Core Facilities – University of Delaware

Patient-based Studies

**DRI Research Core** - Facilitates research subject recruitment and retention, coordinates research test sessions, coordinates training and intervention sessions, therapy support for clinical trials and provides data for grant progress reports. The Research Core will assist faculty members with development of patient study (IRB) applications, the development of patient consent forms, patient billings and collections.

**Institutional Review Board (IRB)** – The UD IRB meets monthly to review research protocols that involve human subjects or specimens and operates under the federal wide assurance.

Animal studies

**Imaging** – Imaging equipment is decentralized and associated with different core facilities. A microCT is housed in the CTCR core facility, which includes 3-D computer reconstruction.

**CANR Comparative Pathology Laboratory** - Provides histology and pathology support for animal diagnostic laboratories of Delaware and Maryland, researchers at the University of Delaware and its affiliates (DBI, etc.), industry and government partners of the university, and external researchers. We specialize in animal tissues and studies related to animal disease or animal models of human disease.

**Office of Laboratory Animal Medicine** – This newly renovated facility is supported by a C06 construction grant from the NIH and expands the laboratory animal care facility at the University of Delaware (UD). The facility cares for rodents, fish, amphibians, poultry and shellfish. The new facility expands UD’s capacity for development and utilization of transgenic mouse models of human disease in national priority areas and support the growth of cancer, cardiovascular, and neuroscience research programs.

Cellular studies

**Flow Cytometry** – At the CTCR Core facility, as well as the INBRE Cell Science core facility, offers access to a FACSCalibur Flow cytometer and a Accuri C6 Flow cytometer.

**Cytomechanics Core** – Provides access to confocal imaging, bio-imaging, Live-cell imaging, mechanical loading, mechanical testing, bone and cartilage processing and histology.

**DBI Bio-imaging center** - A multi-user microscopy facility containing state-of-the-art electron, confocal and light microscopes. The center is open to all academic researchers on a fee-for-service basis, and outside industrial users are accommodated when scheduling permits.

Molecular studies

**UD Sequencing & Genotyping Center** - The DNA Sequencing & Genotyping Center provides state-of-the-art genomics and molecular biology services for University of
Delaware research groups and outside users on a fee-for-service basis. Services include DNA sequencing, genotyping (microsatellite analysis, STR analysis), PCR, qPCR, DNA preparation and analysis, as well as access to pyrosequencing and microarray instrumentation.

**Microarray core facility** – Offers access to Affymetrics GeneChip probe analysis including humans, rodents and other species. Services include sample preparation, experimental design and data analysis.

**Proteomics and Mass Spectrometry Core Facility** – Located in the DBI, the facility specializing in 2-D separations, protein purification, protein identification using Electrospray MS and MALDI MS. Within the department of chemistry, mass spectrometry is available for protein sequencing, LC-MS-MS, GC-MS, MALDI.

**Structural Biology Facility** – Has six NMR spectrometers offering liquid state NMR, solid state NMR and data workstations.

**Macromolecular X-ray crystallography facility** - offers state-of-the-art instrumentation to solve structures of biological macromolecules from single crystals, and is open to university researchers and collaborators. The protein crystallography core is funded by a P20 COBRE grant from the NIH. Outside industry users will be accommodated on a fee-for-service basis when scheduling permits.

**Protein Characterization facility** – offers access to analytical ultracentrifugation for characterization of a variety of biophysical properties of macromolecules.

**Computational Biology**

**Center for Bioinformatics and Computational Biology** - Provides scientific expertise and core infrastructure support in Bioinformatics and Computational Biology, the core facility offers services, collaborations, and computational resources for bioinformatic analysis at all levels of project development and execution, from "proposal to publication". The varied experience of the five Ph.D.-level staff members provides expertise in biological analysis (genomics, metagenomics, amplicon libraries, phylogenetics, data visualization, information mining) and computing (databases, network administration, workflows, distributed computing, computer hardware).

**Biostatistics** – the College of Health Sciences retains biostatisticians who can assist faculty with experimental design and data interpretation, as well as manuscript and grant preparation.