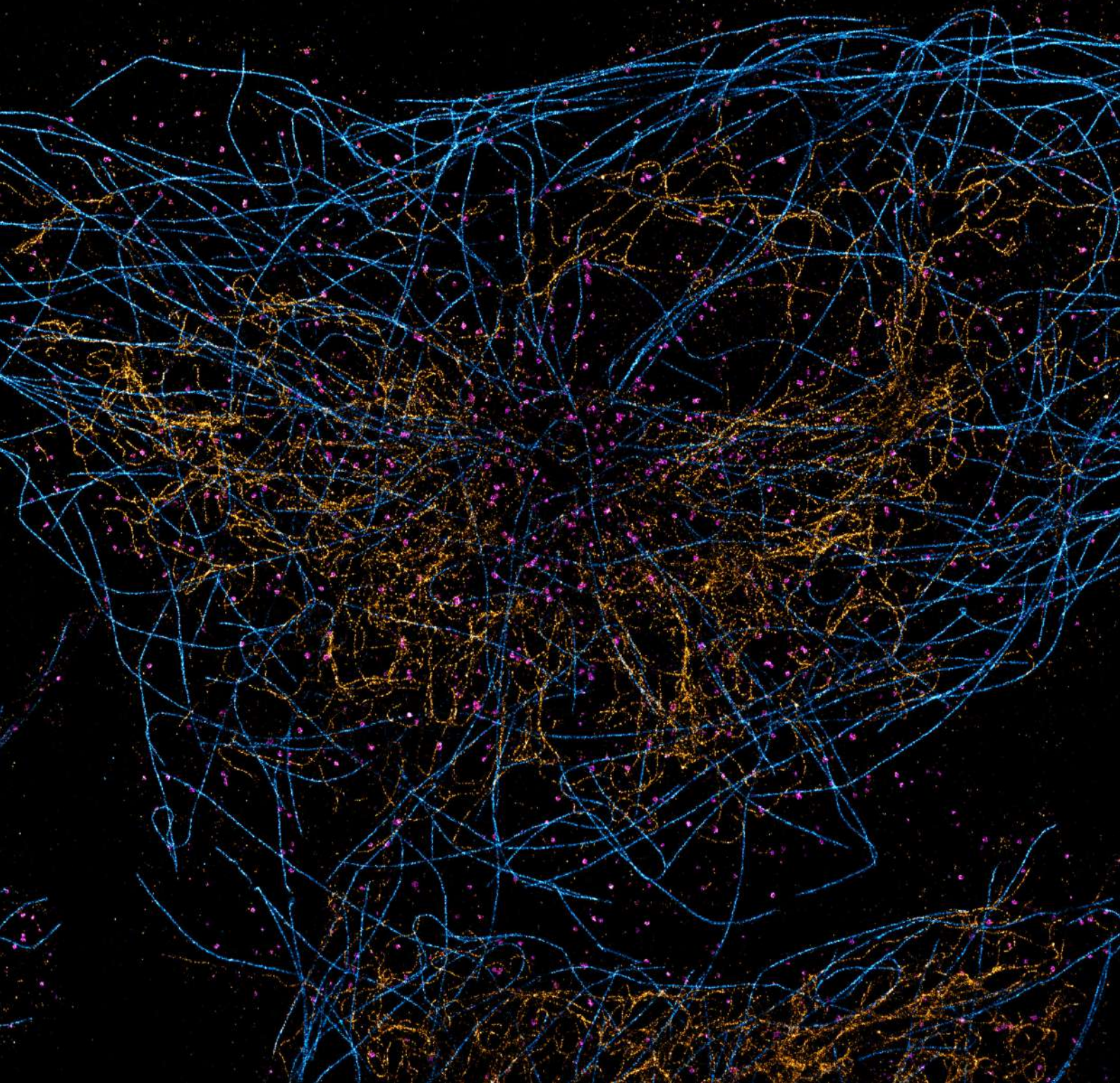
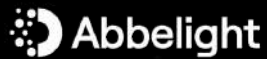


# ADVANCED BIOIMAGING

From Microscopy to Nanoscopy

Solutions Portfolio





## TAKING MICROSCOPY

To the next level

Abbelight is a cutting-edge technology provider, specializing in the development of unique, flexible technologies that integrate seamlessly into tailored products.

Since our founding in 2016, we have been dedicated to supporting scientists in Discovery Research within academia, helping them accelerate their research and achieve groundbreaking discoveries.

In recent years, we have expanded our applications and methods, broadening our offerings to empower scientists in the Biotech, Biopharma, and CRO industries, as well as those engaged in Clinical Translational Research.

Our product portfolio includes ready-to-use sample preparation reagents and flexible add-on modules that are fully compatible with existing inverted microscopes, cameras, and lasers. These integrated solutions are driven by our Abbelight software suite, featuring the proprietary Neo™ software, offering comprehensive control and optimization for enhanced performance.



# A COMPLETE & INNOVATIVE PORTFOLIO

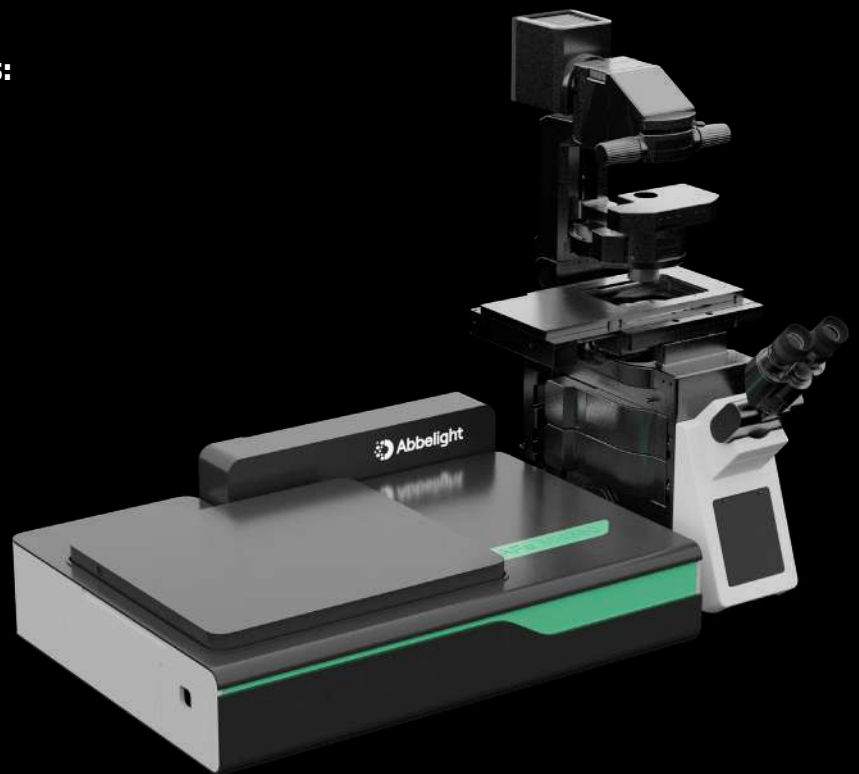
For scientific discovery

Abbelight provides a comprehensive workflow solution, covering every step from sample preparation to powerful data acquisition and delivering actionable insights.

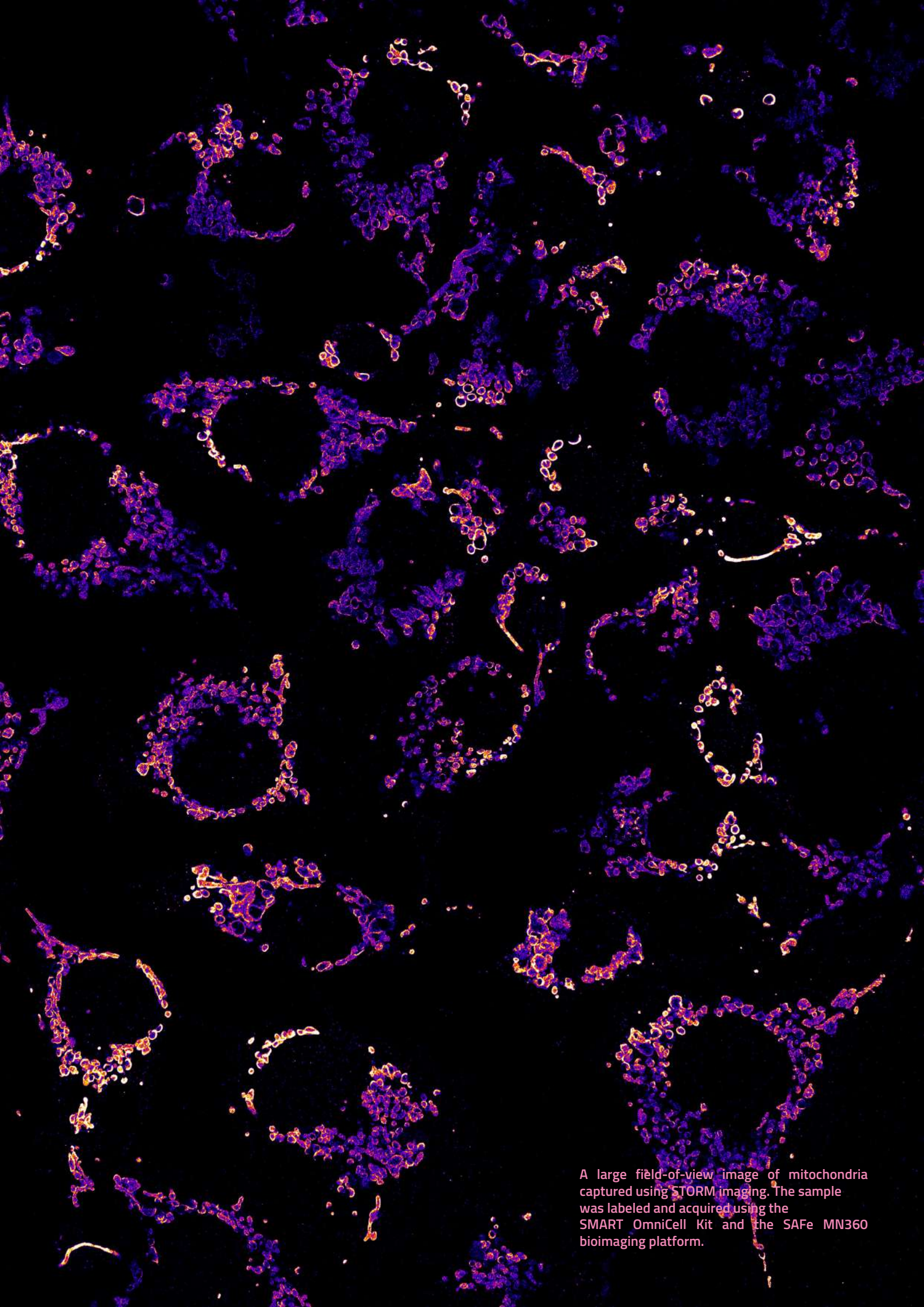
Our cutting-edge technologies push the boundaries of scientific discovery, transforming research and industries that depend on Cell Biology, enabling breakthroughs and advancing research in unprecedented ways.

## Primary Applications:

- Neuroscience
- Extracellular Vesicles
- Nanoparticles
- Microbiology
- Biophysics
- Cell Biology
- Genomics



The SAFe platform is compatible with any inverted microscope.  
Here shown with the Evident IX83 microscope system.



A large field-of-view image of mitochondria captured using STORM imaging. The sample was labeled and acquired using the SMART OmniCell Kit and the SAFe MN360 bioimaging platform.

# A COMPLETE & INNOVATIVE PORTFOLIO

The ultimate multimodal bioimaging platforms



## Sample Preparation

### SMART Products

- Ready-to-use kits
- Reagents
- Automation devices



## Imaging

### SAFe Platforms

- Upgradable
- Customizable
- Multimodal platforms



## Analysis

### NEO Software Suite

- For quantitative analysis
- For visualization at the nanoscale



# SAMPLE PREPARATION

## Streamlined Sample Preparation for Superior Imaging Results

Automate your workflow with ready-to-use kits for fast, reliable, high-resolution imaging

Culture & Capture



Immunostaining



Imaging



Smart EVs Kit

Smart OmniCell Kit

Smart Imaging Kit

Smart Buffer

Smart Sample

### Smart EVs Kit

**Specialized for extracellular vesicle imaging** with reagents for capture, labeling, and low-background imaging. Enables reliable nanoscale visualization.

### Smart OmniCell Kit

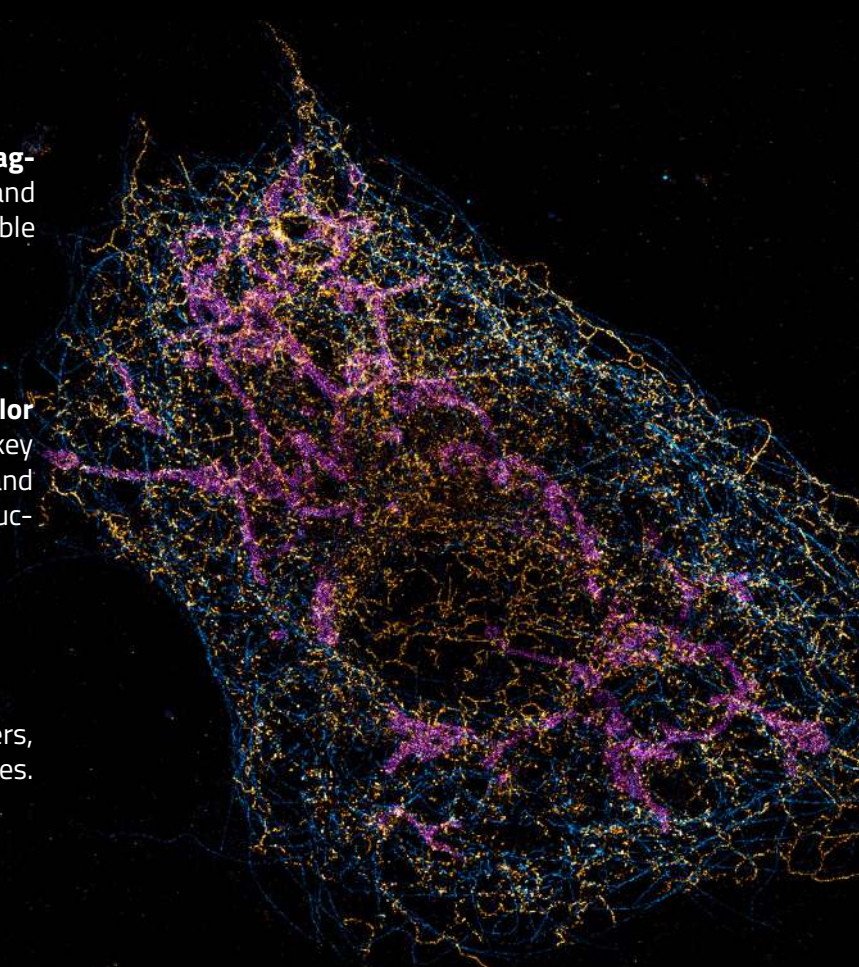
**All-in-one reagent kit for fast, multicolor imaging.** From fixation to imaging, this turnkey solution is optimized for spectral demixing and high-throughput workflows. Ensures reproducible, top-quality results every time.

**Optimized for STORM & DNA-PAINT**

### Smart Imaging Kit

**A complete kit** – secondary antibodies, buffers, and labels for reliable imaging of all cell types. Simplifies workflow, ensures consistency.

**Optimised for STORM & DNA-PAINT**





## Smart Buffers

Pre-formulated STORM imaging buffers for optimal blinking and stability.

Ready-to-use on all cell types, ensuring reproducibility with minimal prep and effort.

## Smart Fluorescent Calibration Sample

A fluorescent reference slide – ready-to-image for fast system validation.

Features standardized structures for alignment, training, and performance checks. Accurate, reproducible, and time-saving.



## Abbelight Smart Flow

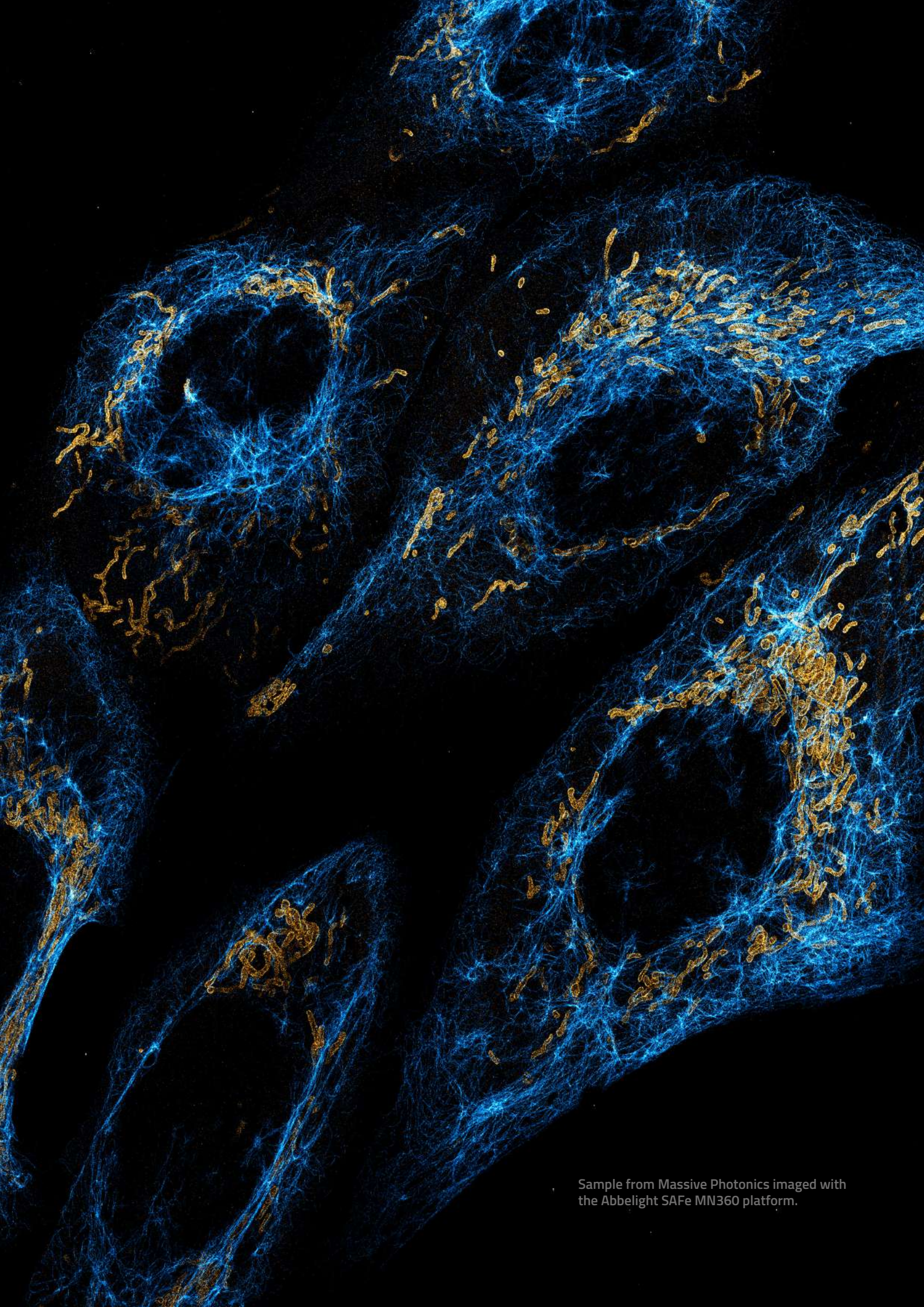
Compatible with all Abbelight kits, the Smart Flow brings fluidic automation to STORM and DNA-PAINT, letting the user **inject, rinse, and switch buffers hands-free.**

Ideal for optimal **Exchange-PAINT cycles, multi-color workflows and more...**

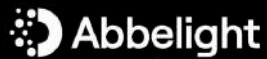
Faster, cleaner & more reproducible sample preparation. Just press start and begin your experiment.



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Sample from Massive Photonics imaged with the Abbelight SAFe MN360 platform.



# ADVANCED IMAGING TECHNOLOGIES

Meet the SAFe platforms



## NOW, WE SEE...

**BIGGER** – With the largest FOV on the market

**MORE** – With simultaneous multicolor and 3D imaging

**DIFFERENT** – Switch between modalities under 1 minute

**FURTHER** – With automated workflow

### Unmatched Field of View

- Up to 230  $\mu\text{m}$  x 230  $\mu\text{m}$  with homogeneous, high-quality imaging.

### Highly Versatile Platform

- Automatic illumination modes: EPI, HiLo, TIRF
- Effortless, simultaneous multi-color imaging (up to 3 colors for SMLM and 4 colors for TIRF)
- Precision 3D imaging with high resolution

### Multi-Modal Simplicity

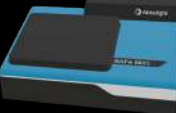
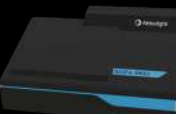


- Integrates microscopy and nanoscopy in one platform
- Quick and accurate modality switching in under a minute

### Advanced Imaging Capabilities

- Streamlined, automated workflow for high-throughput imaging

# ADVANCED IMAGING TECHNOLOGIES

Elevate your research with the most scalable platforms

		MICROSCOPY		NANOSCOPY	
		Cell dynamics		Cell structures	
		Large field of view TIRF imaging	Simultaneous 4-color TIRF imaging	2D & 3D SMLM imaging	Ultimate 3D simultaneous multicolor SMLM
	<b>SAFe M45</b>	●			
	<b>SAFe M90</b>	●	●		
	<b>SAFe MN180</b>	●		●	
	<b>SAFe MN360</b>	●	●	●	●

# THE ABBELIGHT NEO ANALYSIS SOFTWARE SUITE

Unlock detailed insights and extract precise quantitative results to address complex scientific questions

- **Single Molecule Localization**

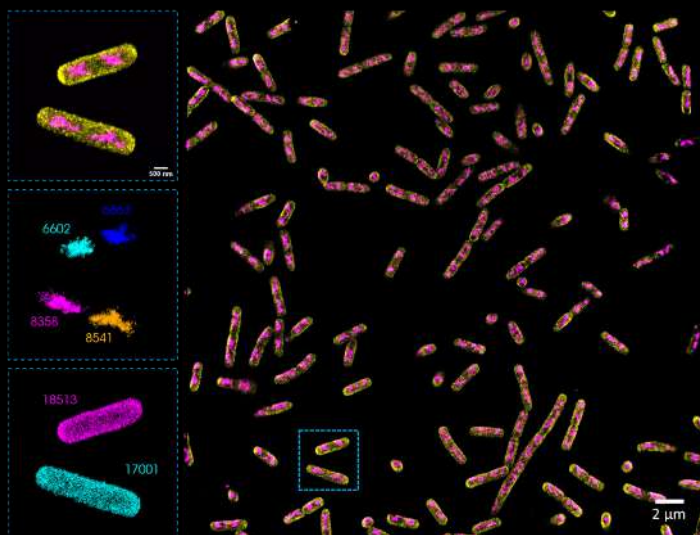
Localize individual molecules in 2D and 3D using our batch processing tool.

- **Automated Spectral Demixing**

Optimized multi-color spectral demixing of molecules with quantitative crosstalk analysis.

- **2D/3D Visualization**

Navigate through your data and start your quantitative analysis.



## From super-resolution data, access quantitative insight

### Spatial Nanoscale organization

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Use our clustering tools to segment and analyse your 2D or 3D data.

### Proteins Colocalization

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Mesure colocalization correlation from multi-color data using our CBC tool.

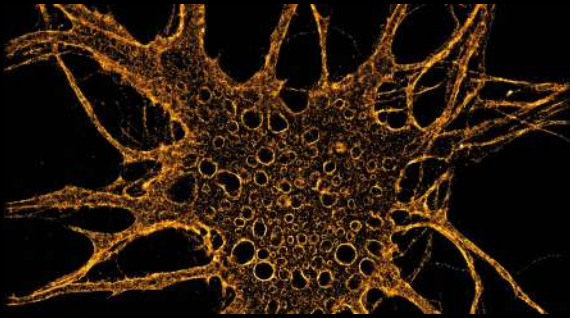
### Molecular dynamics

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Track and analyse Single Particle Tracking (SPT) data and quantify molecular dynamics behaviors.

## CUTTING-EDGE APPLICATIONS

Explore Our Advanced Solutions



### Neuroscience

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Unlock the secrets of neuronal compartments from the cytoskeleton to synapses with our advanced bioimaging solutions, providing insights into neuronal function. The image shows neuron cytoskeleton stained with  $\beta 2$  spectrin, captured through STORM on the SAFe MN360 platform.

### Extracellular vesicles and Nanoparticles

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SMLM is perfect for characterizing EVs and nanoparticles that are too small for conventional microscopes, offering crucial insights for cancer diagnosis, therapy, and other diseases. The image on the right shows a large field of single EVs with tetraspanin for CD9, CD63 and CD81 biomarkers, captured using STORM on the SAFe MN180 platform.



### Microbiology

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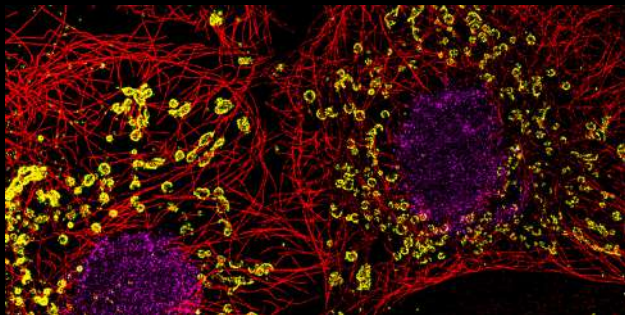
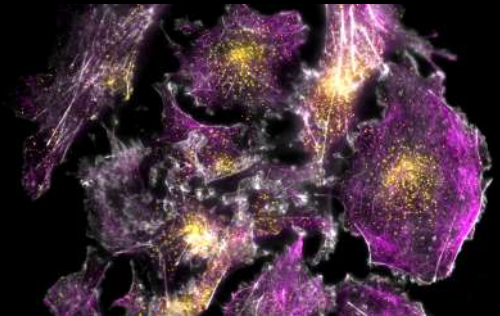
Studying microorganisms like bacteria, fungi, parasites, and viruses is challenging due to their small size and dynamics. Techniques such as Single Particle Tracking and SMLM provide the resolution needed to explore their morphology, life cycle and DNA replication mechanisms. The image on the left shows *E. coli* chromosomes and membranes captured simultaneously in 2 color PAINT through Ultimate 3D configuration of the SAFe MN360 platform.

## Master multiple applications With one powerful platform

### Biophysics

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Abbelight reveals the dynamic organization of cellular structures, enhancing our understanding of cellular biomechanics and molecular forces. The image shows COS7 cells in three colors-actin, tubulin, and clathrin-captured with multicolor TIRF technology on the SAFe M90 platform.



### Cell biology

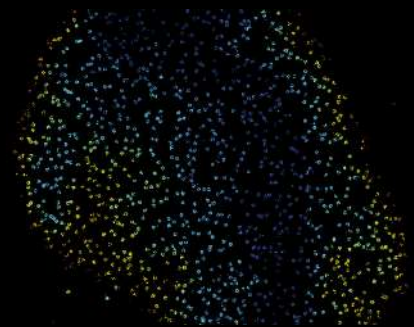
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The SAFe platforms provide a uniform illumination for SMLM, enabling nanoscale imaging of multiple structures in fixed and live samples. This allows detailed visualization of protein organization within organelles like the Golgi, mitochondria, and plasma membrane. The image shows Tubulin, histone, and mitochondria in COS7, captured simultaneously in three colors through STORM spectral demixing using the SAFe MN360 platform.

### Genomics

---

Abbelight's technologies enable 3D visualization of genomic regions through multiplexing oligoSTORM. It also allow to study essential structures for genome regulation such as the Nuclear Pore Complex (NPC) with enhanced 3D resolution. The image on the right shows an 3D view of the Nuclear Pore Complex in U2OS cells, captured in STORM monocolour Ultimate 3D using the SAFe MN360 platform.





## WE HAVE YOU COVERED

Safeguard your research with our service care options, ensuring your platform operates at peak performance.

	Care 1	Care 2	Care 3	Care 3+
1 annual preventive maintenance	●	●	●	●
Remote diagnosis and repair	●	●	●	●
Replacement parts			●	●
Response time (in days)	3	2	1	1
On-site curative intervention		1/y	∞	∞
À la carte scientific support				●

For more information, contact [sales@abelight.com](mailto:sales@abelight.com) or contact your regional distributor.





## SCIENTIFIC SUPPORT

Unlock full potential of the SAFe platform with expert scientific support.

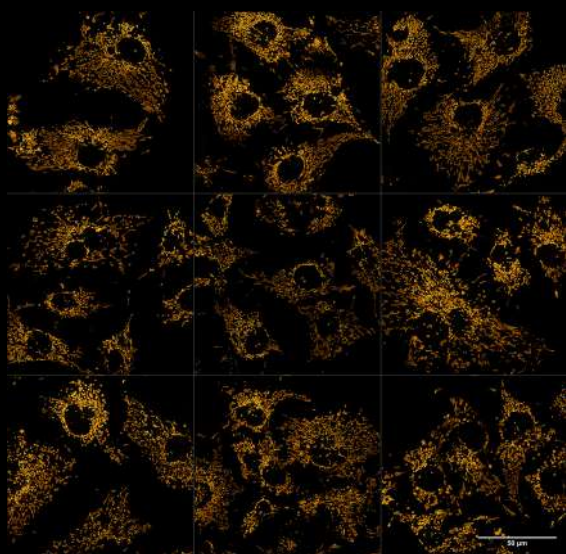
Accelerate your research with our customised & expert-led scientific support services tailored to your project's needs.

Whether remotely, at our HQ or in your lab, our scientists are ready to assist you in your research journey.

Reach out to us at [applications@abelight.com](mailto:applications@abelight.com) for more information.



## Need Super Resolution datasets for your samples?



Not ready to adopt the full imaging platform just yet?

Start with our flexible microscopy imaging service. Gain direct access to state-of-the-art super-resolution technologies—without the need for upfront investment or in-house integration.

For more information, contact us at [sales@abelight.com](mailto:sales@abelight.com).



Founded in 2016, Abbelight is a fast-growing company specialized in imaging solutions focusing on microscopy and unique single molecule detection (super-resolution).

The portfolio integrates a constantly evolving expertise in chemistry, optics, and computer science to provide a comprehensive solution. It covers everything from sample preparation to data analysis, including a flexible bio-imaging platform adaptable to the needs of researchers, biotech labs, and medical facilities.

Abbelight is a French company developed by four passionate researchers who aim to help improve human health in various areas such as **bacteriology, extracellular vesicles, neurosciences, structural biology...**

Today, Abbelight employs over 60 people who are all driven by the goal of providing the best solutions and support to our customers all around the world.



For more information, contact [sales@abelight.com](mailto:sales@abelight.com) or contact your regional distributor.

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94230 Cachan - France

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