

Abstract

Development of Rapid Diagnostics and Establishment of an Alert system for outbreaks of Yellow Fever and Rift Valley fever in Kenya

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Background: Outbreaks of arthropod borne viruses occur periodically in Kenya, and cause significant morbidity and mortality. Yellow Fever Virus, Chikungunya Virus, Dengue Virus and Rift Valley Fever Virus are some of the most important arboviruses. Definitive diagnosis takes several days, partially because point of care tests (POCTs) are not available. Such tests could help speed up diagnosis and if coupled with mHealth and eHealth, can strengthen the surveillance network for disease outbreaks and facilitate timely interventions that can reduce morbidity and slow down the spread of these diseases.

Methods: Our research team has assembled expertise to develop and produce POCTs for YF virus and RVF virus and to design an early vigilance model against outbreaks of these arbovirus infections in partnership with MOPHS. We have successfully applied for and received funding from the Science and Technology Research Partnership for Sustainable Development (SATREPS Program, which is funded by JICA and JST) for five years to do this.

Expected results: In addition to developing POCTs and assembling an alert network, we expect to strengthen both the KEMRI Production Department (PD) and the Arboviruses and Hemorrhagic Fevers Reference Laboratory, and to build a field surveillance laboratory at KEMRI-Centre for Infectious and Parasitic Diseases Control Research (CIPDCR) in Alupe.

Key words: Point of Care Tests, Arboviruses, Yellow Fever Virus, Rift Valley Fever Virus, SATREPS

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