



## Flaviviral infections in Nepal

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Dengue virus (DENV) is the most important mosquito-borne viral infection world-wide, affecting up to 390 million people annually. India has the highest burden of disease in the world, which in turn has affected neighboring countries, such as Nepal, with whom it shares a porous border. Little is known about DENV transmission in Nepal in terms of incidence, prevalence, demographics, or transmission characteristics of both the virus and mosquito populations. Our aim is to study the transmission of Dengue virus in Nepal and specifically to compare the population of infected subjects from the southern sub-tropical region called the Terai to the northern, temperate region of Kathmandu.

We plan to start collection in the post-monsoon months (late August-to-early September) through Dengue season, which could be as late as January. At this time, no cases of Dengue virus have been reported in our study hospitals in Nepal. Thanks to the SPARK award, our team will travel to Nepal in October of this year, likely to be the middle of Dengue virus season, in order to collect samples and oversee clinical operations as well as provide hands on training to students and staff in the local university, Tribhuvan University, with whom we have partnered. We anticipate 200-300 human subject samples during this transmission season.

Currently, we are using the SPARK funds to order the supplies we will need to collect and safely transport the samples from Nepal. Our next steps are to visit the Nepal sites and perform the collection and analysis of samples as mentioned above. This data will serve not only to broaden the scientific literature on DENV, but also as the framework from which we are able to derive future scientific hypotheses, design future studies, and apply for major government-funded grants.