# **Boston University** Medical Campus

## **Community Liaison Committee** (CLC)

National Emerging Infectious Diseases Laboratories (NEIDL)

**MEETING NOTES**

Friday September 25, 2020

2:00 pm. * Zoom

**ATTENDING**

J. Kevin Fisher, CLC; Jean Lee, CLC; Joe Lillis, CLC; Robert Timmerman, CLC; Jim Keeney, CLC; Kenneth Nwosu, CLC; Valeda Britton, Executive Director, Community Relations/MED, BU; Chimel Idiokitas, Director, Community Outreach/MED, BU; Elizabeth Leary, Executive Director, Government & Community Affairs; Anna Honko, Associate Professor, BU Microbiology; Dr. Ronald Corley, BU Department of Microbiology, Director, NEIDL

Meeting opened at 2:05 pm

Dr. Corley introduced Dr. Anna Honko of the NEIDL. She is the Associate Director of the Nonclinical Studies Unit at the NEIDL. Dr. Honko received her doctorate from Wake Forest University. She did post-doctorate research at USAMRIID and worked at the Integrated Research Facility at NIH before leaving to work at the Vaccine Research center at NIAID. She is considered an expert in the use of Telemetry for animal models and has extensive experience at BSL-3 and BSL-4. She is now doing research at BSL-3 and BSL-4 working with SARS-CoV-2.

**Supporting COVID-19 Response at NEIDL: SARS-CoV-2 and Nanosponges by Dr. Honko**

Dr. Honko discussed her research with nanosponges. These nanosponges act as a decoy to keep Covid-19 away from live cells.

Nanosponges are made in the following steps:

1. Cell membranes are extracted from human cells targeted by SARS-CoV-2;
2. Cell membrane fragments are purified; and then
3. Nanoparticle cores (biodegradable polymer cores) are coated with the cell membrane producing the final nanosponge

Since the nanoparticle mimics a cell with a membrane coating around it, once the virus binds with the nanosponge, the virus dies. It was shown that up to 90% of the virus was blocked by nanosponges. These nanosponges can be inserted into a human body and administered through a vein and/or individualized to each patient. Dr. Honko noted that this technology is not only relevant for Covid-19, but might be useful to treat other respiratory infections such as influenza or HIV in the future. In response to the question whether overloading the body with nanosponges caused any particular impact on the body, Dr. Honko answered that studies on

mice showed no effect at the moment. She believes that the nanosponges are very small and they clear the body pretty well.

**NEIDL Director Update by Dr. Ron Corley:**

Dr. Corley mentioned that the next pandemic might be spread by insects or in a respiratory manner. An outbreak of Ebola in the Democratic Republic of Congo is ongoing. It was noted that this outbreak is completely different from the last outbreak which was declared over last June. The ongoing outbreak involves a different region and viral sequence. Right now, our Eastern Equine Encephalitis (EEE) research is on hold. NEIDL investigator, Dr. Colpitts, was interested in pursuing EEE research, but received an opportunity to work at Moderna instead.

Because of the nature of SARS-CoV-2 research, there have been more collaborations among scientists. There are at least 10 labs (BSL-4, BSL-3 and BSL-2) currently working on this coronavirus. NEIDL Investigator, Dr. Florian Douam has started both in vivo and in vitro humanized mice studies in the BSL-3 labs.

**Government & Community Affairs (GCA) Updates:**

Ms. Britton discussed the challenges of community relations in a virtual world. GCA has been working with other areas of BU to build collaborations and external partnerships for BU resources. We are a member of the Faculty Affairs BU Anti-Racism Task Force (FAAR) team which has been developing virtual curriculum (medicine and research) for high school students. These modules will be taught by BUSM students this Spring and offered to BPS students.

In talking with community members about needs, we were asked to share BU expertise and expose students to careers in the health professions. Mr. Idiokitas explained the NEIDL Speaker Series that he has been implementing with Madison Park Technical Vocational High School in Roxbury. This monthly series is designed to expose students not only to research, but also to the various careers that are needed to support a safe and successful research program at the NEIDL. He mentioned that presenters from Environmental Health & Safety have spoken about their career paths and showed a demo of a BSL-4 suit and the Simulation Lab. One of the CLC members recommended that we make sure that students have a well-rounded picture of Team NEIDL. Mr. Idiokitas is in the process of recruiting other NEIDL experts throughout the building to speak with students. In addition, we continue to support community nonprofits that we have an existing relationship with such as South End Soccer and Orchard Gardens Back to School Program.

Other Topics:

There will be a BU/NEIDL annual meeting this year. The meeting will occur in November, but a date has not been finalized yet.

**Meeting adjourned**