



NEWS RELEASE

Bruker Introduces Light-Sheet Microscope for Imaging Optically Cleared Samples

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New Luxendo MuVi SPIM CS Combines Light-Sheet Fluorescence Microscopy and Tissue Clearing Techniques
SAN DIEGO, Nov. 5, 2018 /PRNewswire/ -- At the 2018 Annual Meeting of the Society for Neuroscience, Bruker today announced the release of the **Luxendo MuVi SPIM CS** light-sheet fluorescence microscope for imaging optically cleared samples. The **MuVi SPIM** technology allows fast, long-term imaging of large samples with highest resolution and optical sectioning, as well as minimized photodamage. By means of physicochemical clearing techniques, the optical properties of usually opaque samples are modified to render them transparent, while keeping their structure intact. The **Luxendo MuVi SPIM CS** brings together the best of light-sheet fluorescence microscopy and tissue-clearing techniques, and provides new solutions in sample mounting, sample size, and optics to enable best-in-class, high-quality 3D imaging of cleared samples.

"The new **Luxendo** system complements the current portfolio of imaging systems at our facility," said Dr. Jim Swoger, Head of the Mesoscopic Imaging Facility at the European Molecular Biology Laboratory (EMBL) in Barcelona, Spain, the first researcher to acquire a **MuVi SPIM CS** system. "The cutting-edge optics and ease of use, together with its small footprint, are some of the main advantages of this novel microscope for my facility."

"The robust high-performance capabilities of the **Luxendo MuVi SPIM** have now been extended to the imaging of larger, optically cleared and fixed samples," added Dr. Andreas Pfuhl, Vice President and General Manager of Bruker's Luxendo business. "The modular design allows switching quickly between cleared-sample and live-sample imaging, making the system a perfect choice for multi-user environments with ever-changing applications."

About Luxendo MuVi SPIM CS

The **Luxendo MuVi SPIM CS** is an extension of the **MuVi SPIM** capabilities to enable 3D imaging of cleared

samples. The Cleared Sample Module is an add-on consisting of an exchangeable cleared sample optical core unit (octagon) and an overhead sample-positioning unit installed on the microscope's top plate. The octagon can be easily removed from the microscope for maintenance and cleaning of the sample chamber and objectives that have been exposed to the mounting solution. The sample chamber and detection unit in the octagon can be adapted to suit experimental needs in terms of sample size and detection lens configuration, providing highest flexibility.

The **Luxendo MuVi SPIM CS** features sample mounting 'from above' for easy sample access and optimized travel range suited for various mounting methods (e.g., hook, plate, pin or cuvette), a large sample chamber compatible with a broad range of solutions used in different clearing protocols, as well as flexible illumination and detection configurations to meet varied application needs. As a result, the **Luxendo MuVi SPIM CS** can image a great variety of samples at high speed and high resolution.

To handle the vast amount of data produced by the light-sheet technique, the new **Luxendo LuxData** comprehensive data processing and storage solution provides fast transfer and large-capacity storage, and also leverages multi-core- and multi-GPU-based processing. This holistic approach supports the complete acquisition, storage, and processing workflow for high-resolution image data from Luxendo SPIM microscopes.

About Luxendo

Headquartered in Heidelberg, Germany, Luxendo was founded in September 2015 as a spin-off of the European Molecular Biology Laboratory (EMBL). Luxendo was able to rapidly develop robust product solutions based on the patented SPIM technology. Now, as part of Bruker Corporation, Luxendo's light-sheet microscopes join Bruker's existing portfolio of swept-field confocal, super-resolution, and multiphoton fluorescence microscope product lines, enabling new research advances in small organism embryology, live-cell imaging, brain development and cleared brain tissue, and optogenetics applications. For more information, please visit www.luxendo.eu.

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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