## COVID-19 Research Laboratory Biosafety Guidelines

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| ▪ Any work that involves culture or propagation of the SARS-CoV-2 virus OR any generation of recombinant viruses  
  o Work with seed stocks, working stocks or specimens with intent or potential to grow live virus  
  o Virus isolation, characterization, expansion  
| ▪ Use of live virus in functional assays  
  o Plaque/Focus Forming Unit assays  
  o Serologic virus capture/binding assays  
  o Therapeutic MIC assays  
  o Live cell sorting with intact virus  
| ▪ Use of live virus in animals²  
| ▪ 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  
| ▪ Analysis of already extracted nucleic acid preparations⁴  
| ▪ Pathologic/microscopic examination of fixed specimens⁴  
| ▪ Routine staining and microscopic analysis of fixed smears⁴  
| ▪ Routine examination of bacterial and mycotic cultures  
| | BSL3/ABSL3² | Phil Hanna, Ph.D., BSL3 Facility Director  
| | | pchanna@umich.edu, (734) 615-3706  
| | | Janet Follo, Biosafety Officer / RO  
| | | follo@umich.edu, (734) 647-3133  
| | | Environment Health and Safety (EHS)  
| | | EHSBiosafety@umich.edu  
| | | (734) 647-1143  
| | | Advance Review/Approval Required:  
| | | UMOR Research Prioritization Committee, research.covid19@umich.edu  
| | | and  
| | | U-M Institutional Biosafety Committee (IBC): ibcstaff@umich.edu  
| | | BSL2 with UM COVID-19 Standard Practices³ | Janet Follo, Biosafety Officer / RO  
| | | follo@umich.edu, (734) 647-3133  
| | | Environment Health and Safety (EHS)  
| | | EHSBiosafety@umich.edu  
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| | | BSL2 |  
| | | and  
| | | U-M Institutional Biosafety Committee (IBC): ibcstaff@umich.edu  

¹Adapted from Duke University and Johns Hopkins University  
²Facilities for performing ABSL3 work are currently unavailable  
³COVID-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  
⁴BSL1 or BSL2 pending review by EHS/IBC