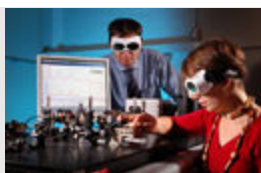


31 July 2008

## LiteThru Limited - sees the invisible to improve pharmaceutical processes



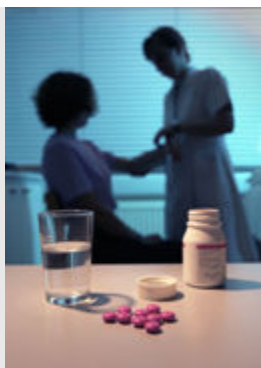
SORS Raman spectroscopy  
Credit: STFC

Production and quality control of medicines could soon be quicker, more accurate and cost effective than previously possible. Pharmaceutical companies are one step closer to being able to peer inside a capsule or tablet and analyse its exact composition, at high speed and whilst still in the packaging. LiteThru Ltd, a spin out company of the Science and Technology Facilities Council (STFC), has successfully secured £750K investment, enabling the company to commercialise the patented technology.

Monitoring production and checking the quality of manufactured medicinal drugs can be a slow and expensive process using techniques such as liquid chromatography, near-Infrared or X-ray analysis. During manufacture it is often difficult to monitor the process to ensure the correct formulation is produced and after manufacture it can take several weeks for a batch of drugs to be tested and released to market; both have enormous impact on the cost of drugs. LiteThru's technology enables non-invasive, accurate analysis of capsules, tablets, powders and solutions in less than one second. LiteThru's innovative approach is set to revolutionise pharmaceutical quality control and formulation development processes on an international scale.

Pioneered at STFC's Central Laser Facility, LiteThru's technology stems from a new form of spectroscopy, known as Spatially Offset Raman Spectroscopy (SORS), which enables the sensitive probing of objects such as capsules and tablets in blister packs or bottles without opening them. This concept is also being researched for its potential to diagnose breast cancer and detect bone disease non invasively.

Dr Darren Andrews, Chief Executive at LiteThru Ltd said: "This investment is the result of successful trials with several large pharmaceutical companies and will be used to build our first rapid analysis machines. The industry response has been strong because the technology can cut the costs of mandatory testing as well as reduce manufacturing lead-time. This is a superb example of how cutting edge science can provide direct solutions for key industrial problems."



General drugs  
Credit: STFC

Professor Pavel Matousek, lead inventor at STFC and Technical Director of LiteThru commented: “This is a very exciting time for us at STFC and LiteThru. I am particularly pleased with the vibrant and stimulating environment at STFC enabling us to make effective use of new ideas and discoveries for the direct benefit of our society.”

LiteThru Ltd was jointly founded by CLIK (Central Laboratory Innovation and Knowledge Transfer Limited), the wholly-owned technology exploitation company of the Science and Technology Facilities Council. The current investment round was led by the Oxford Technology Enterprise Capital Fund and the Rainbow Seed Fund as well as two private investors.

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## Notes for editors

SORS technique images are available upon request - please contact [Wendy Taylor](#).

### Contacts

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### About LiteThru Ltd

[LiteThru Ltd](#) is a private company exclusively licensed to exploit STFC’s novel Raman spectroscopy inventions. As well as pharmaceutical applications this work is being applied to

medical diagnosis for breast cancer and osteoporosis through major clinical studies. It is also being developed for security and customs applications such as screening bottles and other containers.

LiteThru Ltd was originally funded by the Rainbow Seed Fund and NESTA.

### **About SORS (Spatially Offset Raman Spectroscopy)**

Developed for medical and pharmaceutical applications, SORS is a novel spectroscopic technique that enables substances beneath surfaces to be identified. The concept and the research leading to SORS has created a new area of laser spectroscopy. This new technique has been recognised by two international scientific awards (2002 & 2006 Meggers' Award) from the Society for Applied Spectroscopy. Three related scientific papers on this technology were recently selected as three of the 16 most ground-breaking papers published in 'Applied Spectroscopy' over the last 50 years.

[Background](#) on the SORS technique.

### **About CLIK**

Central Laboratory Innovation and Knowledge Transfer Limited ('CLIK') is the wholly-owned technology exploitation company of the Science & Technology Facilities Council. CLIK has the exclusive rights to the commercial exploitation of STFC's intellectual property at Rutherford Appleton Laboratory (RAL) in Oxfordshire, the Daresbury Laboratory (DL) in Cheshire and the Astronomy Technology Centre (ATC) in Edinburgh. Working closely with the technical inventors, the CLIK team progresses individual projects through various business models to the point of implementation as commercial licenses or spin-out companies.

### **About Rainbow Seed Fund**

The £10m Rainbow Seed Fund was established in 2001 with funding from the Office of Science and Innovation to commercialise scientific research in a leading group of the UK publicly funded institutions, our partners. The Fund, which is independently managed by Midven Ltd, made its first investment in 2002, and currently has a portfolio of 17 companies with one exit.

The Fund invests at the earliest stages of a technology's development, and helps to turn an idea into a business by actively identifying and supporting experienced management and facilitating additional coinvestment. Rainbow's partners spend over £1 billion on research and development every year giving the Fund privileged access to high quality investment propositions at the earliest stage.

### **About Oxford Technology ECF**

The £30m Oxford Technology Enterprise Capital Fund was established in 2008 and invests in early stage science and engineering companies. The fund is managed by Oxford Technology

Management Ltd, who also manages the four Oxford Technology series of VCTs and has a portfolio of over 55 early stage technology companies.

## **About Science and Technology Facilities Council**

The Science and Technology Facilities Council ensures the UK retains its leading place on the world stage by delivering world-class science; accessing and hosting international facilities; developing innovative technologies; and increasing the socio-economic impact of its research through effective knowledge exchange partnerships.

The Council has a broad science portfolio including Astronomy, Particle Physics, Particle Astrophysics, Nuclear Physics, Space Science, Synchrotron Radiation, Neutron Sources and High Power Lasers. In addition the Council manages and operates three internationally renowned laboratories:

- The Rutherford Appleton Laboratory, Oxfordshire
- The Daresbury Laboratory, Cheshire
- The UK Astronomy Technology Centre, Edinburgh

The Council gives researchers access to world-class facilities and funds the UK membership of international bodies such as the European Laboratory for Particle Physics (CERN), the Institute Laue Langevin (ILL), European Synchrotron Radiation Facility (ESRF), the European organisation for Astronomical Research in the Southern Hemisphere (ESO) and the European Space Agency (ESA). It also contributes money for the UK telescopes overseas on La Palma, Hawaii, Australia and in Chile, and the MERLIN/VLBI National Facility, which includes the Lovell Telescope at Jodrell Bank Observatory.

The Council distributes public money from the Government to support scientific research. Between 2007 and 2008 we will invest approximately £678 million.