GE Healthcare

applied precision
A GE Healthcare Company

PRESS RELEASE

GE Healthcare set to revolutionize imaging of live cells with launch of super-resolution imaging system

Applied Precision's OMX Blaze is the world's first system capable of acquiring moving images of live cells at super-resolution in all three dimensions

New technology will accelerate scientists' understanding of disease mechanisms at the molecular level

Issaquah, Washington and Chalfont St Giles, UK – 1 November 2011 – Applied Precision Inc., a GE Healthcare company, today announced the launch of DeltaVision OMX Blaze™, a research microscopy system designed to reach the next level in the evolution of super-resolution imaging by employing a proprietary, ultra-fast, illumination module and the latest advanced high-speed camera technologies.

The new DeltaVision OMX Blaze system's speed of image acquisition enables researchers to follow tagged proteins within the same living cell, over time, in three-dimensional space, at near molecular resolution. This makes it possible to start answering new kinds of research questions about how certain structures in cells behave, what they interact with, and how long the events last.

Paul Goodwin, Director of Advanced Applications, API, said, "It's a pretty extraordinary feeling, to see moving images of live cells at a greater level of detail than anyone has witnessed before. The implications of this advance in imaging technology are hugely exciting for researchers. With the OMX Blaze we can start to answer questions that we never could before."

Dr Amr Abid, General Manager of Cell Technologies, GE Healthcare Life Sciences, said, "We are only at the beginning of what this technology can do. The ability to follow cellular interactions, over time at the molecular level will open up new frontiers in so many areas of life science research. This is a hugely important step forward for cellular imaging."

Researchers at the UC Davis-based Center for Biophotonics Science and Technology (CBST) collaborated early as beta testers for the technology. The system is also being installed at a number of early adopter sites around the world which are expected to go live in the next two months.

Dr Frank Chuang, Associate Research Director, CBST, said, "We're at the point where we need to understand mechanisms of health and disease at the molecular level. The OMX Blaze has tremendous potential as a research tool, and we are very excited to apply this in our laboratory models to observe the response of cancer cells to chemotherapy, the cell-to-cell transmission of HIV and other viruses, and the dynamics of engineered nanoparticles."

In the past ten years, a number of fluorescent microscopy methods have been developed which use computational or optical techniques to exceed the previously assumed limits of optical microscopy. Applied Precision's DeltaVision OMX super-resolution system uses a technique called 3D-SIM (Structured Illumination Microscopy) which approximately doubles the resolution in all three dimensions, giving an eight times improvement in volume resolution compared to conventional microscopy.

For more information about the DeltaVision OMX and to view videos and other images, please click here

DeltaVision OMX Blaze™ is for Research Only, it is not a registered Medical Device.

About video footage of live cell imaging of microtubules
The video footage shows the dynamic movement of a protein called EB3 which is found on the ends of microtubules. Microtubules are part of the skeleton-like network which maintains cell structure, provides transport links around the cell, and plays a key role in dividing the chromosomes during cell division. The cell type imaged is HCT-116, a human cell which was originally derived from a colorectal tumor but is now widely used as a model for normal cell function. By treating these cells with drugs that disrupt microtubule behaviour, researchers can potentially determine effective methods for disrupting a cancer cell's ability to replicate, and use this information to inform the design of new potential cancer treatments. The cell sample used to generate the footage was supplied by Professor Linda Wordeman, professor of physiology and biophysics, University of Washington, Seattle, USA.

About GE Healthcare
GE Healthcare provides transformational medical technologies and services that are shaping a new age of patient care. Our broad expertise in medical imaging and information technologies, medical diagnostics, patient monitoring systems, drug discovery, biopharmaceutical manufacturing technologies, performance improvement and performance solutions services help our customers to deliver better care to more people around the world at a lower cost. In addition, we partner with healthcare leaders, striving to leverage the global policy change necessary to implement a successful shift to sustainable healthcare systems.

Our "healthymagination" vision for the future invites the world to join us on our journey as we continuously develop innovations focused on reducing costs, increasing access and improving quality around the world. Headquartered in the United Kingdom, GE Healthcare is a unit of General Electric Company (NYSE: GE). Worldwide, GE Healthcare employees are committed to serving healthcare professionals and their patients in more than 100 countries. For more information about GE Healthcare, visit our website at www.gehealthcare.com.

For our latest news, please visit http://newsroom.gehealthcare.com

About Applied Precision, a GE Healthcare Company
Founded in 1986, Applied Precision is a leading provider of innovative imaging, measurement and analysis systems for the life sciences industries and OEM markets. The acquisition of Applied Precision allows GE Healthcare Life Sciences to expand its offering of products and services for pharmaceutical and life science research. Applied Precision's proprietary technologies are complementary to GE Healthcare's IN Cell Analyzer Systems which are used for high-throughput sub-cellular analysis in cell biology research. The use of cellular and sub-cellular imaging technology is now central to many areas of cell biology including drug discovery and biomarker research. More information is available at www.appliedprecision.com

Center for Biophotonics Science and Technology (CBST)
Established in 2002 with a grant from the National Science Foundation, the Center for Biophotonics, Science and Technology at UC Davis is focused on advancing biomedicine and photonics engineering to improve human health. In partnership with eight other university campuses and Lawrence Livermore National Laboratory, the center focuses its intellectual, scientific, educational and industrial outreach efforts to develop new tools and technologies that apply the science of light to answer important questions in medicine.

Media Contacts:
College Hill for GE Healthcare

Tim Watson, Dimithri Wignarajah
T: +44 (0)207 866 7861
E: GE-CellTechnologies@collegehill.com