

New odour-'reading' device sniffs out superbug

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Designworks image of OdoReader prototype.

(PhysOrg.com) -- Testing has begun on a device that can sniff out the presence of *Clostridium difficile* disease by smell, thanks to an award from the Wellcome Trust.

The new device - OdoReader - can diagnose the superbug [Clostridium difficile](#) by 'reading' the odour of stool samples. Developed by Professor Chris Probert from the University of Bristol and Professor Norman Ratcliffe from the University of the West of England, the technology enables gasses emitted from faeces to be analysed in under an hour, leading to a rapid and inexpensive diagnosis.

Such early detection could reap real health benefits for millions of

people and help prevent the spread of infectious disease.

"For a long time it has been known that stools have a distinctive and different odour if there is an infection," said Professor Probert.

"What OdoReader does is take this 'knowledge' a step further by comparing the odour of faeces of patients with those from people with specific gastro-intestinal disease to make a rapid diagnosis at point of care."

Gastro-intestinal diseases afflict over four billion adults and children each year. Delays in diagnosis can lead to prolonged [hospitalisation](#) and sometimes death. The *C. difficile* bacteria can cause severe [diarrhoea](#), especially among hospitalised patients. There are over 50 000 cases of *C. difficile* infection in England and Wales each year.

The £1.3 million Wellcome Trust Translation Award will support the development of OdoReader prototypes, which will then be tested against the industry 'gold standard' method of making the diagnosis. If successful, the final product will undergo a clinical trial before becoming available for commercialisation. The award covers a three-year programme of work starting in January 2010.

"We expect OdoReader to be a portable device for the diagnosis of *C. difficile*, however it has potential far beyond that," said Professor Ratcliffe.

"It could be used for a range of other [gastrointestinal disease](#) as well as lung and urinary tract diseases too."

Provided by Wellcome Trust News and features

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