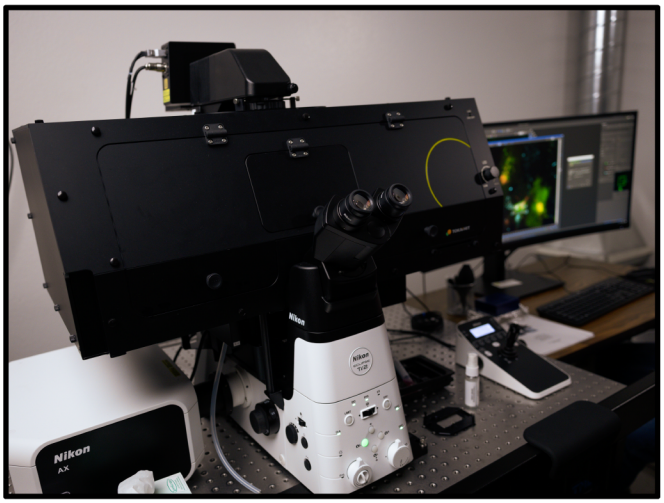
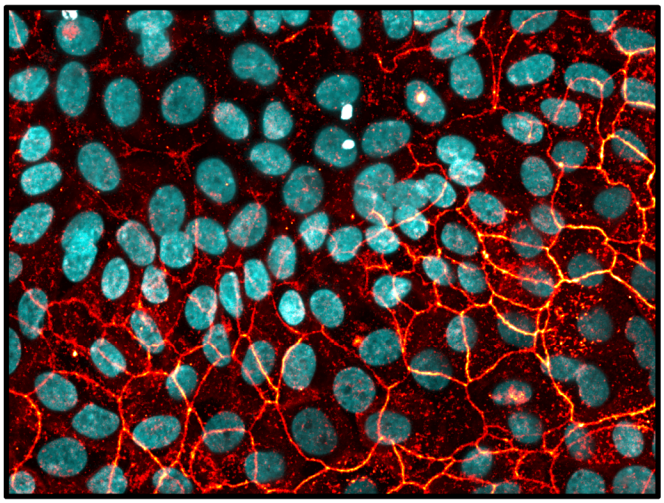
Nikon AX R Laser-Scanning Confocal Microscope

THE UNIVERSITY OF ARIZONA Cancer Center

NIKON Center of Excellence





Instrument Description

The Nikon “AX R” system is an inverted laser-scanning confocal microscope and is our most capable instrument. The AX R has both a traditional, high-resolution Galvano scanner and a **high-speed Resonant scanner** with up to 2K X 2K resolution, making this instrument capable of both high-resolution and high-speed imaging. The AX R offers the largest selection of laser lines, allowing the microscope to **excite up to 7 fluorophores** with clear spectral separation. This instrument has the widest range of objectives lenses, including a **long working distance 20x 0.7NA** objective with 2.3mm of working distance and water-immersion 40x 1.25NA objective paired an **automated water immersion dispenser**, ideal for long-term, live cell and multi-well plate imaging.

Instrument Features

- High-resolution image acquisition with Galvano scanner (up to 8K X 8K)
- High-speed image acquisition with Resonant scanner (up to 2K X 2K)
- Live cell imaging (humidity, temperature, and CO2 regulation)
- Advanced multichannel imaging (up to 7 fluorophores per sample)
- Piezo stage with 600µm travel for precise, high-speed zstack imaging
- Automated water dispenser for automated multi-well imaging using the water-immersion 40x objective.

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Instrument Details	
Available Lasers	405nm / 445nm / 488nm / 515nm / 561nm / 594nm / 640nm / 730nm
Available Objective Lenses	4x Plan Apo (NA = 0.20; WD = 20mm; Phase) 10x Plan Apo (NA = 0.45; WD = 4mm; Phase) 20x Plan Apo (NA = 0.80; WD = 800µm; DIC) 20x Long WD (NA = 0.70; WD = 2.3mm; DIC) 40x Plan Apo (NA = 0.95; WD = 250µm; DIC) 40x W Apo W1 (NA = 1.25, WD = 200µm; DIC) 60x Oil Plan Apo (NA = 1.42; WD = 150µm; DIC)
Available Detectors	Metal-Alkali (Fixed) GaAsP PMT (Adjustable) GaAsP PMT (Adjustable) GaAsP PMT (Fixed) Transmitted Light Detector (TD)
Dichroic Mirrors/ Beam Splitter	DM 405nm / 488nm / 561nm / 640nm / 730nm DM 405nm / 445nm / 514nm / 594nm / 730nm BS 80 / 20
Supported Samples	Slides (1 x 3 and 2 x 3; No. 1.5 coverslips) Glass-bottom Dishes (35mm/60mm; No. 1.5 coverslips) Glass-bottom Multi-well Plates (all well sizes) Glass-bottom Chamber Slides (all well sizes)