DRUG TESTING: FINGERPRINT SWEAT WILL BE "NO SWEAT" TO USE

What is so special about the drug-testing innovation from a Norwich company that it has raised £millions from US investors and secured access to a global £multibillion market? We look at a device you could soon be using.

Intelligent Fingerprinting – a Norwich company which is a spinout from the University of East Anglia – has been awarded its first US patent. The patent protects the company's technique for detecting substances in fingerprint sweat deposits and this technology is built into its revolutionary drug-screening device.

The device – the first of its kind in the world – analyses the tiny amounts of sweat contained in a fingerprint to detect specific chemicals known as 'drug metabolites' which, if present, would

indicate drug use. The device screens for multiple drugs-of-abuse from a single fingerprint sample and provides results in 10 minutes.

Metabolites are chemicals produced by the body as a result of normal metabolic processes. They can be used to identify the substances a person has ingested, inhaled or injected. Because the technique detects drug metabolites rather than the drugs themselves, a positive result proves that the person being screened has taken the drug and not simply touched a contaminated surface.

The device captures a detailed image of the fingerprint during analysis. If required, this image can be used to confirm personal identity in relation to the test result, ruling out false positives due to sample mix ups.

It is non-invasive and safe to use, with no need for the specialist collection arrangements required for conventional drug-testing methods involving blood, urine or saliva.

So it is perhaps no surprise that Intelligent Fingerprinting now has access to a £multibillion global market for its handheld drug-testing device. It recognised that the US accounts for over 50% of the global drug-testing market, and last year raised £2million in funding from a consortium of private US-based investors, as well as UK government funding for pilot studies in the National Health Service and forensics services. The device will be sold across the Atlantic through distribution partner Smart Start Inc, a global supplier of alcohol monitoring devices and drug screening service (*www.smartstartinc.com*), with revenues beginning in 2014.

The company already has patents in the same family for the EU and Australia, with further applications across the globe.

Dr Jerry Walker, CEO of Intelligent Fingerprinting *(photographed left)* confirmed that "The award of this US patent protects our invention, which we see as truly disruptive technology, secures access to the significant US market and creates licensing opportunities."

Intelligent Fingerprinting's drug-screening technique is based on pioneering nanoparticle technology invented by the company's cofounder and chief scientific officer, Professor David Russell *(photographed right)* of the University of East Anglia. His research, which has been published in leading scientific journals, is focused on the study of metabolites and their detection in sweat – through which he discovered that information about a person's lifestyle, such as drug-taking habits, could be obtained by analysing their fingerprints.

The University of East Anglia this year celebrates its 50th anniversary. Last year, the *Times Higher Education* ranked it as one of the 10 best universities in the world under 50 years of age. It has graduated over 100,000 students, and attracted to Norwich Research Park some of the UK's key research institutes and a major University Hospital (*www.uea.ac.uk/50years*).

To deliver its new product, the company has recruited a strong development team of specialist immunoassay scientists. Its leader is development

director Dr Mark Hudson, an experienced immunological detection reagent specialist with a strong background in developing point-of-care diagnostic devices.

Intelligent Fingerprinting is currently working towards achieving ISO13485 (medical device) accreditation and pilot production of the handheld drug-screening device is set to begin at end of the year.

There has been worldwide interest in its technology for a wide range of applications, from workplace testing to criminal justice, drug rehabilitation, offender management and use in the prison services. The technique has potential for other uses including healthcare diagnostics

More details can be obtained from *www.intelligentfingerprinting.com*.