Biorepository and Molecular Pathology

The mission of the Institutional Biorepository/Biospecimen Bank and the Molecular Pathology Shared Resource Facility (SRF) is to support all basic science and translational research programs of The Mount Sinai Health System by facilitating the procurement of disease-based and normal bio-specimens, including tumor and normal paired tissues. The Institutional Biorepository will provide high-quality unfixed (frozen) and fixed disease-specific specimens and corresponding normal samples, when appropriate. This facility will also provide body fluids, including urine, blood, and cerebrospinal fluid. All samples are linked, with appropriate IRB approval, to clinical and pathological data, and open to all investigators of the institution, as well as specific third-party collaborative efforts with investigators from other institutions.

The Biorepository operates under a Mount Sinai Institutional Review Board (IRB) approved protocol and follows guidelines set by HIPAA. The current Biospecimen Bank has approximately 9,000 de-identified specimens (around 3,500 unique cases) and 3,800 consented specimens (approximately 1,000 unique cases), with several hundred cases logged in per year. All samples procured by the bank will be assigned a bar code and de-identified with a unique bank ID number using a commercially available tissue banking database software – Freezerworks Unlimited v6.2 Network Version (Dataworks Development Software, Mt. Lake Terrace, WA). Frozen tissue blocks and formalin fixed, paraffin-embedded tissue of banked specimens will be further processed either upon request by researchers or as a routine bank function to facilitate future research efforts. This includes generation of H&E sections to determine the diagnosis of the frozen / fixed tissue, histologic composition and utility of the specimen. Tissue samples may be micro- or macro-dissected to enhance purity of selected regions of interest. Tissue micro array (TMA) construction is also a function of this facility with individual tissue cores ranging from 0.6mm to 1mm arrayed from multiple samples into a single block, designed to enhance efficiency and maximize tissue utilization. The group will also provide digital H&E and research image scanning and analysis, making histologic images easily accessible for multiple research groups across the institution. Furthermore, tissue and bio-fluids will be processed for extraction of DNA, RNA or protein in order to extend the functionality of the bank, thus allowing for expanded distribution to a greater number of researchers, providing an off-the-shelf resource of annotated linked macromolecules, to broadly facilitate translational clinical research. All requests for specimens from investigators are discussed and approved by the “Tissue Utilization Committee” following predefined guidelines; alternatively, samples are provided at the discretion of the tumor bank director following set guidelines. Records are retained of users’ requests, sample distribution and specimen utilization through research grants, abstracts and publications.

For more information:
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