Recognizing Poliovirus Risk

Poliovirus is a type of Enterovirus with three known serotypes. Often poliovirus infections are asymptomatic or cause flu-like symptoms. However, disabling and life-threatening disease including meningitis and paralysis (called poliomyelitis or “polio”) can occur. The virus is very contagious and can be spread through contact with feces, respiratory droplets, and contaminated food and water. Globally, vaccines are available to prevent polio and two of the three serotypes have been declared eradicated. Even so, the potential for an accidental introduction of poliovirus from lab-related environments exists.

Containing the Risk at VU

The U.S. National Authority for Containment of Poliovirus (NAC) at the Centers for Disease Control and Prevention (CDC) is tasked with helping reduce the risk of the release of poliovirus from U.S. laboratory facilities as part of the Polio Global Eradication Initiative. Vanderbilt University is committed to following the CDC and the World Health Organization (WHO)’s guidance and processes for identifying, inventorying, and reporting all materials covered by this initiative to the NAC. VU Biosafety is supporting this effort through the distribution of awareness guides and surveying investigators in departments that may work with biomaterials or samples that may be considered potential infectious for poliovirus.

Investigator’s Responsibilities

Principal investigators have specific responsibilities relating to poliovirus containment, including:

- **Assessing the potential for poliovirus in samples** in storage or in use in their research program. (Refer to VU Biosafety’s Poliovirus PIM list.)
- **Reporting any poliovirus infectious materials or potentially infectious materials** to VU Biosafety at VUBiosafety@vanderbilt.edu.
- **Notifying VU Biosafety** if they plan to obtain poliovirus or samples that may contain poliovirus.
- **Following all NAC biocontainment guidance** for inventorying, handling, and disposing materials that contain or may contain poliovirus (if determined applicable once declared to VU Biosafety).

Certain environmental, clinical, and other research samples may be known to contain poliovirus. However, poliovirus also may unknowingly be found research materials in depending on their country of origin and the timeline when they were collected based on the circulation of poliovirus or the poliovirus vaccine, including:

- Sewage,
- Environmental waters,
- Human fecal or respiratory secretions,
- Respiratory and enteric virus stocks,
- Cell cultures,
- Infected animals and samples from them, and
- Other specimen types.

For a full list of poliovirus infectious materials (IM) and potentially infectious materials (PIM) see the NAC’s Definitions and Examples and the PIM identification tool. If you need assistance determining if your research materials are IM or PIM, please contact VUBiosafety@vanderbilt.edu.

For additional information about Polio please see Polio (Poliomyelitis) and Polio: For Health Professionals.

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