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NEW ON-THE-SPOT CHECKS FOR FAKE MEDICINES

Research shows new technology can identify counterfeit drugs in minutes

A leading UK expert in analysing pharmaceutical compounds has demonstrated that US-based technology can identify fake medicines in minutes. Traditional technology, based on large, laboratory-based methods, takes hours and sometimes days of intensive work.

Presenting his research at the British Pharmaceutical Conference (BPC) in Manchester, Professor Tony Moffat said: "This new technology allows analysis from a scraping rather than from a whole crushed tablet (which saves time and effort) and can identify counterfeits in real time - two important benefits over existing technology - that offers wholesalers, regulators and governments the opportunity to up-scale their efforts to detect fake drugs that are increasingly entering the supply chain."

Professor Moffat is Head of the Centre for Pharmaceutical Analysis at the University of London's School of Pharmacy.

Identification of a fake drug by visual examination is almost impossible. Increasingly, international and national regulators, law enforcement personnel, pharmaceutical companies and wholesalers are looking for ways of reducing counterfeits entering the supply chain. Recent examples of counterfeits entering the UK supply chain include Plavix (to prevent blood clotting), Casodex (for prostate cancer) and Zyprexa (for psychosis).

The technology, called Direct Analysis in Real Time (DART), produces an almost instantaneous reading of the chemical composition of the outer coating of a tablet - or of its core composition - based on a scraping of the tablet. Traditional analytical techniques require tablets to be crushed to a powder and processed before they can be assessed.

To test the potential of DART technology, Professor Moffat and his team analysed authentic Cialis (a treatment for erectile dysfunction) tablets which contain an active ingredient called tadalafil, bought from pharmacies in London, and compared them with known counterfeit Cialis tablets provided by the Korean Food and Drug Administration. The film coating of the authentic drugs contained a signature chemical that was detected by DART in all instances. DART correctly excluded all the counterfeits because of this signature chemical. Moreover, when a scraping of the tablets was used to examine the core composition of the tablets, DART revealed that none of the counterfeits contained tadalafil. Instead, they contained the active ingredient of Viagra, sildenafil.

Professor Moffat said: "DART clearly differentiated the authentic from the counterfeit preparations within a few minutes. This technique is minimally destructive and gives accurate and quick readings. There is great potential for this technology to be used more widely in efforts to reduce the market fake medicines."

Ends

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Notes to Editors

The British Pharmaceutical Conference - entitled "[The medicines maze: balancing risks and benefits](#)" - takes place from 10th to 12th September, 2007, at Manchester Central (formerly Manchester International Convention Centre). The theme of BPC 2007 is reflected throughout the programme, with keynote speeches and workshops addressing crucial technical and professional issues that are facing pharmacy today. The conference will showcase the latest developments in pharmaceutical science and practice research and include discussion and debate led by expert speakers.

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