

Cellular Imaging

Research Administration
Seattle, WA • 501(c)(3) Nonprofit



Fred Hutch's Shared Resources are catalysts for lifesaving discoveries. This uniquely centralized program of 15 specialized core facilities and scientific services drives advances by integrating dedicated experts and cutting-edge technologies across the entire research pipeline, from basic science to clinical trial.

TissueFAXS

Digital pathology system/slide scanner

Excitation sources

- X-Cite LED and EXFO X-Cite metal halide lamp

Objectives

- 2.5x/0.075 (air), 5x/0.16 (air), 10x/0.3 (air), 10x/0.45 (air), 20x/0.8 (air), 40x/0.75 (air), 100x/1.4 (oil)

Cameras

- Hamamatsu ORCA-Flash4.0 (for monochrome fluorescence imaging)
- Baumer HXG40c (for color transmitted light)

Capabilities

- True color transmitted light imaging
- Five-channel fluorescence imaging (blue, green, red, far red, infrared)
- Semi-automated image acquisition
- Eight-slide capacity

Recommended uses

- Imaging of whole histology slides and tissue microarray slides
- Transmitted light and fluorescence microscopy
- Imaging of large tissue sections
- Slide digitization and archival
- Digital pathology
- Quantitation and scoring of IHC and IF staining

General information

The TissueFAXS is an automated microscope for the imaging of histology slides, including large tissue sections and tissue microarray slides. The microscope includes a motorized stage that can accept up to eight slides. Slides can be rapidly pre-viewed (imaged) at low resolution. The preview images are used to define regions of interest, or ROIs, for acquisition at high magnification/resolution. The microscope is capable of transmitted light (IHC samples) or fluorescence (IF samples) imaging. After regions have been defined, most of the imaging is automated, including slide positioning and focusing, for higher throughput and image consistency. The TissueFAXS system includes two software packages, TissueQuest and HistoQuest, for the analysis and scoring of IHC and IF slides. The TissueFAXS is built on a Zeiss Axio Imager Z2 upright microscope. It uses DAPI, FITC, Rhodamine, Cy5 and Cy7 fluorescence filter cubes.

FILTER	EXCITATION	EMISSION
DAPI	330-380	435-485
FITC.GFP	450-490	500-550
mCherry/Rhodamine/TexasRed	540-580	592-667
Cy5	590-650	673-762
Cy7/IR	660-750	760-850

LEARN MORE

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