, we will comply with all regulations, implemented by the university, and accessible through <http://covid19.wisc.edu>.

### **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.

- *Example Step: Shut down hazardous process materials*
  - *Example Step: Selected staff would work on non-hazardous cleanroom maintenance projects, protected by social distancing if necessary*
1. If possible, a lab member takes work/responsibilities over from the unavailable member.
  2. Reduce the number of mice or mouse strains so that available members maintain the essential lab function.
  3. If no one is available for mouse husbandry, staff in BABS-Biochemistry Addition/Biochemical Sciences will be asked to take over. If they are unable then Kathy Schueler or her backup (Donnie Stapleton) will take over the mouse husbandry.
  4. If no one is available for the experiments, staff in BABS-Biochemistry Addition/Biochemical Sciences will be asked to euthanize the mice involved in the experiments.

**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.

1. Check liquid nitrogen tanks containing samples and fill up the tanks if necessary.
2. Check CO2 tanks connected to incubators and change them if necessary.
3. Essential lab members will come in and carry out essential work. (animal maintenance, liquid nitrogen maintenance, checking freezers for normal operations).

4. If no one is available for mouse husbandry, staff in BABS-Biochemistry Addition/Biochemical Sciences will be asked to take over. If they are unable then Kathy Schueler or her backup(Donnie Stapleton) will take over the mouse husbandry.
5. If no one is available for the experiments, staff in BABS-Biochemistry Addition/Biochemical Sciences will be asked to euthanize the mice involved in the experiments.

**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.

- *Example step: Instruments would be shut down and placed in a safe idle state within hours.*
  - *Example step: There is a potential for damage to especially vacuum pumps if they sit idle for extended periods of time. This may require costly repairs. Designate rotating personnel to attend if necessary.*
1. Freezers and refrigerators not needed for storage of critical reagents would be shut down and placed in a safe idle state within 3 hours. Those that are critical will continue to run and be monitored by electronic monitoring or Julie Kennedy.
  2. Incubators would be shut down within 3 hours.
  3. In case of equipment shutdown, move the essential samples to the equipment working.
  4. Reduce the size of mouse colonies as small as possible.
  5. Essential lab members would rotate to take care of mice.
  6. Long term experiments such as longitudinal studies on mice will be carried out until their normal conclusion.
  7. If taking care of mice is not ideal, mice would be euthanized.

For this scenario, also consider...

Restart will require 1 day to fully clean the lab, followed by another 1 day to restart and test equipment.

What is the process for safely shutting down and/or securing the lab?

1. Turn off unnecessary computers and instruments.
2. Close and lock all the doors.

### **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)?

1. Hazardous gases

2. Animal care
3. Water cooled equipment that can be damaged by loss of water
4. Loss of nitrogen purges
5. Static tanks/containers of chemicals in hoods and loss of exhaust
6. Vacuum systems pump and valve off
7. Turn off UV lamps
8. Ensure all chemical bottles are in storage cabinets and all bottles have secure lids.
9. Cap all solvent carboys
10. Empty all trash containers – remove any chemical contaminated wipes

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.

1. Kathy Schueler, [kschuele@wisc.edu](mailto:kschuele@wisc.edu) (mouse maintenance)
2. Donnie Stapleton, [donnie.stapleton@wisc.edu](mailto:donnie.stapleton@wisc.edu)(backup)
3. Shane Simonett, [ssimonett@wisc.edu](mailto:ssimonett@wisc.edu)(backup)