Prairie Ultima 2

Location: HSC Room 48B / 48D

Main features of Prairie Ultima 2/Multi-Photon Confocal System:

- Six detectors, four reflected mode Photo Multipliers Tube (PMT) detectors and two transmitted mode PMTs for second harmonic and fluorescence detection.
- High NA water immersion optics including 16x PLANAPO LWD Nikon NA 0.8 and a PLANAPO Correction collar LWD 25x NA 1.1, 60x LUMFL water immersion Olympus NA0.8.
- Resonance scanner for high speed imaging timelapse (~200fps depending on format)
- Piezo Z drive for fast z acquisition, 2 inch travel, XY motorized stage
- Fixed (Z) stage with adjustable (2 inch) travel
- Bioscience Tools stage top incubator with heated pad, heated dish
- Mouse Anesthesia system from VetEquip for in vivo applications (Halothane with scrubber)
- Gas supply, 02, C02, 02/C02 mix

Imaging lasers:

- Coherent Vision II with tuning 705-1060nm pulsed femtosecond range 4000-400mW depending on wavelength

Suggested Applications:

- Deep live cell imaging of zebrafish, mouse in vivo, organ culture and slices, 3D cell culture
- Multichannel fluorescence in vivo, slices or cultures
- Tiling mosaics of fixed or live samples
- Timelapse of whole mount, in vivo mouse, culture
- Second harmonic imaging of collagen or other ECM

Objectives:

48B:

Objective	Magnification	Immersion	Numerical Aperture	Correction Collar	Coverslip (mm)	Working Distance (mm)
Apo	25	Water, Water Dipping	1.1	Corr	0-0.17	2

48D:

Objective	Magnification	Immersion	Numerical Aperture	Correction Collar	Coverslip (mm)	Working Distance (mm)
Plan Apo Lambda	4	Air	0.2			20
Plan Fluor	10	Air	0.3		0.17	16
UPlanFl	10	Air	0.3			
LWD	16	Water Dipping	0.8		0	3
Apo	25	Water, Water Dipping	1.1	Corr	0-0.17	2
Fluor	40	Water Dipping	0.8		0	2

Revision #3
Created 20 November 2023 21:46:42 by Bill James
Updated 20 March 2024 19:49:48 by Bill James