Waipapa Taumata Rau University of Auckland

Abberior Facility Line STED microscope



Applications

- *Stimulated emission depletion (STED) microscopy – super-resolution imaging*
- *Modes: xy, xyz, xt, xz, xyt*
- *2D – 3D STED*
- *Fluorescence lifetime imaging (FLIM)*
- *Fluorescence correlation spectroscopy (FCS)*

Software

- *Lightbox*
- *Imspector Base*

Specifications

- *Fully motorised Olympus IX83 inverted microscope*
- *Olympus motorised XY stage, Physik Instrumente piezo z stage*
- *Lasers: excitation - 405nm (CW), 485nm (pulsed), 561nm (SHG pulsed), 640nm (pulsed)*

- *Lasers: STED - 775nm*
- *Detectors: APD, spectral, transmission*
- *ZDC autofocus*
- *Objective lenses – confocal - 4x/0.13 NA UPLFLN, 10x/0.3NA UPLFLN, 20x/0.5 NA UPLFLN, 20x/0.85 NA UPLSAPO oil immersion, 40x/1.4 NA UPLXAPO oil immersion, 60x/1.42 NA UPLXAPO oil immersion, 60X/1.3 NA UPLSAPO silicone oil immersion, 60x/1.2 NA UPLSAPO water immersion*
- *Objective lenses – STED - 60x/1.42 NA UPLXAPO oil immersion, 60X/1.3 NA UPLSAPO silicone oil immersion, 60x/1.2 NA UPLSAPO water immersion*
- *CoolLED pE-4000 LED light engine for fluorescence observation, halogen lamp for transmitted light observation*
- *Accurion anti-vibration platform*

Advanced features

- *Easy3D*
- *Adaptive illumination (ResCUE, DyMin)*
- *Adaptive optics*

Fluorescence filter sets – for observation

Filter set	Fluorophore	LED
Quad	*DAPI*	*365 nm*
Quad	*Alexa 488/FITC*	*470 nm*
Quad	*Cy3/Alexa 568*	*580 nm*
Quad	*Cy5/Alexa 647/STAR RED/STAR 635P*	*635 nm*
Dual – DAPI/TR	*DAPI*	*365 nm*
Dual – DAPI/TR	*Alexa 594*	*595 nm*
Dual – FITC/Cy5	*Alexa 488/FITC*	*470 nm*
Dual – FITC/Cy5	*STAR RED/635P*	*635 nm*
Cy7	*Alexa 750, Cy7*	*740 nm*

Environmental control for live imaging

- *Okolab stage-top incubation system for live imaging – heating and carbon dioxide*
- *Stage inserts for 35mm Petri dishes, ibidi chamber slides and multi-well plates*

Contact person

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