NEWS RELEASE

Bruker Introduces Dedicated Light-Sheet Microscope for Highly Multiplexed 3D Cell Culture Live Imaging

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Luxendo TruLive3D Imager Enables Rapid Imaging of Cells and Organoids in Their Natural Environments

WASHINGTON, Dec. 9, 2019 /PRNewswire/ -- At the 2019 joint meeting of the American Society for Cell Biology (ASCB) and European Molecular Biology Organization (EMBO), Bruker (Nasdaq: BRKR) today announced the launch of the Luxendo TruLive3D Imager light-sheet imaging system. The new system features dual-sided illumination and highly efficient light collection for fast imaging of a broad range of biological samples in their native 3D environments. The TruLive3D Imager leverages the general benefits of single-plane illumination microscopy (SPIM) to enable rapid 3D imaging with minimal light exposure, confocal resolution and excellent contrast in 3D. An extended sample chamber enables multi-sample experiments and an integrated environmental chamber ensures long-term live observations of even the most delicate samples such as stem cells, primary human cells and organoids.

"Our primary breast cancer mouse model allows us to specifically induce and control cancer initiation and progression in 3D organoids," said Dr. Martin Jechlinger, Group Leader at the European Molecular Biology Laboratory (EMBL) in Heidelberg, Germany, the first researcher to test the TruLive3D Imager. "We have been using light-sheet imaging successfully in the past and the new Luxendo system allows us to scale our experiments to hundreds of organoids per imaging session and marks a quantum leap for our research."

"Life happens in 3D," added Dr. Lars Hufnagel, Vice President and General Manager of Bruker's Luxendo business. "Our new TruLive3DImager now enables imaging biology in its native environment without compromising resolution and imaging speed or worrying about photo-toxicity."

About Luxendo TruLive3D Imager
The Luxendo TruLive3D Imager system maintains the ease of use and stability of the InVi SPIM and is optimized to allow fast 3D multi-sample imaging of live specimens. The optical concept, with dual-sided illumination and single-lens detection from below, enables fast acquisition, high-resolution imaging, and minimal shadowing effects, while a wide-field imaging option facilitates sample positioning. The large sample chamber (75 mm in length) can accommodate up to 100 samples into the chamber trough and is ideal for multi-position imaging of small embryos (e.g., Zebrafish, Drosophila, and mouse) or 3D spheroids. For example, time-lapse embryo imaging experiments can benefit hugely from the TruLive3D Imager design and performance.

To facilitate sample mounting for inverted light-sheet microscopes (InVi SPIM and TruLive3D Imager), Luxendo's new TruLive3D Dish series is optimized for light-sheet imaging of cells, 3D cell culture systems, organoids, and small animals. The sterile, dual-well dishes are ready to use and customizable, and samples can be grown or placed into holders as with standard petri dishes. The new dishes also seamlessly integrate into the large chamber of the TruLive3D Imager, which can fit up to three dishes to maximize throughput.

About Bruker Corporation (Nasdaq: BRKR)
Bruker is enabling scientists to make breakthrough discoveries and develop new applications that improve the quality of human life. Bruker’s high-performance scientific instruments and high-value analytical and diagnostic solutions enable scientists to explore life and materials at molecular, cellular and microscopic levels. In close cooperation with our customers, Bruker is enabling innovation, improved productivity and customer success in life science molecular research, in applied and pharma applications, in microscopy and nanoanalysis, and in industrial applications, as well as in cell biology, preclinical imaging, clinical phenomics and proteomics research and clinical microbiology. For more information, please visit: www.bruker.com.

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