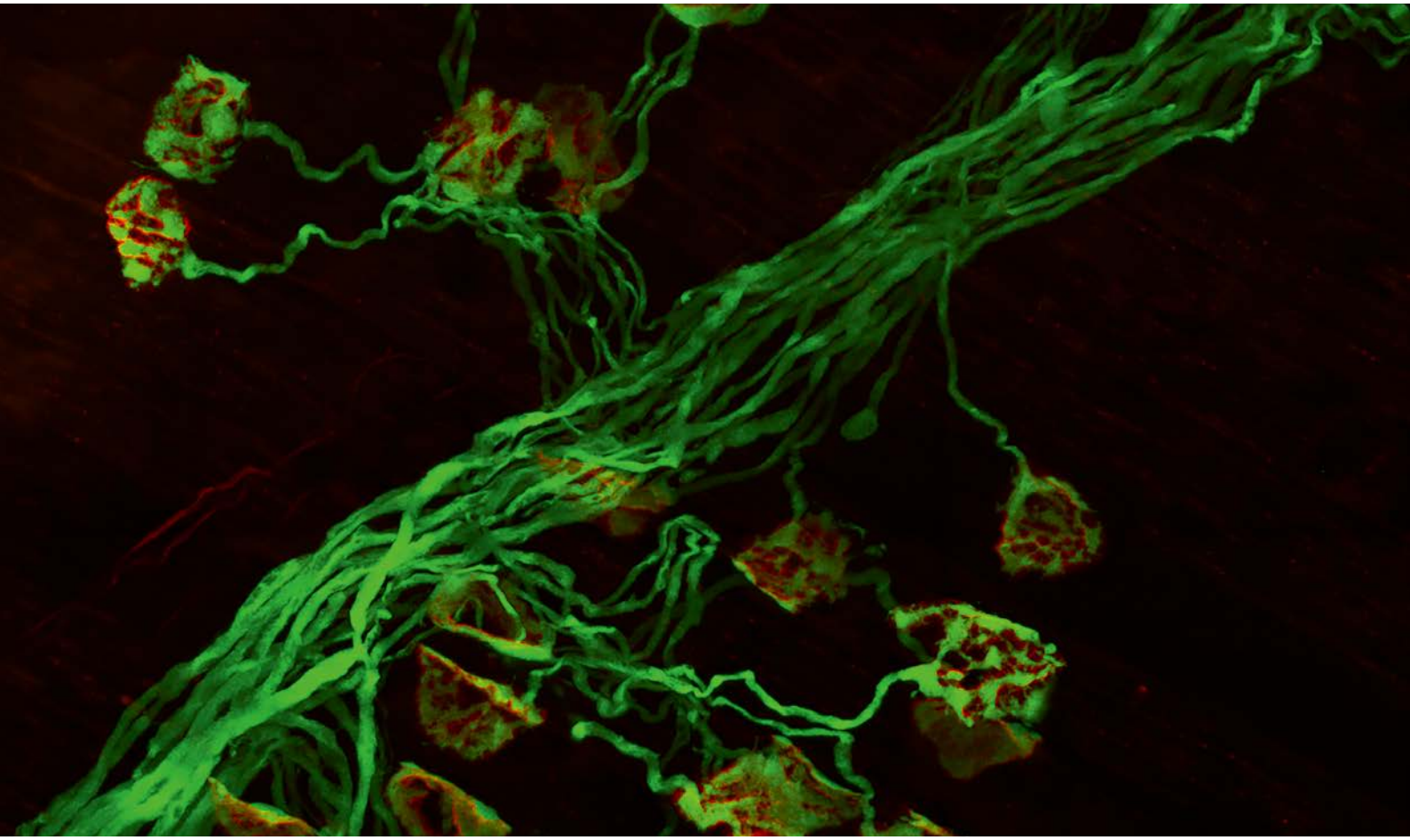
EVIDENT

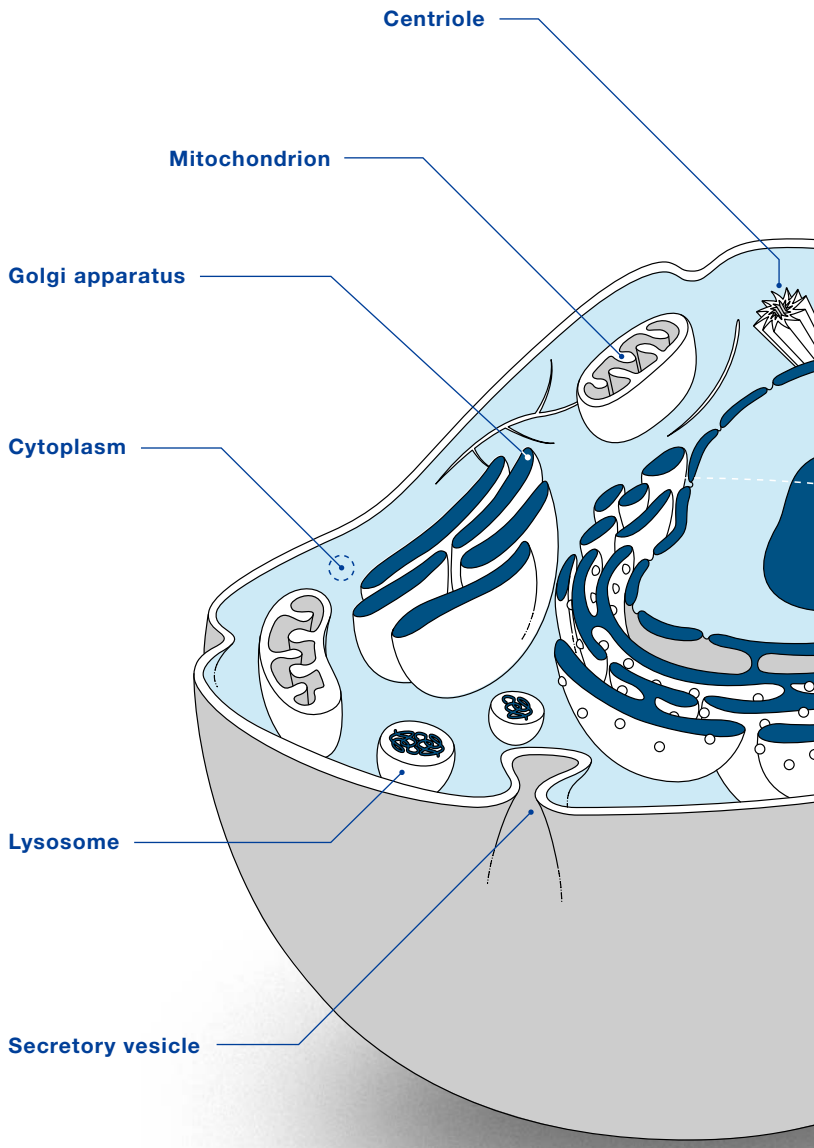
Your Science Matters

Cell Biology Solutions

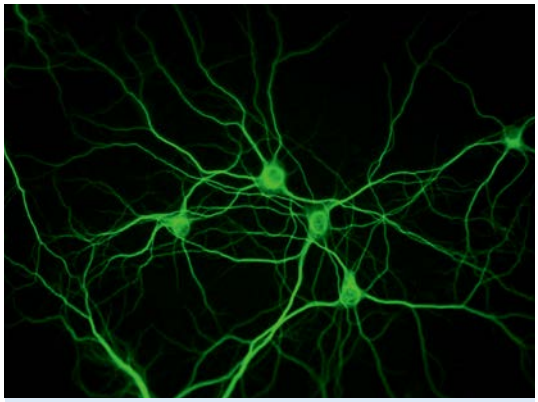


Spotlight on the Cell

To study dynamic processes in living cells, Olympus Life Science System Solutions provide you with fast and highly sensitive imaging techniques. Precise and efficient device control prevents photobleaching and reduces phototoxicity, resulting in healthier samples for more robust data.



Live Cell Imaging



IXplore Live

Live Cell Imaging — Achieve high speed with precise control

Autofocus — Automatically maintain the focal position throughout a long-term, time-lapse imaging experiments

Modular Incubation System — Maintain cell viability and physiological conditions

Dedicated Optics — Capture more fluorescence signal at a better axial resolution using silicone immersion oil

Super Resolution

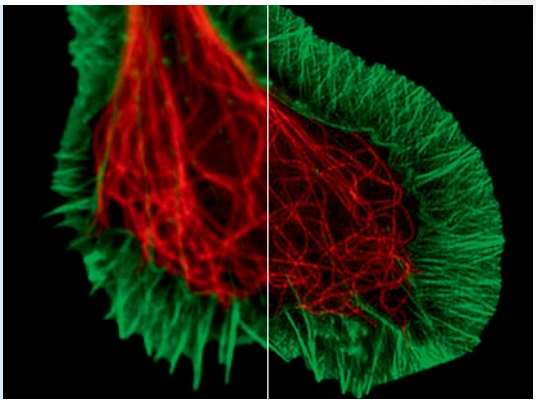
IXplore SpinSR*

Super Resolution — See more details with resolution down to 120 nm

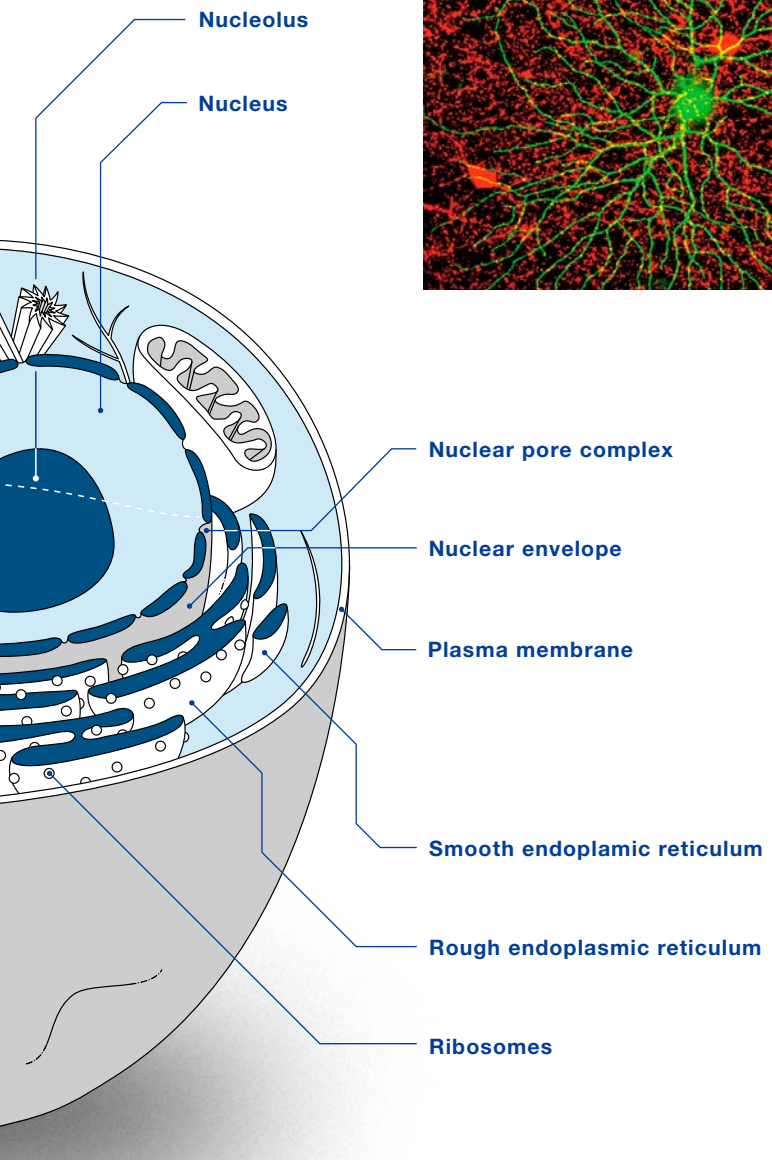
Live Cell Imaging — Take advantage of less phototoxicity and bleaching for prolonged cell viability in confocal time-lapse imaging

Multimode Imaging — Easily switch between widefield, confocal, and super resolution modes

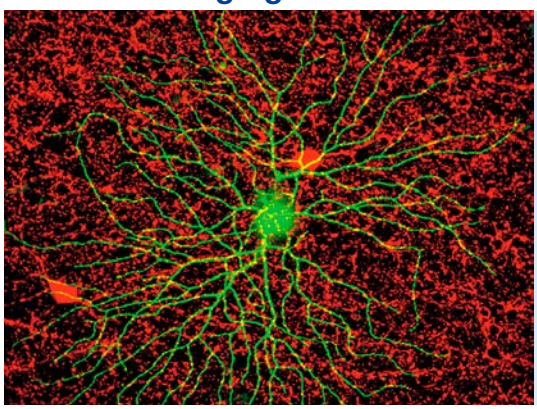
Silicone Optics — Accurate 3D reconstruction with Olympus silicone oil immersion objectives



Fluorescent staining of microtubules (red: Alexa Fluor 594) and actin (green: Alexa Fluor 488) in growth cone of NG108 cells. Image courtesy of: Dr. Kaoru Katoh, Biomedical Research Institute, National Institute of Advanced Industrial Sciences and Technology (AIST)



Confocal Imaging



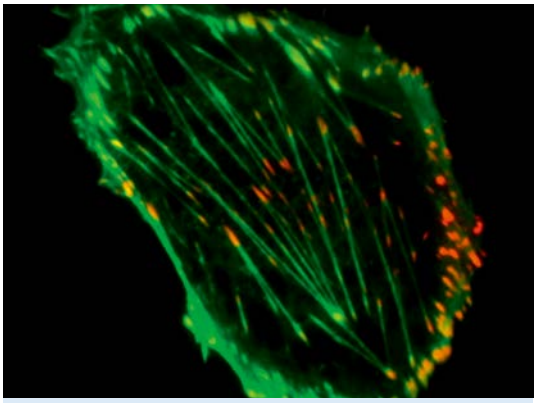
FLUOVIEW FV3000

Live Cell Imaging — Achieve high-quality live cell data and optimum cell viability with high-speed scanning and sensitive detection

Simultaneous Imaging — Simultaneously image bright and dim fluorophores with precise and flexible detection bandwidths from 2 nm to 100 nm

Super Resolution — See your sample in greater detail with resolutions down to 120 nm

TIRF Imaging



IXplore TIRF*

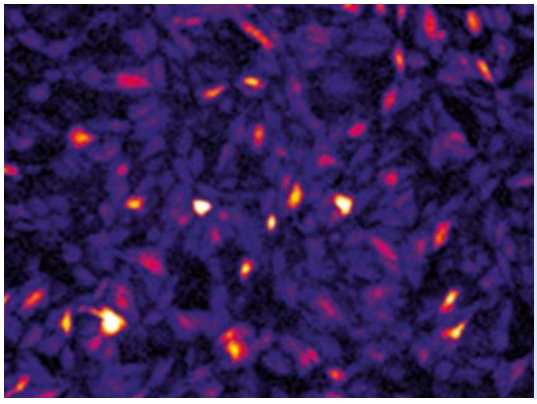
Multicolor Imaging — Document processes in living cells at the same penetration depth using up to four laserbeam paths

Dedicated Optics — Optics with an NA of 1.7 enable you to see more details

Real-Time Control — Advanced, high-speed, real-time imaging requires high accuracy for automated experiment setups

Enhanced Resolution — Adaptable for single molecule localization microscopy

Bioluminescence



LUMINOVIEW LV200*

Optimized Optical Design — High collection efficiency in long-term bioluminescence imaging at subcellular resolution

Motorization — Save time with automated experiment setup for higher throughput

Integrated Incubation — Essential for long-term observation of cells and living tissues over days or even weeks

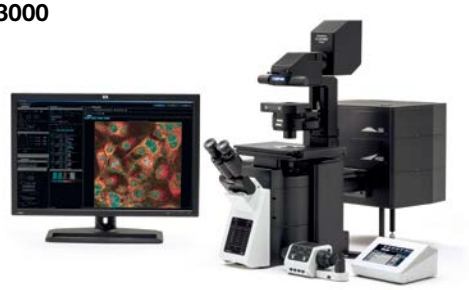
*This product is not available in some regions.

Systems for Cell Biology

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 the reconstruction of 3D structures from a series of images obtained at different depths.

▶ FLUOVIEW FV3000



TIRF Imaging — Get the Right Angle

TIRF microscopy uses the evanescent field created when a focused light beam is reflected at the interface between two media with different refractive indices. This enables high-contrast imaging in close proximity to the reflecting surface, while eliminating background noise and minimizing photo damage. TIRF microscopy is ideally suited to observe events close to the cell surface, such as membrane dynamics and vesicle trafficking. With the maximized signal-to-noise ratio, TIRF is the method of choice for single molecule detection.

▶ IXplore TIRF*

Live Cell Imaging — Stable and Precise

Studying dynamic processes in living cells poses two main challenges to a microscope system: collecting live cell data with a sufficient signal-to-noise ratio while, at the same time, keeping cells alive and healthy. Therefore, reliable control and maintenance of temperature, pH, and humidity is vital for successful live cell studies. The IXplore Live system combines these capabilities with microsecond accuracy in device control. This seamlessly integrated solution enables high-speed imaging with less phototoxicity. Based on confocal spinning disk technology, the IXplore SpinSR system provides fast, 3D super resolution imaging without the need for dedicated labeling procedures. A stable stage and focus enable high-precision, multipoint time-lapse images that are properly aligned and in focus. Matching the refractive index of living tissue, the use of silicone immersion optics enable you to capture more signal and image the real shape of live cells over time.

▶ IXplore Live

▶ IXplore SpinSR*

Bioluminescence Imaging — Use the Light Within

Bioluminescence is induced by a chemical reaction and provides faint light emissions with varying lifetimes. Due to the absence of background light, bioluminescence can be measured with a high signal-to-noise ratio and does not cause any toxicity to the sample. Since emission is only possible with a functioning metabolism, only viable cells emit luminescence signals. Hence, bioluminescent measurements are an excellent choice for monitoring long-term changes in live systems and are directly quantitative.

▶ LUMINOVIEW LV200*

Thy1 YFP-16 triangularis sterni, YFP pan Neuronal cytoplasmic labelling, bungaro-toxin Alexa 594, labels postsynapse, Sample Provided by Monika Brill and Thomas Misgeld, Institute of Neuronal Cellbiology, Technical University Munich

*This product is not available in some regions.

- **EVIDENT CORPORATION is ISO14001 certified.**
- **EVIDENT CORPORATION is ISO9001 certified.**
- **Illumination devices for microscope have suggested lifetimes. Periodic inspections are required. Please visit our website for details.**

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