

Boston University Medical Campus

Community Liaison Committee (CLC)

National Emerging Infectious Diseases Laboratories (NEIDL)

MEETING NOTES

Monday September 16, 2019

6:30 pm. * 650 Albany Street Room 715

ATTENDING

David Opp, CLC; J. Kevin Fisher, CLC; Jean Lee, CLC; James Keeney, CLC; Robert Timmerman, CLC; Valeda Britton, Executive Director, Community Relations/MED, BU; Chimed Idiokitas, Director, Community Outreach/MED, BU; Elizabeth Leary, Executive Director, Government & Community Affairs; Dr. Ronald Corley, BU Department of Microbiology, Director, NEIDL

Meeting opened at 6:35pm

NEIDL Director Update by Dr. Ron Corley:

Global News:

There are usually seven human cases of Eastern Equine Encephalitis (EEE) reported per year. There have already been eight human cases reported in Massachusetts this year. We are seeing an increase in this virus along the east coast. This disease is known as an arbovirus. EEE is spread by a particular mosquito species. Another arbovirus, West Nile virus, is spread by a different species of mosquito than EEE. Horses are the primary mammals most affected by EEE. Horses can be vaccinated against EEE, but a vaccine is generally not available to the general public.

While approximately 80% of people infected with EEE are thought to exhibit little to no symptoms, others get severe disease and may develop encephalitis. Researchers are not sure why this is. In addition, it is not known why there are more cases of EEE some years than in others. Perhaps, migration, more breeding areas, habitat and warmer climate conditions are likely contributors to the spread of arboviruses. Massachusetts recently reported its first case of West Nile virus this year. West Nile virus is more common than EEE and has led to a curtailment of sports and other outdoor activities in the evening.

The Ebola outbreak in the Democratic Republic of the Congo (DRC) is in its second year. This outbreak is the second largest and longest reported ever. An experimental vaccine continues to be used in the DRC. Over 200, 000 people have been vaccinated and the infection is still not controlled. However, this vaccine when utilized is very effective against Ebola. Antibody therapeutics have also been used on infected patients. It should be noted that Dr. Davey of the NEIDL was one of the researchers involved in the early testing of the two (2) monoclonal antibody vaccines used in the DRC.

Experts are reporting that more children are dying of measles than Ebola in DRC this year. This is due to the difficulty of distributing the measles vaccine to them because of the civil war and instability in the area.

Zika has been out of the news lately, but Dr. Corley said that it has not gone away. As the climate changes, mosquitoes usually found on the south coast of the United States will migrate further north.

New Labs/ Investigators/ Research:

Recently, two new investigators joined the NEIDL. Dr. Saeed joined in the Spring and Dr. Douam at the beginning of July. Dr. Douam will work with BSL-2 and BSL-3 viruses such as yellow fever and West Nile. This area of research will add depth to the NEIDL's study of vector borne diseases.

Dr. Saeed has begun research on enteroviruses such as Acute Flaccid Myelitis (AFM). This is a polio-like disease that appears suddenly and causes paralysis especially in children. It is thought that certain enteroviruses may cause AFM, including enterovirus D68. The NEIDL would like to expand the repertoire of viruses it does research on to help grow its research portfolio.

Quality Systems:

The NEIDL is in the process of putting in place quality systems, which are an FDA requirement, to test and monitor therapies and vaccines intended for use in human clinical trials. NEIDL investigators, Drs. Griffiths and Davey, will use these quality systems for their research contracts.

Standard Operating Procedures (SOPs) are being written to develop processes to accurately and safely protect research documentation required for Phase 1 clinical trials. Over the last month, independent auditors have visited the NEIDL to conduct quality assurance audits as well as provide guidance and advice.

NEIDL Receipt of Agents:

To date, there have been three shipments of BSL-4 agents to the NEIDL (August 2018, January 2019, and Summer 2019). The ebola virus delivered this summer was necessary to do regulated studies. Dr. Corley anticipates that the NEIDL will receive one to three shipments a year. Pathogens continue to be transported in accordance with DOT and BPHC guidelines.

NEIDL Emergency Response Drill:

On September 12, 2019, an emergency response exercise was conducted at the NEIDL. This simulation is part of the NEIDL's ongoing safety and training program. The drill simulated an emergency response to a fire incident and an evacuation of the building. Participants met afterwards to review the response and improve efforts and training.

Government & Community Affairs Updates:

Community Relations informed the CLC of the community engagement activities that have been taking place. BU gave 7 scholarships to local high school students to attend BU Summerlab and three scholarships to BU Introduction to Careers in Medicine (ICM).

Summer is a busy time at the NEIDL because requests to visit the NEIDL increase. The STaRS Program had an opportunity to talk with BSL-4 researchers about educational and career paths and take a tour. The theme of that tour was one day in the life of a BSL-4 researcher. Greater Boston Research Opportunities for Young Women (GROW) had a panel discussion with an all-female group of NEIDL researchers and staff. This was a lively exchange of advice and information.

The NEIDL introduced a revamped version of ID2 to ICM and BAHEC. High school students became virus detectives to identify an outbreak affecting school children. This involved building a biosafety cabinet, identifying transmission paths, creating virus candy models, doing DNA sequence analysis and looking at parasites through a microscope. After seeing the enthusiasm and engagement of the students, Community Relations believes that ID2 seems to be a better fit

with high school students instead of 7th graders. Community Relations hopes to introduce ID2 at 2 local STEM high schools such as the John D. O'Bryant and the Dearborn STEM Academy this school year.

Other Topics:

The CLC inquired about coordinating another NEIDL symposium such as EIDA2Z. The planning process has not begun; however, Dr. Corley believes this is something we should look to do in the near future. EIDA2Z occurred in September 2016.

As a topic for discussion at a future meeting, the CLC asked to understand how the business model for the NEIDL has evolved over time. It was noted that it is expensive to run this building as it moves toward operating 24/7. Finding and training qualified personnel and expanding research efforts is costly as well. Bringing in grants and contracts to support research is time consuming. The question was asked how is the community (internally and externally) affected/impacted by these costs?

Meeting adjourned