

WUSTL – Cores

1) Biologic Therapy Core

Contact: Johnnie Cartwright

Phone: 314-362-9011

Website: <https://siteman.wustl.edu/research/shared-resources-cores/biologic-therapy-core-facility/>

Services available:

The Biologic Therapy Core Facility (BTCF) will facilitate the rapid and early translation of promising novel research into clinically relevant interventions intended to treat, prevent, or improve outcomes for cancer and other diseases. The core maintains a cGMP compliant and FDA registered 2,615 sq. ft. modern pharmaceutical cleanroom with 6 independent manufacturing suites and validated & calibrated production equipment. The highly trained staff, competent in regulatory compliance, directly partners with investigators to staff, operate, manipulate and/or manufacture early phase clinical materials in the core, including clinical grade cell and gene therapy products, DNA vaccines, reconstitution of peptides, and radio-labeled PET products.

2) Biomedical Mass Spectrometry

Contact: John Turk, MD., PhD.

Staff: Kevin Yarasheski

Phone: 314-362-8173

Website: <http://msr.dom.wustl.edu/>

Services available:

The Core provides service, collaboration, training and advice on mass spectrometry-based analysis of biomolecules involved in metabolism, nutrition, pathophysiology, and cell signaling. The Core supports extensive research programs and platforms for complex lipid analyses and stable isotope labeled biomolecules in in vitro and in vivo models. All analyses conducted in the Core require a fee-for-service/charge-backs. Core users are encouraged to contact a staff member when composing a research proposal, so that all analytical and personnel fees are included in the budget. Advice on biological sample preparation-analytical methods, and routine mass spectrometry maintenance/service are available.

3) High Throughput Screening Core/Center for Drug Discovery

Contact: Maxene Ilagan, PhD

Phone: 314-362-4445

Website: <http://htsc.wustl.edu/>

Services Available:

The High Throughput Screening Core and Center for Drug Discovery facility is a high-throughput screening robotics core dedicated to identifying small molecule inhibitors that can be developed into potential therapeutics and research tools. The core provides expertise in automation, cell-based and biochemical assay development, and hit to lead

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follow up plus the instrumentation, liquid handling systems, and chemical libraries necessary for screening. Access to the instrumentation – including liquid handling systems, plate readers, and the high content imager/automated microscope – is also available to investigators for non-screening purposes. This core specializes in small molecule screens to identify agonists/antagonist of biologically/pathologically interesting proteins, and sub- or genome-wide siRNA screens in live cell functional assays. We provide support for any project that would benefit from automation

4) Center for Cellular Imaging (WUCCI)

Contact: James Fitzpatrick, PhD

Staff: Terese Hall

Phone: 314-362-2254

Website: <http://wucci.wustl.edu/>

Services Available:

The goal of the WUCCI is to provide reliable and affordable access to state-of-the-art cellular imaging technologies, provide professional guidance in experimental design, sample preparation and data analysis, develop and apply new imaging technologies and work collaboratively with researchers to advance our understanding of human health and disease.

5) Siteman Flow Cytometry Core

Contact: Bill Eades

Phone: 314 -362-9364

Website: <https://siteman.wustl.edu/research/shared-resources-cores/siteman-flow-cytometry-sfc/>

Services Available:

The Siteman Flow Cytometry Core offers services for flow cytometry-based cell analysis and cell sorting. The instrumentation includes five bench top analyzers and three cell sorters assemblies with a total sorting capacity equal to five traditional cell sorters.

6) GENOME TECHNOLOGY ACCESS CENTER (GTAC)

Contact: Richard Head, PhD

Phone: 314-747-3067

Website: <http://gtac.wustl.edu>

Services Available:

The Genome Technology Access Center (GTAC) provides DNA/RNA analysis resources for researchers at Washington University and beyond. We currently provide NextGen sequencing (4 illumina HiSeq2500s, 2 illumina MiSeqs), microarray (all formats) and

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quantitative PCR, including Fluidigm arrays and single cell. We provide analysis services with all these technologies.

7) High Resolution NMR Core

Contact: Brian Marsden, PhD

Phone: 314-935-4715

Website: <http://www.chemistry.wustl.edu/facilities/NMR>

Services Available:

High Resolution NMR Facility was founded in 1985 as a shared resource to serve the University and greater St Louis research community. Today the Facility a) has a variety of modern NMR instruments with field strength from 7.05-14.1 T, b) has experienced staff that are available for user education as well as collaborative research and c) serves approximately 45 different PIs yearly.

8) HYBRIDOMA CENTER/MONOCLONAL ANTIBODY DEVELOPMENT CORE

Contact: Kathy Sheehan, PhD

Phone: 314-362-8744

Website: <http://www.pathology.wustl.edu/research/hybridoma.php>

Services Available:

The Hybridoma Center / Monoclonal Antibody Development Core is a specialized cell culture facility that assists investigators in the generation of monoclonal antibody producing B cell hybridomas. Mouse and Armenian hamster models are utilized to generate antigen reactive monoclonal antibodies.

9) Center for Human Immunology and Immunotherapy Programs (CHiPs)

Contact: Kathy Sheehan, PhD

Phone: 314-362-8744

Website: <http://chiips.wustl.edu/iml-core-lab.html>

Services Available:

The IML provides the structure, instrumentation and expertise to monitor the impact of specific immunotherapies on human and mouse immunologic profiles, interrogate mechanisms and pathways related to treatment protocols and advance the conceptual basis for targeted treatment strategies. Services include: Produce custom human and murine MHC I tetramers; Conjugate mAbs and tetramers with metal-containing polymer tags or fluorophores; Provide single and multiple cytokine analyses from serum, plasma,

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cell culture supernatants or other fluids; Perform lymphocyte functional assays; Promote identification of new biomarkers for translational research; Develop barcoding panels for immunophenotype analysis of patient samples; Identify unique cellular components/subsets and map interrelated signaling networks; Track distinct cellular populations in samples following identification by barcoding; Provide tetramer staining and instrumentation support for Immunoassay laboratory

10) Proteomics Shared Resource Core

Contact: R. Reid Townsend, MD, PhD

Staff: Jim Malone

Phone: 314-362-9122

Website: <https://siteman.wustl.edu/research/shared-resources-cores/proteomics-shared-resource/>

Services Available:

The Proteomics Core provides global and targeted, quantitative proteomics analysis to support research in disease mechanisms and biomarker development (discovery, qualification and verification). A suite of software tools is available to users for data processing, analysis, and interpretation. Consultation on experimental design, selection of analytical platforms, and sample preparation are provided. Advanced Instrumentation (listed below) and sample preparation protocols are in place to enable both gel and LC-MS based proteomics analysis of biological fluids, tissues, and cells using high resolution nano-LC (LTQ-Orbitrap-XL, LTQ-Orbitrap-ELITE, Q-Exactive, and Q-TOF mass spectrometers). Quantification (relative and absolute) of proteins is available using quadrupole mass spectrometry (5600+ Triple TOF mass spectrometers). As part of the Core's biomarker development services, a high-sensitivity immunometric platform and expertise to develop new ELISA-type assays is available.