

STANDARD OPERATING PROCEDURES (SOP)

Measles Protection Program

1. SCOPE

Measles or rubeola infects human and old and new world non-human primates including macaques, chimpanzees, and owl monkeys. Symptoms of measles include a fever, rash and upper respiratory symptoms. The virus can also cause immunosuppression that can lead to pneumonia, otitis media, conjunctivitis, hepatitis, meningitis and encephalitis. In non-human primates measles has also been associated with endometritis and spontaneous abortion. Macaque to human transmission of measles has been documented. This SOP was designed to establish a system of information and safeguards to be utilized to control the spread of measles infection at the University of Pittsburgh research environments.

2. PROCEDURE

2.1 **Agent-** Measles or rubeola, genus Morbillivirus

2.2 **Employees at risk-** Naturally or experimentally infected laboratory animals are a potential source of infection to exposed unvaccinated laboratory personnel. An additional potential risk to laboratory personnel and animal users is also through the direct contact with material from infected animals or infected human volunteers.

2.3 **Animal populations at risk** – Old and new world non-human primates including macaques, chimpanzees and owl monkeys are susceptible to measles. Distressed animals, infants and juveniles are most susceptible.

2.4 **Laboratory Hazards** - Measles is spread by airborne droplets or fomites. It is highly contagious to children, unvaccinated individuals and non-human primates.

2.5 **Required Procedures**

2.5.1 All Principle Investigators (PI's) using virus of the genus Morbillivirus must register their research with the Biosafety Officer/EH&S. A registration document may be obtained from the web site www.ehs.pitt.edu or by calling the Biosafety Officer at 624-9505.

2.5.2 University of Pittsburgh requires measles immunization for all individuals, faculty, staff, and students, who directly contact or manipulate non-human primates, or who utilize measles virus in research.

2.5.2.1 The PI or department director/ supervisor must arrange for all individuals with responsibility for direct handling of non-human primates or the measles virus to be medically evaluated for measles immune status by Work Partners.

2.5.2.2 Following this counsel all such individuals must sign a measles immunization acceptance/declination form prior to continued work with non-human primates or measles virus at the University of Pittsburgh. The original form will be maintained by Work Partners and a copy submitted to Environmental Health and Safety, Public Safety Building, 4th Floor, 3412 Forbes Avenue to be filed with the PI registration if applicable.

2.5.2.3 Individuals refusing vaccination or having medical contra-indication may be prohibited from handling non-human primates or measles virus. This determination is made by an ad hoc group which always includes the University Employee Medical Director, University Environmental Health and Safety Director, Human Resources, PI and if animals are involved the Director of DLAR (Division of Laboratory Animal Resources).

2.5.3 **Implementation-** MMR (measles, mumps, rubella) vaccine will be used to vaccinate individuals identified as having insufficient immunity.

2.5.3.1 Anyone having a 0 titer as demonstrated by an ELISA test performed by a qualified diagnostic laboratory will receive two vaccines given 4 weeks apart.

2.5.3.2 Individuals with a titer greater than 0, but less than 1:10 will receive one vaccine booster.

2.5.3.3 Anyone who has never been vaccinated and who is not known to have had measles will receive two vaccines given 4 weeks apart.

2.5.3.4 Even though it is believed that life long immunity results from infection, all employees in the measles protection program will have their titers re-evaluated 10 years after enrollment.

3. APPROVAL

The University of Pittsburgh's Biohazards Committee and EH&S have reviewed and approved this SOP as attested by the signatures of the Committee Chairperson and the Biosafety Officer.

Committee Chairperson

Date

Biosafety Officer

Date