



SAN LUIS OBISPO COUNTY *Messenger* Public Health Laboratory

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Zika virus – Laboratory watch

While many countries in South and Central America are enduring a public health crisis due to mosquito-borne transmission of Zika virus, US public health authorities continue to conduct surveillance and implement preparedness measures. While no locally transmitted cases have been recorded in the United States, over 500 US travelers have been shown to be infected by the Zika virus as of May 11th. While four of five individuals who are infected with the virus do not exhibit symptoms, evidence is clear that Zika virus can cause neurologic conditions including microcephaly in newborns, Guillian–Barre syndrome, meningoencephalitis and acute disseminated encephalomyelitis (ADEM). The full effect of the virus in the setting of the enormous number of infected individuals is under study; many questions remain to be conclusively answered.

Transmission has been demonstrated in the US territories of Puerto Rico, the US Virgin Islands and American Samoa, and in 52 other countries. At present, the San Luis Obispo Public Health Laboratory (SLO PHL) is not implementing testing for this virus. The state public health virus laboratory (Viral and Rickettsial Diseases Laboratory, VRDL) has set up a suite of tests to detect Zika virus by molecular amplification (from serum, urine, CSF and amniotic fluid) and by serologic testing. The vector mosquitoes, *Aedes aegyptii* and *Aedes albopictus*, have been detected in 12 California counties including San Diego, Imperial, Orange, Riverside, Los Angeles, San Bernardino, Kern, Tulare, Fresno, Madera, San Mateo and Alameda. The vector mosquitoes have not been detected in San Luis Obispo County. However, it is worth noting that mosquito surveillance is currently very limited in SLO county.

Advanced Gastrointestinal PCR Panel Introduced

The San Luis Obispo Public Health Laboratory (SLO PHL) has adopted a new PCR panel for the detection of gastrointestinal pathogens. This new test (Gastrointestinal PCR Panel , #6500) can be performed in as little as a hour, and has been instrumental in the rapid determination of three recent outbreaks of noroviruses in long-term care facilities locally. The panel allows the detection of thirteen bacterial agents of GI illness, five viral agents and four parasites. The “Film Array” testing system is marked by singular ease of use of nested PC—an acknowledged sensitive method of microbe detection--targeting a very broad array of agents. This technology, when coupled with conventional culture after detection is made by the Film Array, allows thorough characterization of culture isolates, which greatly enhances public health laboratory network surveillance.