

Press Release
For Immediate Release

iBox Explorer² for Macro to Micro In Vivo Imaging

June 28, 2014

At WMIC Booth 402, UVP will exhibit the [iBox Explorer² Imaging Microscope](#) which detects fluorescent markers from whole mouse to individual cell level for in vivo imaging in immunology, stem cell biology, neuroscience and cancer biology research applications. Applications include tumor shedding, tumor growth and tracking, biodistribution, metastases Hematogenous and Intralymphatic trafficking and extravasation.

The integrated optics are designed to transition from the macroscopic to the microscopic scale, with deeper interrogation of a fluorescent signal in real time. Magnification range is from 0.17x to 16.5x. Scientists imaging whole animals for tumor tracking or biodistribution will be able to "dive deeper" into the animal in order to investigate biological phenomena at the cellular level.

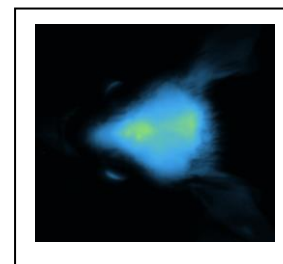


The iBox Explorer utilizes a BioLite™ Xe MultiSpectral Light Source which provides bright illumination for multispectral fluorescent, visible and NIR excitation. The BioLite Xe houses a 150-watt xenon lamp that supplies brilliant excitation of fluorescent probes for a variety of applications. The BioLite Xe includes an eight-position emission filter wheel for placement of filters and convenient switching between experiments and multiplexing applications.

The system captures detailed images of tissues and cells with the leading-edge cooled scientific grade CCD camera. VisionWorks®LS software automates research with total system control and allows easy creation of templates for reproducible and consistent results. The system a computer/monitor loaded with the software.

Additional features include a built-in warming plate maintains a uniform temperature of the mouse. The plate slides out for easy access. A port in the darkroom allows access for an optional anesthesia system.

The iBox Explorer system provides quality images with high sensitivity and broad range applications for molecular imaging. In an application example (UVP [Application Note FP-185](#)), the iBox Explorer was used to study the blood-brain barrier transport by tracking Cy5.5 labeled amyloid beta peptides in mice. Amyloid beta peptides is considered as an important indicator for Alzheimer's disease. Visualization of volume change of Amyloid beta peptides requires an advanced imaging system that can detect the trivial fluorescence signal change with low noise. The iBox Explorer successfully captured the NIR fluorescence Cy5.5 signal inside the mouse brain at various time points. The temperature controlled plate and inhalation anesthesia system helped to make the imaging procedure easy and reliable. With UVP's VisionWorks software, the researcher was able to visualize and qualitatively analyze the transport of Amyloid beta peptides, which provide solid basis for further study.



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