



### Nicaragua - Seroprevalence of Chikungunya

*Chikungunya Seroprevalence Rate and Associated Risk Factors in Nicaragua*

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**Background:** Chikungunya is a mosquito-borne illness transmitted by *Aedes aegypti* and *Aedes albopictus*. It is a debilitating disease characterized by high fever, severe joint and muscle pain, a rash and in rare cases, death. Outbreaks of chikungunya virus (CHIKV) in Africa and Asia have occurred sporadically since 1952; however, on December of 2013, autochthonous chikungunya cases were confirmed for the first time on St. Martin Island. Since the introduction of CHIKV to the Americas, its spread has been wide and rapid; approximately there have been over 1.2 million suspected cases.

**Project Description:** We aim to describe the first Chikungunya outbreak in Nicaragua by analyzing the seroprevalence of CHIKV infection and its associated risk factor through a retrospective serological study. The samples analyzed are captured through three different means: an ongoing community-based children's cohort, healthy adult volunteers recruited by door-to-door inquiry and Red Cross blood donors. The project includes determining seroprevalence rate via enzyme linked immunosorbent assay (ELISA), as well as correlating these results to associated risk factors using the survey issued to each participant.

**International Site:** Our foreign research site is embedded within the Ministry of Health of Nicaragua and administered in collaboration with the Sustainable Sciences Institute (SSI). Placement is available at the National Virology Laboratory of the National Center for Diagnosis

and Reference (CNDR) of the Ministry of Health. The site is well-established with over 60 study employees and serves several large prospective studies of dengue and influenza. Numerous MHIRT, MPH, and PhD students have been hosted by SSI and the National Virology Laboratory in Managua.

**Required Qualifications:** Motivated undergraduate with Spanish language proficiency. Previous laboratory experience, particularly molecular biology. STAT/SAS programming experience preferred, but not required.