

VA NORTHEAST OHIO HEALTHCARE SYSTEM
Louis Stokes Cleveland DVAMC
Medical Research Service
Subcommittee on Research Safety Policy

Effective Date: MAY 8, 2019

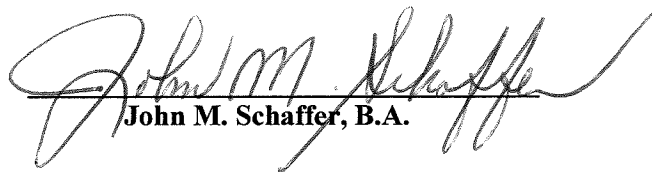
SOP Title: INFECTION CONTROL PROCEDURES FOR INFECTIOUS DISEASES
RESEARCH

SOP Number: SRS--024

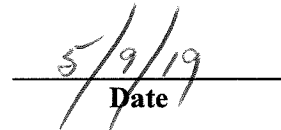
SOP Version: .02

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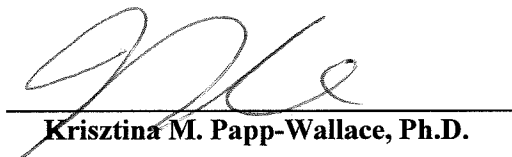


John M. Schaffer, B.A.



Date

Subcommittee on Research Safety Chair:



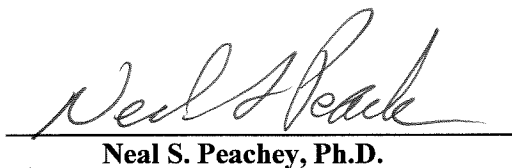
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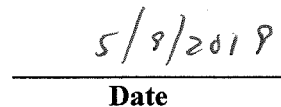
Date

Approved By:

Associate Chief of Staff/Research



Neal S. Peachey, Ph.D.



Date

LOUIS STOKES CLEVELAND VA MEDICAL CENTER
Medical Research Service
Standard Operating Policy and Procedure (SOP)

Effective Date: MAY 8, 2019

SOP Title: INFECTION CONTROL PROCEDURES FOR INFECTIOUS DISEASES RESEARCH

SOP Number: SRS--024

SOP Version: .02

1. PURPOSE:

This Standard Operating Procedure promotes the prevention of exposure to infectious diseases.

- a. By defining infectious diseases used in research.
- b. By recommending actions to reduce biohazards which might lead to injuries and infectious diseases which might affect research personnel.
- c. By developing a safe environment in which to conduct research involving the use of infectious diseases.

2. DEFINITIONS:

- a. I.D. – Infectious Diseases
- b. *C. Difficile* – *Clostridium Difficile*
- c. Research Protocol Safety Survey (RPSS) – A detailed survey of all hazards associated with a Principal Investigator’s research plan.

3. RESPONSIBILITY:

- a. Research personnel are responsible for compliance with this procedure and all Medical Center Infection Control policies.
- b. Principal Investigators and Laboratory Directors will monitor compliance with this procedure.
- c. All employees are required to be familiar with and comply with all Medical Center Infection Control Policies, including:
 - Isolation and Infection Control Precautions, MCP 011-056
 - Tuberculosis Control Program, MCP 011-031

- Bloodborne Pathogen Exposure Control Plan, MCP 011-039
- Personnel Health Infection Control Policy

d. Environmental Management Service disinfect laboratory floors and corridor on a weekly basis as noted below in Section 5, Procedures, subpart c, part 3.

4. **POLICY:**

To ensure compliance as described in Section 5, PROCEDURES, below.

5. **PROCEDURES:**

a. Research personnel working with infectious diseases must adhere to the Standard (Universal) Precautions as described in the Research Protocol Safety Survey (VA Form 10-0398), which is associated with the Principal Investigator's research plan. Standard (Universal) Precautions are protective barriers, which include gloves, lab coat, protective eyewear, Fume Hood, biosafety cabinet, etc.

b. Exposure. The primary routes of exposure are contact, droplet, and airborne.

1. Contact transmission in the laboratory occurs via indirect contact. Indirect contact transmission occurs when infectious agents are transferred to a susceptible individual when the individual makes physical contact with contaminated items and surfaces (e.g. equipment, benchtops, door handles, etc.).
2. Droplet transmission can occur during routine laboratory manipulations, e.g. the preparation of cultures. Transmission occurs when droplets are generated and come into direct contact with the mucosal surfaces of the eyes, nose, or mouth of a susceptible individual.
3. Airborne transmission occurs through very small particles or droplet nuclei that contain infectious agents and can remain suspended in air for extended periods of time. When they are inhaled by a susceptible individual, they enter the respiratory tract and can cause infection.

Personnel must wash their hands, forearms, etc. when suspected of an exposure. Exposures that occur to the eyes, nose, mouth, or open wound must be deluged immediately. Exposures must be reported to the employees Principal Investigator and followed-up by treatment in Personnel Health.

4. Sharps Safety: Refer to Medical Center Policy Bloodborne Pathogen Exposure Control Plan, which notes, "In the event of a needle stick or other sharps injury, mucous membrane splash, or cutaneous exposure, [employees must] report immediately to Personnel Health".

c. Disinfection of work areas involving infectious agents is mandatory. The following procedures must be followed:

1. Research personnel working with infectious diseases must disinfect high-touch surfaces, i.e. work areas, equipment, door handles, etc. with a 10% bleach solution (or a sporicidal agent) at the end of each work day, as described in the Research Protocol Safety Survey (VA Form 10-0398), which is associated with the Principal Investigator's research plan, when work with infectious agents takes place.

2. On a weekly basis, an Ultraviolet (UV)-C device will be employed in laboratories actively working with *C. difficile*. UV-C is a novel device which uses UVC energy to eliminate pathogens in a manner not achievable by typical manual cleaning methods that involve the use of chemicals. When operated, all personnel must be out of the lab with the laboratory doors with windows covered. This method of disinfection takes approximately one hour.

3. Laboratory floors and corridors will be cleaned weekly by Environmental Management Service (EMS) with Virex® II 256, One-Step Disinfectant Cleaner, which is a broad range disinfectant. EMS will use an Advance SC350™ Micro Scrubber, a micro fiber flat mopping system for daily cleaning, and a medium string mop for special projects (deep cleaning, decommissioning laboratories, etc.).

d. Monitoring Disinfected work stations, equipment, floors, etc. must be monitored to ensure that the above-noted disinfecting procedures are effective. Gram-negative bacteria do not survive on work surfaces as does *C. difficile*.

Wipe tests of all work areas and equipment where *C. difficile* is actively used will be performed on a weekly basis by laboratory technicians. Wipe tests will be cultured and read after 48 hours. A 10% bleach solution will be used on all areas/equipment that come-up “positive” for pathogens following wipe tests, which will be repeated until “clean”. A log-book will be maintained in which the weekly wipe-test results will be recorded. Results from these wipe-tests will be presented at the monthly Subcommittee on Research Safety meetings.

e. Spill Procedure See Appendix D, Biological Spill Procedures (BSL-2), on page 11 of SRS Biosafety Policy.

6. **REFERENCE:**

United States Department of Labor, Occupational Safety and Health Administration, Infectious Diseases.

7. **RESCISSION:**

INFECTION CONTROL PROCEDURES FOR INFECTIOUS DISEASES dated June 2, 2016. The rescission date of this Standard Operating Procedure is May 11, 2022.

8. **FOLLOW-UP:** Research Safety Coordinator/Chemical Hygiene Officer.