

IVM-MS2, "The Most Compact All-in-One IntraVital Two-Photon Microscopy System in the World".

IVIM Technology, Inc. has released the most compact all-in-one intravital two-photon microscope, "IVM-MS2". IVIM Technology, Inc. is the world's first start-up that commercializes all-in-one integrated intravital microscopy equipment. Our equipment uses innovative intravital microscopy (IVM) technology originally developed by KAIST.

IVM-MS2 is the all-in-one IntraVital Two-Photon Microscopy System, optimized for in vivo imaging experiments and equipped with a new compact high-efficiency fs-pulse laser module. Especially, the IVM-MS2 is an ideal choice for customers with limited resources and budgets as it integrates a compact high-stability maintenance-free fs-pulse laser into a single box. The two-photon intravital microscope is in high demand for global leading advanced bioresearch institutes. And the newly released "IVM-MS2" will be installed at Harvard Medical School in the U.S.A. and Max Planck Institute in Germany.

"IVM-MS2" is designed to integrate all the functions necessary to image various processes in living animals with high cellular and molecular resolutions, allowing anyone not only equipment experts, to achieve the desired results without any difficulties. It is also equipped with imaging algorithms to automatically compensate movements such as heartbeats and lung movement caused by respiration based on its unique ultra-high speed in-vivo imaging (max. 100fps with 512x512 pixels), and a live animal maintenance system to maintain the physiological environment of tissues during image acquisition.

"IVM-MS2" is the first in the world to have an ultra-small 920nm ultra-fast fs-pulse laser module inside. The 920 nm wavelength is the most used wavelength in two-photon microscopy, it allows two photon-excitation of various fluorescent simultaneously and efficiently. Using "IVM-MS2" with high performance, high space-saving and reasonable price, researchers can observe various biological processes inside living animals without any limitation of fluorescence and get highly reliable results.

In addition to 'IVM-MS2, IVIM Technology, Inc. has a variety of products lines including all-in-one

confocal microscope 'IVM-C', multi-photon microscope 'IVM-M' and confocal/multi-photon microscope 'IVM-CM'. It also provides customized experimental services using customers' own molecules or drug candidates by professional researchers in IVIM corporate research institute (All the researchers in IVIM lab are Ph. D from KAIST and have more than over 10 years of experiences).

Recently, the biopharmaceutical industry has focused on developing new concepts of biopharmaceuticals, such as immunotherapy, cell therapy, gene therapy, and antibody therapy, rather than simply developing synthetic drugs. The human body works through complex interactions. However, in the preclinical stages of new drug development, studies have been conducted mainly in ways that do not involve interactions, such as in vitro and ex-vivo experiments. IVIM Technology's ultra-fast laser scanning three-dimensional intravital microscopy allows for direct observation of the cell movement inside living tissues, and individual cells moving inside various organs of the body that cannot be seen with MRI or CT. It also allows for imaging of various cells, molecules like proteins and surrounding microenvironments simultaneously with higher resolution and precision than that allowed by existing technologies. It allows getting detailed information about the process of various diseases occurring in the body in cellular level.

IVIM Technology's intravital microscopy systems can be used for ▲In Vivo 4D cell imaging, tracking & monitoring, ▲In Vivo imaging of drug efficacy, and ▲In Vivo imaging of drug delivery. And you can get high-resolution intravital imaging of almost all tissues and organs, so it is perfect methods for accurate identification of drug mechanisms, especially for various new drug studies such as exosomes, bispecific antibodies, and microbiomes.

