

Continuity of Operations Plan (COOP) for Pike Lab

Individual Lab COOPs should be shared with the Department Chair/Center Director, and the Administrator in case the lead faculty/PI are not available.

(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

(See <https://ecals.cals.wisc.edu/2020/03/15/hillmer-to-chairs-directors-and-administrators-respond-with-essential-employee-list-by-3-17-20/>.)

- Mark Meyer markmeyer@wisc.edu
- Seong Min Lee smlee4@wisc.edu
- Nancy Benkusky nabenkusky@wisc.edu

2. Non-essential Personnel

None

External resources

- Dustin Irving dirving@wisc.edu (Animal Resources)

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) J. Wesley Pike, jpik@wisc.edu
- b. Mark Meyer, markmeyer@wisc.edu
- c. Seong Min Lee, smlee4@wisc.edu

Communication

- d. Group messaging system for all lab members (contains contact information for lab members) – Microsoft Teams, J. Wesley Pike, jpik@wisc.edu Mark Meyer,

markmeyer@wisc.edu Seong Min Lee, smlee4@wisc.edu Nancy Benkusky,
nabenkusky@wisc.edu,

- Email – email list of all lab members – See above.
- Video conferencing (e.g. Webex or Teams) for remote lab meetings.

Remote Data access, exchange, and security

- List provisions for cloud data storage systems currently in place (e.g. Box, Google Drive) – Box.
- 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. Our research priorities revolve around the conductance of research outlined in two NIH grants. These grants involve delineating the factors and mechanisms that underpin the production and degradation of the vitamin D hormone in vivo in the kidney and other non-renal sources of the hormone and the regulation of the phosphaturic bone produced hormone FGF23 in mice in vivo.
 1. Research funded by MSN237738 (R01-DK117475) entitled Regulatory mechanisms of renal vitamin D activation and degradation, and
 2. Research funded by MSN237741 (R01-DK 118174) entitled Transcriptional control of mouse FGF23 expression in health and disease. Maintenance of animals. These studies involve the creation of mutant mice and extensive analysis of the phenotype of these mice.
2. Mark Meyer (markmeyer@wisc.edu,) and Seong Min Lee (smlee4@wisc.edu, will be working in BABS-Biochemistry Addition/Biochemical Sciences (Rm B2215, B2228A and B2228B) and Biochemistry Addition (Rm 545). It will take from 2 hours to 6 hours a day for mouse work and additional time as indicated to conduct phenotyping.
3. Non-survival surgery: On-going mouse projects that have been planned will be pursued.
4. Studies involving the DNA Sequencing Biotechnology Core will commence at re-start.

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. Lab meetings remotely by teleconference as above.

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)
- Lab meetings per videoconferencing as above.
- 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 as above 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:
 - Examples: insectary, vivarium, etc.,
 - 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. 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 max. 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.

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 group chat.
- 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 lab functions.
 3. If no one is available for mouse husbandry, staff in BABS-Biochemistry Addition/Biochemical Sciences will be asked to take over.
 4. If no one is available for the experiments, staffs 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).
4. If no one is available for mouse husbandry, staff in BABS-Biochemistry Addition/Biochemical Sciences will be asked to take over.
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 would be shut down and placed in a safe idle state within 3 hours.
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. 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 computers and instruments that don't need to be on.
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. Primary walk-thru checker: Mark Meyer, markmeyer@wisc.edu
2. Secondary walk-thru checker: Seong Min Lee, smlee4@wisc.edu
3. Tertiary back up walk-thru checker: Nancy Benkusky, nabenkusky@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.*