## University of Miami SARS-CoV-2 (COVID-19) Research Laboratory Biosafety Guidelines

<table>
<thead>
<tr>
<th>Research Activity</th>
<th>Biosafety Level</th>
<th>Regulatory Requirements</th>
</tr>
</thead>
</table>
| Cultures of or using live SARS-CoV-2 virus, including isolation, characterization, expansion, and in assays, including virus capture/binding, therapeutic MIC, and live cell sorting  
  - Cultures/isolates must be transported as Category A, UN2814 | BL3 | There are currently no BL3 facilities at the University of Miami, therefore this research is not authorized at the University |
| Use of live SARS-CoV-2 virus in animals | BL3-N | There are currently no BL3-N facilities at the University of Miami, therefore this research is not authorized at the University |
| Processing, aliquoting or preparing specimens for research use and storage  
  - Preparing samples to be fixed or otherwise inactivated for lab assessment or microscopic analysis  
  - Preparing samples for nucleic acid extraction of specimens for culture or molecular analysis | BL2 with enhancements |  
  - Biosafety Officer (BSO)  
  - Institutional Review Board (IRB)  
  - Institutional Biosafety Committee (IBC) |
| Work with attenuated strains or otherwise non-viable virus* | BL2-N / BL3-N |  
  - Biosafety Officer (BSO)  
  - Institutional Animal Care and Use Committee (IACUC)  
  - Institutional Biosafety Committee (IBC) |
| Performing diagnostic tests (e.g. serology) that do not involve activities with the potential to propagate virus  
  - Final packaging of specimens already in a sealed, decontaminated primary container for transport to collaborating laboratories for additional analyses  
  - Specimens from suspected or confirmed cases must be transported as Category B, UN3373 | BL2 |  
  - Biosafety Officer (BSO)  
  - Institutional Review Board (IRB)  
  - Institutional Biosafety Committee (IBC) |
| Work/analysis of already fixed or inactivated samples, including:  
  - Molecular analysis of already extracted nucleic acid preparations  
  - Pathologic/microscopic examinations  
  - Routine staining of fixed smears | BL1 |  
  - Institutional Review Board (IRB)  
  - Biosafety Officer (BSO) |
| Assays/testing that is performed on COVID-19 patients and concluded/discarded in patient room | Clinic Patient Room |  
  - Institutional Review Board (IRB)  
  - Biosafety Officer (BSO) |
| Collecting samples from individuals recovered from COVID-19, or otherwise healthy individuals with no signs suspected of COVID-19 | BL2 |  
  - Biosafety Officer (BSO)  
  - Institutional Review Board (IRB) |

**Contacts:**  
- Biosafety Office (BSO) – contact Shane Gillooly at sxg1519@med.miami.edu  
- Institutional Biosafety Committee (IBC) – contact Lizzeth Meza at lmeza@med.miami.edu  
- Institutional Animal Care and Use Committee (IACUC) – contact Ellen Kapsalis at ekapsali@med.miami.edu  
- Institutional Review Board (IRB) – contact Cindy Gates at cmg345@med.miami.edu

- Specimens are defined as, but not limited to, blood, serum, plasma, tissues, feces, urine, sputum, mucosal swabs or washes/secretions collected from any species.
- Required Enhancements to standard BL2:  
  - Any procedure with the potential to generate aerosols or droplets (e.g. vortexing, cell sorting, ELISA plate washing) will be performed in a certified Class II Biological Safety Cabinet (BSC). BSC must be decontaminated with an EPA approved disinfectant for coronavirus.  
  - Centrifugation of specimens must be performed using sealed centrifuge rotors or sample cups.  
  - The use of sharps should be eliminated wherever possible.
*Will need to be assessed on a case by case basis by the IBC*