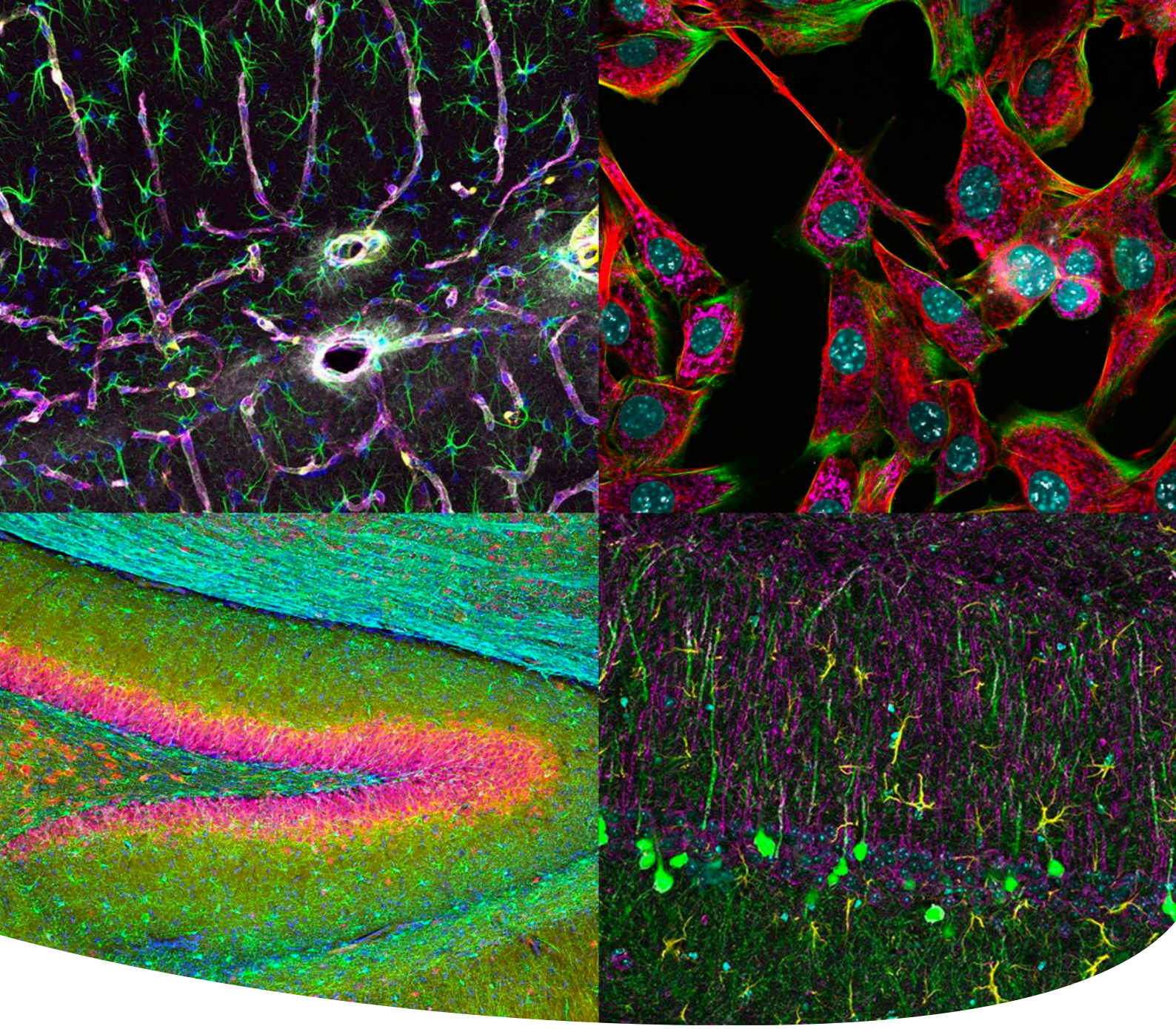


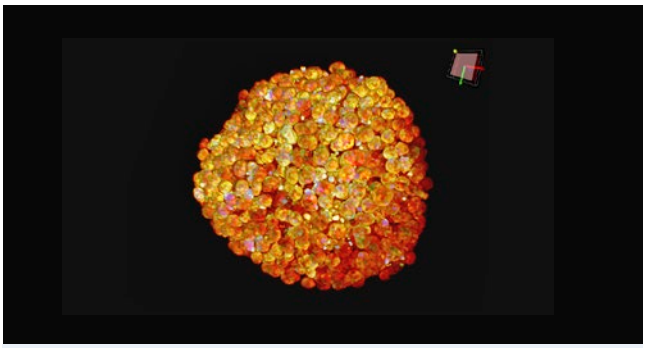
Near-Infrared Imaging Solutions

EVIDENT

Near-Infrared Imaging Solutions

See in red—open a spectrum of possibilities. When investigating cellular processes in the context of their 3D environments, model organisms and organoids are often superior to 2D culture systems. Near-infrared (NIR) microscopy has proven beneficial for imaging biological tissues due to a lower absorption and scattering of NIR light than visible light. This lets NIR light penetrate deeper into tissue, enabling the assessment of information from deeper structures with limited photodamage. The development of NIR fluorophores to broaden the spectrum available to researchers for multichannel imaging has brought this imaging technique to the forefront of various biological imaging applications.

Fast Confocal Imaging



IXplore™ SpinSR Super-Resolution Microscope System

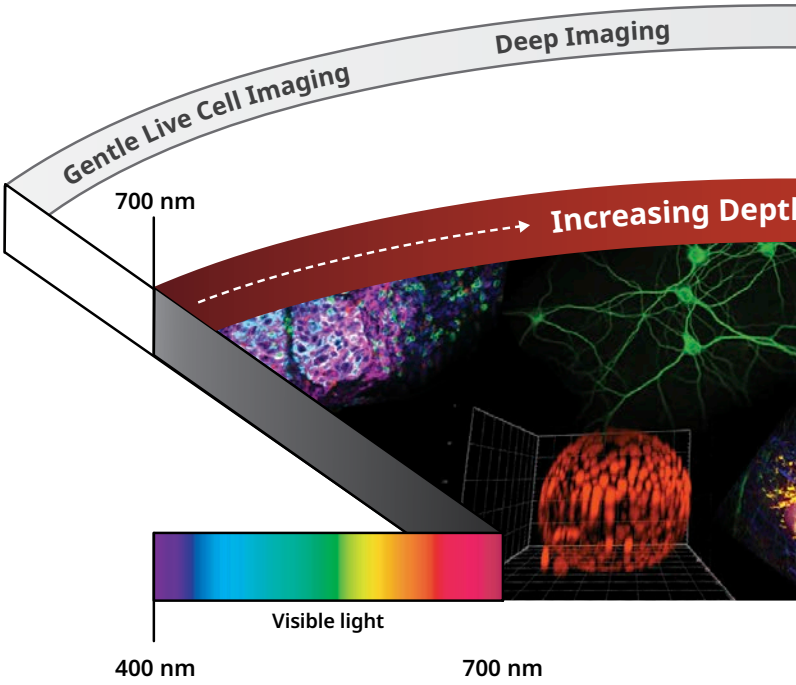
Live-Cell Imaging: Spinning-disk technology reduces phototoxicity and bleaching for prolonged cell viability in time-lapse imaging

Deep-Tissue Observation: Near-infrared fluorescence technology and silicone immersion optics support gentle live-cell imaging and high-resolution observations deep inside living tissue with minimal spherical aberration and reduced autofluorescence

Super Resolution: See more details with resolution down to 120 nm using live samples

High-Content Screening: Automate screening and high-resolution imaging of rare events in large populations*

*Only for Americas, EMEA, China and APAC regions.



Nanoscopic Imaging

SAFe Bioimaging Platform*

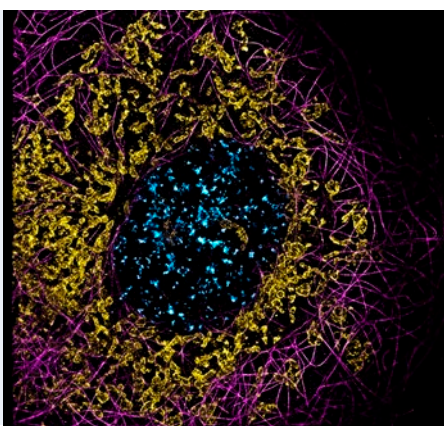
SAFe Light Illumination Modules: Reveal structures and dynamics at the nanoscale

ASTER Technology: Homogeneous illumination in TIRF, HiLo, and Epi mode supports PALM, STORM, or PAINT modalities with nanometer precision

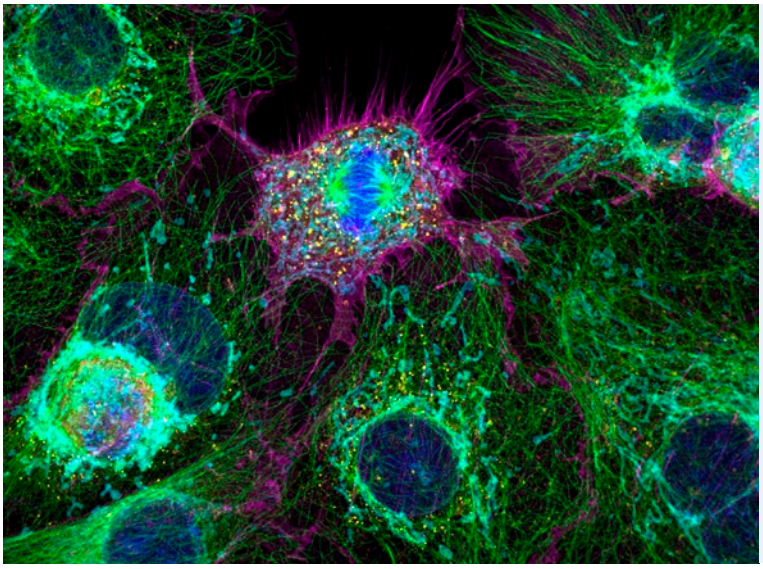
Modular Nanoscopy Solutions: Maximize your imaging capabilities with confocal microscopy, total internal reflection fluorescence microscopy (TIRFM), and single-molecule localization microscopy (SMLM) in one system

SAFe RedSTORM: Simultaneous multicolor imaging in SMLM using far-red spectral demixing

*Only for the Americas, EMEA, and APAC regions.



High-Resolution 3D Imaging



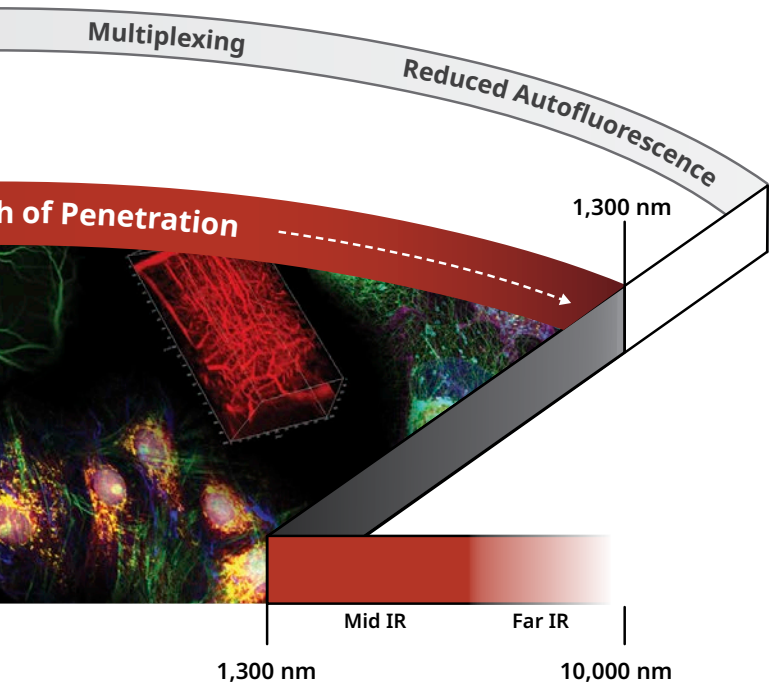
FLUOVIEW™ FV4000 Confocal Laser Scanning Microscope

Live-Cell Imaging: Achieve high-quality quantitative live-cell data and optimal cell viability with 685, 730, and 785 nm NIR laser diodes, which are constantly monitored for consistent illumination power

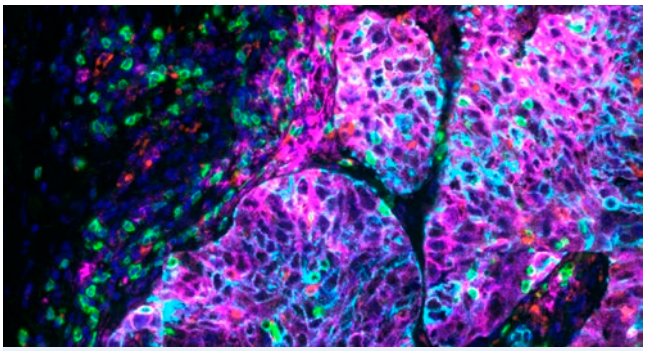
Spectral Freedom: Up to 6 individual high transmittance optics channels from VIS to IR and flexible spectral bandwidth up to 900 nm

TruFocus™ Z-Drift Compensator: Minimizes cell damage during prolonged live-cell imaging

Multiphoton Imaging Upgrade: Expand your deep imaging capabilities as your research evolves by adding the MPE modules and pulsed lasers with excitation up to 1,300 nm.



Digital Slide Scanning



SLIDEVIEW™ VS200 Research Slide Scanner

Multiplexing: Reveal co-expression and the spatial composition of multiple targets within a sample

SILA Optical Sectioning: Real-time, high contrast, and blur-free images from thick samples

Contrast Methods: Digitize and share images using brightfield, darkfield, polarization, and multichannel fluorescence

Penta Filters: Benefit from a variety of fluorescent filter sets and wheels to perform imaging using dyes from DAPI to Cy7

Extended Focus Imaging: Extract the in-focus information from different focal planes to view the entire depth of the specimen in one image

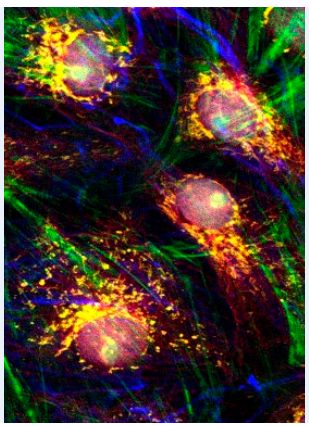
High-Performance Objectives

A Line™ Silicone Immersion Optics

Deep-Tissue Imaging: High-resolution observations deep inside living tissue with minimal spherical aberration

Brightness: Catch more fluorescence signal at a better axial resolution

Improved NIR Transmittance: Special version with dedicated coatings for high transmittance in NIR



X Line™ High-Performance Objectives

Flatness: Expanded flatness with consistent sharpness from the center to the edge

Numerical Aperture: Improved brightness, resolution, and signal-to-noise ratio, resulting in excellent image quality

Chromatic Aberration: Exceptional color accuracy for multicolor fluorescence imaging in 400-1,000 nm

Near-Infrared Imaging Solutions: Applied Technologies

Confocal Imaging—Focused on 3D

Confocal imaging creates optical sections of a specimen by scanning a focused laser spot point-by-point over the field of view. A pinhole allows only the light from a small focal volume to pass through to the detectors. The measured signal intensity at each scanning point is then converted to an image, pixel by pixel. Confocal microscopy not only increases optical resolution and contrast but its optical sectioning properties also enable reconstruction of 3D structures from a series of images obtained at different depths. The FV4000 confocal microscope supports even deeper imaging with less absorption and scattering using high transmittance optics and specialized red-shifted SilVIR™ detector technology.

› FLUOVIEW FV4000

Spinning-Disk Confocal Imaging—From Live-Cell Imaging to Super Resolution

Spinning-disk confocal microscopes simultaneously excite multiple image points and collect the data using a highly sensitive camera, enabling fast imaging without sacrificing image quality. Taking advantage of this technique, the IXplore™ Spin system enables you to study dynamic cellular processes in live cells at high speed and signal-to-noise ratio while keeping cells alive and healthy. The IXplore SpinSR system enables fast 3D super resolution imaging without the need for dedicated labeling procedures. Both systems further improve organoid imaging through the use of silicone immersion optics, which match the refractive index of living tissue and enable you to observe deeper into the specimen, catch more signal, and image the real shape of organoids over time.

› IXplore SpinSR

Whole Slide Imaging—See the Big Picture

In whole slide imaging, slides are converted into virtual slide images that can be stored, managed, and shared for documentation and analysis. By generating a precise copy of the entire specimen at high resolution, users can view and analyze samples in detail, from single cells to the entire brain, surface, and deep areas, regardless of their proximity to the microscope. Since large slide holders are available, larger samples that previously had to be divided into multiple slides can now be digitized in a single scan. Virtual slides can be stored on a central server, making simultaneous access possible anywhere in the world.

› SLIDEVIEW VS200

Single-Molecule Localization Microscopy (SMLM)

SMLM relies on the ability to stochastically activate only a subset of fluorescent molecules to distinguish them spatially. Repeating the process by acquiring consecutive images, the accumulated raw data are processed in real time to detect and localize every single molecule with nanometer precision (down to 10 nm). Abbelight SAFe nanoscopes offer a unique excitation system based on ASTER technology, which generates homogeneous illumination in TIRF, HiLo, and EPI modes while performing SMLM modalities such as PALM, STORM, or PAINT. The SAFe RedSTORM module integrates with an Evident inverted microscope platform for multicolor far-red spectral demixing and offers an easy and flexible nanoscopy solution.

› Abbelight SAFe modules

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