NovaUCD

Technology Licensing Opportunity

Novel Diagnostic Test for Bovine Tuberculosis

- Simple, fast and accurate diagnostic test

Opportunity:

The global cost of bovine tuberculosis (BTB) caused by infection with *Mycobacterium* bovis has been conservatively estimated to be US$3 billion annually. It remains endemic in many countries despite the implementation of stringent surveillance and control programmes. Current tests for BTB such as the single intradermal comparative tuberculin test (SICTT) and the interferon-gamma release assay are limited in their ability for early and accurate diagnosis, contributing to the ongoing persistence of BTB. Delayed diagnosis increases the risk of spread from infected to uninfected cattle.

Researchers at University College Dublin have developed a simple molecular diagnostic test to complement existing BTB tests resulting in earlier, more accurate detection of infected versus uninfected animals.

Applications:

Early diagnosis of tuberculosis in cattle to complement current tests as part of an effective BTB control strategy. Can be used in the management of herds where current tests fail to detect persistent infection whilst reducing the time for the de-restriction of herds.

Key Features/Advantages:

- Diagnosis of BTB using a combination of 19 genes differentially expressed by animals during the immune response to *M. bovis* infection.
- A whole blood sample that allows for the identification of infection as early as one-week post-infection in experimentally infected animals.
- Can contribute to BTB eradication programmes by complementing existing tests to improve accurate diagnosis of infected animals.

FUNDERS: Science Foundation Ireland sfi For what's next; SCIENCE WITHOUT BORDERS

Value Proposition:
Diagnostic test for bovine tuberculosis using whole blood. Experimentally infected animals have been identified as early as one week after infection. Complementary test to existing methods to be used as part of a BTB eradication strategy.

Market:
Animal Health Diagnostics.

Lead Inventor:
Prof. David MacHugh, UCD School of Agriculture and Food Science
Prof. Stephen Gordon and Prof. Eamonn Gormley, UCD School of Veterinary Medicine,
Dr Kirsten McLoughlin and Dr Carolina Correia.

IP Status/Publication:
UK patent filed on 11 May 2021 (GB2106720.2).

Contact:
Dr Stacey Kelly
Case Manager
Knowledge Transfer
t: + 353 1 716 3705
+ 353 87 406 1714
e: stacey.kelly@ucd.ie