Waipapa Taumata Rau University of Auckland

PhaseView Alpha 3 light sheet microscope



Camera

- *Hamamatsu Orca Flash 4 V3 sCMOS*

Applications

- *Imaging optically cleared samples, e.g. organoids, spheroids, tissue blocks*
- *Live imaging, e.g. zebrafish embryos*

Software

- *QtSPIM - acquisition*
- *LINDA - acquisition*
- *Imaris - for 3D visualisation and segmentation. Facility licence including file conversion, stitcher and deconvolution*

Specifications

- *LASERS: diode - 405nm, 488nm, 561nm, 638nm, 730nm, 785nm*
- *Emission filter sets: ET440/40x, ET525/50m, ET600/50m, ET690/50m, ET775/50x, RET792LP*
- *Focus sweeping module*
- *Dynamic focus module - for chromatic aberration due to wavelength*
- *XY Tiling X:25mm Y:25mm range*
- *Multi-position imaging*
- *Multiple chambers available for different sample sizes and volumes*
- *Specialised holders for capillary tubes, organoids, etc.*
- *Halogen lamp for transmitted light imaging*

Environmental control for live imaging

- *Okolab customised incubation system for live imaging – heating and carbon dioxide*

Objective lenses - illumination

Objective lens	NA	Light sheet thickness (average)
2x	*0.055*	*9 microns*
5x	*0.14*	*4 microns*
10x	*0.28*	*1.5 microns*
20x	*0.4*	*0.8 microns*

Objective lenses - detection

Objective lens	NA	Media	Working distance
XLFLUOR 2X/340/ 0.14 NA LOW MAGNIFICATION FL	*0.14*	*Any*	*20 mm*
XLFLUOR 4X/340 / 0.28 NA LONG WD SEMI APOCHROMAT	*0.28*	*Any*	*29 mm*
UMPLFLN 10X/ 0.3 NA W UMPLAN SEMI APOCHROMAT WATER IMMERSION	*0.3*	*Aqueous/water only*	*3.5 mm*
UMPLFLN 20X/ 0.5 NA W UMPLAN SEMI APOCHROMAT WATER IMMERSION - WD 3.5mm	*0.5*	*Aqueous/water only*	*3.5 mm*
XLSLPLN 25X/ 0.95 NA SVMP2 25X SCALEVIEW IMMERSION	*0.95*	*RI: 1.33 - 1.41*	*8.0 mm*
LUMPLFLN 40X/ 0.8 NA W LWD UM PLAN SEMI APOCHROMAT	*0.8*	*Aqueous/water only*	*3.3 mm*
XLPLN 10X/ 0.6 NA SVMP (0.6NA/8WD SCALEVIEW	*0.6*	*RI: 1.33 -1.52*	*8.0 mm*
XLUMPlanFL N 20x/1.0 NA WATER IMMERSION	*1.0*	*Aqueous/water only*	*2.0 mm*

Contact person

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