

Core Facilities 2009

Behavioral and Field Research

The Behavioral and Field Research Core (BFRC) at Karmanos Cancer Institute is designed to facilitate the integration of communication and behavioral research across the Institute, including work in epidemiology, cancer prevention, clinical and developmental therapeutics, palliative care, and genetics.

Director: Lisa Berry-Bobovski, berryl@karmanos.org, 313-576-8289

<https://www2.karmanos.org/research/Home2/Researchers2/CoreFacilities/BehavioralFieldResearch.aspx>

Bioinformatics

The Bioinformatics Core focuses on support and collaborative research in the areas of: data analysis for high throughput gene expression experiments (e.g., microarrays), development of molecular classifiers, experimental design, and database support for storage and retrieval of experimental data.

Director: Sorin Draghici, sorin@wayne.edu, 313-577-5484

<https://www.med.wayne.edu/cancer/researchresources.htm#bioinformatics>

Biostatistics

The Biostatistics Core has primary responsibility for the design and development of research databases and for ensuring that all Projects are well-planned and are using appropriate experimental designs as well as for ensuring that planned statistical analyses are suitable to the experimental design and study endpoints.

Director: Judith Abrams, Jabram@wayne.edu, 313-576-8653

<https://www2.karmanos.org/research/Home2/Researchers2/CoreFacilities/Biostatistics.aspx>

Cellular and Animal Imaging

As an integral part of research activities at the Center, the Cellular and Animal Imaging Core houses the only confocal microscopy unit in the Wayne State University School of Medicine that operates multiple microscopes capable of viewing simultaneously multiple-labeled (up to nine markers) tissue and cells. The Cellular and Animal Imaging Core is also the only facility capable of performing *in vivo* small animal imaging.

Director: Kami Moin, kmoin@med.wayne.edu, 313-577-2199

<https://www2.karmanos.org/research/Home2/Researchers2/CoreFacilities/CellularAnimalImaging.aspx>

Cell Culture

The Cell Culture Core provides Hepatocyte isolation, cell line maintenance, centrifugal elutriation, media preparation, mycoplasma testing, technical assistance and training.

Director: Tom Kocarek, t.kocarek@wayne.edu, 313-963-7487

<http://home.med.wayne.edu/departments/research-facilities.php#CCF>

Central Instrumentation Facility

The Central Instrumentation Facility maintains modern analytical instruments to provide routine analysis and research support. The facility consists of four major areas of emphasis - Mass Spectrometry, Nuclear Magnetic Resonance Spectroscopy, X-Ray Crystallography, and Optical Spectroscopy.

Director: David Coleman, ad5191@wayne.edu, 313-577-2586

<http://www.med.wayne.edu/cancer/researchresources.htm#central>

Clinical Genetics

The Clinical Genetics Core provides information about genetic diseases, availability of DNA testing, patient support groups, etc.

Director: Anne Greb, agreb@cmb.biosci.wayne.edu, 313-577-6298

<http://home.med.wayne.edu/departments/research-facilities.php#CCF>

Clinical Imaging Research

The Clinical Imaging Research Core capabilities include state-of-the-art equipment for anatomical imaging (e.g., CT, ultrasound, mammography), functional imaging (PET and DCE MRI), and experimental new imaging methods utilizing MR spectroscopy and acoustic tomography. Imaging efforts are aimed at a clinical and research need for quantification of these parameters to gain a fuller understanding of treatment response in order to maximize clinical value.

Director: Peter Littrup, littrup@karmanos.org, 313-576-9953

<https://www2.karmanos.org/research/Home2/Researchers2/CoreFacilities/ClinicalImagingResearch.aspx>

Epidemiology Research

The Epidemiology Research Core (ERC), developed in December 2007, supports population-based research by providing access to metropolitan Detroit cancer cases and registry data for research. The Core also provides epidemiology consulting and collaborates with KCI members conducting investigations in cancer prevention, etiology, treatment and outcomes.

Director: John Graff, graffj@karmanos.org, 313-578-4205

<https://www2.karmanos.org/research/Home2/Researchers2/CoreFacilities/EpidemiologyResearch.aspx>

Genomics

The Genomics Core serves KCI members with state-of-the-art genomic technologies and expert consultation services. Core scientists interact with researchers at the design phase of projects and assist in incorporating genomics approaches by generating preliminary data, writing methodologies, analyzing cost, and performing high throughput implementation of technology.

Director: Susan Land, sland@med.wayne.edu, 313-577-3555

<https://www2.karmanos.org/research/Home2/Researchers2/CoreFacilities/Genomics.aspx>

Microarray and Bioinformatics

The Microarray and Bioinformatics Core uses computational and statistical methodologies to analyze microarray data and interpret the results in a biological context.

Director: Alan Dombkowski, domski@wayne.edu, 313-961-4943
<http://www.ehscenter.org/facility/mbfc.html>

Molecular Signatures

The Molecular Signatures developing Core provides detailed genetic and genomic analysis of human tumor samples to support the development and subsequent implementation of personalized cancer therapy.

Director: Ramsi Haddad, haddadr@karmanos.org, 313-576-8857
<https://www2.karmanos.org/research/Home2/Researchers2/CoreFacilities/MolecularSignatures.aspx>

Magnetic Resonance Imaging and Spectroscopy Research Core

The MR Research Facility is committed to the development of the MR methods and their application in the preclinical and clinical subjects to better understand human physiology and disease. The MR Research Facility will promote the use of magnetic resonance-based methods to the WSU scientific community and support the implementation of MR methods through education, assistance in experimental design, and data collection and analysis.

Director: E. Mark Haacke, haacke@wayne.edu, 313-745-1395
<http://www.mrc.wayne.edu/>

PET Center

The PET Center Core provides PET Scanning, Cyclotron, Chemistry, Data Acquisition and Analysis.

Director: Harry Chugani, hchugani@pet.wayne.edu, 313-993-0000
<http://pet.wayne.edu/>

Pharmacology

The Pharmacology Core supports clinical trials as well as preclinical studies by providing specimen processing and tracking, drug level analyses and pharmacokinetic modeling, and assistance in study design and data interpretation.

Director: Jing Li, ljin@karmanos.org, 313-576-8258
<https://www2.karmanos.org/research/Home2/Researchers2/CoreFacilities/Pharmacology.aspx>

Proteomics

The mission of the Proteomics Core is to enhance research productivity of KCI members by providing the equipment and expertise necessary for analysis of cellular protein composition and protein-protein interactions. The Proteomics Core provides instruments and expertise for identification of proteins and analysis of protein interactions. These two services require different instrumentation, but they both rely on expertise in protein chemistry, separation and analysis.

Director: Paul Stemmer, pmstemmer@wayne.edu, 313-961-7634

<https://www2.karmanos.org/research/Home2/Researchers2/CoreFacilities/Proteomics.aspx>

Systems and Computational Biology

The mission of the Systems and Computational Biology Core is two-fold: to provide a technology resource and support service in systems and computational biology for KCI members, and to serve as an integrative driver for collaborative research in systems-based oncology across all five Programs. In particular, Core activities enable the application of molecular profiling and network modeling approaches to clinical studies ranging from the molecular to the population level.

Director: Craig Giroux, cgiroux@wayne.edu, 313-576-8927

<https://www2.karmanos.org/research/Home2/Researchers2/CoreFacilities/SystemsComputationalBiology.aspx>

Translational Research

The Translational Research Core services comprise the development of biochemical, molecular, or cellular assays that are tailored and validated according to the specific and customized translational research question associated with the clinical trial and the development of standard operating procedures (SOPs), including instructions for research nurses and collection logistics.

Director: Angelika Burger, burgera@karmanos.org, 313-576-8302

<https://www2.karmanos.org/research/Home2/Researchers2/CoreFacilities/TranslationalResearch.aspx>

University Pathology Research Service

The University Pathology Research Service Core provides services for tissue based ancillary studies and technologies that encompass both the technical and the interpretational/collaborative offerings of a modern academic pathology department.

Director: Wael Sakr, wsakr@med.wayne.edu, 313-576-9232

<http://www.med.wayne.edu/uprs/missionstatement.htm>