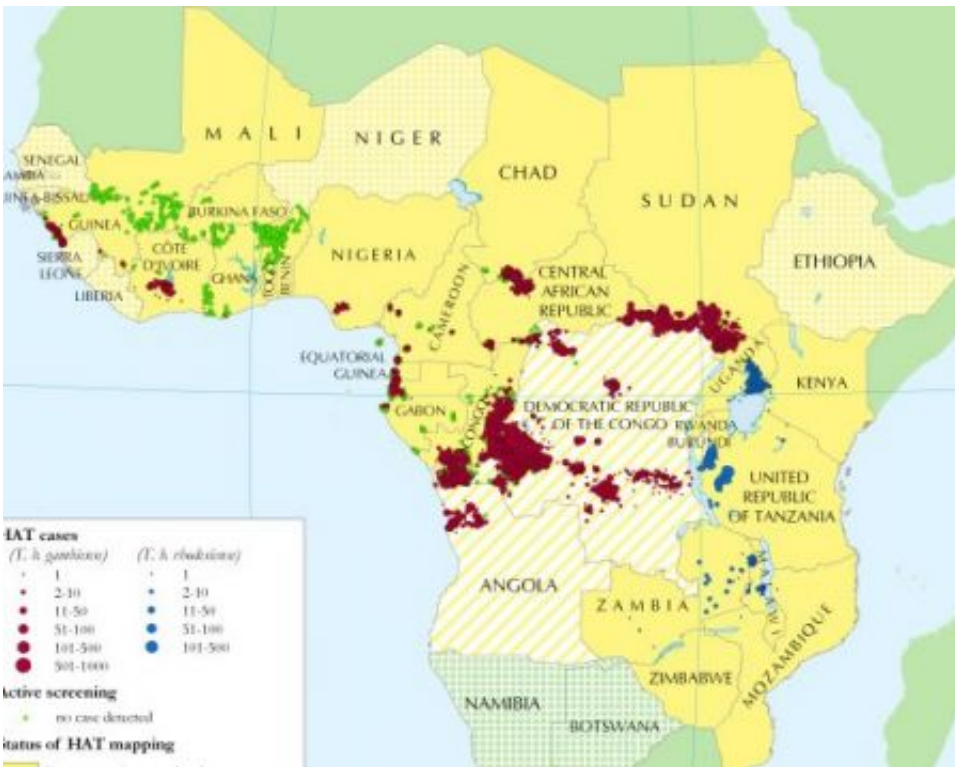


Scientists 'artificially evolve' sleeping sickness bacterium

January 19 2016



Scientists at the University of Salford are to artificially evolve a bacterium linked to the spread of deadly sleeping sickness, African Trypanosomiasis.

They aim to better understand the genomics of *Sodalis glossinidius*, a

bacteria which, when present in the gut, allows the Tsetse fly to become a carrier of the parasitic disease.

Sleeping sickness causes around 10,000 human deaths each year and also kills cattle contributing to poverty and famine in regions of central Africa.

The scientists, led by Dr Ian Goodhead, a lecturer in infectious diseases in the School of Environment and Life Sciences, have been awarded nearly 100k by the Wellcome Trust to investigate how the genetic make-up of the bacteria influences the [symbiotic relationship](#) with insects.

Wellcome Award

Dr Goodhead, an early career researcher, earned the prestigious Wellcome Seed Award for the two-year study which he will conduct with colleagues at the University of Liverpool and Liverpool School of Tropical Medicine.

He said: "Genomes can tell us an awful lot about an organism and its relationship with health and disease."

"As Tsetse are naturally resistant to Trypanosomiasis and become more susceptible when *Sodalis* is present in the gut, a greater understanding of this bacterium is crucial to our understanding of the paths of infection."

According to genomics, *Sodalis* should adaptively evolve in long-term culture, reducing and deleting redundant genes and pathways. By measuring the rate and nature of *Sodalis* gene loss over time, Ian and the team can better understand the genes and pathways involved in Trypanosomiasis spread and, therefore, allow for the future design of better control strategies for insect-vectored diseases.

Provided by University of Salford

Citation: Scientists 'artificially evolve' sleeping sickness bacterium (2016, January 19) retrieved 25 April 2024 from

<https://phys.org/news/2016-01-scientists-artificially-evolve-sickness-bacterium.html>

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