Public release date: 7-Nov-2005 Contact: Tony Stephenson at.stephenson@imperial.ac.uk 44-207-594-6712 Imperial College London

New TB test scoops top prize at Medical Futures competition

An inexpensive and rapid test for tuberculosis (TB) which could be used in developing countries has won first place in the Best Innovation to Improve Global Healthcare category of the Medical Futures Innovation Awards. It also scooped the overall prize at the awards ceremony held last week in London.

The test, known as MODS (Microscopic Observation Drug Susceptible Assay) is able to confirm the presence of TB from sputum samples in one week on average, taking one third to one quarter of the time of a standard TB test. At the same time, the new test is able to spot if the TB is drug resistant which is five to ten times faster than existing tests. The test costs \$2 to perform compared with around \$30 to \$40 for a standard test.

Dr David Moore, from Imperial College London, and the winner of the Award said: "This test can be carried out using cheap and readily available tools and requires relatively little training or expertise. This is particularly important in developing countries which may not have the infrastructure we take for granted in the developed world."

Each year around 8 million new cases of TB are diagnosed, and 1.7 million people die from TB, often as a result of delayed diagnosis and through not being able to spot if the TB is drug resistant.

Working with colleagues from Peru's National TB Programme, the Universidad Peruana Cayetano Heredia, AB PRISMA, and John Hopkins Bloomberg School of Public Health, the team realised many TB patients were dying unnecessarily largely due to an inability to cheaply and quickly diagnose TB. They have now completed proof of principle studies, evaluated the test in large-scale field trials, and are now looking at strategies for implementation and roll-out to optimize impact and cost-effectiveness.

Professor Jon Friedland, from Imperial College London, who helped develop the test, added: "TB is a major cause of mortality in the developing world, and eradicating it has been made difficult through a lack of inexpensive diagnosis equipment which can be deployed quickly and easily. The MODS test provides a simple solution to this, and I am very pleased that this has been acknowledged by winning this very prestigious award."

Professor Stephen Smith, Principal of the Faculty of Medicine at Imperial College London said: "David and Jon's work is an excellent example of how organisations such as Imperial can really help make a difference. The development of a low cost practical solution which can be rolled out in countries with a limited infrastructure could make an enormous difference in eradicating TB."

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