700MHz Biomolecular NMR Facility
WSU has recently announced the operational status of its new 700MHz Biomolecular NMR Facility, located in the Chemistry Department. In December 2003 the triple-resonance cryo-probe was installed, completing the original facility equipment mandate, and ending the installation phase. The facility is now available for time requests and is providing data sets, and is the primary means of biomolecular structure determination for the groups involved.

Director: John SantaLucia, jsl@chem.wayne.edu, 313-577-0101

Applied Genomics Technology Center
The AGTC is a University wide resource for state-of-the-art genomic technologies and 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, 313-577-9605
www.AGTC.med.wayne.edu

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
www2.karmanos.org/research/Home2/Researchers2/CoreFacilities/BehavioralFieldResearch.aspx

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
**Center for Social Work Practice and Policy**
This center provides consultation and technical assistance for investigators who need guidance with content and community context for social intervention research. The center offers services such as research design, evaluation, grant development, and community building.

Director: Joanne Sobeck, ab1350@wayne.edu, 313-577-4439
[www.research.socialwork.wayne.edu](http://www.research.socialwork.wayne.edu)

**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://www.ehscenter.org/facility/ccfc.html](http://www.ehscenter.org/facility/ccfc.html)

**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](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](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, littrupp@karmanos.org, 313-576-9953
Epidemiology Research
The Epidemiology Research Core (ERC), developed in December 2007, supports population-based research by accessing metropolitan Detroit cancer cases and registry data for research. The Core also provides epidemiology consulting and collaborates with Karmanos Cancer Institute (KCI) members and other faculty conducting investigations in cancer prevention, etiology, treatment, and outcomes.

Director: Kendra Schwartz, MD, MSPH, kensch@med.wayne.edu, 313-578-4202
Co-Director: Fawn Vigneau, JD, MPH, vigneauf@med.wayne.edu, 313-578-4231

Isothermal Titration Calorimetry Center
This facility has instrument availability to collect Isothermal Titration Calorimetry (ITC) data. Services include training and allowing use of the departmental ITC.

Director: Timothy Stemmler, tstemmle@med.wayne.edu, 313-577-5712

Life Sciences Collaborative Access Team (LS-CAT)
The Life Sciences Collaborative Access Team (LS-CAT) provides macromolecular crystallography resources for those with a need to determine the structure of proteins. Mainly LS-CAT provides access to state of the art x-ray diffraction facilities at Argonne National Laboratory's Advanced Photon Source where extremely intense beams of x-rays are focused using both mirrors and beryllium lenses onto tiny protein crystals. The x-rays diffracted by these crystals are collected with giant CCD detectors that produce the images needed to calculate where the atoms in the protein crystal are. Current LS-CAT members are Michigan State University, University of Michigan, Wayne State University, Van Andel Research Institute, Northwestern University, University Wisconsin-Madison, Vanderbilt University, and University of Illinois at Urbana-Champaign.

WSU Director: Domenico Gatti, dgatti@med.wayne.edu, 313-993-4238
http://ls-cat.org/index.html

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/

**Michigan Proteome Consortium Service**
This core provides a variety of liquid-handling robotics for assay development.

Director: Russell Finley, rfinley@wayne.edu, 313-577-1627
http://twohybridservice.org/index.html

**Microarray and Bioinformatics**
This 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

**Microscopy and Imaging Resources Laboratory**
MIRL is a central microscopy and imaging facility with established administrative policies in the School of Medicine. MIRL is a designated core facility of the Karmanos Cancer Institute and the Perinatology Research Branch of The National Institutes of Child Health and Development and the Department of Defense Cancer Center of Excellence. The MIRL provides expert scientific consultation and access to instrumentation for investigators whose research requires microscopy and imaging resources and related techniques.

MIRL offers multiple imaging modalities and associated services:

- Conventional Light and Fluorescence Microscopy
- Laser Scanning Confocal Microscopy
- Multiphoton Microscopy
- Spinning (Nipkow) Disk Confocal Microscopy
- FRET and FRAP
- Ratiometric analysis
- In vivo small animal fluorescent/bioluminescent and X-ray imaging
- Three & Four dimensional image reconstruction and quantitative measurements
- Training in microscopy and the use of the instruments
- Consultation in experimental design

Director: Kamiar Moin, kmoin@med.wayne.edu, 313-577-2199
http://www.med.wayne.edu/mirl/index.asp

**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
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, lijin@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

Smart Sensors and Integrated Microsystems (SSIM) Service Center
The Smart Sensors and Integrated Microsystems (SSIM) laboratories are located in the College of Engineering at Wayne State University and occupy more than 12,000 square feet of core facilities and laboratories, including a major new micro electro mechanical systems (MEMS) and microelectronics clean room developed jointly with Delphi Corp. The program has more than 20 full-time staff scientists, engineers and research technicians available to assist in the operation and maintenance of the equipment. The SSIM Program is a central facility in the area of research and development for MEMS, microsystems, microsensors and nano/micro integration technology.
**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](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](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](http://www.med.wayne.edu/uprs/missionstatement.htm)

**Wildman 1Cyte Service Center**

This core centrifuges blood and prepares it for subsequent tests.
Director: Derek Wildman, dwildman@genetics.wayne.edu