



SHARED RESOURCES

Experimental Histopathology

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 trials.

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The 1,900ft² Experimental Histopathology core facility provides a range of services and expertise working with both human tissue and preclinical animal model specimens. It offers histology services, including several special stains to detect connective tissue, mucins, lipids, nucleic acids, amyloid, microorganisms and other proteins, as well as customized stain development. Expert staff working with the latest equipment also provide digital pathology services, including two powerful scanning instruments for digitizing slide images, and a variety of immunohistochemistry methods, including multiplex immunohistochemistry with staining of up to six biomarkers in one tissue specimen. The core facility also offers cutting-edge data analysis of scientific images.

Additionally, the lab provides comprehensive tissue cross-reactivity studies to support Investigational New Drug applications for therapeutic antibodies. It also supports xenograft tissue work, including patient derived xenografts (PDX) and multifaceted models with complex therapeutics and unique species combinations.

Staff members collaborate with faculty-led research laboratories, external scientific partners and other Fred Hutch Shared Resources core facilities and services. For example, they worked with the Antibody Technology core facility to develop a new antibody suitable for testing markers in solid tumors for a novel CAR T-cell therapy clinical trial.

Histology & Immunohistochemistry Technologies

- Mopec tissue grossing station
- 2 automated Sakura tissue processors
- 2 Leica slide printers (IP-S)
- 1 Leica cassette printer (IP-C)
- Leica CM1800 cryostat
- Sakura robotic histology stainer
- IMEB robotic histology stainer
- Leica & Arcturus® systems
- 4 Leica Bond automated stainers

Digital Pathology Technologies

- PerkinElmer Opal™/Vectra® Systems
- Aperio ScanScope AT Turbo
- Aperio ScanScope FL
- Indica Labs - Halo® Analysis Platform
- Indica Labs - Halo® Link image management system

Capabilities

- Multiplexed fluorescent immunohistochemical assays (mIHC)
- Chromogenic and multiplexed fluorescent in-situ hybridization (mFISH)
- Branched-chain ISH (BRISH)/IHC
- Routine immunohistochemistry (IHC)
- IHC and mIHC assay validation