

New diagnostic test for human African Sleeping Sickness

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Credit: University of Dundee

A new diagnostic test developed from research at the Universities of Dundee and Cambridge has been launched with the aim of helping eliminate the disease known as African sleeping sickness.

Sleeping sickness, or Human African Trypanosomiasis (HAT), is caused by parasites transmitted by tsetse flies in sub-Saharan Africa and has a

devastating impact, causing thousands of deaths each year.

Today, September 12th, the international non-profit organisation FIND and the diagnostics company Alere launched their second-generation rapid diagnostic [test](#) (RDT) for sleeping sickness. This second-generation test is easier and safer to produce, using recombinant protein technology to produce the two diagnostic antigens, one of which is completely new.

The new test, SD BIOLINE HAT 2.0, costs US \$0.50 each and requires no specialist equipment to diagnose sleeping sickness from a pin-prick of blood, providing the same level of accuracy but in a more robust production format.

The test has been developed from research performed in the laboratories of Professor Mike Ferguson at Dundee and Professor Mark Carrington at Cambridge, with device prototyping done at BBI Solutions in the Dundee Technology Park.

"This is a terrible disease that causes character disintegration, psychological deterioration followed by coma and death, and current treatments are far from ideal," said Professor Carrington.

"The World Health Organisation's goal is to eliminate HAT and rapid and accurate diagnosis is essential to achieving this objective. It is extremely encouraging for us as researchers to see our work now being deployed in the field where it can make a real difference to people."

The work at Dundee and Cambridge was supported through separate funding streams from the Wellcome Trust and the Medical Research Council (MRC).

Both the Dundee and Cambridge labs were supported by the Wellcome

Trust at the time the research was done, and much of the work was performed by Dr Lauren Sullivan, MRC PhD student and then MRC Centenary fellow between 2008 and 2013, and Dr Mandy Crow, MRC PhD student between 2000 and 2004.

Professor Ferguson said, "Sometimes impactful [work](#) comes from side-projects where one synthesises funding streams, in this case from the MRC and the Wellcome Trust, and works across institutions and with industrial partners to do something more speculative or applied. The science underpinning this new diagnostic device is a good case in point."

More information: For more from FIND see:
www.finddx.org/news/alere-find...-gen-hat-rapid-test/

Provided by University of Dundee

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