Minimum Training and Experience Requirements for BSL-3/ABSL-3 Work with SARS-CoV-2 and Other High Risk Pathogens

Effective May 27, 2020*

INTRODUCTION & PREMISE

- SLU researchers periodically express interest in conducting research with high risk pathogens such as SARS-CoV-2.
- Risk assessments are essential to properly classify research containment as BSL-2 or BSL-3 (and/or ABSL-2 or ABSL-3) based on protocols submitted to the SLU Institutional Biosafety Committee (IBC) for review and approval.
- An integral factor in approving protocols requiring BSL-3 and/or ABSL-3 containment is the training and experience of the principal investigator (PI) and their staff in being safe and proficient at working in BSL-3 and/or ABSL-3 laboratories.
- The safety of our SLU researchers and the community at large is of paramount concern and importance to the IBC in reviewing and approving work with high-risk pathogens. To that end, minimum training and experience requirements for BSL-3 and/or ABSL-3 work with high-risk pathogens are essential to minimize the risks of accidental exposures, releases and disease transmission.

The following requirements are hereby formalized and adopted:

A. Minimum Training Requirements for All BSL-3/ABSL-3 Personnel

1. **Select Agent and High Containment (BSL-3/ABSL-3) Awareness Training *(provided by BSO):***
   - **(a)** The BSL-3/ABSL-3 candidate (whether experienced or not) must successfully complete the BSL-3 training course. Currently, this consists of a PowerPoint presentation provided by the SLU Biological Safety Officer (BSO) or designee.
   - **(b)** This training is required to be completed annually to maintain BSL-3/ABSL-3 access.
2. **ABSL-3 Training *(provided by Comparative Medicine (CM)):***
   - **(a)** Personnel planning to perform ABSL-3 work (whether experienced or not) must successfully complete the ABSL-3 training course provided by the SLU CM Manager or designee.
   - **(b)** This course includes a PowerPoint presentation and a tour of the ABSL-3 facility.
   - **(c)** The training course is required to be completed annually to maintain ABSL-3 access.
3. **Powered Air Purifying Respirator (PAPR) Training *(provided by BSO or Comparative Medicine):*** If work in BSL-3/ABSL-3 will require use of a PAPR respirator, the following training must be provided as stated below.
   - **(a)** If the BSL-3/ABSL-3 user's work will require use of a PAPR in the BSL-3 laboratory only, or in both BSL-3 and ABSL-3 laboratories, then training is provided by the BSO.
   - **(b)** If the BSL-3/ABSL-3 user's work requires PAPR use only in the ABSL-3 laboratories, then training will be provided by the CM Manager.

(c) The required training course consists of a PowerPoint presentation and a hands-on experience with BSO or CM Manager that includes donning, doffing, and maintenance of the PAPR unit.

(d) This training is required to be completed annually to maintain BSL-3 and/or ABSL-3 access for which PAPR use is required.

(e) Viewing a series of training videos provided by vendor is optional

B. Minimum Experience Requirements for All BSL-3 / ABSL-3 Principal Investigators (PIs)

1. PI's Previous Experience Working at BSL-3 and/or ABSL-3

(a) Past experience of the PI will be considered on a case-by-case basis.

(b) Evidence of previous experience will include review of PI's C.V. and an in-person interview by the Biological Safety Officer (BSO) or his/her designee. This includes work with Risk Group 2 (RG2) and Risk Group 3 (RG3) biological agents in a BSL-3 and/or ABSL-3 facility.

(c) Laboratory inspections and incident reports for that PI's laboratory over the past three years will also be reviewed.

(d) If the PI's past BSL-2/ABSL-3 experience is deemed insufficient during the past three years by the BSO, additional BSL-3/ABSL-3 training may be required. *(See B. 2. below)*

2. PI New to BSL-3 and/or ABSL-3 Work

(a) PI's new to BSL-3/ABSL-3 work must demonstrate to the BSO (or designee) proficiency in safely and competently functioning in a BSL-3 or ABSL-3 high containment laboratory, including donning and doffing PPE, and performing some routine procedures (possibly using lower risk RG2 biological materials or mock inconsequential non-infectious materials) while wearing required PPE, including respiratory protection. Procedures covered by the BSO include:

Entry Procedures

- ☐ Donning PPE
- ☐ Security (access control systems)
- ☐ Verify negative directional airflow

Working in High Containment

- ☐ Proper use of Biosafety Cabinet
- ☐ Safe sharps use and disposal
- ☐ Proper pipetting technique
- ☐ Proper use of centrifuge
- ☐ Transporting infectious materials within the lab
- ☐ Decontaminating work area
- ☐ Incident response

Exit Procedures

- ☐ Decontamination
- ☐ Doffing PPE

(b) The BSO (or designee) must certify the new BSL-3/ABSL-3 PI has successfully demonstrated mastery of safe practices and procedures in the BSL-3/ABSL-3 laboratory delineated in B.2.(a) above and is familiar with the BSL-3/ABSL-3 facility plans and procedures and demonstrates an understanding of facility engineering controls.

C. Requirements for BSL-3 / ABSL-3 Lab Group Members.

Training of lab group members on the research procedures specific to the research to be conducted in the BSL-3/ABSL-3 laboratory is the responsibility of their BSL-3/ABSL-3 supervising PI.

D. Requirements for IBC and IACUC Protocol Applications (PI New to BSL-3/ABSL-3)

A PI who is not experienced working in BSL-3/ABSL-3 labs and who wishes to submit a new IBC and/or IACUC protocol requiring BSL-3/ABSL-3 containment is required to complete the training outlined in Section A.1.(a) above and to also review the applicable BSL-3 and/or ABSL-3 Biosafety Plans prior to developing and submitting their IBC and IACUC protocol application.

APPROVALS

These training and experience requirements for BSL-3/ABSL-3 work with SARS-CoV-2 and other high-risk pathogens were approved in May 2020 by the IBC Chairperson, Vice President for Research, and Dean of the School of Medicine. Minor updates for clarity were made in March 2023.

Updated: March 30, 2023