

# LLUSM AIM Zeiss LSM 710

## Hardware details

**Microscope:** Inverted (Axio Observer Z1) microscope

**Excitation:**

- Violet HeNe (405 nm)
- Argon Multiline laser (458, 488, 514 nm)
- Green DPSS laser (561 nm)
- Orange HeNe (594 nm)
- Red HeNe laser (633 nm)
- Coherent Chameleon Vision II Ti:sapphire laser (680-1080 nm) for MPE spectroscopy
- X-Cite metal halide lamp for epifluorescence

**Emission:**

- 2 PMT detectors
- 32 channel QUASAR multispectral scanning module
- Transmitted-light PMT detector
- 2-non-descanned detectors for multiphoton spectroscopy
  - Detector 1 - 500-550 nm
  - Detector 2 - 565-610 nm
- Epifluorescence work - Zeiss HRm CCD camera

**Accessories:**

- Motorized stage
- Fast piezo motorizer
- Patch voltage-clamp subsystem (HEKA EPC10 double) with a Patchstar double manipulator
- Danish Myo Technology pressure (CP120) and wire (CW120) myographs
- PECON heating and environmental control system
  - Heating, Oxygen and carbon dioxide control
- 8 channel Automate Scientific programmable perfusion system
- Rainin peristaltic pump

**Objectives:**

- EC Plan NEO 5X 0.3 NA
- EC Plan NEO 10X 0.3 NA
- Plan-APO 20X 0.8 NA
- Plan APO 63X 1.4 NA Oil
- Plan APO 100X 1.4 NA Oil
- C-Plan APO 10X 0.8 NA W
- C-Plan APO 63X 1.2 NA W
- Imaging capability: Coverslipped material (#1.5, 0.17mm)
  - 35mm, 60mm, labtech chambers, microscope slides
  - Not presently set up for microplates

**Offline Analysis:**

- Dell Precision T7400
  - Optimized for Zeiss Zen software
  - System also has Image J Fiji
- Zeiss Zen software dongle (key)