

Tuberculosis and neglected diseases targeted by new center

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A major new centre to boost the development of drugs to tackle the foremost diseases of the developing world is to be created at the University of Dundee.

There is an urgent need for new drugs to treat [infectious diseases](#) of the developing world, such as [tuberculosis](#) (TB), [malaria](#) and [African sleeping sickness](#). However, despite significant efforts in early stage drug discovery, there is a bottleneck when it comes to the lead optimisation stage of molecules targeting these diseases.

Lead optimisation is a key stage in the drug discovery process, where early leads are improved through cycles of design, synthesis and testing to identify potential drugs which are suitable for testing in a clinical setting. It is a labour intensive process requiring significant laboratory resource over a number of years.

To address this need Professor Paul Wyatt and colleagues at the Drug Discovery Unit (DDU) at the University of Dundee, with joint funding from the Wellcome Trust and the Bill & Melinda Gates Foundation, are establishing "A Centre of Excellence for Lead Optimisation for Diseases of the Developing World". The Dundee centre represents a £6.5million investment over five years and will create 11 new posts.

Professor Wyatt said, "One of the main aims of the Drug Discovery Unit is to make inroads into developing drugs for diseases that affected the developing world. We have the capability through the DDU to help

break the bottleneck which occurs at a key stage of the drug discovery process."

The initial focus will be on TB, the world's second-leading infectious killer, disproportionately affecting developing countries; in 2010 causing 1.4 million deaths, 8.8 million new infections and 450 thousand drug-resistant TB cases. First-line therapies for TB are old and inadequate, taking six months to cure patients. The long treatment regimen contributes to high treatment default rates that can lead to increased disease transmission, drug resistance, and death.

The strategy is to identify a portfolio of TB Lead Optimisation projects through the DDU's involvement with the global HIT-TB consortium and TB Drug Accelerator Program which are working to generate drug leads through their screening programmes.

The DDU as part of HIT-TB is already identifying and optimising multiple series of related compounds which kill TB that could be taken up by the team.

Dr Richard Seabrook, Head of Business Development at the Wellcome Trust, said: "We are pleased to be co-funding with the Bill & Melinda Gates Foundation on this exciting UK project, bringing together internationally renowned experts in the biology of infectious diseases with a first-class [drug discovery](#) unit to tackle some of the world's most profound medical needs."

Provided by University of Dundee

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