# COVID-19 Research Laboratory Biosafety Guidelines

## Research Activities

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| Any work that involves culture or propagation of the SARS-CoV-2 virus OR any generation of recombinant viruses  
- Work with seed stocks, working stocks or specimens with intent or potential to grow live virus  
- Virus isolation, characterization, expansion | BSL3/ABSL3<sup>2</sup> | Phil Hanna, Ph.D., BSL3 Facility Director  
phil.hanna@umich.edu, (734) 615-3706  
Janet Follo, Biosafety Officer / RO  
follo@umich.edu, (734) 647-3133  
EHS Biosafety @umich.edu  
(734) 647-1143  
**Advance Review/Approval Required:**  
U-M Institutional Biosafety Committee (IBC): ibcstaff@umich.edu |
| Use of live virus in functional assays  
- Plaque/Focus Forming Unit assays  
- Serologic virus capture/binding assays  
- Therapeutic MIC assays  
- Live cell sorting with intact virus | | Environment Health and Safety (EHS)  
EHSBiosafety@umich.edu  
(734) 647-1143  
**Advance Review/Approval Required:**  
U-M Institutional Biosafety Committee (IBC): ibcstaff@umich.edu |
| Use of live virus in animals<sup>2</sup> | | |
| Processing, aliquoting or preparing specimens for use and storage  
- Preparation of chemical or heat-fixed specimens for microscopic analysis  
- Nucleic acid extraction of specimens for molecular analysis  
- Preparation of inactivated specimens for other laboratory assessments  
- Diagnostic tests (e.g. serology) that DO NOT involve activities with the potential to propagate virus  
- Inoculating bacterial or mycological culture media  
- Analysis of specimens originating in BSL3 that have been inactivated by a method approved by UM IBC/EHS-Biosafety | BSL2 with UM COVID-19 Standard Practices<sup>3</sup> | Janet Follo, Biosafety Officer / RO  
follo@umich.edu, (734) 647-3133  
EHS Biosafety @umich.edu  
(734) 647-1143  
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| Analysis of already extracted nucleic acid preparations<sup>4</sup>  
- Pathologic/microscopic examination of fixed specimens<sup>4</sup>  
- Routine staining and microscopic analysis of fixed smears<sup>4</sup>  
- Routine examination of bacterial and mycotic cultures | BSL2 | |

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1 Adapted from Duke University and Johns Hopkins University  
2 Facilities for performing ABSL3 work are currently unavailable  
3 COVID-19 Standard Practices  
- All handling of virus and specimens must be performed in a Biological Safety Cabinet (BSC)  
- Centrifuge safety cups are required  
- Microplate sealing film must be used for removal of plates from BSC for further testing  
4 BSL1 or BSL2 pending review by EHS/IBC

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U-M EHS and IBC, 5/3/21