Biological Agent Reference Sheet (BARS)

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**CHARACTERISTICS**

**Morphology**
Zika virus (ZIKV) is a single-stranded RNA virus of the Flaviviridae family, genus Flavivirus, Spondweni group. There are two ZIKV lineages: the African and the Asian lineage which has recently emerged in the Pacific and the Americas.

**Growth Conditions**
Inoculate intracerebrally into suckling mice. Resuspend 20% sMb (sucking mouse brain) with 7.5% BSA in PBS.

**Sources**
- ATCC® VR84 – from MR766 (original strain)
- Wild virus isolated from infected human diagnostic samples

**HEALTH HAZARDS**

**Host Range**
Humans and NHPs, non-pathogenic for hamster, guinea pig or rabbit.

**Modes of Transmission**
ZIKV is transmitted by infected Aedes mosquitoes. Perinatal, in utero, sexual and transfusion transmission events have also been reported.

**Signs and Symptoms**
About 1 in 5 people infected with ZIKV become ill. The most common symptoms of Zika are fever, rash, joint pain, or conjunctivitis (red eyes). Other common symptoms include muscle pain and headache. The illness is usually mild with symptoms lasting for several days to a week. There may be an association between ZIKV infection in pregnancy and microcephaly of the fetus.

**Infectious Dose**
Unknown

**Incubation Period**
The incubation period ranges between approximately three to 12 days after the bite of an infected mosquito. Most of the infections remain asymptomatic (between 60 to 80%).

**MEDICAL PRECAUTIONS / TREATMENT**

**Prophylaxis**
None

**Vaccines**
None

**Diagnosis**
ZIKV disease diagnostics is primarily based on detection of viral RNA from clinical specimens in acutely ill patients. The viremic period appears to be short, allowing for direct virus detection during the first 3–5 days after the onset of symptoms.

**Treatment**
The treatment is symptomatic and mainly based on pain relief, fever reduction and anti-histamines for pruritic rash.

**Surveillance**
People infected with ZIKV, chikungunya, or dengue virus should be protected from further mosquito exposure during the first few days of illness to prevent other mosquitoes from becoming infected and reduce the risk of local transmission.

**Emory Requirements**
Occupational Health Consultation prior to handling ZIKV. Report all incidents.

**LABORATORY HAZARDS**

**Laboratory Acquired Infections (LAIs)**
Accidental infection has occurred in laboratory personnel

**Sources**
Unknown

**SUPPLEMENTAL REFERENCES**

**European CDC**