

Monday 24<sup>th</sup> November 2008

## **CYMAP DEAL PUTS NEW GENERATION TECHNOLOGY IN FOCUS**

Cancer Research Technology Limited (CRT), the oncology-focused development and commercialisation company, and the technology development specialists The Technology Partnership plc (TTP) have agreed to join forces to progress new lens-free imaging equipment called CyMap.

CyMap is able to detect a range of particle types in a solution and holds the potential to be used in highly cost-effective medical diagnostics systems\* in hospitals, doctors surgeries and research laboratories to detect, quantify and analyse medical samples such as blood or bacteria.

This technology is based on the principle that when illuminated using a simple light source, 'items' such as cells or pathogens in a sample create light diffraction\*\* and interference patterns that can be recorded by a charge-coupled device (CCD) - a type of digital camera - and then analysed using computer algorithms. This will enable scientists to count the number of 'items' in a sample, and also to monitor changes over time, such as location, movement and division of cells. This information will be useful in helping scientists understand cell division and cell movement, which are important in some normal processes such as wound healing, and in some diseases including cancer.

In the diagnostics field, CyMap may also be developed to monitor bacterial contamination, the presence of other pathogens, or to count red and white blood cells. One of the other advantages of CyMap technology is that it can be easily miniaturised and integrated with microfluidic systems – and it may also have other wider research applications as well.

Professor Borivoj Vojnovic, one of the inventors of the technology at the Gray Institute for Radiation Oncology and Biology, University of Oxford, (GIROB) said: "This new generation of imaging technology will hopefully be much smaller, cheaper and easier to use than the existing alternatives which are usually only available to scientists and pathologists in larger well equipped bioscience laboratories. We envisage CyMap working well as a hand-held device which should make the equipment accessible and affordable for more people working in cancer and other health related disciplines across the world."



The technology was developed by members of the Optical Biochips Consortium, at GIROB, Cardiff University and Bangor University. This Consortium was backed by funding\*\*\* from Research Councils UK, which includes the Biotechnology and Biological Science Research Council and the Engineering Physical Sciences Research Council.

The intellectual property arising from this laboratory-based research has been assigned to CRT which has filed a patent to protect the academic work. Under the terms of the agreement announced today, CRT has awarded TTP an exclusive option to license and develop the CyMap technology. TTP will seek other commercial partners to develop and bring to market a range of applications based on CyMap, either by direct licensing arrangements or through co-development partnerships. CRT and TTP will share the revenues arising from any future development and sales of the technology.

Paul Galluzzo, consultant at TTP, said: “We specialise in commercialising technology that holds the potential to make a real difference in sectors such as clinical and consumer diagnostics, drug discovery, consumer products, digital printing, and communications. We frequently work in partnership with the scientists who made the discovery to bring exciting concepts to the marketplace. CyMap is genuinely innovative and we believe it has great commercial potential, for example to enable new diagnostic platforms, and to introduce imaging capability to products where imaging is currently too expensive. The next stage will be to develop the technology for a range of specific product areas.”

Dr Phil L’Huillier, CRT’s director of business management said: “We believe this technology is very exciting and it’s great to be able to see it progressed in today’s deal. We hope CyMap will help understand and predict what is happening to patients at a basic biological level. This could, one day, have an impact on treatments and how they are delivered. CyMap technology has the potential to be cheaper, more compact and simpler to use which will hopefully prevent doctors from having to send as many samples to laboratories for analysis and enable quicker and easier monitoring of the samples. Only time will tell if this early stage promise pays off but we will watch its progress eagerly.”

**ENDS**

For media enquiries, please contact Emma Gilgunn-Jones in the Cancer Research UK press office on 020 7061 8311 or, out of hours, the duty press officer on 07050 264 059.

### **Notes to editors:**

\* At present, most optical imaging of cells is carried out using large, low-throughput microscope systems or costly 'high-content' automated imaging systems which are generally only usable in a laboratory environment. Though a number of novel miniaturised lab-on-a-chip devices for cell imaging have been described, the range of applications of each is generally limited to monitoring only a few parameters.

\*\* The principle of light diffraction is based on the way waves of light bend around small obstacles to create patterns. Using CyMap technology, a sample can be illuminated using a light-emitting-diode (LED) and these patterns can be recorded by an image capturing device known as a charge-coupled device (CCD) camera. CyMap will offer the ability to analyse these images over time, which can be used to monitor wound healing assays for instance or to track individual cell movements in the sample.

\*\*\* Research Councils UK provided the Consortium, lead by Professor Paul Smith at Cardiff University, with approximately £2.3 million to develop optical biochips for use in cell-based drug discovery, point-of-care diagnostic applications, and veterinary diagnostics. One of the outcomes of this funding was the CyMap technology.

### **The Technology Partnership plc (TTP)**

TTP is Europe's leading independent technology and product development company and creates new business based on advances in technology. TTP specialises in medical devices, instrumentation, consumer and industrial products, digital printing, communications, cleantech and security systems. Established in 1987, TTP is headquartered in Melbourn (near Cambridge, UK). For more information visit [www.ttp.com](http://www.ttp.com), or contact [press@ttp.com](mailto:press@ttp.com).

### **Cancer Research Technology**

Cancer Research Technology Limited (CRT) is a specialist commercialisation and development company, which aims to develop new discoveries in cancer research for the benefit of cancer patients. CRT works closely with leading international cancer scientists and their institutes to protect intellectual property arising from their research and to establish links with commercial partners. CRT facilitates the discovery, development and marketing of new cancer therapeutics, vaccines, diagnostics and enabling technologies. CRT is wholly owned by Cancer Research UK, the largest independent funder of cancer research in the world. Further information about CRT can be found at [www.cancertechnology.com](http://www.cancertechnology.com)

### **Cancer Research UK**

- ◆ Together with its partners and supporters, Cancer Research UK's vision is to beat cancer.
- ◆ Cancer Research UK carries out world-class research to improve understanding of the disease and find out how to prevent, diagnose and treat different kinds of cancer.
- ◆ Cancer Research UK ensures that its findings are used to improve the lives of all cancer patients.
- ◆ Cancer Research UK helps people to understand cancer, the progress that is being made and the choices each person can make.
- ◆ Cancer Research UK works in partnership with others to achieve the greatest impact in the global fight against cancer.
- ◆ For further information about Cancer Research UK's work or to find out how to support the charity, please call 020 712 6699 or visit [www.cancerresearchuk.org.uk](http://www.cancerresearchuk.org.uk)