



GE Healthcare launches super-resolution microscope

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- Gives fast, deep and clear images for live observation over long periods
- Scientists can study a larger range of applications thanks to multiple imaging modes integrated on one device – saving the need for multiple instruments.
- EDGE Confocal imaging allows deeper imaging into samples, tissues or organisms

Seattle, Washington, September 18, 2019 – GE Healthcare launches a new microscope to support researchers and their ever-increasing need to see extreme details in cells, without having to choose whether speed, depth or clarity is more important. The DeltaVision OMX Flex super-resolution microscope is a highly stable, multichannel imaging platform optimized for structured illumination microscopy (SIM), and now includes EDGE confocal technology.

Super Resolution Microscopy (SRM) includes the most powerful microscopy tools used for investigating cellular structures because of the level of detail (resolution) they can reveal to a researcher when their biological questions require more information.

“Scientists are increasingly using live cell samples to capture dynamic biological processes in real-time. So the demand is that imaging tools must deliver faster, higher-resolution, and deeper imaging –but using as little light as possible so they can successfully keep the cells alive,” says Emmanuel Abate, General Manager, Genomics & Cellular Research, GE Healthcare Life Sciences. “The new OMX FLEX provides even more ways for our research customers to interrogate their samples and gain more insights.”

In the past, researchers have had to accept partial answers when the diffraction limit of traditional microscopy tools did not provide the level of resolution required for complete understanding, but they are no longer limited by the tools available. Super-Resolution Microscopy can benefit all research areas currently using light microscopy methods, from microbiology through plant biology and all the cellular based research in between.

The DeltaVision OMX Flex can capture the exact details of cell division with enormous clarity and contrast (see photo below). Researchers and clinicians in areas of molecular and cellular biology, virology, cancer research and the like, often use confocal microscopes and need to image thick, live or dim samples. Photobleaching, or excess light exposure, in current imaging modes can be harmful to each of these types of samples.

Prachi Bogetto, Diagnostics Segment Leader, GE Healthcare Life Sciences, says: “Based on the growing needs of researchers to image more complex 3D samples, we integrated our proven IN Cell 6500HS EDGE enhanced confocal technology onto the DeltaVision OMX platform. This emerging confocal capability gives enhanced contrast through the increased depth of these 3D samples. Combined with the other modes, the DeltaVision OMX Flex lets researchers easily switch between imaging modes and go from a micro- to a nanoview of tissues, cells, and organelles.”

The EDGE enhanced confocal technique uses an innovative approach to measure and remove the out-of-focus light contribution that can otherwise remain in traditional line-scanning confocal images. This image quality enhancement is especially prominent for cells grown in 3D culture such as spheroids and organoids, where out-of-focus light dramatically and negatively affects image contrast.

A visual of cell division in a HeLa cell through the DeltaVision OMX super-resolution microscope.

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[See the launch video.](#)

The DeltaVision OMX Flex is commercially available now.

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About GE Healthcare Life Sciences

GE Healthcare Life Sciences helps therapy innovators, researchers and healthcare providers accelerate how precision diagnostics and therapies are invented, made and used. Our products enable biological analysis, research, development and the manufacture of advanced therapies and vaccines. Life Sciences is part of the \$19.8 billion healthcare business of GE (NYSE: GE). With over 100 years of experience in the healthcare industry and more than 50,000 employees globally, GE Healthcare helps efficiently improve outcomes for patients, healthcare providers, researchers, and life sciences companies around the world. Visit our website <https://www.gehealthcare.com/about/life-sciences> for more information.

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