The Biorepository Core at the Comprehensive Transplant Center

The Biorepository is one of the cores at the Comprehensive Transplant Center (CTC). The Biorepository’s mission is to support clinical and translational studies that aim to better understand transplant immunology, rejection and tolerance to help us improve patient care. The Biorepository Core collects, hosts and distributes fully annotated biological specimens from multiple transplant disciplines, including kidney, liver, pancreas, stem cell, islet, and lung transplantation.

Our strength is the ability to deploy this unique specimen portfolio to support clinical and translational studies to the research community at Northwestern University and across the U.S.

The Biorepository and staff are highly trained and armed with GLP/GMP knowledge. Not only do they perform specimen processing, inventory and shipping, they also conduct specimen inventory audits and equipment maintenance, ensuring optimal biospecimen quality.

Currently, the Biorepository Core supports more than 25 clinical research/clinical trial projects conducted by CTC researchers. These studies are funded by a variety of sources: the NIH, pharmaceutical companies and internal funding mechanisms. After they are collected in the clinic, biospecimens are processed and stored in the Biorepository freezer farm.

Since June 2014, the Biorepository Core has expanded its storage capacity by 30% to meet the increasing demand. Temperatures in each freezer is monitored by state of the art online monitoring system 24/7. Alerts can be sent to all Biorepository staff members through telephone calls and emails in the event the temperature in a freezer goes out of the acceptable range. Specimen processing and storage at the Biorepository is in compliance with the College of American Pathologist (CAP) standards and HIPAA. Each individual patient is de-identified according to HIPAA, yet biospecimens are fully-catalogued and managed by FreezerPro, which is sophisticated inventory software that not only feeds directly to the Northwestern Enterprise Data Warehouse (EDW), but also links to clinical data and to the pathology imaging platform, an Aperio system. Upon request, specific biospecimens can be quickly identified, packaged and shipped according to specific requirements. The collection of specimens in the Biorepository can be used for prospective as well as retrospective clinical and translational studies, including discovery and validation of biomarkers of transplant immunology, rejection and tolerance. Our specimens are assimilated with enriched information and provide investigators with the edge to quickly reach their goals.

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