

ITM Outbreak research team prepares for next epidemic

With funding of the Flemish Ministry of Science, ITM will do research during outbreaks.

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Dit is de omschrijving

- The Flemish Ministry of Science invests € 2.5 million euro in outbreak research
- The multidisciplinary team will count nine researchers
- The research activities are supported by a field-adapted training laboratory and replica field hospital at ITM's facilities

The Ebola outbreak in West Africa was a wake-up call as the world found itself unprepared for an infectious disease that would kill over 11,000 people between 2013-2016. To be better prepared, the World Health Organization (WHO) has recently added the unknown 'Disease X' to its list of priority diseases. Preparedness goes beyond the humanitarian response, and includes research during outbreaks, which can lead to insights that might save lives when a new epidemic occurs. The Flemish Ministry of Science invests € 2.5 million euro in a new outbreak research team at ITM.

Philippe Muyters, Flemish Minister of Science: "The Institute of Tropical Medicine is world-renowned for its research into and the fight against tropical diseases. It is therefore the right place for a team of experts that studies epidemics of infectious diseases. A team that is ready to be deployed during a new outbreak and help save lives. The Ebola outbreak has shown that reacting to an outbreak only is not good enough. We need to be prepared before an outbreak occurs. As Flemish government we are happy to contribute to this effort."

ITM's outbreak research team will be on stand-by for rapid deployment to conduct research during an infectious disease outbreak anywhere in the world. The Institute will be hiring nine senior experts with complementary profiles, including an entomologist, an epidemiologist and a clinical researcher who will start in the coming weeks.

"In between outbreak interventions, the team will study the drivers of outbreaks. It will also design and evaluate diagnostic tests and strategies for the prevention, early detection and control of infectious diseases. The knowledge generated by outbreak research will help to improve future outbreak responses," said Dr. Veerle Vanlerberghe, an ITM epidemiologist who has been on several outbreak missions herself.

Each year several outbreaks of bacterial, parasitic and viral diseases occur where ITM's expertise can be of added value. Outbreaks are not only about scary unknown diseases, but also about poverty-related known ones like cholera which continue to re-emerge. In recent months, ITM has supported its partners in the Democratic Republic of the Congo (DRC) in the handling of a cholera outbreak. The Institute currently explores research opportunities for the new outbreak research team to test better and more simple ways to vaccinate populations at risk of acquiring cholera.

Lessons learned from Ebola

During the Ebola outbreak in West-Africa, Prof. Johan Van Griensven took the lead of a large EU-funded emergency clinical trial on convalescent plasma as Ebola treatment. The Ebola-Tx trial was co-funded by the Flemish government. Like other research centres, the Institute found it challenging to get the clinical trial up and running quickly enough to provide meaningful answers in the course of the ongoing outbreak. "Setting up a study and getting approval of ethical committees and regulatory authorities is usually a matter of years, which we needed to race through in a few months. We need to prepare now to be quicker when a new outbreak occurs," said Prof. Van Griensven.

Skills lab – field hospital in Antwerp

The funding of the Flemish government also allowed ITM to invest in its epidemic research and training facilities for Belgian and international health

professionals. Our outbreak research laboratory offers hands-on training for safe and field-adapted laboratory support during outbreak research. Applications include, amongst others, point-of-care diagnostics, equipment adapted to tropical contexts as well as sample storage and shipment systems applicable in remote settings.

In addition, ITM set up a replica of a field referral hospital to train students in infection prevention and the containment of epidemic diseases. "Belgian and international students learn how to isolate a patient, draw and process blood and other clinical samples safely and start up an outbreak investigation. Having practiced these skills makes all the difference when the pressure is on during a real outbreak," said Prof. Jan Jacobs.

More than 600 international students specialise each year at ITM. Students include Belgian physicians and nurses who want to pursue an international career in health, as well as seasoned health care professionals from developing countries.