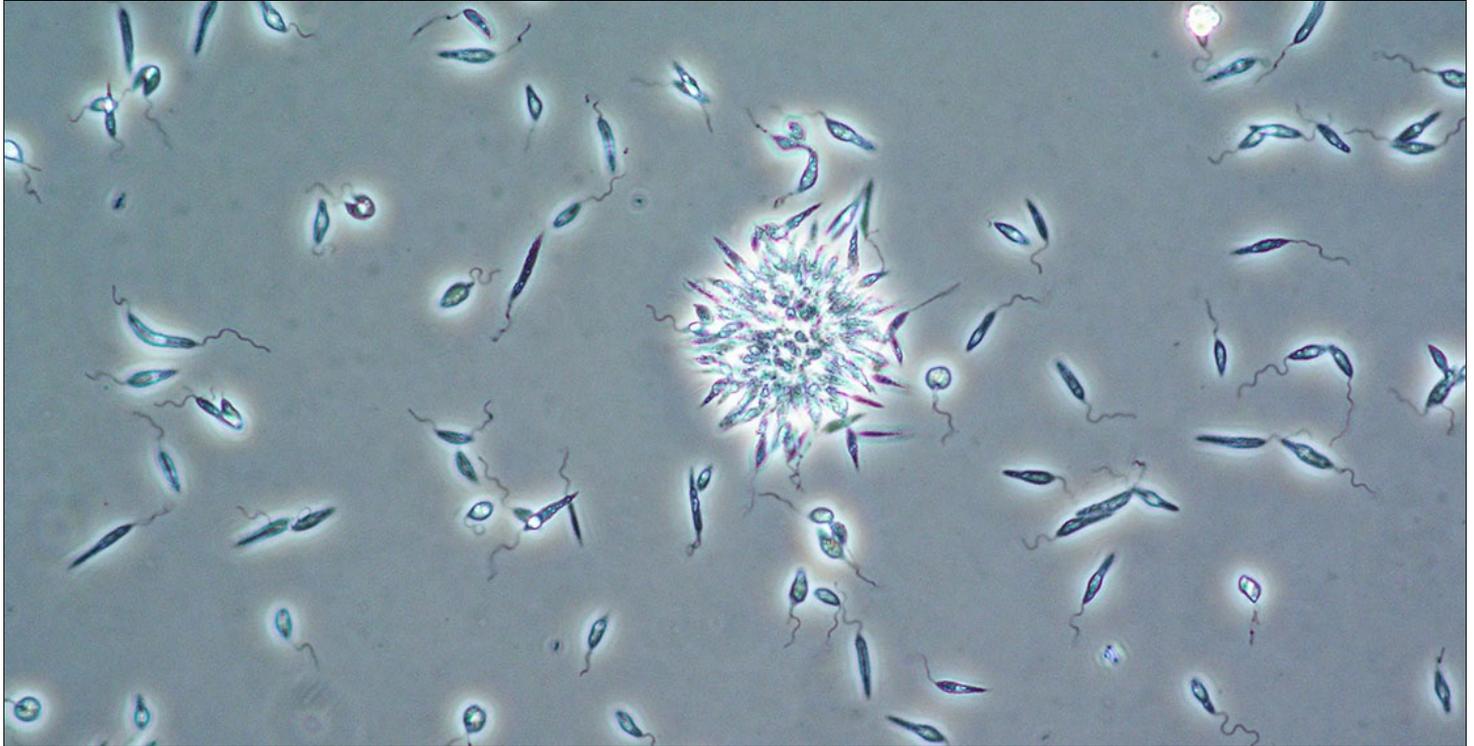


Molecular surveillance as a weapon against neglected diseases

A plea for molecular surveillance

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Dit is de omschrijving

Molecular surveillance is essential to control infectious diseases, but is not applied in the case of neglected diseases. However, this research method is very relevant for ongoing elimination programmes for diseases such as leishmaniasis, sleeping sickness and Chagas. This is highlighted in a study conducted by Dr Malgorzata Domagalska and Prof Jean-Claude Dujardin, researchers at the Institute of Tropical Medicine (ITM) in Antwerp. The study was published online in Trends in Parasitology.

Molecular surveillance is based on genetic methods that identify the DNA of a pathogen. The methods provide information about specific mechanisms, molecules and genes that influence the risk of developing a disease or drug resistance. Because molecular surveillance provides extremely detailed and reliable data, the results of these analyses make it possible, among other things, to identify the origin of an epidemic, its transmission or propagation route and to take appropriate measures. However, molecular surveillance is not applied in elimination programmes for neglected diseases such as leishmaniasis, sleeping sickness or Chagas.

Prof Jean-Claude Dujardin, head of the Department of Biomedical Sciences at ITM, explains: "Elimination programmes for leishmaniasis, sleeping sickness and Chagas are working well, there are fewer and fewer cases. This is often a dangerous moment, because the attention of governments can shift or because people want to use the financial resources to tackle other health problems. However, in order to avoid new epidemics, it's more important than ever to do surveillance. Molecular surveillance can play a major role in this, but this method is often forgotten."

"Over the last ten years, ITM has invested in studies of the genome of parasites responsible for neglected diseases. This was possible thanks to the financial support of the Flemish Government's Department of Economy, Science and Innovation," says Prof Dujardin. "As a result, we are the experts in our field and have been able to develop new research methods that make it possible to examine the entire genome of a parasite in small quantities of the patient's tissue. We now want to further put our expertise to use by developing a platform for molecular surveillance in endemic countries. We would integrate this platform with existing clinical and epidemiological platforms. However, we still have to convince governments and funders of this," concludes Prof Dujardin.

Link

- [Next-Generation Molecular Surveillance of TriTryp Diseases](#)