

**SUPSI**

# DeMoViS

## Automatic Device for Mosquitos Viral Screening via RNA-based Biosensors



### **The problem**

Devices that allow a rapid screening of viruses in mosquitos (like Zika, Dengue and Chikungunya) are not present in the market. The screening is based in only one technique already on the market using PCR methodology (Polymerase chain reaction), a time-consuming and expensive technique.

### **The project**

The aim of the project DeMoViS is to design and realize a device equipped with microfluidic chips able to trap viral specific cRNA sequences derived from saliva extracts of *Aedes albopictus*, commonly known as Asian tiger mosquito.

### **The result**

DeMoViS will be the first product of a new generation of medical/diagnostic device. It will be composed by a disposable kit able to analyze potential viral charge via identification of specific RNA sequences on the mosquito's saliva through bioimpedance measurement coupled with digital fluorescence measurement by microscopy. The device will improve the sensitivity and reduce the analysis time, working with more feedback technologies and RNA samples simultaneously.

### **Contact information**

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### **Funding agency**

Innosuisse

### **Partner**

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### **Research domain**

3 Innovative products and processes  
6 Social systems and public health