**Custom In Vitro Culture Infection Request / Study Plan**

**Date:**

**Requestor (lab point of contact):**

**Email:**

**Laboratory PI:**

**Duke Fund Code:**

**Overview:**

Due to the world-wide COVID-19 pandemic and urgent public health crisis, the need for *in vitro* cell culture infection experiments is imperative. To address this need, the Duke RBL Virology Unit can run custom *in vitro* cell culture infection experiments under BSL3 containment as a service. Briefly, cells/organoids of interest are prepared by the requestor and delivered ready to go to the RBL Virology Team. Prepared cell cultures will then be infected with a multiplicity of infection (MOI) of SARS-CoV-2 (strain USA-WA1/2020) determined by the requester. Samples will be collected, teste, and if required, inactivated for transfer to lower containment according to the requestors defined timeline.

Containment use fees, PPE, staff labor time and assay consumables will be invoiced via CoreResearch@duke. Due to the high demand we are unable to provide individualized cost estimates.

**Questions regarding experimental design and scheduling can be directed to Dr. Trey Oguin:**

**thomas.oguin@duke.edu**

**Requesting Party Requirements:**

* + - All cells/treatments etc. are approved to be used safely by laboratory staff. Documentation required at time of submission.
		- All plates/materials submitted for testing will be labeled clearly with printed labels, and a digital sample manifest will be provided by requester at time of submission. No hand-written items will be accepted.
		- Culture medium and required supplements must be provided by requesting party.

**Available Routine Assays / Duke IBC-Approved Inactivation Procedures:**

* + - Live SARS-CoV-2 qRT-PCR Viral Copy Number (cultures, biospecimens)
		- Live SARS-CoV-2 Plaque/TCID assays (cultures, biospecimens)
		- Inactive Viral RNA (Qiagen Kit) from culture supernatant
		- Inactive host cell lysate (Trizol or equivalent)
		- Heat inactivated culture supernatant (60°C, 60 minutes)
		- Detergent lysed cells (IGEPAL-630+Heat, 95°C, 30 minutes)
		- Formalin fixed plates

**Purpose of Study:**

**What you (the requestor) will bring to the BSL3 Lab team:**

*(please tell us plate layout, cell species/type/number, culture media for diluting virus, treatments etc.)*

**Experiment Timeline:**

*(please detail the timeline for virus infection, post-infection treatments/ sample collection, etc.)*

**Deliverables:**

*(please detail the assay measurements and/or inactivated samples you would like from this experiment)*