UCI Chao Family Comprehensive Cancer Center

Experimental Tissue Resource (ETR)

Robert Edwards, MD, PhD | *Co-Director*
Wendy Cozen, DO MPH | *Co-Director*
Delia Tifrea, PhD, MBA | *Manager*

Mission and Leadership

MISSION

ETR supports the research mission across UC Irvine and the campus research community

- **HS# 2012-8716**
  Honest broker status → Facilitates and track usage of tissue for research

- **Support**
  1. Chao Family Comprehensive Cancer Center grant
  2. Pathology Department
  3. Approved recharge rates

LEADERSHIP

Robert Edwards, MD, PhD
Co-Director

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Manager

Services

- **Tissue and Correlative Clinical Data Procurement and Distribution**
  - Fresh; archival bio-banked flash-frozen; archival formalin-fixed, paraffin-embedded (FFPE) tissues
  - Virtual biorepository portal for FFPE specimens
  - Customized request of clinical data annotation
  - Cryopreserved viable blood and marrow cell samples

- **Tissue Histology, Immunohistochemistry (IHC), and Digital Pathology services**
  - Routine histology services: embedding, cutting FFPE and frozen, staining, cytochemical stains, automated IHC staining, and IHC optimization.
  - Ventana DP200 high-speed digital slide scanners
 - Custom and standard TMA

- **Interpretive Histopathology and Mouse Pathology Services**
  - Necropsy, histopathology consultations, consultation on orthotopic and patient-derived xenograft (PDX) tumor models and experimental design

- **Archival FFPE blocks and slides remnants since 1989**

  343,635 surgical cases

  2,365 autopsy cases

  - 80% Histology services FFPE blocks remnant Research slides
  - 12% FRESH
  - 8% FROZEN
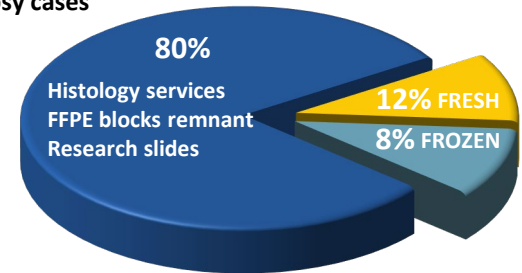
- **Cancer related projects/year 63%**

- **Total individual requests/year 1620**
- **Patients -Human tissue RO/year 1200**
- **Animal tissue projects RN/year 200**
- **Fresh tissue –34 projects/year –> 320tissue/year**

More information regarding all services can be found at: https://cancer.uci.edu/experimental-tissue-resource

Key Equipment & Technologies

- **Routine histology services:** Leica Peloris Tissue processor, microtome, Leica CM3050 Cryostat, Ventana Discovery automatic stainer

- -80°C and LN2 freezers

- Freezerworks SUMIT biobanking inventory program

- Ventana DP200 high-speed digital slide scanner
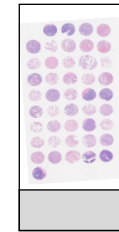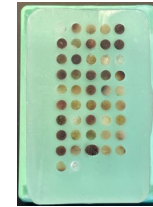
- TMA Grand Master- 3DHISTECH

Feature technology

- **TMA Grand Master- 3DHISTECH**

Available core/block (core diameter):
- ✓ 558 - (0.6 mm)
- ✓ 286 - (1 mm)
- ✓ 135 - (1.5 mm)
- ✓ 84 - (2 mm)

Feasible for proteomics *nanoString*- GeoMx DSP

150 microns thick lung Tissue cultured	Formalin fixed cut in 4	Stacking	Paraffin embedding	Custom TMA	High-plex Single-Cell Spatial Omics