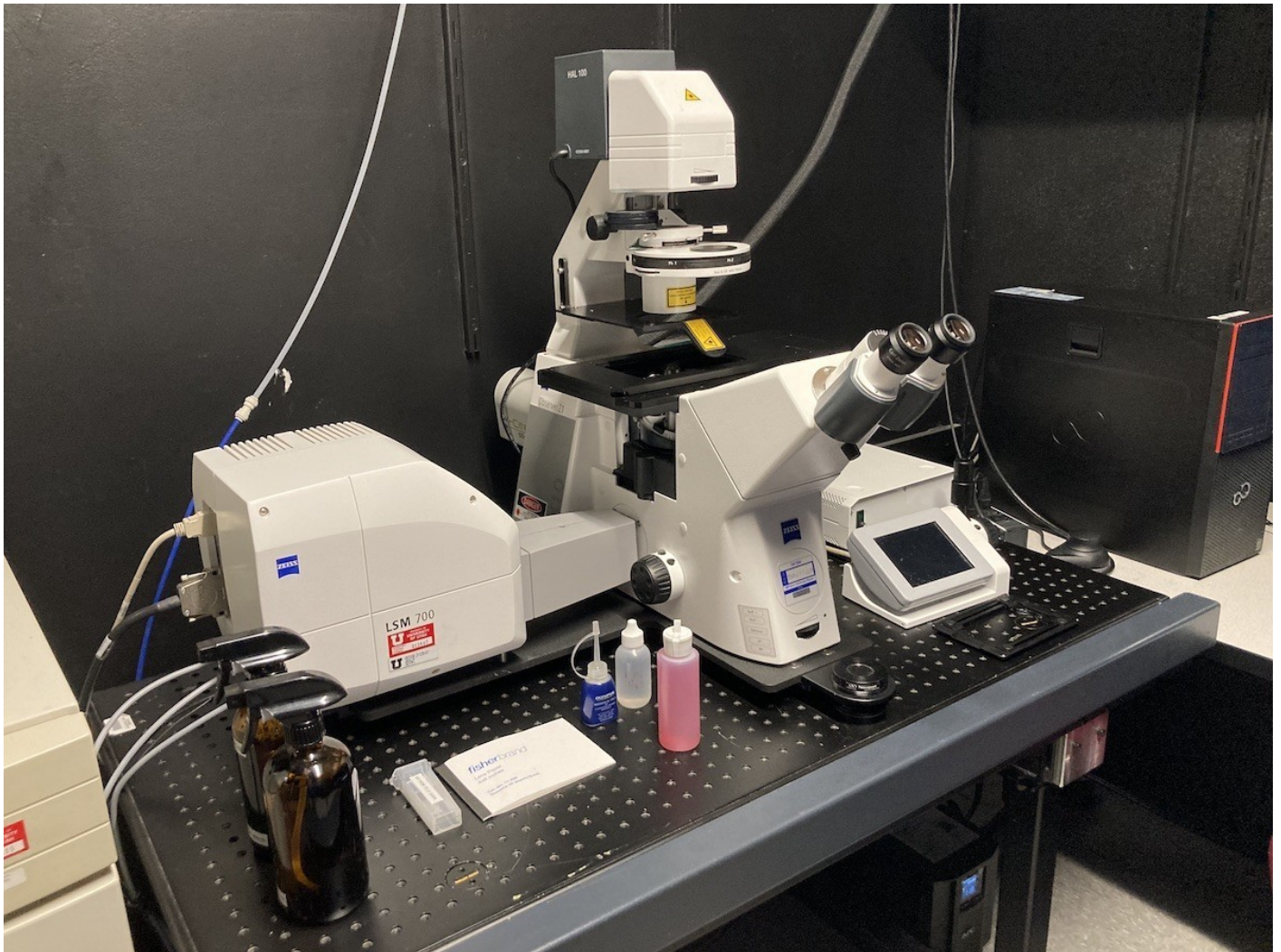


# Zeiss 700 Confocal Microscope

Location: HSC (Building 586) Room 56



The LSM 700 laser scanning confocal microscope is the seventh generation of confocal microscopes from Carl Zeiss. The LSM 700 system uses a Zeiss AXIO Observer Z1 inverted microscope with transmitted illumination (HAL 100) and a laser illumination source. The LSM 700 system features easy operation, excellent sensitivity, and a design that can handle complex tasks.

## **Main features of Zeiss 700 System:**

- Two Photo Multipliers Tube (PMT1 and PMT2) detector unit enables simultaneous 12 bit (4096 intensity levels) acquisition of up to 4 fluorescent channels.
- Confocal scan head unit can provide high-resolution images up to 2048 x 2048 pixels in size.
- Fully automated Zeiss Observer Z1 inverted microscope.
- LED Epifluorescence and HAL100 Brightfield illumination lamps for rapid sample identification and focusing through the eyepiece.
- Filter wheel used for epifluorescence viewing of the sample is currently outfitted with DAPI , FITC (green), and Rhodamine (red) filter cube sets.
- Motorized XY stage with a variety of stage inserts available (slides, dishes, multiwall plates, etc..).
- Zeiss Zen Black multi-platform acquisition software.
- Measurements include: Z stack, Time lapse, Stitching/Tiling, XY positions, and Spectra unmixing

## Suggested Applications:

- 3D Imaging.
- Multichannel fluorecence fixed slide imaging.
- Tiled mosaics.

## Imaging lasers:

| Wavelength (nm) | Type  | Power | Manufacturer            |
|-----------------|-------|-------|-------------------------|
| 405             | diode | 5 mW  | Lasos Lasertechnik GmbH |
| 488             | diode | 10 mW | Lasos Lasertechnik GmbH |
| 555             | diode | 10 mW | Lasos Lasertechnik GmbH |
| 639             | diode | 5 mW  | Lasos Lasertechnik GmbH |

## Objectives:

| Objective            | Magnification | Immersion | Numerical Apperture | Correction Ring | Coverglass (mm) | Working Distance (mm) |
|----------------------|---------------|-----------|---------------------|-----------------|-----------------|-----------------------|
| EC Plan Neofluar M27 | 10X           | Air       | 0.3                 |                 | 0.17            | 5.2                   |
| Pan Apo M27          | 20X           | Air       | 0.8                 |                 | 0.17            | 0.55                  |
| LD C-Apo Korr M27    | 40X           | Water     | 1.1                 | Corr            | 0.14-0.19       | 0.62                  |
| Pan Apo DIC M27      | 63X           | Oil       | 1.4                 |                 | 0.17            | 0.19                  |

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