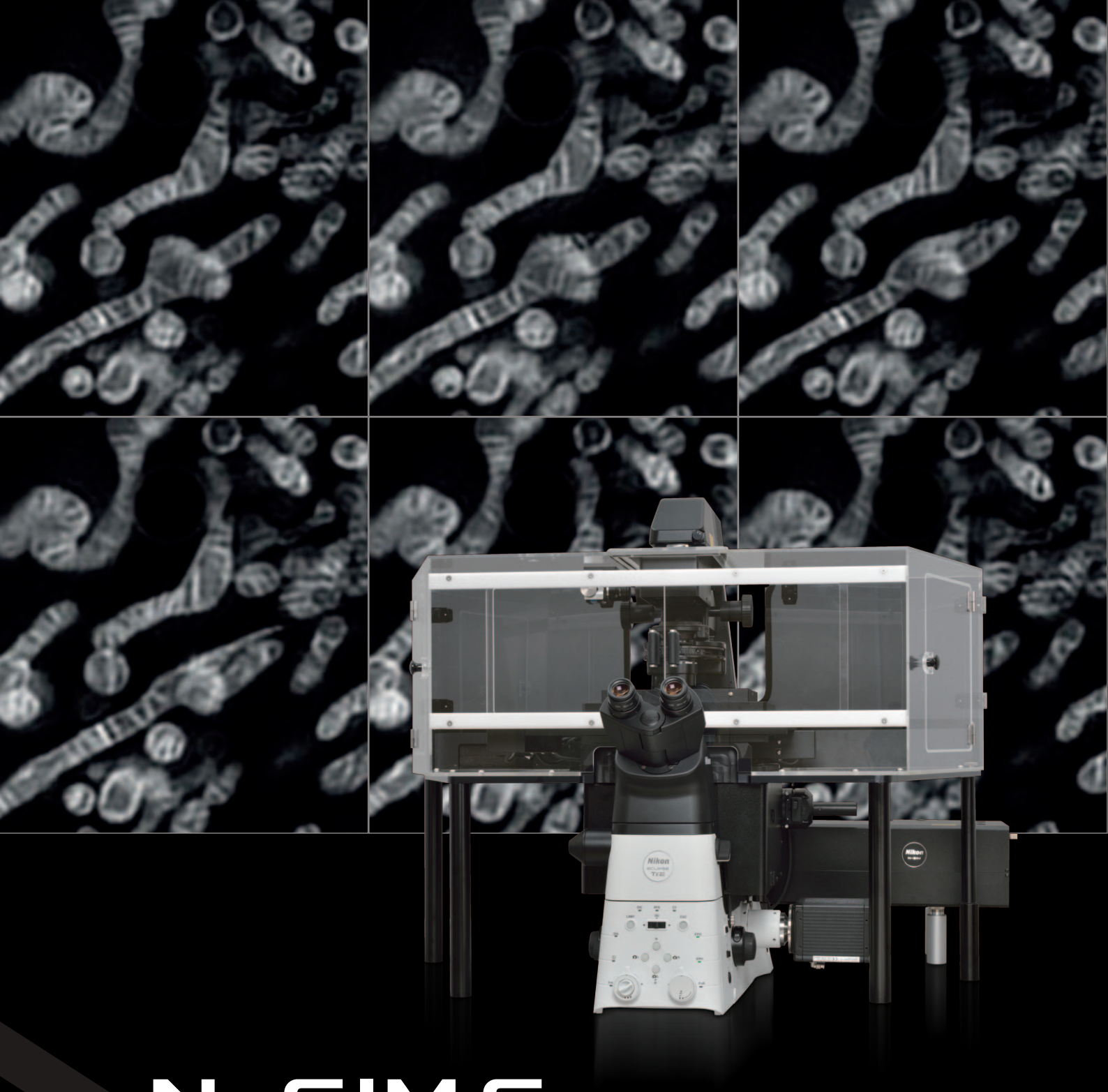
N-SIM S

Live cell friendly, super resolution microscope

Designed to maximize your potential to get the perfect results

Shedding New Light On **HEALTHCARE**



N-SIM S

Resolve more spatial structural details in your biological systems at ease

Precisely locate your biomolecules of interest

Monitor the cellular membrane events specifically at super resolution

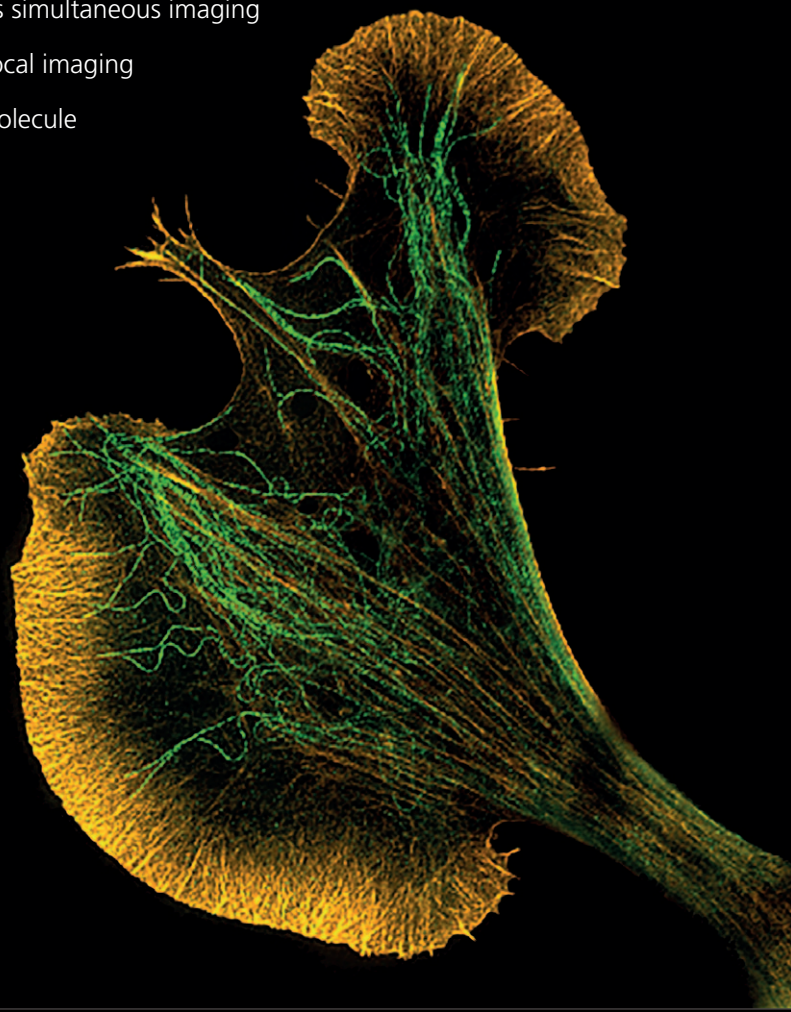
Observe subcellular dynamic events in living cells at high frame rates and with gentle illumination

N-SIM S is designed for maximum ease in optimising your experiments to get the best quality results

- Three imaging modes available – 2D SIM, 3D SIM and TIRF SIM. Choose the most suitable mode for your experiment
- Spatial light modulator automatically optimises grid pattern to your excitation wavelength. Maximum resolution enhancement without the need for manual handling and calibration
- Wide range of compatible objectives featuring oil, silicone, water immersion and dry objectives to suit your samples
- Minimise spherical aberration using the objective's correction collar and a simple automated software procedure. Image deeper better at super resolution
- Intuitive and powerful reconstruction software tool to resolve the highest quality SIM images

Get more data, more information and higher context

- Large field of view enables more data to be captured in one experiment
- Observe molecular interaction via dual channels simultaneous imaging
- Get more context faster by coupling with confocal imaging
- Acquire even more spatial details on a single molecule level by coupling with N-STORM 5



Specifications

Lateral resolution (FWHM of beads in xy)	115 nm[*1] in 3D-SIM mode, 86 nm[*2] in TIRF-SIM mode
Axial resolution (FWHM of beads in z)	269 nm[*1] in 3D-SIM mode
Image acquisition time	Up to 15 fps (TIRF-SIM/2D-SIM, 2 msec exposure time)
Reconstructed image size	1024 x 1024 pixels, 2048 x 2048 pixels
Imaging mode	TIRF-SIM 2D-SIM 3D-SIM (Reconstruction method: slice, stack)
Multi-color imaging	Up to 6 colors
Simultaneous multi-color imaging	Two colors
Compatible laser	LU-NV series laser unit Standard: 405 nm, 488 nm, 561 nm, 640 nm Option: 445 nm, 514 nm Laser combination: 405 nm/445 nm/488 nm/561 nm/647 nm
Compatible microscope	Motorized inverted microscope ECLIPSE Ti2-E
	Perfect Focus System Motorized XY stage with encoders Piezo Z stage
Objective	CFI SR HP Plan Apochromat Lambda S 100XC Sil (NA1.35) CFI SR HP Apochromat TIRF 100XC Oil (NA 1.49) CFI SR HP Apochromat TIRF 100XAC Oil (NA 1.49) CFI SR Plan Apochromat IR 60XC WI (NA 1.27) CFI SR Plan Apochromat IR 60XAC WI (NA 1.27) CFI Plan Apochromat Lambda 60XC (NA 0.95)[*3] CFI Plan Apochromat Lambda 40XC (NA 0.95)[*3]
Camera	ORCA-Flash 4.0 sCMOS camera (Hamamatsu Photonics K.K.)
Software	NIS-Elements Ar NIS-Elements C (for Confocal Microscope A1+/A1R+) Both require additional software modules NIS-A 6D and N-SIM Analysis
Operating conditions	20˚C to 28 ˚C (± 1.5 ˚C)

*1 These values are measured using 100 nm diameter beads excited by a 488 nm laser. Actual resolution is dependent on laser wavelength and optical configuration.
*2 This value is measured using 40 nm diameter beads excited by a 488 nm laser. Actual resolution is dependent on laser wavelength and optical configuration.
*3 Supports 2D-SIM and 3D-SIM (slice reconstruction).

Reference publications:
Fumagalli et al (2019), J. Neuroinflammation 16:9
Kazuaki et al (2018), Eur J Neurosci, 47: 1033–1042
Woo et al (2018) Front. Cell. Neurosci. 12:319