Working safely during COVID-19 in the Advanced Light and Electron Microscopy Facility

Introduction
This document has been prepared by @YorkUMicroscopy. This document gives practical considerations how to work safely in the Imaging Facility. We expect that this document will be updated over time. This version is up to date as of July 1, 2020. Please check https://microscopy.info.yorku.ca/ for updates. If you have any feedback for us and to raise a concern, please email microscopy@yorku.ca.

Managing risk
To reduce risk to the lowest reasonably practicable level Users should consider to work remotely if at all possible. Users who are unable to work remotely due to the equipment required are asked to follow instructions below to operate safely and effectively.
Clinically vulnerable individuals have been strongly advised not to work outside the home. To make sure individuals who are advised to stay at home under existing government guidance do not physically come to the Laboratories. This includes individuals who have symptoms of COVID-19 as well as those who live in a household with someone who has symptoms.

Managing risk – Users
Users who suspect that are SARS-Cov-2 should follow Ontario government policy even if they appear to have only mild cold-like/seasonal allergies symptoms.
Users who show any common symptoms of upper respiratory infection or otherwise sick are not allowed to access the Facility.
To reduce the number of contacts to minimum, @YorkUMicroscopy allows only a single User for each piece of equipment. QReserve booking is mandatory – no walk in experiments are permitted.
To re-activate your QReserve account you must submit a Machform request: https://sciforms.apps01.yorku.ca/machform/view.php?id=48978
The access to the laboratories is restricted (key card access (LSB 438) and key access (LSB 313)), and contact traced (York Passport workstation login).
User can share their experiment progress live via screen sharing and zooming with off-site Team Members.
Thirty minutes blackout period in scheduling is introduced to ensure no accidental contact will take place and, to provide time for cleaning and air exchange.
User can request to have core staff run equipment instead of Users and/or having users supported remotely by core staff through electronic means.
No on-site analysis is permitted at this time. Please download a free 90 days full version of ZEN software and request data transfer. Please do not transfer data in person.
To take all the mitigating actions possible to reduce the risk of transmission please keep the activity time involved as short as possible.
Users are encouraged to plan ahead to maximize their productivity at each booking.
**Social distancing at YorkUMicroscopy**
The social distancing guidelines to keep a distance of 2m is reinforced in full in relation to all activities in the Facility. Keep in mind that social distancing applies to all parts of the Life Science Building, not just the Laboratories, but also entrances and exits, and similar settings. Please do explore options for remote connection first.

Webcams are installed to promote efficient communication between Users and staff providing touchless way to communicate as opposite to smart-phones video conferencing apps employed for this purpose. Zoom/Teams are tools of choice to facilitate communication and screen sharing for staff to assist users while operating instruments, or for Principal Investigators to direct Users operating the microscope.

**Hygiene – handwashing, sanitation facilities and toilets**
Users are reminded to apply good handwashing technique, and to avoid touching your face. Hand sanitizer stations are provided in addition. Please consider using washrooms before or after visit to the facility – as you need to fulfill social distancing regulation in the washroom and repeat the facility entrance requirement if elect to use a washroom break during your session.

**Personal Protective Equipment (PPE) and face coverings**
PPE protects the user against health or safety risks at work. It includes gloves, eye protection, and respiratory protective equipment. Where you are already using PPE in your daily activity to protect against non-COVID-19 risks, you should continue to do so. Wearing a face covering is mandatory. The evidence suggests that wearing a face covering may protect others if you are infected but have not developed symptoms.

It is important to use face coverings properly and wash your hands before putting them on and taking them off. Wash your hands thoroughly with soap and water for 20 seconds or use hand sanitizer before putting a face covering on, and after removing it. When wearing a face covering, avoid touching your face or face covering, as you could contaminate them with germs from your hands. Change your face covering if it becomes damp or if you’ve touched it.

You should be prepared to remove your face covering if asked to do so by security officers and staff for the purposes of identification.

**Training and Consultations**
Providing regular trainings to our Users is of paramount importance. The training will be provided as a combination of a face to face meeting, zoomings and remote assistance using web apps. Please do not come in person to schedule your training. Planning for experiments, consultations and data discussions are executed remotely.

Please request a zooming via microscopy@yorku.ca, mjaklew@yorku.ca or facetime/whatsup @ (647)-567-7295.

**Coming to @YorkUMicroscopy**
Please follow York University guidelines when coming to Life Science Building and leaving Life Science Building. Access to the Facility is restricted to by appointment only. Please see QReserve booking information. Only one User is allowed at the Microscopy Laboratory at one time. Please arrive with minimum belongings to avoid any unnecessary contact with touchable surfaces. Please wash and sanitize your hands at the nearest washing station before opening the laboratory door. Immediately after arrival please glove yourself with gloves provided. Users with skin allergies are asked to contact microscopy@yorku.ca in advance. Please be reminded that face covering is mandatory for the entire duration of your booking.
Accidents, security and other incidents
To prioritise safety during incidents for example, a chemical spill, fire or break-in, Users do not have to stay 2m apart if it would be unsafe. Users involved in the provision of assistance to others should pay particular attention to sanitation measures immediately afterwards including washing hands and changing gloves and face covering.

Managing Risk - Specimens
All sample containers should be wiped down with disinfectant before bringing them to the facility. Slide boxes, styrofoam boxes, containers if they are used to keep live samples warm during transport must be wrapped in a cling wrap.
Boxes cannot be placed directly on benches. A fresh cling wrap has to be applied first and removed after.
Specimens submitted for a test by staff shall be placed in a dedicated Facility fridge on a main floor. Specimens submitted for remote controlled experiments are to be delivered to the shipping and receiving area in 002 Petrie to avoid physical contact.

Managing Risks - Laboratories
The microscopy laboratory layouts promote social distancing between Users. Managing occupancy levels, to maintain social distancing in labs is sufficient by strictly adhering to the QReserve bookings.
Having multiple cleaning and personal protective equipment and measures provides redundancy that is the best way to ensure safety when Users operate microscopes.
Cleaning is a shared responsibility. Users are expected to follow strictly the cleaning procedures. Users are responsible for cleaning the microscopes and the workstations before and after their session. The staff will monitor and perform periodic in depth cleaning.
To limiting use of high-touch items and shared office equipment the electron microscopy specimens will be prepared in advance by staff (please see instructions how to safely drop off your specimens). Light microscopy Users are asked to arrive with your specimens/reagents/oil properly secured. You must not place your specimens directly on benches. Please cover the bench with a single use cling wrap and then place your materials on it.
Immediately upon arrival please don gloves. You shall remain gloved during the entire duration replacing glove as often as needed. Should you need to leave the laboratory for any reason – you need to wash and disinfect your hands before re-entry and don a fresh pair of gloves inside the microscopy room.
Please do not touch shared control terminals with bare hands.
All touchable surfaces including keyboards, computer mouse, eyepieces, focus knobs, joysticks) are possible means of transmitting SARS-CoV-2. A layer of new cling wrap should be applied before starting the microscopy session and remove the wrap at the end of their session.
Transmission through the eye (conjunctiva) is considered possible. A safety glasses are recommended. The eyepiece cups are removed from the system till further notice.
Users should not touch bare surfaces without gloves. That includes door handles, microscope parts, and computers including peripheral devices.
The Facility ensures a good airflow in laboratories but take care not to cause instrument performance issues. A time gap between users allows a several-fold air exchange and to let any aerosol settle.

Cleaning the microscope
Users must carry out cleaning procedures in order for the Facility to stay open. Please be advised that most of the cleaners are based on 70% ethanol solutions. If a User is aware of any allergic reaction to the cleaner they will be asked to deliver specimens in a safe manner and participate in a remote
Do not use spray bottles to avoid creating explosive aerosols.

<table>
<thead>
<tr>
<th>Surface</th>
<th>Cleaning and disinfecting method</th>
</tr>
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<tbody>
<tr>
<td>Exterior casing and mechanical external surfaces</td>
<td>Wipe with a kimwipe that is dampened with a disinfectant.</td>
</tr>
<tr>
<td>Eyepieces</td>
<td>It is mandatory to have personal safety goggles while operating a Microscope System. For disinfection, only wipe the external surface of the eyepiece with disinfectant if needed. Frequent disinfection can cause deterioration of the optical coating of the eye lens. The eyecups are permanently removed from the system. Never immerse (dip) the entire eyepiece into disinfectant. This will damage the eyepiece and make it unusable. The disinfectant leaves a chemical residue on the surface. To remove the residue, refer to Cleaning an Optical Surface.</td>
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<tr>
<td>Objective front lens</td>
<td>Gently wipe the front lens using lens paper which is damped in an Optical Cleaning Solution. Frequent cleaning can cause deterioration of the coating of the front lens. The material of the objective front lens is sensitive to chemicals. Don't use disinfectant on the front lens</td>
</tr>
<tr>
<td>Soft plastic parts and rubber surfaces</td>
<td>Gently wipe the soft plastic parts and rubber surfaces with a clean cloth that is dampened with a disinfectant. Discolouration can occur if alcoholic or other disinfectant are used regularly on a rubber surface or soft plastic parts. If the surface is frequently contacted, it is strongly recommended to wear gloves as a preventive measure while operating the Microscope System.</td>
</tr>
<tr>
<td>IT equipment</td>
<td>Gently wipe the soft plastic parts and rubber surfaces with a clean cloth that is dampened with a disinfectant. Keyboards and mice need to be covered by a cling wrap. Please use a fresh cling wrap everytime and dispose of it after you are done. Gloves are mandatory.</td>
</tr>
<tr>
<td>Touchscreen</td>
<td>Wipe with a clean cloth that is slightly dampened with a disinfectant.</td>
</tr>
<tr>
<td>Internal components and optical surfaces</td>
<td>Only ZEISS service representatives, who have specialized knowledge, are permitted to clean the internal components</td>
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**Keeping the workplace clean**

Frequent cleaning of objects and surfaces that are touched regularly, such as door handles and testing
surfaces are requested of each User. Please make sure that generated waste is disposed of safely following the building regulations.

**Communications and Meetings**
To reduce transmission due to face-to-face all meetings will be scheduled as zoomings. The Facility website will be updated daily, if any changes to the equipment status. QReserve booking is mandatory. All microscope rooms are equipped with web cameras and Zoom/Teams software to create a comfortable and safe virtual meeting space.

**Common areas in Life Sciences Building**
Please refer to York University regulations.

**Additional information**
https://microscopy.info.yorku.ca/
https://yubettertogether.info.yorku.ca/