

Building Safety Plan (Stage 2 updates included) for Resumption of On-Campus Research in the Michael Smith Laboratories

Section 1. Overview

This document outlines the building plan to reduce the transmission of COVID-19 during Phase 1 and Stage 2 of the resumption of on-campus research and serves as a resource for MSL faculty to design individual laboratory safety plans and for completing the required form: **MSL Research Resumption Form (Appendix A)**. This document covers research and common space within the Michael Smith Laboratories (MSL) and the Network of Centres of Excellence (NCE) buildings. It provides details of protocols implemented for keeping the workplace safe and describes the plans to ensure the control of people within the MSL that ensures physical distancing is maintained in wet laboratories, dry laboratories, offices, and common areas.

COVID-19 is known to be transmitted by liquid droplets and through contact with contaminated surfaces. The measures that proposed in this document are specifically to interrupt transmission through these two modes. The protocols require restricting the number of personnel in individual labs and buildings, addressing room capacities and seating arrangements in common spaces, and posting signage for elevators, high traffic areas, stairwells, and so on.

In Phase 1, the goal is to reduce the number of people in buildings to up to 1/3 of normal occupancy in order to reduce contacts between people in lab spaces and in common spaces. In Stage 2, this number will increase to up to 2/3 of occupancy and enable more people to return to on-campus research.

In Phase 1 and Stage 2, all MSL faculty, staff, and research personnel who can work off campus must continue to do so. **The number of faculty in buildings will be able to reach a maximum of 25% occupancy initially in Stage 2.** Exemptions may be applied on a case-by-case basis for faculty and research personnel who cannot work at home for valid reasons (e.g., lack of specialized equipment, incompatibility of home environment and work productivity, etc.) and require time on campus for research.

Note: In this document, we use “research personnel” = students, post-docs, RAs, staff, technicians, etc. for research, but not faculty. Faculty = tenure-track faculty.

Section 2: Planning and Sub-Committee

Science struck a Return to On-Campus Research (ROCR) committee with faculty representatives from each unit, select administrators, post-docs and graduate students.

The MSL was presented by:

Phil Hieter, faculty representative
Karen Reid, administrator representative

The MSL formed a sub-committee to review the return to MSL application forms and make recommendations to the Director, Peter Zandstra for consideration. This sub-committee includes:

Phil Hieter, ROCR member and faculty with a lab in the MSL
Karen Reid, ROCR member and administrator
Nobu Tokuriki, Local Safety Team faculty rep and faculty with a lab in the MSL
Martin Hirst, Space Committee chair and faculty with a lab in the NCE

This building safety plan was put together by the ROCR sub-committee together with the MSL Facility Manager, Dan Fayant.

Section 3: Communication Plan

This document will be disseminated to the department by email and posted on the MSL and NCE Safety boards. In the **MSL Research Resumption Form** they are asked to sign off, or provide email confirmation, on having read and understood this **MSL Building Safety Plan**.

Section 4: Guiding Principles and Responsibility Sharing

Researchers entering the MSL will adhere to the guidelines set out by the VPRI:

1. The health and well-being of faculty, students and staff is paramount
2. The orders, notices and guidance of the Provincial Health Officer will be followed
3. Permission to conduct on-campus research and scholarship can only be granted to those who require on-campus resources and cannot work remotely. **Managed access to offices will be governed by Faculties.**
4. There will be a phased and coordinated approach across each campus
5. Phased resumption of activity may need to be reversed and stricter curtailment conditions imposed in response to public health guidance or changes to the situation on our campuses
6. If employees have concerns about returning to work, they are encouraged to discuss that with their supervisor, Human Resources, and their employee group as appropriate
7. Equity will be considered in evaluating how to plan and conduct research resumption

Additional Principles:

1. Before coming to work, all personnel must check their health status. Personnel experiencing any COVID-19 associated symptoms (cough, sneezing, shortness of breath, loss of sense of smell/taste, sore throat, tiredness, fever) must not come to work.
2. Individuals displaying symptoms of COVID-19 (described above) must remain at home and isolated until they have been confirmed COVID-free by testing or have been symptom free for the length of time recommended by the BCCDC. Personnel who have been in contact with a person confirmed or presumed to have COVID-19 must also self-isolate as per provincial health guidelines. Personnel will be referred to the BC Health Self-Assessment tool to determine if they require testing and/or medical care: <https://bc.thrive.health/>
3. All work that can be done off campus must continue to be done off campus. Data processing, writing manuscripts, writing grant proposals, creating presentations, studying, ordering of lab supplies, online library research, computations, etc. should be done from home. Exceptions may be considered for cases where research personnel do not have the possibility to work from home.
4. Teaching-stream faculty and research-stream faculty who are teaching during Phase 1 / **Stage 2** for whom conditions make it impossible to provide classes from home can apply to use their office for lectures; approval is decided by their head/director.

5. Teaching-stream faculty who require access to on-campus space to prepare materials for the fall (e.g., making videos for online course production) should be accommodated by the head/director where possible.
6. On campus research during Phase 1 will be restricted to experienced research personnel. Training of new research protocols is strictly limited to situations where physical distancing can be maintained. In Stage 2, it is possible for new trainees (undergraduates, graduate students, post-docs) to join research labs and obtain training. When training is required that cannot be performed with physical distancing, then researchers must follow the safety regulations for close-up training activities (Appendix F).
7. In-person group meetings, events or lectures cannot be organized in Phase 1. During Stage 2, in-person meetings (e.g., for comprehensive exams, supervisory committee meetings, safety training, master's defenses, etc.) will not be permitted except where there is a critical need (e.g., safety training that cannot be done online). In that case, a safety plan for the activity with a layout of the room that ensures physical distancing will need to be reviewed and approved by the ROCR. This will require meeting participants to be spaced by at least 2 m in the classroom, and meets all of the requirements outlined in the SRS "UBC Employees COVID-19 Essential In-person Meetings/Trainings Guidance": <https://riskmanagement.sites.olt.ubc.ca/files/2020/04/Guidelines-for-Meetings-Trainings-FINAL.pdf>
8. Where exemptions have been given for a faculty member to access his or her office, they must not have guests in the office during Phase 1 or Stage 2.
9. Respect research personnel's decisions not to return to research if the individual has underlying health issues or other personal situations that interfere with returning to work. Accommodate them with remote work where possible.

Responsibility of Faculty of Science

- Responsible for developing Faculty wide plans for approval by VPRI office
- Work together with Departments and Institutes to develop safe working plans at each phase
- Help Heads and Directors deal with issues of non-compliance and offer anonymous reporting of non-compliance
- Address patterns of non-compliance in a manner consistent with UBC policy

Responsibility of the MSL Director

- Responsible for ensuring that these guidelines are shared with all faculty and research personnel in their unit
- Responsible for communicating the safety plan of the unit to faculty and research personnel.
- Responsible for ensuring that signage is in place to ensure physical distancing and cleaning protocols are practiced in common areas (e.g., elevators, social rooms, lunch rooms, bathrooms, stairwells), department offices (e.g., main office, mail room), and shared facilities that are under our purview. These may be carried out by Building Ops, department staff or research personnel.
- Responsible for approving faculty plans that ensure physical distancing and safe working practices in their labs, and for making it clear that PIs must enforce the measures taken
- Responsible for putting hand sanitizer at key points (e.g., near entrances, entrances to shared instrument facilities) for personnel, if not supplied by Building Operations

- Responsible for informing the faculty member's other department Head(s) when a non-compliance issue was raised.
- Responsible for maintaining a schedule of faculty occupying offices, and ensuring that the number of faculty does not exceed 25% initially during Stage 2.

Responsibility of Faculty

- Responsible for developing a laboratory safety plan for their space, and communicating this to all group members. It will be necessary for many PIs to update their plans from Phase 1 to Stage 2 if they are able to increase the capacity of the lab.
- Responsible for posting on the doors to their lab areas the maximum number of occupants. Where a lab is shared by multiple PIs, this maximum occupancy must be agreed upon. In the event that it is not agreed upon, then the Director can impose a limit.
- Responsible for coordinating shifts / rotations of researchers as needed to ensure that physical distancing can be practiced and that the lab is no more than 1/2 occupied (Phase 1) and 2/3 occupied (Stage 2). Where a lab is shared by multiple PIs, this schedule must be agreed upon. In the event that it is not agreed upon, then the Head/Director can decide the schedule. A new Access Agreement may be needed for Stage 2.
- Trainees and staff may not have the same comfort level or ability to return to work and anyone can choose to defer their return to on-campus work, at their own discretion. Supervisors have a duty to recognize and accommodate each situation individually.
- Ensure the availability of gloves, lab coats and other necessary PPE
- Responsible for ensuring that their trainees take the mandatory UBC COVID specific training course, as well as taking it themselves. The course is available here: <https://wpl.ubc.ca/browse/srs/courses/wpl-srs-covid>

Section 5: Contextual Information

Organization structure

The MSL reports to the Provost through the Dean of Science who serves as the Chair of the Dean's Advisory Committee, which is made up of 6 Faculty Deans (Science, Medicine, Applied Sciences, Forestry, Pharmaceutical Sciences, and Land and Food Systems). Here, like other administrative reporting, the MSL follows the procedures and processes laid out by Science.

The MSL faculty are all jointly appointed in academic departments and are required to share their approved **MSL Research Resumption Form** with all their respective Heads, which include: Botany, Chemistry, Microbiology & Immunology, Biochemistry and Molecular Biology, Chemical and Biological Engineering, Medical Genetics, Psychiatry, Zoology, Electrical Engineering, Forest and Conservation Sciences, Land and Food Systems, Biomedical Engineering.

Buildings

This document pertains to the **Michael Smith Laboratories** and the **Networks of Centres of Excellence** buildings. Researchers in the Michael Smith Laboratories (MSL, as a unit) are the only occupants of these buildings, there are no other units that share this space.

Space occupancy required for research continuity

The estimated number of people during Phase 1 in the MSL will be (up to) 93. This is based on a 1/3 occupancy, with an estimated 278 department members. The number will only be finalized once the faculty submit their **MSL Research Resumption Forms**, but we don't expect this to deviate too much.

The estimated number of people during Stage 2 in the MSL will be (up to) 186. This is based on a 2/3 occupancy.

A table listing departmental, research, and shared facility space that will be occupied by, or used by, the MSL is presented in **Appendix B**. Any subsequent rooms that are added to this list will be communicated to Building Operations by our departmental Facility Manager.

Section 6: Prioritization of Access

In Phase 1, research personnel, staff and faculty who do not need to be on campus to complete their work must continue to work from home. Exceptions may be made for those who have very difficult work-at-home situations by making an exemption request to the Director. These decisions will be made on a case-by-case basis, depending on the situation for the individual to work from home and how important it is that he/she returns to campus at this time. Heads and Directors should consider career progress and equity in their decisions.

Prioritization

Here are the general principles underlying prioritization of researchers within individual faculty laboratories:

1. Anyone who can effectively work from home must continue to do so.
2. PIs working in shared spaces will coordinate the schedule between all users.
3. PIs should balance giving priority to time-critical work, maximizing research productivity for the group, and maintaining equitable access to ensure that all students who require building access to make progress on their work have some time available during Phase 1 and **Stage 2**.
4. Research personnel who feel that reporting to work creates unacceptable risk to their health, or the health of those in their household, should contact their supervisor, opportunity to work remotely should be considered. If you are unable to have the discussion with your supervisor, you may contact the Director or graduate advisor.
5. All research personnel being considered during Phase 1 must have up to date appropriate SRS training certificates and not need further research-specific training. Research personnel who have not completed their practical training prior to the research curtailment in March are not permitted in the laboratory during Phase 1. **During Stage 2, it will be possible to train new students in the labs. When training is required that cannot be performed with physical distancing, then researchers must follow the safety regulations for close-up training activities (Appendix F). All returning researchers are required to take UBC COVID-specific training.**
6. Undergraduate students (as well as recent graduates who have not yet become graduate students) may be acceptable as long as they do not require any specialized training that would be unsafe. **During Stage 2, it is possible for new trainees (undergraduates, graduate students, post-docs) to join research labs and obtain training. When training is required that cannot be performed with**

physical distancing, then researchers must follow the safety regulations for close-up training activities (Appendix F).

7. Volunteers (high school, undergraduate) will not be permitted at this time.
8. No unnecessary visitors are permitted in the buildings, including relatives (e.g., parents, children) or friends of faculty or research personnel. No animals are allowed. **Exceptions include: couriers, industry representatives dropping off samples for analysis, other researchers on campus accessing equipment.**

PIs should prioritize research personnel as follows when scheduling:

1. Research personnel working on COVID-related research, including work for which an exemption was already granted
2. Department personnel to support research activities, such as autoclaves, glassware cleaning, shipping/receiving, etc.
3. Research personnel who play key roles in equipment maintenance
4. Research personnel working on time-critical projects for reasons including: grant deadlines, time-sensitive papers, and students close to degree completion
5. Equity considerations for faculty who cannot work remotely (due to environmental reasons, such as the presence of children) and have been granted a special exemption by the Director.
6. Equity considerations for other research personnel who cannot work remotely due to environmental reasons.

Section 7: Building Considerations

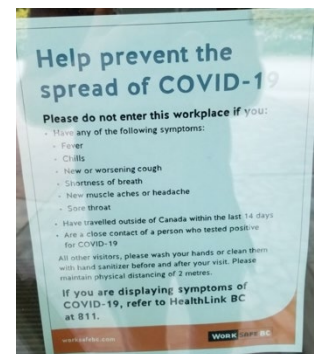
The hours of operation during **Phase 1** will be **Monday to Friday 7:00 am-6:00 pm**. **Stage 2** maintains the **Monday to Friday 7:00 am-6:00pm hours, with the inclusion of weekend access.**

General:

- There is a sign at every entrance that describes the symptoms of COVID-19 and advises all personnel to not enter if they have these symptoms.
- Hand washing/sanitizing stations are provided inside of building entrances, and at the entrances to each labs block. At these locations there will be cleaning supplies for laptops that are brought to the MSL.
- All rooms have a sign-posted with the maximum occupancy based on area of room
- Physical distancing signage will be posted at entrances, stairwells and in hallways. Only one person will be able to walk in the MSL-NCE causeway at a time.
- Stairwells will remain unidirectional. Only one person on a set of stairs at a time, and personnel as expected to remain on the landing until clear.

Elevators:

- Elevators will only be used for heavy loads and accessibility needs
- Elevators will be limited to one **or 2 people** at a time, with appropriate signage **depending on the size of the elevator.**



- Tape or markings are on the ground to indicate where research personnel should stand while lining up to enter the elevator

Lunch rooms and kitchens:

- In kitchens and lunchrooms, disinfectant is available, and a sign limiting the number of occupants at a time is posted
- With the exception of the microwave, **toaster ovens**, and fridges, use of common appliances is not permitted (e.g., kettles, coffee makers, etc.). Those opting to use the microwave or **toaster oven** must wipe down the handle and buttons with disinfectant prior to and following use.
- Personnel must bring their own dishes and these must be washed immediately with soap and water. Shared department dishes are off limits.
- The vending machines are off limits and are taped off.
- Chairs in lunchrooms are arranged to allow for physical distancing.
- No coffee will be provided in the MSL 3rd floor kitchen



Lounges

- The library (study), Crow's nest (lounge), and MSL 361 (lounge/ coffee room) will be locked or taped off.

Bathrooms and showers

- Single occupant bathrooms have a notification system, if occupied
- Doors to multi-person washrooms will be propped open to minimize high touch surfaces and maximize air flow. Only one person should use the washroom at a time
- Showers will remain open. User will need to spray high touch surfaces with disinfectant spray provided.



Reception, shipping and receiving, and mailroom

- The MSL reception doors will be open when staffed. Aside from one department staff, only one additional person at a time should be in the reception area. A plexiglass shield separates the Receptionist from research personnel.
- Only one person at a time can enter the NCE mailroom, signage present.

Departmental maintained equipment

- Departmental communal equipment (for example, printers/photocopiers, autoclave handles and buttons, ice machine shovel, etc. will be cleaned daily). Refer to **Appendix C** for checklist.

Meeting rooms

- Multipurpose room, auditorium, and meeting rooms that are normally bookable are either locked or closed off (with tape).

Points of Access to Building and Access Control

- The MSL and NCE buildings remain locked.

- Authorized access to the buildings is provided using UBC cards.
- No unnecessary visitors are permitted in the buildings, including relatives (e.g., parents, children) or friends of faculty or research personnel. No dogs either. **If required, visits to the workplace to service instruments or deliver samples (e.g., industrial partners) should be prearranged, staggered, recorded and safety protocols should be communicated before entry into the workplace (e.g., email and/or signage posted to entrance).**
- A sign is posted on the front and loading dock door for courier companies to call a department staff to accept shipments. Any shipments arriving to the NCE are directed to the MSL. This was done during the research curtailment period and courier companies are used to this process.

Section 8: Safety Protocols

Common Safety Protocols (Everyone)

1. Before coming to work, all personnel must check their health status. Personnel experiencing any symptoms of COVID-19 (cough, sneezing, shortness of breath, loss of sense of smell/taste, sore throat, tiredness, fever) must not come to work.
2. Individuals displaying symptoms of COVID-19 (described above) must remain at home and isolated until they have been confirmed COVID-free by testing or have been symptom free for the length of time recommended by the BCCDC. Personnel who have been in contact with a person confirmed or presumed to have COVID-19 must also self-isolate as per provincial health guidelines. Personnel will be referred to the [BC Health Self-Assessment Tool](#) to determine if they require testing and/or medical care.
3. Anyone returning from outside of Canada must follow the directions of the quarantine act, which specifies 14 days of self-isolation, regardless of whether or not they are experiencing COVID-19 symptoms. Anyone exposed to a traveler must also self-isolate for 14 days.
4. New researchers arriving from international destinations are required to self-quarantine for 14 days prior to beginning research.
5. People returning to UBC to work will be required to take a UBC COVID-specific training course
6. Physical distancing is required at all times. Research personnel should not be in situations where they need to be closer than 2 meters from one another. Where physical distancing is not possible, then UBC guidelines for these situations should be followed - see: [UBC Employee COVID-19 Physical Distancing Guidance](#). Personnel carrying out these duties together should avoid contact, wear gloves, and wear a face shield. It is recommended to wear a face mask as well. **Appendix F contains the expected protocol for training for new students in lab setting.**
7. Personnel must wash their hands regularly and avoid contact with one another. For example, wash hands before entering common spaces and wash hands upon returning to working spaces.
8. In line with MSL existing policy, research personnel carrying research materials in hallways, should continue to follow the one-glove policy: carry hazardous materials in the gloved hand and use your ungloved hand to touch common surfaces such as door handles, elevator buttons, common equipment keyboards, etc.
9. All laptops brought on campus should be wiped down with disinfectant upon arrival and at departure. Spray bottles will be available at the sanitization stations.
10. Do not congregate in common areas. Minimize social interactions in the building.

11. Use of masks for non-research purposes is recommended, but remain optional at this time, and must not interfere with carrying out their duties safely. Personnel who choose to wear masks must still comply with physical distancing requirements.
12. No in-person group meetings, social events, lectures or other gatherings shall take place until further notice.
13. Field work will be reviewed and approved on a case-by-case basis. See the VPRI website for details. [COVID-19: Curtailing research activities on UBC campuses | UBC Research + Innovation](#)
14. Undergraduate students may work with a mentor/supervisor in research labs provided they receive appropriate safety training and follow physical distancing rules. Any training that cannot be performed with 2 m physical distancing must follow the protocol in Appendix F. Note that undergraduate summer students are lower priority than graduate students for on-campus research.
15. The Building Emergency Response Plans (BERP) for MSL and NCE are available on our internal website under the Health & Safety. Dan Fayant, the Chief Floor Warden will be on-site during standard working hours. Should he not be able to make it in one day, another Department Manager will serve as Deputy Chief Floor Warden will be on-site.
16. No unnecessary visitors are permitted in the buildings, including relatives (e.g., parents, children) or friends of faculty or research personnel. No dogs either. Exceptions include: couriers, industry representatives dropping off samples for analysis, equipment technicians performing installation and maintenance, and other researchers on campus accessing equipment. Visits should be prearranged, staggered, recorded and safety protocols should be communicated before entry into the workplace.

UBC Safety and Risk Service is recommending one of these three recipes for house-made disinfectant solutions:

- 70% Isopropanol with 0.1% SDS (Sodium dodecyl sulphate/Laurel sulfate)
- 80% Ethanol with 0.1% SDS (Sodium dodecyl sulphate/Laurel sulfate)
- 10% Bleach (household type)

Wet Laboratory Space

1. Occupancy of labs must be restricted by faculty so that all research personnel can work 2 m apart. Where the space is occupied by research personnel from multiple groups, the faculty must jointly coordinate this. The number of people that can work in a lab simultaneously will therefore depend on the individual lab configuration (area / geometry / bays), but MSL must aim for an occupancy of up to 1/3 for Phase 1 and 2/3 for Stage 2. The maximum occupancy of each lab must be posted on the door.
2. A maximum of 1 person in a bay at any one time during Phase 1. During Stage 2, research labs will be able to operate at higher capacity as long as physical distancing (2 m) can be maintained between all researchers. Depending on the lab configuration, it may be possible to have more researchers in the lab than in Phase 1 (for example, on average 1.5 people per bay). Faculty must work with researchers to establish a safe number of people in the lab at a given time. Faculty will be required to submit revised training plans for approval (by head/director) if the scheduling or # of researchers is changed. A new Access Agreement (Appendix D) may be needed for Stage 2.
3. While practicing physical distancing, it is important to ensure that research personnel are not working alone in labs where this is normally prohibited. Faculty are responsible for ensuring that

there is a work schedule to cover this. Where working alone is not avoidable, personnel must follow their labs working alone procedure. The MSL has been a pilot unit for the SRS on using a mobile App (App Armor), many labs are already using this App as their standard procedure.

4. People in common areas (e.g., equipment and instrument rooms) must also adhere to physical distancing.
5. Common surfaces (e.g., fridge handles, solvent containers, mice on lab computers) should be wiped regularly with disinfectant wipes. Supplies need to be made available to research personnel.

Signage Required:

- Signed Access Agreement on the lab door indicating maximum occupancy (**Appendix D**). **A new Access Agreement may be needed for Phase Stage 2.**
- Checklist of items that require wiping at the end of each shift. This should include switches, freezer / fridge handles, keyboards and mice of communal computers, cart handles, etc.

Dry Laboratory Space and Offices

1. Regular office use is not permitted in Phase 1. **During Stage 2, faculty office space within the MSL may be used up to about 25% at any given time, and will be managed centrally by the department through a sign-up procedure.**
2. Shared offices: there will be no multiple occupancy of shared offices during Phase 1. **Shared offices may only be used by 1 person at a time. This policy will be reconsidered in late August. A cleaning protocol must be established for cleaning high touch points and desks before and after use. Users should not be working for long periods in these offices – work that can be done off-campus must continue to be done off campus. Shared offices may be used for storing personal belongings while researchers are working in the lab.**
3. Temporary short access to offices (e.g. 10 minutes for grabbing a book) will be provided by request to Karen Reid on a case-by-case basis.

Signage Required:

- A signed Access Agreement will be posted on the dry lab/office door indicating maximum occupancy (**Appendix D**). **A new Access Agreement may be needed for Phase Stage 2.**

Ordering of critical personal protective equipment (PPE)

UBC has established a Critical Supply team that has been reaching out to members of the university community who may require personal protective equipment (PPE) to let them know how to place and manage orders while there is a global shortage of these critical supplies. **Refer to Appendix E for information on how to order critical PPE.**

Responsible faculty presence

The MSL will have one faculty present each day during **core hours (8:00 am to 5:00 pm)** during Phase 1. This faculty will be available in the case of an emergency or be available for questions. This faculty will help ensure that the restrictions for Phase 1 and Stage 2 are being observed and check in on the labs occasionally. **In Stage 2 core hours will be 9:00 am to 5:00 pm.**

A schedule will be created and in Phase 1, names will be displayed on the digital signage TVs (4) at the entrances and in the lunchrooms in both MSL and NCE. **In Stage 2, the names will be broadcast to the department by email.**

Section 9: Scheduling Control Access

Building occupation is permitted **Monday to Friday, between 7:00 am and 6:00 pm**. The buildings must be cleared by 6:00 pm to allow for Custodial staff to adequately clean the spaces. **In addition, during Stage 2, weekend work will be permitted, but researchers must ensure that working alone procedures are being followed. PIs are responsible for ensuring that their research staff are trained in appropriate cleaning protocols for their lab/research space, including cleaning high contact surfaces, benches, shared equipment, fume hood sash handles, doorknobs and other common areas within their labs on weekends.**

It is recognized that a small number of researchers will have scientifically justified research protocols that require sampling/observations/data collection over an extended period of time and beyond regular working hours. The protocol for work **after hours** will be as follows:

1. The faculty must notify the Director and Operations Manager that there will be work continuing beyond the regular hours.
2. (Optional) Operations Manager may opt to notify security ahead of time, of who will be working extended hours (including time, date, location) so that they can be given access if they forget or misplace their access card.
3. The researchers will post a notice on the lab door denoting that late-night or weekend work is underway, indicating name(s) and working hours.
4. The researchers in the lab must abide by their labs working-alone policy (i.e., mobile App Armor, e-contact check-ins) with a safety plan to ensure that there are regular checks on researchers.
5. Faculty are responsible for ensuring that their research personnel are trained in appropriate cleaning protocols for their lab/research space, including cleaning high contact surfaces, benches, shared equipment, fume hood sash handles, doorknobs and other common areas within their labs on weekends.
6. Researchers must respect the custodial servicing of labs and spaces during regular working hours and be mindful on custodial staff working in other areas of the building while researchers are in their lab's afterhours.

These are the components to successfully scheduling controlled access:

- Faculty are responsible for maintaining a schedule of on-site researchers; keeping in mind their infrastructure set up, physical distancing requirements, and the goal to having only 1/3 building occupancy during Phase 1, **and 2/3 occupancy during Stage 2.**
- The schedule should identify the area where work will be carried out, with the established maximum density listed, making it clear when capacity is reached.
- A shared calendar system for your lab is encouraged.
- Schedules must be available upon request and need to be saved for a period of one month.
- Lab occupancy should be tracked, this can either be through a sign in/sign out sheets posted on the lab doors, electronic tracking through Slack, or another mobile App. Everyone entering the building for the day are required to sign in/ out according to the determined system in the lab. Any system the faculty implements needs to have the ability to be archived, whether electronically or physically. **If required, visits to the workplace to deliver samples (e.g., industrial partners) should be**

prearranged, staggered, and safety protocols should be communicated before entry into the workplace. Keep a record of visitors to the workplace.

- The MSL will be responsible for creating, maintaining and displaying the schedule of daily faculty presence, with respect to contact information, including faculty office access to about 25% initially in Stage 2.

Section 10: Reporting and Managing Non-Compliance

We expect all personnel to take reasonable care to protect the well-being of all employees. Implementing the safety measures outlined in this document is intended to keep everyone safe. Circumstances may occur where there is a perception of non-compliance, when in fact that is not the case. An example would be two work colleagues who live in the same home who are seen to be working less than 2 meters apart from one another. In most cases, a quick discussion with the individuals involved may help to resolve any concern.

When a research personnel or faculty is concerned about an infraction of the rules for Phase 1 or Phase 2, they should follow the reporting guidelines below.

Below is a guide for managing non-compliance of the protocols in place for Phase 1 and Phase 2:

1. Research personnel should report any safety concerns (e.g., crowding of a space, failure to complete a necessary cleaning protocol) within a lab/research space to the Principal Investigator. Non-compliance on the part of a PI is first reported to the Head or Director of the Unit.
2. Graduate students may also report their graduate advisor
3. Any research personnel may also report infractions confidentially via email to accessfeedback@science.ubc.ca, monitored by Mark MacLachlan, Associate Dean of Research & Graduate Studies. Complaints will be treated discreetly with the MSL Director.
4. The faculty (or the Director) must investigate the situation without delay by contacting the appropriate people in the lab or other space. This could be research staff, trainees, or the faculty. They may also seek advice from UBC Safety & Risk Services.
5. As part of the investigation, it may be advisable, though not always feasible, to do visual inspection of the lab/research space in question.
6. If a claim about non-compliance is substantiated, the supervisor (faculty or Director) will consult with Human Resources, Faculty Relations, Safety & Risk Services, and other units to determine an appropriate response. The response could include:
 - Suspension of access to on-campus facilities;
 - Curtailment of the type or location of activity that can be undertaken on campus;
 - Depending on the nature and severity of the non-compliance, suspension or other employment-related discipline.
7. Resumption of activity can only occur with the agreement of the supervisor who investigated the complaint, and only when that person is satisfied that the conditions leading to the non-compliance have been resolved.

APPENDIX A

Michael Smith Laboratories Research Resumption Form

This form pertains to research personnel, department staff and faculty within the Michael Smith Laboratories building (MSL) and the Networks of Centres of Excellence (NCE) where the MSL faculty named below conduct research. Following approval by the MSL Director forward a copy of the completed form to your Department Head(s).

Faculty should refer to the **MSL Building Safety Plan** for responsibilities, context, and guiding principles.

The information collected below outlines the approach that the faculty will take to control access to their space, how they will work with other faculty who share contiguous lab space, and additional safety protocols that will be in place.

Once a faculty has been approved to restart research, then he or she will sign an **Access Agreement** that can be found at the end of this request form and post this on the door of each lab space. A new Access Agreement may be needed for Stage 2. The signed form will be posted on the lab door so that all trainees can see what the faculty has agreed to and the cap for the number of people in the space. Beyond posting the document on the door, the faculty must inform his/her trainees of this process.

Faculty Name:

Email:

Mobile Phone#:

1. Briefly outline proposed experiments/research that require on-campus access:

2. Fill in the table with all the rooms your research personnel will access. Note that UBC is aiming for 1/3 occupancy of buildings during Phase 1, and that there must be space for physical distancing. Additional rows may be added to the bottom of the table as required.

Room #	Room type (lab, equipment room, office, or other)	# of personnel who will work in this room as their primary location	Total # of personnel who need access to this room?	Max. # at one time during Phase 1

3. Is your lab space shared? Yes / No

If **yes**, indicate how you will coordinate with adjacent labs or personnel.

4. Are all personnel from your group accessing the lab certified (yes/no).

5. List the personnel below who will require access to on-campus space in Phase 1, and their position

(Grad student, Postdoc, RA, Faculty, Undergrad, Technician, Research support, Staff):

Ex. John Smith Grad student

6. Describe how will you schedule occupancy of your lab space to ensure physical distancing is maintained? e.g. online sign up, weekly discussion in lab meeting to prepare a schedule together, other? Ensure that people on the same shift are not in conflict for the same resources in their own lab. Include an example plan with the application. Schedules should be posted on the lab door weekly. **Note:** at any one time, UBC is aiming for **ca. 1/3 occupancy** during Phase 1

7. Are there any tasks where physical distancing cannot be maintained (yes/no)?

If **yes**, frequency and duration of tasks? What safety measures will be taken?

8. Outline plans to address regulations on working alone/working in isolation

9. Identify high-contact points that need to be sanitized (fridge handles, switches, communal keyboards, etc.) and all multi-user instruments and equipment in your labs, their location, sanitization protocols. This should be posted as a checklist at the entrance for research personnel to complete before and after each shift

10. Is equipment in your lab space used by personnel from other labs (yes/no)?

If **yes**, explain how you will arrange for other users to access this equipment while maintaining physical distancing. How will this equipment be sanitized between users?

11. Will you need to access equipment located in other research labs, or your lab equipment housed in shared equipment rooms in your building (yes/no)?

If **yes**, list the equipment or room numbers and how will this be arranged? How will this equipment be sanitized between users?

Acknowledgment that faculty and all researchers returning to the MSL agree have completed the required UBC COVID-specific training course for safe return and will abide by policies and principles outlined in the:

- 1) MSL Building Safety Plan
- 2) This MSL Research Resumption Form,

A signature or an email confirmation from research personnel is acceptable (only sign this after this form has been reviewed, in the event that changes are required)

FACULTY SIGNATURE _____--

RESEARCH PERSONNEL NAME _____

RESEARCH PERSONNEL NAME _____

RESEARCH PERSONNEL NAME _____

RESEARCH PERSONNEL NAME _____

(add lines as needed)

As Director of the Michael Smith Laboratories, I confirm that this Research Resumption Form has been fully assessed and approved.

Peter Zandstra

APPENDIX B

Rooms occupied by, or used by, research personnel in the MSL

In Stage 2, added single and shared offices include:

MSL 171-179, 183 (open cubicle style)

MSL 201, 205-235

MSL 305-333

NCE 303-307, 350 (open desk style)

NCE 404-409, 416

Building Name	Room Number	PI(s) Name or Shared Facility
Michael Smith Laboratories	001	Creagh
Michael Smith Laboratories	001A	Creagh
Michael Smith Laboratories	001B	Creagh
Michael Smith Laboratories	001C	Creagh
Michael Smith Laboratories	001D	Creagh
Michael Smith Laboratories	005	Departmental
Michael Smith Laboratories	005A	Departmental
Michael Smith Laboratories	005B	Departmental
Michael Smith Laboratories	024	Washroom
Michael Smith Laboratories	026	Washroom
Michael Smith Laboratories	216	Kitchen
Michael Smith Laboratories	230	Lunch room
Michael Smith Laboratories	234	Washroom
Michael Smith Laboratories	236	Washroom
Michael Smith Laboratories	251	Piret
Michael Smith Laboratories	251A	Piret
Michael Smith Laboratories	251B	Piret
Michael Smith Laboratories	253	Piret/Jefferies
Michael Smith Laboratories	253A	Piret/Jefferies
Michael Smith Laboratories	255	Jefferies
Michael Smith Laboratories	255A	Jefferies
Michael Smith Laboratories	255B	Jefferies
Michael Smith Laboratories	255C	Jefferies
Michael Smith Laboratories	252	Washroom
Michael Smith Laboratories	256	Washroom
Michael Smith Laboratories	259	Snutch
Michael Smith Laboratories	259A	Snutch
Michael Smith Laboratories	259B	Snutch
Michael Smith Laboratories	259C	Snutch
Michael Smith Laboratories	261	Snutch/Brumer
Michael Smith Laboratories	261A	Snutch/Brumer
Michael Smith Laboratories	261B	Snutch/Brumer

Michael Smith Laboratories	263	Brumer
Michael Smith Laboratories	263A	Brumer
Michael Smith Laboratories	263B	Brumer
Michael Smith Laboratories	267	Brumer
Michael Smith Laboratories	267A	Brumer
Michael Smith Laboratories	267B	Brumer
Michael Smith Laboratories	269	Turner
Michael Smith Laboratories	269A	Turner
Michael Smith Laboratories	269B	Turner
Michael Smith Laboratories	275	Kastrup
Michael Smith Laboratories	275A	Kastrup
Michael Smith Laboratories	275B	Kastrup
Michael Smith Laboratories	275C	Kastrup
Michael Smith Laboratories	266	Departmental
Michael Smith Laboratories	268	Shared Facility
Michael Smith Laboratories	274	Departmental
Michael Smith Laboratories	286	Brumer
Michael Smith Laboratories	278	Jefferies/Hieter
Michael Smith Laboratories	278A	Jefferies/Hieter
Michael Smith Laboratories	296	Shared Facility
Michael Smith Laboratories	301	Reception
Michael Smith Laboratories	312	Kitchen
Michael Smith Laboratories	324	Departmental
Michael Smith Laboratories	351	Hieter
Michael Smith Laboratories	351A	Hieter
Michael Smith Laboratories	351B	Hieter
Michael Smith Laboratories	353	Hieter/Kronstad
Michael Smith Laboratories	353A	Hieter/Kronstad
Michael Smith Laboratories	359	Kronstad
Michael Smith Laboratories	359A	Kronstad
Michael Smith Laboratories	359B	Kronstad
Michael Smith Laboratories	359C	Kronstad
Michael Smith Laboratories	352	Washroom
Michael Smith Laboratories	356	Washroom
Michael Smith Laboratories	363	Finlay
Michael Smith Laboratories	363A	Finlay
Michael Smith Laboratories	365	Shared Facility
Michael Smith Laboratories	367	Finlay
Michael Smith Laboratories	367A	Finlay
Michael Smith Laboratories	367B	Finlay
Michael Smith Laboratories	371	Tokuriki
Michael Smith Laboratories	371A	Tokuriki
Michael Smith Laboratories	371B	Tokuriki
Michael Smith Laboratories	375	Li

Michael Smith Laboratories	375A	Li
Michael Smith Laboratories	375B	Li
Michael Smith Laboratories	375C	Li
Michael Smith Laboratories	375D	Li
Michael Smith Laboratories	375E	Li
Michael Smith Laboratories	377	Li
Michael Smith Laboratories	377A	Li
Michael Smith Laboratories	381	Bohlmann
Michael Smith Laboratories	366	Departmental
Michael Smith Laboratories	368	Shared Facility
Michael Smith Laboratories	374	Finlay
Michael Smith Laboratories	376	Shared Facility
Michael Smith Laboratories	378	Shared Facility
Michael Smith Laboratories	386	Li
Michael Smith Laboratories	390	Departmental
Michael Smith Laboratories	392	Bohlmann
Michael Smith Laboratories	394	Hieter
Michael Smith Laboratories	396	Hieter
Michael Smith Laboratories	383	Bohlmann
Michael Smith Laboratories	383A	Bohlmann
Michael Smith Laboratories	383B	Bohlmann
Michael Smith Laboratories	383C	Bohlmann
Michael Smith Laboratories	385	Bohlmann/Finlay
Michael Smith Laboratories	385A	Finlay
Michael Smith Laboratories	385B	Shared Facility
Michael Smith Laboratories	385C	Finlay
Networks of Centres of Excellence	432	Departmental
Networks of Centres of Excellence	439	Departmental
Networks of Centres of Excellence	438	Foster
Networks of Centres of Excellence	437	Foster
Networks of Centres of Excellence	436	Foster
Networks of Centres of Excellence	435	Foster
Networks of Centres of Excellence	434	Foster
Networks of Centres of Excellence	425	Foster
Networks of Centres of Excellence	426	Foster
Networks of Centres of Excellence	424	Hirst
Networks of Centres of Excellence	423	Hirst
Networks of Centres of Excellence	422	Hirst
Networks of Centres of Excellence	421	Haney
Networks of Centres of Excellence	420	Haney
Networks of Centres of Excellence	419	Haney
Networks of Centres of Excellence	418	Haney
Networks of Centres of Excellence	410	Haney
Networks of Centres of Excellence	440	Foster

Networks of Centres of Excellence	342	Foster
Networks of Centres of Excellence	339	AMPEL
Networks of Centres of Excellence	338	Mayor
Networks of Centres of Excellence	337	Mayor
Networks of Centres of Excellence	328	Mayor
Networks of Centres of Excellence	329	Mayor
Networks of Centres of Excellence	330	Mayor
Networks of Centres of Excellence	331	Mayor
Networks of Centres of Excellence	332	Mayor
Networks of Centres of Excellence	334	Withers/Mayor
Networks of Centres of Excellence	341	Mayor
Networks of Centres of Excellence	327	Withers
Networks of Centres of Excellence	326	Withers
Networks of Centres of Excellence	325	Withers
Networks of Centres of Excellence	324	Withers
Networks of Centres of Excellence	308	Withers
Networks of Centres of Excellence	309	Withers
Networks of Centres of Excellence	310	Withers

APPENDIX C

This checklist pertains to the department maintained equipment, or common high touch areas, that the departmental staff will be responsible for cleaning.

MSL & NCE Facilities Daily Cleaning List				
Building	Room	Equipment	Description	Completed
NCE	All	Door handles	wipe all handles and push bars	
MSL	All	Door handles	wipe all handles and push bars	
NCE	All	Elevator (3 floors)	wipe all buttons inside and out	
MSL	All	Elevators (4 floors)	wipe all buttons inside and out	
NCE	432	Autoclave	wipe buttons and touch screen	
MSL	266, 366	Autoclaves	wipe handles and touch screens	
NCE	439, 301	Ice machines	wipe handle and scoop	
MSL	378, 268	Ice machines	wipe handle and scoop	
NCE	439	Ultra water dispenser	wipe buttons and spigot	
MSL	366, 266, 268	Ultra water dispenser	wipe buttons and spigot	
NCE	402	Microwave, toaster ovens, fridge, water cooler, and sink	wipe handles and buttons	
MSL	216, 312	Microwave, toaster ovens, fridge, water cooler, and sink	wipe handles and buttons	
NCE	402, 345	Printing station	wipe handles and buttons	
MSL	324, 396, 210, 276	Printing station	wipe handles and buttons	
MSL	390	Film processor	wipe handles and buttons	
MSL	296	Lypholizer	wipe handles and buttons	
MSL	276	PCR	wipe buttons and keyboard	
MSL	365	Gel doc and Tecans	wipe buttons and keyboard	
MSL	378	Centrifuges	wipe buttons and rotor fridge handle	

APPENDIX D

I, _____, agree to comply with all safety protocols in place in my Department while conducting research and scholarly activity on the UBC-Okanagan or UBC-Vancouver campus. I understand that permission to conduct on-campus research, scholarship and creative activity is limited to those who require on-site resources, and cannot work remotely.

I confirm that safety protocols to address the following issues are available and have been implemented in rooms and spaces bearing this notice (*indicative list*):

1. In keeping with guidance from the Provincial Health Officer:
 - a. Personnel will stay at home if they are sick with cold or flu symptoms
 - b. Physical distancing: all people present in this space will respect physical distancing by keeping two meters (six feet) away from one another at all times;
 - c. Personal hygiene: regular hand washing, covering coughs and sneezes
 - d. Regular and thorough cleaning, particularly of high-touch, high-traffic points;
2. Personal protective equipment: Any PPE required to undertake this research is available to meet the needs of the people present;
3. The maximum number of personnel in ROOM # _____ at any one time will be no more than

X People

ACKNOWLEDGEMENT

By signing this form, I acknowledge that the health and wellbeing of our university community is paramount, and we will follow guidance from the Provincial Health Officer, the University, WorkSafe BC, and other relevant authorities.

I also acknowledge that:

- Failure to uphold the commitment confirmed here could result in the loss of research access privileges.
- Non-compliance in my research setting could jeopardize the ability of on-campus activity to continue during the COVID pandemic.
- It is my responsibility as the Principal Investigator to ensure that I along with all faculty, staff and students engaged as part of my research activities are aware of and comply with the relevant COVID-19 and other safety protocols.
- Only those people essential for the activity to be performed in this space will be asked to return to work;

Name	Signature	Date
------	-----------	------

Department Approval

Name	Signature	Date
------	-----------	------

Copy to be posted on every lab door

APPENDIX E

Ordering Critical Personal Protective Equipment (PPE), COVID-19 Research Resumption (May 2020)

UBC has established a Critical Supply team that has been reaching out to members of the university community who may require personal protective equipment (PPE) to let them know how to place and manage orders while there is a global shortage of these critical supplies.

The university's supplier partners are currently experiencing supply chain constraints due to the coronavirus (COVID-19). As a result, UBC is experiencing delays in receiving orders, and challenges in being able to secure critical goods and services, such as PPE (nitrile gloves, face shields, N95 and surgical masks, hand sanitizer, disinfectant wipes, etc.). The Critical Supply team is actively working to improve the situation by:

- Work with UBC's regular suppliers to plan and coordinate orders, and manage backorders,
- Identify new sources of supply for PPE,
- Explore alternative products, where appropriate.

How to Place Orders

We have received some questions from the research community on how to place orders for PPE. Please note that the Critical Supply team is working to support our research community in securing any PPE they need for ongoing scholarly activities during COVID-19.

We recommend:

- If you need to order PPE, **please submit an [eProcurement Form](#) to place your order** through the Critical Supply team.
- The team will review your request, and a Hygenist (from Safety and Risk Services) will contact you to discuss your order to confirm that the best type and amounts of PPE are ordered to allow safe work practices.
- If you **require assistance, or have questions, please contact critical.supply@ubc.ca**

Please note: if you are ordering PPE for COVID-19 research, please indicate this in your requisition so that this can be clearly communicated to vendors.

If your area had been placing orders using a UBC Purchasing Card, you may continue to do so. However, the Critical Supply team does not have visibility to these orders, and is not able to easily assist with them.

What Items are Considered Critical PPE

As a reminder, PPE includes:

- Nitrile gloves
- Face shields
- N95 masks
- Isolation gowns
- Level 3 or level 4 gowns
- Hand sanitizer
- Disinfectant wipes
- Other supplies and supportive treatment equipment, including Mask Face (Aseptic w/Ear Loop)
- Other sample collection and diagnostic materials, including viral swabs

Appendix F

Guidelines for Procedures (e.g. Training) When it is not Possible to Physically Distance in the Workplace

Background

Many research projects in laboratories require close, hands-on training of new research personnel, especially undergraduate students, where physical distancing is not possible. During Phase 1 of UBC's research resumption, the Faculty of Science Guiding Principles stated that only research personnel who were already fully trained can undertake research in a laboratory. In Stage 2 and Stage 3, more undergraduate students as well as other new trainees (e.g., graduate students, post-docs) will work in research labs. As well, in practical undergraduate labs that are able to run, there may be interactions between teaching assistants, lab managers, and students where physical distancing is not possible. This document sets out the guidelines for work and training that requires close interactions (< 2 m physical distancing) in the Faculty of Science.

Scope

These guidelines impact all research personnel who are working in labs and undergraduate students carrying out laboratory experiments in the Faculty of Science on campus at UBC during COVID.

Purpose

This work instruction covers the mandatory use of Personal Protective Equipment when the required job duties prevent individuals from practicing physical distancing (i.e. individuals working together are unable to maintain a 2 metre distance). These may be necessary as part of hands-on training of research personnel and must be approved by the research supervisor (PI).

Safety Precautions

- Avoid working, socializing, or taking breaks within a 2 metre radius of any other person at all times, unless approved.
- Wash your hands frequently for at least 20 seconds using soap and water.
- Avoid touching your eyes/nose/mouth with unwashed hands.
- When you sneeze or cough, cover your mouth and nose with a disposable tissue or the crease of your elbow and then wash your hands.
- Any employee or investigator team member not feeling well or experiencing signs of illness will stay at home and self-isolate as directed by the Provincial Health Officer and/or a physician.

Procedure

While physical distancing is one of the primary measures to prevent viral transmission, there may be laboratory situations where maintaining a full 2 m of physical distance is not feasible. When 2 research personnel (or a PI + research personnel) need to work in close proximity where physical distancing is not possible, the overarching objective of keeping exposure to individuals outside of your household as low as

reasonably achievable remains by organizing tasks and work environments to minimize the duration spent in close proximity.

In addition to standard controls, it is recommended that the researchers wear something that will cover their mouth and eyes (e.g., a face shield and/or goggles with a disposable nonmedical mask^{***}) as an additional measure.

*** Note that not all face shields provide the same level of transmission reduction. Also, the face shield must be clearly labeled as a COVID-19 control so it is not mistaken for a PPE face shield.**

****The researchers must be trained in the proper SOP for the use and disposal of disposable surgical masks.**

*****Please note that since nonmedical masks are not constructed to an approved certification standard, they must not be assumed to provide a known level of protection – and must not be treated as a better option than hand washing and social distancing.**

Where procedures require Personal Protective Equipment (PPE) independent of COVID-19 prevention measures, the required PPE must be donned prior to commencing the task. Where that procedural PPE supplants conflicts with the recommendation of masks above, the procedural PPE should take precedence. For instance, if the task requires the use of an N95 respirator please follow the work instructions associated with that procedure or task.

It is also recommended that individuals wear lab coats and gloves unless other PPE have determined to be more appropriate.

Doffing of the PPE at the end of the task should be in the order as follows:

- 1) Remove gloves
- 2) Wash hands with soap and water for 20-30 seconds (or 90 seconds if working with pathogens)
- 3) Remove face shield or goggles
- 4) Remove face mask by the straps
- 5) Repeat hand washing

Reusing PPE

The day to day reuse of face masks is not encouraged. The mask can be reused for the day only. If a mask has become moist or soiled throughout the day, it should be changed out for a new one. If it is not needed continuously throughout the work day, store it in a paper bag labelled with your name in between uses. Ensure that the inside of the mask is not touched with unwashed hands when placing or removing the mask from the bag. Dispose of the mask and the bag at the end of the day.

The day to day reuse of goggles and face shields is encouraged. The goggles and face shields should be wiped down (visor, lens, strap, headband) with disinfectant (e.g., 80% ethanol) before and after each use.

Approval and Revision History

This guideline will be reviewed annually, or when the requirement for physical distancing in the workplace is changed.