

**Continuity of Operations Plan (COOP) for
Venturelli 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
Ophelia Venturelli	venturelli@wisc.edu
Jun Feng	jfeng88@wisc.edu
Bryce Connors	bconnors3@wisc.edu
Ryan Clark	rlclark2@wisc.edu
Yu-Yu Cheng	ycheng223@wisc.edu
Freeman Lan	freeman.lan@berkeley.edu
Yiyi Liu	liu568@wisc.edu
Tyler Ross	tross5@wisc.edu
Jin Wen Tan	jtan48@wisc.edu
Madeline Hayes	mmhayes4@wisc.edu
Erin Ostrem Loss	ostrem@wisc.edu
Susan Hromada	hromada@wisc.edu
Zhengyi Chen	zchen597@wisc.edu
Pak Kevin Cheung	pcheung4@wisc.edu
Yili Qian	qian9@wisc.edu
Madeline Topf	mtopf@wisc.edu
Sarah Ertmer	ertmer@wisc.edu

James Corban	corban@wisc.edu
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External resources

- **Bio safety contact** – Andrea Ladd, andrea.ladd@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.

- (PI) Ophelia Venturelli, venturelli@wisc.edu
- Erin Ostrem Loss, ostrem@wisc.edu
- Bryce Connors, bconnors3@wisc.edu

Communication Plan

- The Venturelli Lab communicates frequently using Slack, email and video conferencing.
- The group email list is biochem_venturelli@lists.wisc.edu
- Virtual meetings to discuss research progress occurs between each member of the Venturelli Lab and Ophelia weekly or biweekly
- Venturelli Lab meeting occurs 10am on Thursdays via Webex

Remote Data access, exchange, and security

- The Venturelli Lab has a Box folder for sharing protocols and data.
- The Venturelli Lab stores large sequencing and imaging datasets on the Biochemistry File Server.
- The Venturelli Lab strains, plasmids and primer information is stored on a shared Google Drive.
- Documents, data and Illustrator files for manuscripts in preparation are shared via Dropbox.
- The VPN is required for access to campus IT systems (see <https://it.wisc.edu/services/wiscvpn/>).

Research Priorities:

Our research priorities are to carry out research for our grants:

- ARO W911NF-17-1-0296: our goal is to develop a droplet-microfluidic platform to decipher microbial interactions in complex microbial communities and microbiomes
- Gates Foundation MSN224269: our goal is to develop a model-guided workflow to enhance the growth and evenness of complex microbial communities to enable biomanufacturing of bacterial therapeutics.
- NIH R35 GM124774: our goal is to investigate the ecological and molecular processes that influence human gut microbiome dynamics, response to perturbations and stability in response to nutrient shifts, antibiotics and invasion by pathogens.
- DOE DE FC02-07ER64494: our goal in Aim 10 is to design synthetic microbial communities to produce medium-chain fatty acids from conversion residue.
- ARO W911NF-19-1-0269: Our goal is to investigate microbial interaction networks across space, time and develop targeted interventions to control their behaviors.

- COVID-19 research project: Our research priority is to investigate the effects of gut microbiota and the metabolites they produce on ACE2 expression in human gut epithelial cells.

What to do if someone feels unwell?

If someone feels unwell, contact Ophelia as soon as possible by phone and email (venturelli@wisc.edu) and stay at home and limit contact with others. The person should contact their health care provider for additional instructions. Please follow the health guidance instructions here: <https://covid19.wisc.edu/health/>.

OPERATIONS UNDER DIFFERENT RISK LEVELS

1. Operation as normal.

The Venturelli Lab members are present in lab and offices during normal business hours. Venturelli Lab holds group meetings in person on Thursdays at 10am.

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

Lab members performing essential research tasks will be present in lab and lab offices for some period of the business day. Lab members work remotely if they can on computational and writing tasks. The Venturelli Lab will hold virtual lab meetings. Lab members will follow health guidance outlined here <https://covid19.wisc.edu/health/> including frequent hand washing, avoiding touching face, avoid close contact with people who are sick, wearing masks recommended by CDC (see here: <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/cloth-face-cover.html>) and frequently disinfecting work surfaces and door handles.

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

- Only approved lab members will be allowed in the laboratory and offices. The approved individuals will work limited hours in the lab.
- Venturelli Lab meetings will occur virtually on Thursdays at 10am.
- Non-essential personnel will not be allowed in the lab starting 3/18 until further notice.
- We will establish a remote work plan for each person in the Venturelli Lab to carry out computational projects, writing of manuscripts, preliminary exams and learning new computational techniques.
- General SOPs to prevent community spread (see below).

General SOPs for Minimizing community spread:

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

1. Only personnel formally approved to carry out research tasks will be permitted to work in the lab.
2. The individuals that are approved to enter the laboratory will work in separate lab rooms (3206, 3208, 3228, 3266, 4424, 4420, 4416, 4412) separated by at least two lab doors at all times.
3. If a person feels unwell, they are not allowed to enter laboratory spaces, should stay at home, contact their health care provider, limit contact with others and follow health

guidelines provided by CDC (see here: <https://www.cdc.gov/coronavirus/2019-ncov/if-you-are-sick/steps-when-sick.html>)

4. When entering the laboratory building, approved personnel must immediately wash their hands with soap and water following CDC guidelines (see here: <https://www.cdc.gov/handwashing/when-how-handwashing.html>).
5. Working surfaces and door handles will be sterilized with 70% Ethanol before and after performing work.
6. Personnel must wear gloves while in lab.
7. Personnel must wear masks or face coverings in common spaces
8. Personnel should wash hands after entering the building and continue washing hands frequently while in the laboratory spaces, especially after touching door handles, work surfaces, etc.
9. If necessary, in-person communication can occur following CDC guidelines of at least 6 feet distance (see here: <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/social-distancing.html>)
10. Personnel are advised not to travel to and from work via public transportation (buses, shared ride vehicles).
11. General reference: <https://www.osha.gov/Publications/OSHA3990.pdf>.
12. We have implemented an integrated floor plan for the third floor of Biochemical Sciences Building (Record, Romero, Venturelli labs) to minimize inter-person contact in common spaces, create google calendars for shared equipment, disinfect common surfaces, display occupied/not occupied signs on the doors of shared rooms.

Maintaining the community of the lab:

- Ophelia will meet with each lab member weekly or biweekly to discuss research progress and check on the lab member's mental and physical well-being.
- Lab members are encouraged to talk virtually on a frequent basis, collaborate on projects, discuss ideas, papers and help each other learn computational techniques.
- Ophelia will set up collaborative sub-group teams to work together remotely on common research goals.
- The Venturelli Lab will comply with all regulations, implemented by the university, and accessible through <http://covid19.wisc.edu>.
- Wellbeing resources for students/postdocs are found here: <https://recwell.wisc.edu/>
- Remote health and connection resources are found here: <https://www.uhs.wisc.edu/remotehealth/>

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.

1. Two lab members will coordinate work schedules for safety reasons and follow social distancing guidelines recommended by CDC.

2. Inform Ophelia where lab notebook is located so other members of the lab can complete a critical experiment if needed.
3. Clearly document all experimental details and do not start new experiments that require more than a few days to complete.
4. Store lab materials properly in appropriate location for long-term stability.

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. Equipment is shut down.
2. Gas cylinder regulator valves are closed.
3. All chemicals are stored properly and labeled.
4. All lab members will implement remote work plans (computational/writing).
5. Virtual meetings will occur as per regular schedule (biweekly one-on-one meetings with Ophelia and weekly lab meetings).
6. Ophelia and Biochemistry Building staff will routinely check on lab equipment and freezers.

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.

1. Equipment is shut down.
2. Gas cylinder regulator valves are closed.
3. All chemicals are stored properly and labeled.
4. All lab members will implement remote work plans.
5. Virtual meetings will occur as per regular schedule.
6. Ophelia and Biochemistry Building staff will routinely check on lab equipment and freezers.

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)?

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.

We have anaerobic chambers that need to be maintained regularly and a MiSeq sequencer that requires monthly washes. These tasks are performed by essential personnel Erin Ostrem Loss and Jun Feng. There are no hazardous materials that need to be maintained in the lab. We have two -80C freezer and three -20C freezers.

- Erin Ostrem Loss, ostrem@wisc.edu
- Bryce Connors, bconnors3@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.*