

Research Resumption at PennVet Spring Phase

Introduction

This plan has been developed to ensure the safe return to research at PennVet and to meet the requirements outlined by the Provost's Research Resumption plan, <https://research.upenn.edu/resources/resumption/>. It has been developed by PennVet's Current Research Restart Team that includes *Phil Scott, William Beltran, Montserrat Anguera, Chris Hunter, Boris Striepen, Igor Brodsky, Hannah Galantino-Homer, Ellen Pure, Oliver Garden, Katrin Hinrichs, Sparky Lok, Kim Kopple and Robert Schieri*. The purpose of this plan is to provide an overview for faculty and staff of what will be required at PennVet for a resumption of research. As more information becomes available this plan may be modified accordingly.

This School plan is guided by the following principles:

- The health and safety of the research community, and the community at large, should be protected.
- The careers of early stage researchers should be protected.
- The PIs/Supervisors are best equipped to define physical distancing plans and appropriate shifts in their labs. Plans will differ depending upon the types of research and physical location.
- Laboratory plans should involve discussion with the research personnel who do the work in the labs and communicated to all lab members.
- COVID-19 research will continue to be prioritized until full operations are resumed.
- Compliance and enforcement mechanisms are required at the school and at lab levels.
- Personnel will comply with all University guidelines regarding research resumption

The resumption of research activities on campus will be accomplished in different phases:

- Phase I: Increase of prioritized research with enforced population density restrictions and telework continued.
- Phase II: Expanded scope of research operations increasing population with physical distancing enforced.
- Fall Phase: Eliminates the explicit population density restriction while requiring social distancing in all spaces, anticipates some expansion of activities in field work and human subjects' studies.
- **Spring Phase:** Appropriate social distancing is still enforced, allows for all types of research. Additionally, Undergraduate research may be conducted on a limited basis, per University Policy
- Phase III: Return to full research operations, with new awareness and hygiene practices as the norm and telework utilized where possible.

Research Discontinuation

During research discontinuation all research activity is halted except that determined to be essential and is very narrowly defined. COVID-19 activities that could have immediate impact on the pandemic are designated as essential; COVID-19 related activities not severely impacted by a delay are planned and negotiated but not initiated until research resumes. Physical distancing, appropriate PPE, and sanitation protocols are in place.

Research Resumption Spring Phase

During this phase, occupation density is restricted by compliance with 6' social distancing in the labs and research spaces, as well as in the associated open spaces. The majority of requirements from Phase II and the Fall Phase remain in effect, including requirements for school and faculty research resumption plan approval, exception approval for research related travel, office use approval, field work approval and processes for clinical and non-

clinical studies involving human subjects. Expansion of undergraduate research is anticipated upon a required review.

Individual laboratory research resumption plans will be required for each laboratory and for all cores prior to an increase in lab occupation. The population density requirement as a percentage of normal occupancy has been eliminated, however, 6' social distancing must be maintained during all activities, including entering and leaving labs as well as in the general spaces within the buildings. The number of people that can be accommodated will depend on the configuration of the space; consequently, it is generally not expected that laboratory occupation will reach 100% of normal operations. Strategies such as extended lab hours, shifted schedules, and weekend access will still be required to optimize research progress.

Plans will also address the following issues as they relate to their labs: Access to and appropriate use of PPE (masks provided by PennVet, other PPE by the labs); physical distancing plans; a plan to minimize the number of people in labs or research space (for example, staggered scheduling); enhanced sanitation plans; and how lab activity would be reduced if there is a spike in COVID-19 cases. A more detailed description of these requirements is in Appendix 2. Initial plans, as well as any significantly modified plans, will be submitted to the department chair for review and to the Vice Dean for Research and Academic Resources for final approval. Principal Investigators (PIs) are encouraged to review the research resumption checklist provided by EHRS (<https://ehrs.upenn.edu/covid-19/research-resumption-checklist>).

Training for implementation of physical distancing, appropriate use of PPE, handwashing, and sanitation is available from EHRS. All personnel will complete Penn's Environmental Health and Radiation Safety (EHRS) COVID-19 training that is available in knowledge link prior to returning for campus:

- "Penn Guide to Returning to Campus." for non-lab personnel
- "Prevention of Covid 19 Transmission in Laboratories." for lab personnel

The laboratory head will designate which personnel will return to work in-person. Scheduling flexibility in consideration of child-care, elder care, individual risk factors, etc. is encouraged. A risk mitigation plan has to be developed if the research involves field work/travel or involves community work.

School level resumption plans to promote increased safety and ensure compliance have been developed, and include specific trafficking patterns, use of elevators, and appropriate signage. The school will provide masks and disinfectants to the labs. All activity that can be performed remotely should be performed remotely, including meetings. In person meetings are generally not permissible. In cases where in person meeting is essential to research progress, an exception can be requested from the school's administration. Room capacity is taken into consideration for an 'in person' meeting.

The physical distancing measures and other enhancements to ensure safety that have been developed for common areas is in Appendix 3. Should accurate FDA approved virology and serology testing become available for wide spread use, it will be added to the measures outlined above to inform prioritization of on-campus activity.

Tracking personnel and health monitoring: Faculty, students and staff must be compliant with University testing requirements and PennOpen Pass is utilized.

PennOpen Pass, <https://pennopen.med.upenn.edu/>, provides instructions and support for those who test positive. If an individual tests positive for COVID-19:

- The individual will not report to campus, will notify his/her supervisor of his/her absence and will be contacted by a contact tracing team.
- If an individual tests positive outside of a Penn testing site, PennOpen Pass should be completed, and the supervisor should be made aware of the test results if the individual has been on campus.

- The contact tracing team will determine if there were any close contacts (within 6' for greater than 15 minutes cumulatively) as well as their respective risk of transmission and associated quarantine recommendation.
- Individuals deemed close contacts will be asked to quarantine for up to 14 days.
- If the COVID-19 positive individual was on campus during the last three days, contact EHRS for guidance on cleaning and potential 24-hour laboratory shut down (if the positive case was present in the laboratory the same day as testing positive).
- If more than one person in the same laboratory tests positive within a 7-day period, an exposure control team consisting of representatives from Occupational Medicine, EHRS, contact tracing team, PennOpen Pass and Campus Wellness will convene a meeting to review and assess the situation, and discuss strategies for breaking the chain of viral transmission.
- Students should refer to the Spring 2021 Campus Compact (the "Compact"), <https://coronavirus.upenn.edu/content/student-campus-compact>, for additional guidance.

School level monitoring will occur by an evaluation of each resumption plan at the school level, which will ensure prioritized research and management of population density across research floors/buildings, as well as distancing plans for each lab. No in-person meetings will occur in conference rooms unless approved. The physical distancing measures and other enhancements to ensure safety developed for common areas at PennVet is in Appendix 3.

Compliance: Compliance will be assessed the PI's own tracking. The use of PPE and physical distancing will be enforced locally by designated individuals who will walk-thru labs based upon a schedule developed by the Vice Dean of Research and Academic Resources, as well as by EHRS who will perform regular compliance sweeps. A series of escalating consequences is in place for repeated non-compliance.

Research personnel may confidentially report non-compliance or concerns through the University reporting website <https://secure.ethicspoint.com/domain/media/en/gui/22868/index.html> or may contact the Research Compliance Officer in the Office of the Vice Provost for Research. Additionally, students and postdocs with concerns about the School-based procedures may contact provost-ed@upenn.edu for students, or vpr@upenn.edu for postdocs, or their department chair. Research personnel are given the contact number if there is a need to report a concern anonymously: 215-P-COMPLY.

Communication: One of the most important aspects of this plan is to ensure it is communicated effectively to the PIs and research personnel. PennVet will use several communication methods, including email and discussions at department meetings. A copy of the plan will be distributed to the faculty and stored at inside.vet. In addition, a succinct version with the specific guidance for safety will be provided to the research personnel. Signage will be a major mechanism of communication at the entrance to lab floors and elsewhere and will reinforce the PPE and physical distancing requirements.

Continual review of the safety measures outlined above. The research restart team no longer meets weekly to review issues of compliance; the School Research Council now reviews any new procedures and protocols that can further improve safety, and alter plans as needed.

University Guidelines. All personnel must comply with all University guidelines regarding research resumption, including those listed on the website for the Vice Provost for Research, <https://research.upenn.edu/resources/resumption/>

Appendix 1: Procedures for COVID-19 positive cases for PennVet

As outlined above, PennOpen Pass, <https://pennopen.med.upenn.edu/>, provides instructions and support for those who test positive. If an individual tests positive for COVID-19:

- The individual will not report to campus, will notify his/her supervisor of his/her absence and will be contacted by a contact tracing team.
- If an individual tests positive outside of a Penn testing site, PennOpen Pass should be completed, and the supervisor should be made aware of the test results if the individual has been on campus.
- The contact tracing team will determine if there were any close contacts (within 6' for greater than 15 minutes cumulatively) as well as their respective risk of transmission and associated quarantine recommendation.
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- If the COVID-19 positive individual was on campus during the last three days, contact EHRS for guidance on cleaning and potential 24-hour laboratory shut down (if the positive case was present in the laboratory the same day as testing positive).
- If more than one person in the same laboratory tests positive within a 7-day period, an exposure control team consisting of representatives from Occupational Medicine, EHRS, contact tracing team, PennOpen Pass and Campus Wellness will convene a meeting to review and assess the situation, and discuss strategies for breaking the chain of viral transmission.

Appendix 2: Requirements for research resumption in laboratories and cores.

All labs/cores need to ensure proper PPE, physical distancing, tracking of their personnel and sanitation within the labs. The following are the guidelines to meet these requirements.

Enhanced PPE: Masks are required for all personnel at PennVet. These can be fabric masks. Upon arrival in the laboratory, fabric masks should be removed and stored in a paper bag. Hands should be washed and surgical masks put on; in the laboratory all personnel are required to wear a surgical-style mask. The only exception to wearing a mask is when eating lunch, where personnel should be physically distancing. Surgical-style masks will be provided by the school, and if not soiled can be worn for several days. **Lab coats** should be worn at all times in the lab and are provided by the labs. Cleaning of lab coats will be coordinated by facilities. **Safety glasses or face shields** will be provided by the lab and required at all times in the lab. All research personnel at PennVet are required to take the EHRS training (listed in body of plan) that is available in knowledge link prior to returning to campus. It is the job of the PI to verify that EHRS training has occurred. In addition, to reinforce this training, PIs should review with their research personnel appropriate use of PPE. All normal EHRS rules and regulations for safety in the laboratories are required (e.g. shorts and sandals may not be worn into the lab, even under a lab coat).

Physical distancing- Labs: As each lab differs in the number of personnel, physical layout and work requirements, it will be the responsibility of the PI to prepare a comprehensive plan for how enhanced physical distancing can be optimized in his/her lab. For those labs with an open floor plan, this will require coordination between the PIs who share open space to ensure appropriate 6' social distancing. This plan that is developed has to be communicated to all research personnel prior to research resumption.

Tracking research personnel at PennVet: All research personnel will continue use PennOpen Pass.

Enhanced sanitation (labs, common research space, equipment): All laboratories should be maintained in a manner that would facilitate daily cleaning. Specifically, lab benches, desks, common equipment areas, etc. should be clear, organized and disinfected at the beginning and at end of each day. This will be the responsibility of the lab. The School will provide the disinfectant to all the labs.

Lab plan for Research Resumption: Your lab plan will be submitted to your Department Chair and the Vice Dean of Research & Academic Resources for review and approval **prior to returning to the lab**. The lab plan should also be shared with your research personnel and optimally your lab members should contribute to the plan as appropriate.

Things that should be included:

- 1) PI name, lab location, a brief paragraph on the nature of the research and its priority. Consider carefully long-term research projects that might be influenced by a shutdown of research if there is a spike in cases.
- 2) Identification of spaces for work including a floor plan or sketch indicating the locations for personnel in the lab or other spaces associated with your lab (e.g. tissue culture rooms; shared equipment rooms).
- 3) An excel spreadsheet listing the research personnel who will be returning. Information to be provided include name, position, email, and telephone number if available. Updates are made to the excel spreadsheet when new laboratory members arrive or depart.
- 4) The number of research personnel you can fit with appropriate distancing in your lab space at any one time. **This may not be the number allowed to return**, as that number will also be determined by the

School when taking into consideration the overall research resumption plan. Once these plans are submitted, your Department Chair will let you know the number of personnel who will be allowed to return to your lab.

- 5) A description of how you will use shifts and a seven-day week to ensure the density of the lab spaces are maintained at a low level. Recognizing that shifts may change depending upon the experiments involved you may elect not to identify the exact times for these shifts in this plan. However, you should be keeping a calendar that is available to all lab members that shows the times when personnel are in the lab.
- 6) Confirmation that you have appropriate PPE (masks provided by PennVet) for research personnel, and confirmation that your research personnel have taken the EHRS training available in knowledge link
- 7) A description of how you will maintain good communication with your lab (examples include Microsoft teams, Slack, WhatsApp, etc.).
- 8) Identification of any shared equipment in your lab, and how you will ensure that it is used safely.
- 9) Description of how you would ramp down your research should this be necessary

Cores: Cores should provide a similar plan identifying how common equipment would be used and sanitized; the personnel involved, and other unique aspects of the cores that need to be addressed to ensure safety.

Appendix 3: Facilities Issues with Campus Re-occupancy

School level facilities issues as related to resumption of research will be overseen by the following committee: *Robert Schieri, Kim Kopple, Chris Phillips and Bryan Isola*. The committee will meet as needed to ensure all issues described below are addressed. The committee will coordinate its activities with the Research Council at PennVet, and FRES and EHRS as appropriate.

1. Physical Distancing
 - a. Common spaces will have posted occupancy limits
 - b. Furniture will be removed and that remaining will be placed to ensure physical distancing
 - c. Outdoor furniture will be provided for lunch and breaks and placed to allow physical distancing
2. PPE
 - a. Masks will be provided by the school
 - b. Laundry of research lab coats at Penn Vet Philadelphia campus will be done in Ryan Hospital
3. Disinfectant
 - a. School will provide disinfectants to labs in spray bottles.
 - b. At frequent touch points wipes and hand sanitizers will be provided.
4. Entrances
 - a. Research personnel will enter and exit at designated doors.
5. Vertical circulation
 - a. Elevators- only one person per elevator- signage to indicate
 - b. When possible, up and down staircases will be identified.
6. Restrooms
 - a. Door signs will indicate the number of occupants; knock for admission
7. Signage
 - a. Signage will be provided by the school, and it is anticipated that the turnaround time is short to obtain signage. Signage will be evaluated on an ongoing basis to determine if additional signage is required.
8. Dividers
 - a. PIs will communicate to facilities any special dividers that would improve safety in their labs, which would then be provided by the school.
9. In-lab deliveries (e.g. compressed gas, dry ice): delivery personnel will be required to wear masks and physically distance.
10. Housekeeping
 - a. Communication to the returning PennVet personnel will indicate how housekeeping will work. All housekeepers have received PPE training
 - b. Housekeeping will not sanitize within the labs but will sanitize high touch common areas.
11. HVAC
 - a. Communications to personnel will indicate the current HVAC systems for their space and indicate where doors should not be left open due to air handling.

