CORES DAY 2022

THURSDAY, SEPTEMBER 15th, 10am-2pm

https://pheedloop.com/VirtualCoresDay2022/site/home/

Perelman School of Medicine University of Pennsylvania

Children's Hospital of Philadelphia℠

The Wistar Institute

Please note that registration is required for this event. Please click here to register for free at any time and receive an event access code.

2022 SPONSORS

The Children's Hospital of Philadelphia

Breakthroughs. Everyday.

For almost a century, Children’s Hospital of Philadelphia Research Institute has advanced breakthrough treatments and innovations that have changed lives and pushed pediatric scientific knowledge forward. It’s truly amazing what an elite scientific research institution can accomplish with an engaged professional community, the shared resources on a premier academic campus, and the commitment to excellence at a world-renowned children’s hospital. From laboratory discoveries, to new public policies, to health gains, we want to give every child the best opportunity for a bright future.

https://www.research.chop.edu/

The Perelman School of Medicine

We are dedicated to the highest standards of patient care, education and research.

The University of Pennsylvania is the oldest and one of the finest medical schools in the United States. Penn is rich in tradition and heritage and at the same time consistently at the forefront of new developments and innovations in medical education and research. Since its founding in 1765 the School has been a strong presence in the community and prides itself on educating the leaders of tomorrow in patient care, biomedical research, and medical education.

At Penn academic excellence, as well as compassion for the patients we are privileged to serve, are stressed. Skillful compassion is truly a hallmark of the Penn learning experience. The Perelman School of Medicine at the University of Pennsylvania consistently ranks among the top five in US News and World Report’s rankings of research-oriented medical schools.

https://www.med.upenn.edu/psom/

The Wistar Institute

Discovering the future of medicine

Wistar is a world leader in early stage discovery science in the areas of cancer, immunology and infectious disease. The Institute is committed to accelerating research advances from bench to bedside through brilliant science and distinctive approaches to collaboration among scientific investigators and academic and industry partners. Wistar’s single-minded focus is on making discoveries that will change the future of human health.

https://wistar.org/

https://pheedloop.com/VirtualCoresDay2022/site/sponsors/

Registered and interested in a core facility?

Login via the Virtual Event Portal to view core facility presentations and participate in live chat Q&A sessions.

Each chat box will be monitored live by core facility personnel during the scheduled presentation time. Please feel free to leave your questions or comments in the chat for the duration of the session, or to contact the core directly outside of this time.

Please note that all sessions in each time slot will take place simultaneously.

Have to miss a session? Following its scheduled presentation time, each presentation will feature control buttons allowing you to pause, rewind, and replay at your convenience. All presentations will also be made available online in the future.

CORES DAY SCHEDULE

Please click core facilities linked below to view presentations

CORE FACILITY NAME				
10:00 - 10:10am	Bioinformatics Core Facility (UPenn)	Research Information Services (CHOP)	Animal Facility Shared Resource (Wistar)	Cytomics and Cell Sorting Resource Laboratory (UPenn)
10:15 - 10:25am	Bioinformatics Shared Resource (Wistar)	PMACS Analytics and Research Teams (UPenn)	Aquatic Zebrafish Core Facility (Wistar)	Flow Cytometry Core Facility (CHOP)
10:30 - 10:40am	Institute for Biomedical Informatics Clinical Research Informatics Core Facility -CIC (UPenn)	Biomedical Research Support Facility (Wistar)	Cell and Animal Radiation Core Facility (UPenn)	Flow Cytometry Facility (Wistar)
10:45 - 10:55am	Biostatistics Analysis Center (UPenn)	Corporate Info. Services Enterprise Research Applications (UPenn)	Cell Center Services Facility (UPenn)	Human Immunology Core Facility (UPenn)
11:00 - 11:10am	Biostatistics and Data Management Core Facility (CHOP)	Information Services Advisory Center - ISAAC (UPenn)	Genomic Analysis Core Facility (UPenn)	Human Pluripotent Stem Cell Core Facility (CHOP)
11:15- 11:25am	Clinical Research Computing Unit - CRCU (UPenn)	Penn Libraries (UPenn)	Genomics Facility (Wistar)	Molecular Screening and Protein Expression Shared Resource (Wistar)
11:30 - 11:40am	Johnson Foundation Structural Biology & Biophysics Core Facility (UPenn)	Office of Clinical Research (UPenn)	CRISPR - Cas9 Mouse Targeting Core Facility (UPenn)	Pathology Core Facility (CHOP)
11:45 - 11:55am	Chemical and Nanoparticle Synthesis Core Facility (UPenn)	Center for Applied Genomics Core Services (CHOP)	Next Generation Sequencing Core Facility (UPenn)	Molecular Pathology and Imaging Core Facility (UPenn)
12:00 - 12:10pm	Vector Core Facility (UPenn)	Neurobehavior Testing Core Facility (UPenn)	Transgenic and Chimeric Mouse Core Facility (UPenn)	Radiology Core Facilities - CAMRIS & Nuclear Medicine Imaging and Therapy - PET Center (UPenn)
12:15 - 12:25pm	Clinical Vector Core Facility (CHOP)	Penn Neurology VR Laboratory (UPenn)	Transgenic Core Facility (CHOP)	Radiology Core Facilities - Clinical Imaging Core Facility Core Facility & CACTIS (UPenn)
12:30 - 12:40pm	Center for Single Cell Biology (CHOP)	Neurons R Us (UPenn)	Stem Cell Xenograft Core Facility (UPenn)	Imaging Shared Resource (Wistar)
12:45 - 12:55pm	Center for Human Phenomic Science - CHPS (UPenn)	CHOP-Penn Proteomics Core Facility (CHOP)	Comparative Medicine Services Core Facility (CHOP)	Electron Microscopy Resource Lab/Beckman Center for Cryo-EM (UPenn)
1:00 - 1:10pm	Center for Human Phenomic Science - CHPS (CHOP)	Comparative Pathology Core Facility (Penn Vet)	CDB Microscopy Core Facility (UPenn)	Gnotobiotic Mouse Core Facility (UPenn)
1:15- 1:25pm	Cooperative Human Tissue Network - CHTN (UPenn)	Metabolomics Core Facility (UPenn)	Extracellular Vesicle Core Facility (PennVet)	Histotechnology Facility (Wistar)
1:30 - 1:40pm	OCRC Tumor Biotrust (UPenn)	Microbial Culture and Metabolomics Core Facility (UPenn)	Small Animal Imaging Core Facility (CHOP)	Research Vector Core Facility (CHOP)
1:45 - 1:50pm	BioRepository Resource Center (CHOP)	CHOP Microbiome Center (CHOP)		

Animal Facility Shared Resource (Wistar)

Denise DiFrancesco, AS, RLATG, CMAR, ILAM, Managing Director (difrancesco@Wistar.org)

Presentation time: 10:00 - 10:10 am

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SESA41E12EBVF59G4

The Wistar Institute Animal Facility Shared Resource facilitates research through compassionate and efficient management of animal populations. The vivarium operates as a modified barrier facility and is equipped with quarantine and procedure rooms, holding rooms with biosafety cabinets, an imaging/ultrasound holding room equipped with a PerkinElmer IVIS Spectrum CT small animal imager and SonoVol Ultrasound, as well as additional support areas. The Facility has housing space for more than 6,000 sterile, disposable, and individually ventilated mouse cages. Space for housing limited numbers of small animal species other than mice is also available upon request. The Wistar Institute Animal facility has breeding colony Management and services that include veterinary care and pharmacy, quarantine housing, technical support and training, mouse pathology, breeding consultations and transgenic services in collaboration with Fox Chase Cancer Center. Wistar's Animal Care and Use Program, overseen by Wistar's Institutional Animal Care and Use Committee (IACUC), is fully accredited by the AAALAC International, has an assurance on file with the Office of Laboratory Animal Welfare at the NIH, and is a registered USDA research institution.

https://wistar.org/research-discoveries/shared-resources/animal-facility

Aquatic Zebrafish Core (CHOP)

Christoph Seiler, PhD, Core Director (seilerc@chop.edu)

Presentation time: 10:15 - 10:25 am

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SESU35B9ZR9CJG1J6

The Aquatic Zebrafish Core provides services using the small vertebrate zebrafish as a model for human disease and to study gene function.

There are numerous reasons to model a disease in a fish, including the rapid, five-day development of zebrafish and the ability to image whole organs in vivo and perform time-lapse analysis. Also, zebrafish models give us the ability to complete drug screens by simply adding your drug to 100uL of fish water, perform behavioral analysis, and make it easy to create knock-outs and transgenic lines.

The Zebrafish Core serves all researchers at Children's Hospital of Philadelphia and the University of Pennsylvania as well as outside organizations. We aim to make the zebrafish model accessible to everyone – from clinicians without their own labs to principal investigators with well-established projects.

https://www.research.chop.edu/aquatic-zebrafish

Bioinformatics Core Facility (UPenn)

Taehyong Kim, PhD, Principal Bioinformatician, Interim Core Director
(taehyong@pennmedicine.upenn.edu)

RRID: SCR_022374

Presentation time: 10:00 - 10:10 am

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SES53TI7V7L9HPIF0

The Bioinformatics Core (BIC) of the Institute for Biomedical Informatics (IBI) provides professional bioinformatics services that include data analysis and consultation to Penn Biomedical research community. The BIC core is also dedicated to the building of efficient pipelines that handle various biomedical data including Next-Generation Sequencing (NGS) data. Since its establishment in 2015, BIC has been serving 80+ research groups from 20+ Penn institutes and departments, helped the funding of multiple NIH grants, and co-authored in 30+ publications.

https://bioinfo.med.upenn.edu/

Bioinformatics Shared Resource (Wistar)

Andrew Kossenkov, PhD, Scientific Director (akossenkov@wistar.org)

Presentation time: 10:15 - 10:25 am

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SESVGDI6BM2JDA8VC

The Wistar Bioinformatics Facility continuously develops new and efficient approaches to data analysis as a response to emerging research needs. Facility functions include: statistical analyses and computational modeling for all types of high-throughput data, advanced bioinformatics tools for integrative cancer biology, and high-throughput data management.

https://wistar.org/research-discoveries/shared-resources/bioinformatics-facility

Biomedical Research Support Facility (Wistar)

Livio Azzoni, MD, PhD, Managing Director (azzoni@wistar.org)

Presentation time: 10:30 - 10:40 am

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SESJXEDOA8406Z1EL

The Wistar Biomedical Research Support Core (BRSC) provides a robust infrastructure to support mechanistic, patient-oriented research. The BRSC manages the resource commitment associated with clinical studies, including supporting compliance with regulatory directives governing research in Human Subjects. This includes data collection, storage and extraction, data quality control, site monitoring, regulatory reporting, and connection with statistical teams for data analysis. Services include phlebotomy, tissue microarrays, collection of pathological specimens and support for clinical studies.

https://wistar.org/research-discoveries/shared-resources/biomedical-research-support-facility

BioRepository Resource Center (CHOP)

David Stokes, PhD, Institutional Director (stokesdg@chop.edu)

Presentation time: 1:45 - 1:50 pm

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SESO5LHLJ4VA4MX03

The Biorepository Resource Center (BioRC) improves the breadth and access to biobanked specimens and information resources across the CHOP community of investigators. With a capacity for approximately 2 million to 3 million samples, the facility serves all of CHOP's biobanking needs, avoiding specimen duplication, preserving precious materials, and providing organized data and materials. The BioRC storage facility is located in a 2,956 square foot, temperature-controlled, card-accessed facility in Colket Translational Research Building (CTRB). The BioRC's laboratory space, also located in the CTRB building, is outfitted for specimen accession, processing, and temporary storage. The BioRC operates under the following principles:

- An Operational Committee, which coordinates central and investigator-specific biobanking resources and programs at CHOP, governs and approves requests to utilize the BioRC.
- BioRC facilitates integration and enhancement of access to information about biorepository specimens and resources.
- BioRC assists investigators in developing new projects that require the collection and processing of shareable samples not currently available, or helps investigators with existing projects who would like to migrate storage and management of their shareable banked specimens and data to the BioRC.
- BioRC institutes and follows best-practice standard procedures for collection, processing, and storage of samples to ensure high quality specimens and data for all CHOP investigators.

https://www.research.chop.edu/biorepository-resource-center

Biostatistics Analysis Center (UPenn)

Scott Appel, MS, Acting Co-Director, Senior Triage and Consulting Manager (appelsc@pennmedicine.upenn.edu)

RRID: SCR_022393

Presentation time: 10:45 - 10:55 am

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SESOQ0DL0E2EMD3NP

The Biostatistics Analysis Center (BAC) is a University of Pennsylvania service center, offered by the Perelman School of Medicine's Department of Biostatistics, Epidemiology, and Informatics (DBEI). The BAC is staffed by professionally-trained biostatisticians and biostatistical programmers, and provides a wide range of biostatistical and epidemiological consulting services to the University's biomedical research community, as well as externally.

https://www.cceb.med.upenn.edu/bac

Biostatistics and Data Management Core Facility (CHOP)

Julie Pappas, Database Analyst I (juliepappas@westat.com); **Walter Faig, Biostatistician** (walterfaig@westat.com);
Linda Sprouse, Project Administrator (sprousel@chop.edu)

Presentation time: 11:00 - 11:10 am

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SESKV9AT7U8QJZG3E

If you need to ensure that your study includes valid, statistically sound data and results, then the Biostatistics and Data Management Core (BDMC) at CHOP is here to help! Our team of highly motivated and experienced biostatisticians is committed to collaborating with investigators to meet their studies' unique biostatistics and data management needs. We can assist you in designing experiments, planning clinical protocols, analyzing and interpreting data, and presenting and disseminating results. Our data management team members have expertise in designing case report forms, developing databases, creating data management plans, developing metrics to report on study progress, and delivering high quality datasets for analysis. The BDMC offers the unique advantage of CDISC membership, as well as experience with Biologics License Application submissions. We are eager to work with you if you need guidance with clinical trial start-up, oversight, and regulatory submission. We are available for free limited consulting for your data management and statistical questions.

https://www.research.chop.edu/biostatistics-data-management

CDB Microscopy Core Facility (UPenn)

Andrea Stout, PhD, Technical Director (astout@pennmedicine.upenn.edu)

RRID: SCR_022373

Presentation time: 1:00 - 1:10 pm

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SESK5GTSEOH9BA2MP

The Cell & Developmental Biology (CDB) Microscopy Core is located in the Perelman School of Medicine at the University of Pennsylvania. Our facility houses eleven light microscopes, a scanning electron microscope (SEM), and two image analysis workstations. We are open to the entire University of Pennsylvania community as well as to researchers from other institutions and companies in the area. Our services include assisted imaging sessions, in-depth training on our microscopes, and consultation on sample preparation or image analysis.

https://www.med.upenn.edu/cdbmicroscopycore/

Cell and Animal Radiation Core Facility (UPenn)

Denisa Goia, Technical Director (denisa.goia@pennmedicine.upenn.edu)

RRID: SCR_022377

Presentation time: 10:30 - 10:40 am

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SESI4FY0HLVOB3LQI

The Cell and Animal Radiation Core (CARC) is one of the most advanced cell and animal radiation research facilities in the US, essentially modeling state-of-the-art radiation modalities currently used in the clinic. The CARC provides “turn-key” services to users for performing precision, image-guided radiotherapy with both Photons and Protons (including FLASH proton radiotherapy) on cells, rodents and larger animals. A dedicated team of Physicists will also provide expert dosimetry and treatment planning capabilities. The CARC instrumentation consists of two image-guided SARRP 200 Small Animal Radiation Research Platforms (Xstrahl) capable of irradiating rodent tissues from 1 mm-120 mm in diameter; a research proton beamline (IBA, Roberts Proton Center); one X-RAD 320ix cabinet x-ray irradiator (Precision X-Ray); and two Cs gamma-ray irradiators (Shepherd Mark I), suitable for whole-body radiation of rodents.

https://www.med.upenn.edu/carc/

Cell Center Services Facility (UPenn)

Tapan Ganguly, PhD, Core Director (gangulyt@pennmedicine.upenn.edu); **Sabine Baxter, Technical Supervisor** (baxters@pennmedicine.upenn.edu)

RRID: SCR_022391

Presentation time: 10:45 - 10:55 am

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SES54LL4HBQAN14ZE

The Cell Center Services Facility provides services in various cell culture and procedures involving cell culture.
The services include:

- Training in basic sterile and tissue culture techniques involving attached and suspension cells
- Cell culture at various scales, expansion of primary cells, seed cell cultures from on-site cell bank, cell storage
- Mycoplasma and Endotoxin testing
- Large scale growth of hybridoma and other cell lines followed by antibody purification by protein G column or recombinant protein production
- EBV induced transformation of lymphocytes
- Hybridoma generation by cell fusion and screening
- Transfection of mammalian cells (stable and transient)
- Preparation of specialized cell culture media, Drosophila media, and various tissue culture and molecular biological reagents.
- Preparation of agar plates with and without antibiotic

https://genetics.med.upenn.edu/cores/cell-center-services/

Center for Applied Genomics Core Services (CHOP)

James Snyder, CAG Biorepository Laboratory Manager, (snyderj3@chop.edu); Maria Lemma, CAG Genotyping Laboratory Manager (garrism@chop.edu); Molly Gallagher, NGS Operations Lead (gallaghm12@chop.edu)

Presentation time: 11:45 - 11:55 am

https://pheedloop.com/VirtualCoresDay2022/virtual/page=sessions&section=SESY267KVGW0HQPNT

Established in 2006, the CAG Genotyping Laboratory is fully equipped with state-of-art liquid handling technology and experienced staff members. The CAG genotyping core offers both standard and custom array project design. With the capacity to process >2300 samples/week and generate >480 million genotypes per day, the genotyping core fully integrates with our Biorepository and Bioinformatics group, offering the collaborator the opportunity for a seamless workflow from DNA extraction to data release.

https://chop.ilab.agilent.com/service_center/show_external/5056?name=center-for-applied-genomics-core-services

Center for Human Phenomic Science - CHPS (CHOP)

John Krall, LCSW, Administrative Director (krallj@chop.edu)

Presentation time: 1:00 - 1:10 pm

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SESDU8NN5A3W114WQ

The Center for Human Phenomic Science (CHPS) provides the resources, environment, operations, and training to support and promote high-quality clinical and translational research by qualified investigators. It launched with the support of the Clinical and Translational Science Award, a National Institute of Health Roadmap initiative. CHPS merged the General Clinical Research Centers at Children's Hospital of Philadelphia andUniversity of Pennsylvania Health System, and then introduced new programs and services. CHPS has child and adult specific facilities at CHOPand UPHS respectively, as well as joint components. It is the Center's policy to charge for services provided to investigators for the purpose ofsupporting the program and expanding the current services available. All protocols are approved by the CHPS Resource Committee.

https://chps.research.chop.edu/

Center for Human Phenomic Science - CHPS (UPenn)

Carl Shaw, MEd, MBE (shawcarl@pennmedicine.upenn.edu)**; Terry Scattergood, RN** (Theresa.Scattergood@pennmedicine.upenn.edu)

RRID: SCR_022402

Presentation time: 12:45 - 12:55 pm

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SESB6UWG445VRJPQV

The Center for Human Phenomic Science (CHPS) was formed with the receipt of the Clinical and Translational Science Award (CTSA), an NIH Roadmap initiative. The CHPS has child and adult specific components at the Children's Hospital of Philadelphia (CHOP) and University of Pennsylvania, respectively, as well as joint components. The CHPS merged the General Clinical Research Centers (GCRCs) at both institutions, and introduced new programs and services. The goal of the CHPS is to provide the resources, environment, operations, and training to support and promote high-quality clinical and translational research by qualified investigators. For specific information regarding the CHPS at CHOP please visit: https://chps.research.chop.edu/.

https://www.med.upenn.edu/chps/

Center for Single Cell Biology (CHOP)

Mei Zhang, Core Facility Technical Director (zhangm5@chop.edu)

Presentation time: 12:30 - 12:40 pm

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SESVEC2FGZSL3C5PU

As part of the Center for Single Cell Biology, our service core provides convenient access to cutting-edge single-cell, spatial and in situ technologies to CHOP, UPenn and the wider research community. Established in early 2022, we are equipped with state-of-the-art instruments, experienced research assistants and bioinformaticians to offer in-house experimental and computational support to your single-cell research. Our services include:

• 10x Genomics single cell assays
• NanoString GeoMx Digital Spatial Profiler RNA and protein assays
• Akoya PhenoCycler spatial proteomics
• Vizgen MERSCOPE spatial transcriptomics

We thrive in providing high-quality and cost-effective service work. We are happy to consult with you on how our services can facilitate your research. We are located at 3501 Civic Center Blvd, CTRB A450D, Philadelphia, PA 19104.

https://www.research.chop.edu/single-cell-technology-core

Chemical and Nanoparticle Synthesis Core Facility (UPenn)

Davit Jishkariani, PhD, Associate Technical Director (davitj@sas.upenn.edu)

RRID: SCR_022390

Presentation time: 11:45 - 11:55 am

https://pheedloop.com/VirtualCoresDay2022/virtual/page=sessions&section=SESNFYID22TSF67FG

The CNSC supports researchers by providing in-house expertise in medicinal chemistry, metal chelate chemistry, polymer synthesis, nanoparticle production and surface functionalization, and site-specific antibody labeling. Our chemists provide custom, problem-specific support for researchers in medical, chemical, and materials science fields. Specific services include: consultation and assistance with the design of chemical/medicinal compounds, in-house synthesis of chemical/medicinal compounds, custom nanoparticle design and synthesis, custom nanoparticle surface functionalization, polymer and dendrimer synthesis, and site-specific antibody labeling.

https://www.itmat.upenn.edu/cnsc/

CHOP Microbiome Center (CHOP)

Kyle Bittinger, PhD, Analytical Core Director (bittingerk@emaill.chop.edu)**; Ahmed Moustafa, PhD, Sequencing Core Director** (moustafaam@chop.edu), **Ruth Fahey**, **Administrative Manager** (faheyr@chop.edu); **Ariel Myatt**, **Resource Coordinator III**, myatta@chop.edu)

Presentation time: 1:45 - 1:55 pm

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SEST1Y7DGPW99EWZK

Looking for help with sequencing and analytics to advance your project? The CHOP Microbiome Center is the sequencing and analyticalresource of the PennCHOP Microbiome Program, providing end-to-end solutions for microbiome research. Our sequencing lab offers expertise in next-generation DNA sequencing for microbiome studies, working with customers to provideoptimized workflows and protocols customized for each study. Our analytical lab provides expertise in bioinformatics and statisticalanalysis of microbiome data. We develop an analytical plan specific to your project and can integrate microbiome data with other datasources, such as metabolomics or dietary intake information. CHOP Microbiome Center services are available to researchers at CHOP, University of Pennsylvania, other academic institutions, and industry.

https://www.research.chop.edu/chop-microbiome-center

CHOP-Penn Proteomics Core Facility

Lynn Spruce, Technical Director (spruce@chop.edu)

Presentation time: 12:45 - 12:55 pm

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SESHKHRYS3BD7OZDU

The Proteomics Core Facility provides services to investigators at CHOP, University of Pennsylvania, and outside institutions, offering specialized expertise for the analysis of proteins and peptides using bottom-up mass spectrometry. Our state-of-the-art instrumentation and continual development of new methods and customized approaches for proteomic analysis, keeps our core innovating to meet the needs of the rapidly changing scientific environment.

We assist investigators with experimental design and sample procurement suggestions prior to analysis with the goal of producing the highest quality data set to answer biological hypotheses. We provide mass spectrometry-based proteomics technical expertise and bioinformatic support during both discovery and validation phases of proteomic experiments.

A wide variety of proteomics experiments are possible, and we are always willing to discuss your projects, ideas and any questions you might have with data. We are here to help in any way we can.

https://www.research.chop.edu/proteomics-core-facility

Clinical Research Computing Unit (UPenn)

Lisa Wesby, Assoc. Dir, POCO, CRCU (wesby@pennmedicine.upenn.edu)**; Maria Blanco, Assoc. Dir. CDM, CRCU** (mblanc@pennmedicine.upenn.edu)**; Shawn Ballard, Assoc. Dir. RT, CRCU** (sballard@pennmedicine.upenn.edu;)

Presentation time: 11:15 - 11:25 am

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SESOBNIR14QHG21KY

The Clinical Research Computing Unit (CRCU) is an Academic Clinical Research Organization that expertly provides the full range of services

essential for the conduct of clinical research projects, including Phase I-IV, multi-center, randomized, clinical trials, registry, and cohort studies. The

CRCU employs proven technologies and tools to ensure superior data quality. We can also provide custom development solutions when appropriate for project needs. The CRCU has extensive experience in managing multi-institution research networks as the data coordinating center and offer expert staff with a prime focus on quality data. The CRCU specializes in study design and development, site management and training, data collection, processing, quality control, regulatory requirements and reporting, database development, administration, security, data storage and proposal development.

https://www.cceb.med.upenn.edu/crcu

Clinical Vector Core Facility (CHOP)

Johannes van der Loo, PhD, Core Director (vanderlooj@chop.edu)

Presentation time: 12:15 - 12:25 pm

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SES4BNZGASP4K13W4

The Raymond G. Perelman Center for Cellular and Molecular Therapeutics has established state-of-the-art Current Good Manufacturing Practices(cGMP) clinical vector manufacturing suites for adeno-associated virus (AAV) and lentiviral (LV) vectors. Directed by a leading expert in preclinical and clinical vector production and characterization, our goal is to help realize the enormous promise of gene transfer therapy to address unmet medical needs. The Clinical Vector Core manufactures clinical and pre-clinical adeno-associated virus (AAV) vectors of serotypes 1, 2, 5, 6, 8, and 9, and Lentivirus (LV) vectors. Novel or modified serotypes will require development prior to scale-up. Products for clinical use are manufactured incompliance with cGMP for Phase 1 and 2 clinical trials. To support pre-clinical work, including pharmacology and toxicology studies, we offer products manufactured using a GMP-comparable process. Research-grade products for proof-of-principle and bridging studies are also offered, in addition to support for long-term stability and device compatibility studies and investigational new drug (IND) submission. The Clinical Vector Core is a not-for-profit core that welcomes projects from academia, industry, and government on a first-come, first-serve basis.

https://www.research.chop.edu/clinical-vector

Comparative Medicine Services Core (CHOP)

Melanie C. McFadden, DVM, MLAS, Technical Director (mcfaddenmc@chop.edu) (Cell: 445-213-0094); **Amy Muehlmatt, Research Laboratory Director** (muehlmatta@chop.edu); **Meoghan MacPherson, Quality Assurance Manager** (macphersm1@chop.edu)

Presentation time: 12:45 - 12:55 pm

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SESOB9VJA10I6CF2F

The mission of the Raymond G. Perelman Center for Cellular and Molecular Therapeutics Comparative Medicine Services Core is to partner with and guide Children's Hospital of Philadelphia-based investigators through the process of translating their wet bench research to clinical care. Since its inception, CHOP Research Institute has held a bench-to-bedside philosophy that emphasizes bringing basic research ideas to the clinic so they may improve the lives of our patients and their families. Completing preclinical investigations and submitting Investigational New Drug and Premarket Approval Applications to the U.S. Food and Drug Administration to initiate first-in-human trials are essential steps toward enacting this philosophy. The Comparative Medicine Services Core is currently developing the capacity for Good Laboratory Practice (GLP) compliance. We encourage you to contact us as soon as you believe you have a drug or device that will eventually require human clinical trials prior to use in patients so that we may begin planning and discussion. The Comparative Medicine Services Core comprises highly trained professionals capable of completing and overseeing a variety of studies working with animal models. We adhere to the highest standards of animal welfare, procedure reproducibility and validation, and customer service.

https://www.research.chop.edu/comparative-medicine-services-core

Comparative Pathology Core (Penn Vet)

Enrico Radaelli, DVM, PhD, DECVP, Faculty Director (enrada@vet.upenn.edu)**; Charles Assenmacher, DVM, MSc, DACVP, Technical Director** (chasse@vet.upenn.edu)

RRID: SCR_022438

Presentation time: 1:00 - 1:10 pm

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SESHMQYJPR0TJ34AY

The Comparative Pathology Core (CPC) is an established core facility within the Department of Pathobiology at the University of Pennsylvania, School of Veterinary Medicine (Penn Vet), and a fully integrated shared resource within the Abramson Cancer Center (ACC). The main objective of the CPC is to provide expert pathological characterization of experimental animal models to fulfill the growing needs of researchers performing in vivo studies as part of their basic and translational research endeavors. In this context, the CPC supports the local research community at the University of Pennsylvania, including the School of Medicine and Abramson Cancer Center, as well as closely related institutes such as Children's Hospital of Philadelphia, and the Wistar Institute. To accomplish its mission and ensure accurate extrapolation, interpretation, and translation of preclinical animal data, the CPC offers the expertise of board-certified veterinary pathologists and access to a state-of-the-art platform for histology services, molecular staining of tissue samples, and digital pathology. CPC pathologists possess a comprehensive understanding of the diverse experimental strategies used in preclinical research and have developed unique expertise in experimental laboratory animal pathology.

https://www.vet.upenn.edu/research/core-resources-facilities/comparative-pathology-core

Cooperative Human Tissue Network (CHTN) (UPenn)

Xavier Arthur, Procurement Technician, (xarthur@pennmedicine.upenn.edu)

RRID: SCR_022407

Presentation time: 10:45 - 10:55 am

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SES18VY3P1VHDA0FL

The CHTN is a prospective human tissue procurement service within the Department of Pathology at HUP, that assists investigators with collection, processing and preservation of research samples. Our staff will personalize sample acquisition and processing to meet project requirements. Samples (malignant, normal, diseased, etc.) and biofluids can be preserved in a range of methods (fresh, frozen, fixed, etc.).

https://pathology.med.upenn.edu/research/centers-and-institutes/cooperative-human-tissue-network

Corporate Information Services Enterprise Research Applications (UPenn)

Jamie Howell, Lead Application Analyst, Laboratory Information Systems (Jamie.Howell@pennmedicine.upenn.edu); **Colin Wollack, Lead Application Analyst, Clinical Research Information Systems** (Colin.Wollack@pennmedicine.upenn.edu)

Presentation time: 10:45 - 10:55 am

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SESW5QO4D9W0K7A3J

PMACS/DART (Penn Medicine Academic Computing Systems/Digital Academic Research Transformation), was formed in 2012 with the goal of providing computing services for the Perelman School of Medicine's departments, centers, and institutes. PMACS/DART has matured into a 140+ department of technology professionals providing a wide range of services including:

- Desktop Support
- Server Administration
- Storage Management
- Both High Performance Computing (HPC) and Limited Performance Computing (LPC)
- Software Development
- Web Design and Development
- Database Development
- Enterprise Application Development and Support
- Consulting services that provide options to best support research initiatives

PMACS/DART is focused on delivering state of the art technology solutions in the most cost-conscious manner in support of the education, administrative and research needs of the Perelman School of Medicine.

https://www.med.upenn.edu/dart/research-systems.html

CRISPR-Cas9 Mouse Targeting Core Facility (UPenn)

Leonel Joannas, PhD, Technical Director (ljoannas@pennmedicine.upenn.edu)

RRID: SCR_022378

Presentation time: 11:30 - 11:40 am

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SESJQTWEY6R1UQAZY

The CRISPR/Cas9 targeting core at the Perelman School of Medicine has been fully operational since February of 2017. Jorge Henao-Mejia M.D., Ph.D. has served as Scientific Director of and Leonel Joannas as the Technical Director. The core is located in the Institute for Immunology and the Scientific and Technical Directors are part of the IFI. In addition, this recently established core is composed of 2 laboratory technicians that work under our guidance. The mission of the CRISPR/Cas9 targeting core is to streamline procedures to facilitate the use of the CRISPR/Cas9 genome editing technology by the larger UPenn/CHOP community to rapidly and economically generate novel mouse genetic tools. This core has had a significant positive impact in the community. Since we established this technology in campus we have generated over 200 new mouse models for 115 users at UPenn/CHOP and nationwide. In addition, our R&D efforts in this area should enable UPenn/CHOP to remain at the forefront of this technology.

https://pathology.med.upenn.edu/research/core-resources/crisprcas9-mouse-targeting-core

Cytomics & Cell Sorting Core Resource Laboratory (UPenn)

Jonni Moore, PhD, Faculty Director (moorej@pennmedicine.upenn.edu)

RRID: SCR_022376

Presentation time: 10:00 - 10:10 am

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SES6E32PJU80WQ5J3

The Cytomics and Cell Sorting Resource Laboratory is dedicated to providing Penn investigators access to high-quality, cost-effective flow cytometric services, as well providing the scientific expertise necessary to effectively integrate this technology into their research projects. One of the Resource lab's primary missions is teaching this technology, consulting with investigators regarding integration of this technology into their research paradigms, and providing technical support to regular users. The facility offers training for investigator performed analysis on all bench-top analyzers, and cell sorter training is also available upon staff approval. A newly-integrated single cell genomic pipeline allows users to perform RNA-seq library preparation immediately after sorting. The facility can advise and/or collaborate on implementing advanced data analysis methods for large-scale or high-dimensional experiments in conjunction with Dr. Wade Rogers. Investigators may also access commercial data analysis software either by licensing through the facility (for a quarterly fee). Recognizing the complexity of cytomics, the Cytomics and Cell Sorting Resource Laboratory has developed an educational program to enable investigators to make optimal and efficient use of the technology. This training and consultation program is a model for other shared resource labs throughout the country.

https://pathbio.med.upenn.edu/pbr/portal/flowcyto/

Electron Microscopy Resource Lab/Beckman Center for Cryo-EM (UPenn)

Sudheer Molugu, PhD, EMRL Director (Sudheer.Molugu@pennmedicine.upenn.edu); **Stefan Steimle, PhD, Beckman Center Director** (stefm@sas.upenn.edu); **Inna Marrynyuk MS, Ultrastructure Services** (Inna.Martynyuk@pennmedicine.upenn.edu); **Biao Zuo MD, Ultrastructure Services** (biaozuo@pennmedicine.upenn.edu)

RRID: SCR_022375

Presentation time: 12:45 - 12:55 pm

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SESXPCSL706UPLGRU

The Electron Microscopy Resource Lab (EMRL) at the Perelman School of Medicine, University of Pennsylvania, is a training and service facility dedicated to providing both conventional transmission electron microscopy (TEM) of cells and tissues and state of the art cryo-electron microscopy (cryo-EM) and cryo-electron tomography (cryo-ET) for structural investigation of macromolecules and cells. The core facility offers services to University of Pennsylvania research groups and external academic research groups in the greater Philadelphia area.

https://www.med.upenn.edu/electronmicroscopyresourcelab/

Extracellular Vesicle Core Facility (Penn Vet) (UPenn)

Luca Musante, PhD, Core Director (musante@vet.upenn.edu)

RRID: SCR_022444

Presentation time: 1:15 - 1:25 pm

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SESX8U3QE47VIVFL4

The Extracellular Vesicle (EV) Core Facility located in the Rosenthal building at 3800 Spruce Street provides comprehensive or selected services in the necessary isolation, quantification and characterization of EVs. Isolation of EV is based on size exclusion using high-performance (SEC- HPLC) or gravity fed (e.g. iZon column) liquid chromatography, ultracentrifugation, and/or density gradient ultracentrifugation. We can accurately characterize EV particle size distribution and concentration using resistive pulse sensing techniques (nCS1, Spectradyne, LLC). Immunophenotype can be accomplished using nanoscale flow cytometry and/or chip array (ExoViewTM) techniques. We additionally provide services in training and education for individuals and lab groups in all methods above and study design consultation to ensure that your EV work is of the highest quality and prepared for high impact publication in this exciting and rapidly growing field.

www.vet.upenn.edu/extracellular-vesicle-core

Flow Cytometry Core Facility (CHOP)

Florin Tuluc, MD/PhD, Director (tuluc@chop.edu)

Presentation time: 10:15 - 10:25 am

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SESPXINXQNYXNLGTR

The Flow Cytometry Laboratory at CHOP provides access to state-of-the-art instrumentation for flow cytometry and cell sorting applications to the research community at Children's Hospital of Philadelphia and University of Pennsylvania. The laboratory is located in suite 1207 on the 12th floor of the Leonard and Madlyn Abramson Pediatric Research Center.

Nine analyzers (two Cytek Aurora, CytoFlex LX, CytoFLEX S, LSRFortessa, LSR II, FACSCalibur, two Accuri C6) and five cell sorters (a brand new Cytek Aurora CS sorter, a Beckman-Coulter MoFlo Astrios EQ, Becton-Dickinson FACSAria Fusion, Becton-Dickinson FACSJazz, and Union Biometrica BioSorter) are operated in the lab either by staff or by trained users. The two Cytek Aurora spectral cytometers are both equipped with five lasers and are capable of analyzing over forty fluorochromes in a sample. One of the Cytek Aurora analyzers has a temperature-controlled 96 well plate loader for medium-throughput analysis.

CytoFlex LX is a sixlasers, 21 fluorescence parameters instrument, able to automatically load samples from 96 well plates. A CytoFLEX S cytometer (4 lasers, 13colors, plate loader) is also available. LSRFortessa is equipped with five lasers and it is capable of detecting 18 colors. LSR II has UV, violet, blue and red lasers and can detect up to 15 colors. FACSCalibur and the two Accuri C6 cytometers have blue and red lasers and four color detectors. Aurora CS, MoFlo Astrios EQs, FACSAria Fusion and FACSJazz are electrostatic droplet sorters encased in a biosafety class 2 cabinets and they are used on an everyday basis for processing samples requiring containment at Biosafety Level 2 or lower. The BioSorter (Union Biometrica) equipped with blue and yellow green lasers is available for analyzing and separating large particles (C. elegans, zebrafish larvae, pancreatic islets, Drosophila imaginal discs, hepatocytes, adipocytes). An Evos FL Auto fluorescence imaging system, a Countess FL II cell counter, a cell washer, centrifuges shakers and other small equipment are also available in our lab. Flow cytometry analysis software (FlowJo, FCS Express) are offered to users through site license or internet dongles. The staff has the expertise for performing a variety of flow cytometry applications, including sample processing for surface and intracellular staining, functional assays, complex multi-color flow cytometry analyses, intracellular calcium assays, side population assays etc.

Individualized training for operating the analyzers, cell sorters, the imaging system and the cell counter is provided upon request.

https://www.research.chop.edu/flow-cytometry

Flow Cytometry Facility (Wistar)

Jeffrey Faust, MBA, Managing Director (jsfaust@Wistar.org); **John Fundyga, Associate Director,** (jfundyga@wistar.org)

Presentation time: 10:30 - 10:40 am

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SESUIYN38F5ATN9PC

The Wistar Flow Cytometry Facility provides users with the technological resources and professional assistance for high quality, multiparameter flow cytometry analyses and sorting. Facility personnel aid investigators in creating efficient and cost-effective experimental designs, through optimizing cytometry-specific reagent and fluorochrome selection, and offer assistance in operation of analysis instruments. Technical support is also provided for analyses of flow and imaging cytometry data for publication, presentation, and inclusion in grant applications, management of cytometric data (storage, archiving, and retrieval), and management of a site license for low-cost analysis software.

https://wistar.org/research-discoveries/shared-resources/flow-cytometry-facility

Genomic Analysis Core Facility (UPenn)

Tapan Ganguly, PhD, Core Director (gangulyt@pennmedicine.upenn.edu); **John Tobias, PhD, Technical Director** (jtobias@pennmedicine.upenn;) **Eric Toorens, Lab Manager** (toorens@pennmedicine.upenn.edu)

RRID: SCR_022383 (DNA Sequencing Facility) & **RRID: SCR_022389** (Molecular Profiling Facility)

Presentation time: 11:00 - 11:10 am

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SESVMOKHAL7FGPR6C

Penn Genomic Analysis Core, an Abramson Cancer Center Shared Resource consists of two laboratories.

DNA Sequencing Lab offers:

- Gold standard Sanger sequencing service
- Next-generation sequencing (NGS) services specializing in targeted sequencing
  - Consultation and experimental design of NGS projects
  - Includes library preparation to sequencing to data analysis
  - Amplicon-based and capture-based enrichments for targeted sequencing
  - NGS on Illumina MiSeq and Next-Seq
  - NGS on Ion Torrent PGM and S5
  - New -Digital PCR (dPCR) on Qiagen QIAcuity for orthogonal NGS data validation and other applications
  - Data analysis
- Human Cell Line Authentication, microsatellite genotyping and fragment analyses for VNTR, SNaPshot etc
- The molecular biological services –
  - PCR, cloning, subcloning, mutagenesis, construct preparation
  - Mouse genotyping
  - Plasmid DNA preps at different scales

Molecular Profiling Lab offers:

- Full service whole genome and targeted molecular profiling of DNA and RNA on multiple platforms
- Consultation and experimental design of profiling projects
- Sample accrual, data management and data analyses
- Quantitative RNA profiling (gene expression) and DNA profiling (genotyping) on
  - Affymetrix GeneChips and high-throughput Gene Titan instruments
  - Fluidigm BioMark HD at intermediated scale
  - ABI QS 12K real-time PCR machine.
- Genome- wide chromosomal analysis using
  - Agilent aCGH platform
  - Affymetrix CytoScan and OncoScan platforms

Molecular Profiling Facility: https://med-upenn.corefacilities.org/service_center/show_external/4515

DNA Sequencing Laboratory: https://med-upenn.corefacilities.org/service_center/show_external/5134?name=penn-genomic-analysis-core-dna-sequencing-laboratory

Genomic Analysis Core Facility: https://genetics.med.upenn.edu/cores/genomic-analysis-core/

Genomics Facility (Wistar)

Sonali Majumdar, MS, Managing Director (smajumdar@wistar.org)

Presentation time: 11:15 - 11:25 am

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SESAPFPUVFCPXY2Z2

The Wistar Genomics Facility serves as a hub for consultation and scientific interaction relating to nucleic acid-based methods. It provides expertise and support to insure the best possible outcomes for genomic related projects. The Facility supports several state-of-the-art platforms for a wide variety of nucleic acid-based studies, including massively parallel sequencing as well as routine capillary sequencing. The facility also supports: transcriptomic projects including RNA-Seq, ChIP-Seq, methylation (MeDIP), small RNA-Seq and targeted sequencing; gene expression studies using Quant-Seq(3' RNA-seq) and low input sequencing; single Cell-Seq (Takara iCell 8 MSND system); and targeted gene expression studies include the nanoString platform.

https://wistar.org/research-discoveries/shared-resources/genomics-facility

Gnotobiotic Mouse Core Facility (UPenn)

Dmytro Kobuley, Technical Director (penngf@pennmedicine.upenn.edu); **Michelle Albright, Lab Animal Assistant** (penngf@pennmedicine.upenn.edu)

RRID: SCR_022384

Presentation time: 1:00 - 1:10pm

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SESH5BER123K46Y8H

The Gnotobiotic Mouse Facility Core at the University of Pennsylvania is part of the PennCHOP Microbiome Program. The core provides germ-free mice, technical support and access to several experimental setups that are needed for a variety of studies. The core personnel assist with consultation, training, and specialized technical services. The core is equipped with state-of-the-art isolators and isocage system as a solution for short period studies (ranging from days to 2–3 weeks), where experimentation with germ free mice can be done at multiple simultaneous conditions. In addition, specialized testing equipment can be introduced into isolators and isocages upon request. The core maintains several common strains of germ-free mice at different ages that are available upon request, and provides re-derivation services for generating customized germ-free and gnotobiotic mouse strains. All animal protocols approved by the Institutional Animal Care and Use Committee (IACUC).

https://med-upenn.corefacilities.org/service_center/show_external/4311

High Throughput Sequencing Core Facility (CHOP)

Teodora Orendovici, Ph.D., Technical Director (orendovict@chop.edu)

Presentation time: 11:30 - 11:40 am

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SES6Z59EXEJG86C34

The High Throughput Sequencing Core helps/facilitates research in cutting edge fields of genetics and genomics by providing sequencing and sequencing related services to researchers form CHOP and UPenn.

https://www.research.chop.edu/high-throughput-sequencing-core

Histotechnology Facility (Wistar)

Fangping Chen, HT (ASCP), Managing Director (fchen@wistar.org)

Presentation time: 1:15 - 1:25 pm

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SESOFFIUL6S1FUXZK

The Wisar Histotechnology Facility provides services for fixing, processing and paraffin or OCT-embedding of all types of tissues for light microscopy (e.g. routine stains, immunohistochemistry or in situ hybridization). The Facility staff performs routine hematoxylin and eosin staining, as well as specialized staining and slide preparation for immunohistochemistry and in situ hybridization. Frozen sectioning is also available, including consultation regarding freezing and fixing techniques to optimize experimental results.

https://wistar.org/research-discoveries/shared-resources/biomedical-research-support-facility/histotechnology-facility

Human Immunology Core Facility (UPenn)

Nina Luning Prak, MD, PhD, Director, (luning@pennmedicine.upenn.edu); **Honghong Sun, PhD, Technical Director** (hsun2@pennmedicine.upenn); **Jean Scholz, PhD; Research Investigator** (jeanl@pennmedicine.upenn.edu)

RRID: SCR_022380

Presentation time: 10:45 - 10:55 am

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SESWYT8S9XJR7M6IX

The Human Immunology Core (HIC) provides wet bench expertise and infrastructure support for early phase clinical trials and other investigations. The HIC offers online ordering of purified cell subsets from HLA-typed healthy human apheresis donors. HIC staff are internally and externally qualified to perform blood (PBMC) and tissue processing for viable cryopreservation following validated standard operating procedures. The HIC also offers a wide range of immunological assays including digital ELISA, ELISA, ELISPOT, Luminex, flow cytometry and immune repertoire profiling (NGS of BCR and TCR rearrangements in bulk and single cell formats). The HIC offers investigators expertise and guidance in study design, sample processing, regulatory compliance, immunology assay design and validation, data analysis and presentation, and grant writing support.

https://pathbio.med.upenn.edu/hic/site/

Human Pluripotent Stem Cell Core (CHOP)

Deborah L. French, PhD, Core Director (frenchd@chop.edu); **Jean Ann Maguire, PhD, Technical Director** (maguirej@chop.edu)

Presentation time: 11:00 - 11:10 am

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SES6Q3LBVVS5JQ3IZ

The pluripotent stem cell and genome editing technologies represent exciting new tools for studying human disease. Having unlimited supplies of cells that either express or are genetically manipulated to express genes of interest provides investigators with human model systems to study disease mechanisms and identify new therapies.

The Core generates induced pluripotent stem cell (iPSC) lines from somatic cells including peripheral blood mononuclear cells, fibroblasts, and lymphoblastoid cell lines. These lines are generated using the latest non-integrating reprogramming methodologies that leave the genome intact. The Core has established standard operating procedures for:

- Pluripotent stem cell growth and maintenance
- Genome editing technologies including CRISPR-CAS9
- Differentiation to germ layer and derivative tissues of interest

The Core provides enrichment training courses for investigators interested in learning how to work with pluripotent stem cells and/or establish the pluripotent stem cell technology in their own labs.

The Human Pluripotent Stem Cell Core, established in 2008 by the Raymond G. Perelman Center for Cellular and Molecular Therapeutics at Children's Hospital of Philadelphia, serves the research needs of CHOP, the University of Pennsylvania, and outside academic communities in the field of human pluripotent stem cell biology.

https://www.research.chop.edu/human-pluripotent-stem-cell-core

Imaging Shared Resource (Wistar)

James Hayden, RBP, FBCA, Managing Director (jhayden@Wistar.org)

Presentation time: 12:30 - 12:40 pm

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SESXBZB5P5ME65PVH

The state-of-the-art Wistar Imaging Facility provides access to standard and advanced optical imaging systems capable of reaching these goals and offers assistance with advanced image analysis solutions. Researchers may be trained for unassisted use of all core instrumentation, while full service assistance by facility staff is also available for qualitative or quantitative image capture. The Facility also offers expert technical assistance with experimental design to optimize imaging results, enabling users to get more out of the imaging technology.

https://wistar.org/research-discoveries/shared-resources/imaging-facility

Information Services Advisory Center (ISAAC) (UPenn)

Jennifer Moody, MBA, Senior Manager, IS Advisory Center (Jennifer.Moody@pennmedicine.upenn.edu)**; Ray Talley, Senior Technical Analyst** (Orondae.Talley@pennmedicine.upenn.edu)

Presentation time: 11:00 - 11:10 am

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SES47GJ2EWSZD5Q3C

The Information Services Advisory Center (pronounced "Isaac") is designed to provide a personalized support experience for the Penn Medicine community. It can be challenging to find the right IS professional to contact and assist you, especially navigating complex issues. Isaac is an IS "concierge service", where IS experts are available to assist with non-urgent questions related to reporting, IS security and policies, PennChart, clinical research, and other UPHS applications, email, and mobile. The team encompass years of experience across these areas, so you'll be tapping into their collective wisdom to get the assistance you need. Not sure where to ask your IS question? Ask Isaac!

https://www.med.upenn.edu/evdresearch/isaac.html

Institute for Biomedical Informatics Clinical Research Informatics Core (CIC) (UPenn)

RRID: SCR_022409

Presentation time: 10:30 - 10:40am

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SESPTMPO6C5R6KE7G

Danielle L. Mowery, PhD, MS, MS FAMIA, Scientific Director. Chief Research Informatics Officer (dlmowery@pennmedicine.upenn.edu)**; Emily Schriver, MS, Translational Data Scientist** (Emily.Schriver@Pennmedicine.upenn.edu)**; Sunil Thomas, MS, Data Analyst Sr.** (Sunil.Thomas@pennmedicine.upenn.edu)**; Sy Hwang, MS, NLP Data Scientist** (Sy.Hwang@Pennmedicine.upenn.edu)**; Ashley Batugo, BS, Data Analyst Jr.** (Ashley.Batugo@Pennmedicine.upenn.edu)

The Institute for Biomedical Informatics (IBI) Clinical Research Informatics Core (CIC) provides data brokering and analytics services of clinical data for clinical and translational research in which the goal is to learn actionable healthcare knowledge and develop impactful solutions for improving patient care. We specialize in extraction, integration, standardization, and analytics of clinical data from the electronic health record (EHR) as well as research databases including Penn Genotype&Phenotype (PennG&P), Penn COVID-19 i2b2 database, and the IQVIA Medical Record Database using artificial intelligence, natural language processing (NLP), ontologies, machine learning, and visual analytics. We also provide translation of research knowledge and products into healthcare operations through coordination with Penn Medicine Corporate Information Services, Penn Data Analytics Center, and the Penn Center for Applied Health Informatics. The IBI CIC is a member of the Penn-sponsored Honest Broker program.

https://ibicic.med.upenn.edu/

Johnson Foundation Structural Biology & Biophysics Core Facility (UPenn)

Kushol Gupta, PhD, Faculty Director (kgupta@pennmedicine.upenn.edu)

RRID: SCR_022414

Presentation time: 11:30 - 11:40 am

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SESJ0Z53RZDYUZ0IV

The Department of Biochemistry and Biophysics at the University of Pennsylvania is privileged to have a wide range of unique equipment and expertise to facilitate modern biophysical characterization and structural analysis of proteins and other biomolecules. These facilities, funded in large part through the generosity of the Johnson Foundation, are available for use by the research community at Penn and beyond.

https://www.med.upenn.edu/jf/bsbcore/index.html

Metabolomics Core Facility (UPenn)

Christopher Petucci, PhD, Technical Director (Christopher.Petucci@pennmedicine.upenn.edu)

RRID: SCR_022381

Presentation time: 1:15 - 1:25 pm

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SES4IOM95F5SHO4OJ

The Metabolomics Core is overseen by the Cardiovascular Institute and is a partnership with the Abramson Cancer Center and the Institute for Diabetes, Obesity and Metabolism at Penn. The Metabolomics Core provides expertise in targeted and untargeted metabolomics of biological samples using liquid chromatography/mass spectrometry. Our mission is to perform the assays and assist in the interpretation of the results. The core is available to the entire Penn research community, external research investigators, and industry.

https://www.med.upenn.edu/cvi/metabolomics-core.html

Microbial Culture and Metabolomics Core Facility (UPenn)

Elliot Friedman, PhD, Technical Director (elliotf@pennmedicine.upenn.edu)

RRID: SCR_022417

Presentation time: 1:30 - 1:40 pm

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SESN8RW88SB39ESQH

The Microbial Culture and Metabolomics Core Facility, which is part of the PennCHOP Microbiome Program, features facilities and equipment for the aerobic and anaerobic culture of microbial species in both batch and continuous systems, as well as targeted metabolomic services of amino, bile, and short chain fatty acids. The facility offers training and usage for culture equipment; consultation regarding experimental design, and; anaerobic culture services. Examples of culture studies include isolation of microbial taxa from mammalian samples; interrogation of the physiology of microbial strains under different conditions (e.g., anaerobic/microaerobic/aerobic, differing nutrient limitations) using isolated strains or strains obtained from culture collections (another service offered by the core); co-culturing of defined microbial consortia to investigate microbe-microbe interactions, and; preparation of microbial products (live bacteria, heat-killed bacteria, bacterial supernatants) from single or defined-mixed microbial cultures for use in mammalian cell culture and/or animal model systems.

https://www.research.chop.edu/penn-microbial-culture-and-metabolomics-core

Molecular Pathology and Imaging Core Facility (UPenn)

Kate Bennett, Technical Director (bennk@pennmedicine.upenn.edu)

RRID:SCR_022420

Presentation time: 11:45 - 11:55 am

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SES65S4WF3GSM69MK

The Molecular Pathology and Imaging Core (MPIC) provides histological services, equipment, and technical expertise for the processing and analyses of digestive, pancreatic, and liver tissues as well as three-dimensional tissue culture models. The MPIC is part of the Center for Molecular Studies in Digestive and Liver Diseases.

https://www.med.upenn.edu/CMSDLD/the-molecular-pathology-and-imaging-core-mpic.html

Molecular Screening and Protein Expression Shared Resource (Wistar)

Joel Cassel, Managing Director (jcassel@wistar.org)

Presentation time: 11:15 - 11:25 am

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SESCGM5F6F1GX9ZER

The Wistar Molecular Screening and Protein Expression Facility fosters collaboration by providing expertise in biochemical and cell-based assay development for high-throughput screening and compound profiling. Such assays enable researchers to identify small molecule compounds which interact with a target protein of interest. These compounds can then be used as tools to further study the target proteins function and signaling pathways in cells. In addition, recombinant protein expression is offered in insect cells and other hosts on a case-by-case basis.

https://wistar.org/research-discoveries/shared-resources/molecular-screening-protein-expression-facility

Neurobehavior Testing Core Facility (UPenn)

W. Timothy O'Brien PhD, Core Director (obrienw@pennmedicine.upenn.edu)

RRID: SCR_022386

Presentation time: 12:00 - 12:10 pm

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SESE55J8Y35P19VK0

The Neurobehavior Testing Core (NTC) provides equipment and services to investigate behavior phenotypes of models related to neurological and other disorders. The core is utilized by scientists across disciplines that are interested in the behavioral consequences of unique physiological disruptions (e.g., metabolic, drugs etc.). We provide assessment of many domains of behavior including, but not limited to, sensory, motor, social, communication, affect-related behaviors and learning and memory. The NTC was established in 2012 through generous startup funds from the Penn School of Medicine, the Institute for Translational Medicine and Therapeutics (ITMAT), Center for Sleep and Circadian Neurobiology (CSCN) and Penn Medicine Neuroscience Center (PMNC).

https://www.itmat.upenn.edu/NBTC.html

Neurons R Us (UPenn)

Gwanui Hong, Technician (cnscells@pennmedicine.upenn.edu)

RRID: SCR_022421

Presentation time: 12:30 - 12:40 pm

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SES1YBEBXFN37QYIF

The NRU (NeuronsRUs/Brain Cell) Core supplies suspensions of neuronal cells prepared from rodent brain for various downstream applications, including primary cell culture. The Core currently supplies rat or mouse cells isolated from cortex or hippocampus either in suspension or plates. Custom dissection services are available for other brain regions or for user-supplied genetically modified mice.

https://www.med.upenn.edu/neuronsrus/

Next Generation Sequencing Core Facility (UPenn)

Jonathan Schug, PhD, Technical Director (jschug@pennmedicine.upenn.edu)

RRID: SCR_022382

Presentation time: 11:45 - 11:55 am

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SESPIZE179CM7KK9Z

The Next-Generation Sequencing Core (NGSC) provides a full set of services related to single-cell and bulk whole-genome, RNA-Seq, ATAC-Seq, BIS-Seq, Exome-Seq, ChIP-Seq, CLIP-Seq, etc. We recently acquired an Illumina NovaSeq 6000 in addition to our NextSeq and MiSeq sequencers - which all feature self-service as well as full-service operation. We have experience with difficult, low input samples as well as sequencing and analyzing novel library types. We have a small Oxford Nanopore sequencer which allows for full-length RNA or cDNA sequencing as well as very long read (100KB) sequencing from genomes. Come see us for experimental design services prior to starting your experiment.

https://ngsc.med.upenn.edu/#/

OCRC Tumor Biotrust (UPenn)

Ehay Jung, MBA, Technical Director (euihye@pennmedicine.upenn.edu)

RRID: SCR_022387

Presentation time: 1:30 - 1:40 pm

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SESH4ZVQR0LZYC1B0

The Ovarian Cancer Research Center (OCRC) has opened a Tumor BioTrust Collection (TBC) to the Penn research community on July 1, 2018. Specimens that are available through the OCRC TBC include gynecologic cancer specimens such as fresh and frozen tissues, plasma, serum, peripheral blood mononuclear cells, blood, formalin fixed paraffin embedded (FFPE) samples, and Tissue Microarrays (TMAs). All samples collected have clinical annotation including demographic patient profiles, pathological & clinical notations, treatment history, and detail disease information, etc. We are building and maintaining a centralized research database according to HIPPA specifications and Penn IRB standards.

https://www.med.upenn.edu/OCRCBioTrust/

Office of Clinical Research (UPenn)

Laura Fluharty, Senior Director, Clinical Research , OCR Operations (lauraee@upenn.edu)**; Deanna Condit-DiDonato, Director, Sponsor Support Unit, OCR SSU** (deannad@upenn.edu)**; Stacey Mercado, Director, Compliance** (mercados@upenn.edu)**; Jason Molli, Director of Research Finance, OCR Finance** (molli@upenn.edu)**; Donya Short, Associate General Counsel and Senor Director, Legal** (shortdj@upenn.edu)

Presentation time: 11:30 - 11:40 am

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SES80KEJD63XMTL0S

The Office of Clinical Research seeks to promote human research for the advancement of healthcare while ensuring the highest level of research participant safety and facilitating the highest quality research by: Realizing the best research standards through adherence to university and government research policies and regulations; Supporting investigators and research teams through process improvement, innovative technologies, and education and training initiatives; Propagating best operational practices to maximize the efficiencies of research activities; Collaborating with University organizations involved with human research. OCR can provide guidance and expertise with regulatory submissions and exemptions, contract support with external sponsors, research budgets and finance, training, research data management and systems, monitoring, clinicaltrials.gov and inspection support.

https://www.med.upenn.edu/ocr/

Office of Environmental Health and Radiation Safety - EHRS (UPenn)

Elizabeth Bassett, PhD, Assistant Biosafety Officer (littauer@ehrs.upenn.edu)

Presentation time: 11:45 - 11:55 am

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SESV99Y701H6YQBUL

The Office of Environmental Health and Radiation Safety (EHRS) promotes health, safety and environmental protection in teaching, research, health care and administrative activities by providing services, advice, and compliance resources. Come learn more about how we can assist you throughout your research career at Penn!

https://ehrs.upenn.edu/

Pathology Core (CHOP)

Daniel Martinez, Director (martinezd@chop.edu)

Presentation time: 11:30 - 11:40 am

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SESZ6G0UR6D89TRM9

If you’re in need of advanced state-of-the-art pathology services to propel your research, you’ll want to meet with our experts at the Pathology Core Laboratory within Children’s Hospital of Philadelphia Research Institute. Backed by the comprehensive experience of our staff, our innovative core unites several pathology components into one facility to provide exceptional service that is efficient and cost-effective. Our array of services include:

- Basic histopathology, as well as histopathology for both paraffin-embedded and frozen tissue samples
- Research immunohistochemistry
- Tissue microarray
- Fluorescent microscopy
- Digital slide scanning services

We work extensively with researchers at CHOP and in the surrounding academic community and are eager to consult with you about how our services can facilitate your basic, translational, and clinical research. martinezd@chop.edu 267-426-5635 Ruth and Tristram Colket Jr. Translational Research Building Room A410 3501 Civic Center Blvd Philadelphia, PA 19104

https://www.research.chop.edu/pathology

Penn Libraries (UPenn)

Lynda Kellam, Head of Research Data Services, Research Data and Digital Scholarship, University of Pennsylvania Libraries (lmkellam@upenn.edu)**; Nicky Agate, PhD, Snyder-Granader Assistant University Librarian for Research Data & Digital Scholarship, University of Pennsylvania Libraries** (agate@upenn.edu)**, Lauren Phegely, Research Data Engineer** (lphegley@upenn.edu)

Presentation time: 11:15 - 11:25 am

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SESYW5C0M0526JWQA

The Research Data & Digital Scholarship unit at the Penn Libraries provides a wide variety of support for researchers throughout the data lifecycle. We provide guidance on data management best practices, support for writing data management plans, including office hours, and advice on selecting an appropriate data repository. RDDS has information on the new NIH mandate for Data Management and Sharing Plans, provides support for DMPTool, and can help navigate the process.

https://www.library.upenn.edu/page/research-data-digital-scholarship

Penn Neurology VR Laboratory (UPenn)

Jeffery Vadala PhD, Lead VR Developer (jeffrey.vadala@pennmedicine.upenn.edu)

RRID: SCR_022394

Presentation time: 12:15 - 12:25 pm

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SESMG6WV3J7GYNY8Y

The Penn Neurology VR Laboratory facilitates scientific and interdisciplinary VR/AR research in neuroscience and neuroscience-related studies such as psychology, radiology, forensics, anthropology, and several other medical fields where computer-driven 3d visualization, scientific-testing, simulation/modeling, and experimentation are required. Located in the Brain Science Center, the laboratory broadly operates as a virtual and augmented reality experimentation and collaboration space, software development laboratory, subject-testing, and experimentation facility for research incorporating virtual and augmented reality. Services include VR/AR software development, hardware/software consultation, grant-methodology consultation, scientific VR/AR environmental design/production, VR simulation modeling, mobile/PC software development (tablet/mobile), environment scanning/modeling (terrestrial/drone), VR/AR experimental design, VR/AR experimentation, and subject testing. The lab is equipped with state-of-the-art computer hardware (high-end RTX GPU systems) and a multitude of virtual and augmented reality headsets are available for use.

https://pennbrain.upenn.edu/

PMACS Analytics and Research Teams (UPenn)

Vince Frangiosa, Service Information Officer (vince.frangiosa@pennmedicine.upenn.edu)**; Rick Bryson, Service Information Officer** (richard.bryson@pennmedicine.upenn.edu)**; Yuliya Borovskiy, Lead Clinical Information Analyst** (Yuliya.Borovskiy@pennmedicine.upenn.edu)

Presentation time: 10:15 - 10:25 am

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SESP1QMPC80QR201L

PMACS (Penn Medicine Academic Computing Systems), was formed in 2012 with the goal of providing computing services for the Perelman School of Medicine's departments, centers, and institutes. PMACS has matured into a 140+ department of technology professionals providing a wide range of services including:

• Desktop Support
• Server Administration
• Storage Management
• Both High Performance Computing (HPC) and Limited Performance Computing (LPC)
• Software development (Academic)
• Web design and development
• Database management
• Enterprise application development and support
• Consulting services that provide options to best support research initiatives

PMACS is focused on delivering state of the art technology solutions in the most cost-conscious manner in support of the education, administrative and research needs of the Perelman School of Medicine.

https://www.med.upenn.edu/dart/

Proteomics and Metabolomics Shared Resource (Wistar)

Hsin-Yao Tang, PhD, Managing Director (tangh@wistar.org)

Presentation time: 11:00 - 11:10am

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SESALLCXZGX6WWCA0

The Wistar Proteomics and Metabolomics Facility provides high sensitivity proteomics and metabolomics analyses using state-of-the-art mass spectrometry instruments and methods. Proteomics services include: quantitative, in-depth global comparisons of sub-proteomes, complete proteomes, and secretomes using integrated ion current, SILAC or TMT labeling; global quantitative comparisons of posttranslational modifications (PTMs) such as ubiquitination, acetylation, or phosphorylation; detailed characterization of individual purified proteins including PTMs; identification of components in protein complexes (e.g. pull-downs) including estimation of stoichiometries (where appropriate); characterization of intact protein and peptide masses using either MALDI-MS or ESI-MS; and HPLC peptide mapping with UV detection. Metabolomics analyses include analysis of polar metabolites or lipids extracted from cells, biological fluids, conditioned media, or tissues.

https://wistar.org/research-discoveries/shared-resources/proteomics-metabolomics-facility

Radiology Core Facilities - CAMRIS & Nuclear Medicine Imaging and Therapy (PET Center) (UPenn)

Norman Butler, Director of Radiology Core Facilities (norman.butler@pennmedicine.upenn.edu)**; Erin Schubert, Associate Director of Clinical Research** (erinschu@pennmedicine.upenn.edu)

RRID: SCR_022398 (CAMRIS)

Presentation time: 12:15 - 12:25 pm

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SES7SPF30THFX31U0

The overall mission of CAMRIS is to provide oversight in the responsible use and application of Magnetic Resonance in research through leadership, education, and guidance. These principles are manifested in the development of new research and collaborations inside and outside the Radiology Department which can translate into advanced clinical techniques; training in safe and efficient use of this investigative tool and dissemination of current, accurate and evolving MR Technology; scheduling upgrades of MR Systems and facilities; scheduling systems operations and personnel within the MR department; and receiving and acting on recommendations pertaining to the administration of CAMRIS Facilities.

The Nuclear Medicine Imaging and Therapy core (previously called the PET Center) is dedicated to continuing the advancement of molecular imaging and seeks to build a network of collaborators to conduct translational research using existing and new radiotracers to help better understand the diagnosis, physiology and treatment of multiple diseases. We strive to educate referring clinicians and their patients about the emerging benefits of PET/CT diagnostic procedures, other radiotracer imaging methods and radionuclide therapies as tools in their research and clinical practice. The NMIT core includes an onsite cyclotron facility and radiochemistry development and manufacturing group, a physics and instrumentation team, and pre-clinical and clinical imaging facilities

CAMRIS: https://www.med.upenn.edu/camris/

Nuclear Medicine Imaging and Therapy (PET Center) Website: https://www.pennmedicine.org/departments-and-centers/department-of-radiology/radiology-research/core-facilities/pet-center

Radiology Core Facilities - Clinical Imaging Core Facility & CACTIS (UPenn)

Kathleen Thomas, MSOD, Administrative Director, Clinical Imaging Core Facility (kathleen.thomas@pennmedicine.upenn.edu)**; Lisa Angilletta, Manager, Center for Advanced Computed Tomography Imaging Services** (lisa.angilletta@pennmedicine.upenn.edu)

RRID: SCR_022487 (CIC) & RRID: SCR_022395 (CACTIS)

Presentation time: 12:15 - 12:25 pm

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SESC4XPAPWBH2FG4S

The Clinical Imaging Core Service Center was developed in 2010 jointly between the Department of Radiology and the Abramson Cancer Center to support cancer clinical trials. Since then it has evolved to provided services throughout the Perelman School of Medicine. The core is divided into three categories: RADCORE, Tumor Response Assessment (TRAC) and Research imaging guided biopsies. RADCORE is staffed by dedicated clinical research professionals with a wide range of expertise of imaging based clinical research protocols. The services we provide range from consultation through fully management of research protocols. This team also includes our dedicated Radiology IND/IDE support office. Tumor Response Assessment Core (TRAC) is staffed by a core team of Radiologist skilled in evaluating tumor response imaging assessments for patients enrolled in cancer clinical trials being conducted at UPHS. Research imaging guided biopsies: Staffed by an Interventional Radiology and technical lead to provide consultation with investigator to define biopsy protocol and pathology tissue collection. Center for Advanced Computed Tomography Imaging Services (CACTIS) is a committee dedicated to oversee proposed research protocols that involve human, animal, & phantom studies in an effort to aid in the day-to-day operations of all CT procedures associated with research. Under the direction of the Chair, Dr. Harold Litt, CACTIS is made up of radiologists, physicists and technologists that help researchers utilize the resources available within the Department of Radiology. The overall mission of CAMRIS is to provide oversight in the responsible use and application of Magnetic Resonance in research through leadership, education, and guidance. These principles are manifested in the development of new research and collaborations inside and outside the Radiology Department which can translate into advanced clinical techniques; training in safe and efficient use of this investigative tool and dissemination of current, accurate and evolving MR Technology; scheduling upgrades of MR Systems and facilities; scheduling systems operations and personnel within the MR department; and receiving and acting on recommendations pertaining to the administration of CAMRIS Facilities.

CIC: https://www.pennmedicine.org/departments-and-centers/department-of-radiology/radiology-research/core-facilities/radcore

CACTIS: https://www.pennmedicine.org/departments-and-centers/department-of-radiology/radiology-research/core-facilities/cactis-lab

Research Information Services (CHOP)

Nick Kight, RIS Outreach Manager (kightn@chop.edu)**; Michael Abanyie, Research Support Analyst Supervisor** (abanyie@chop.edu)**; Robert Del Campo, RIS Assistant Director** (delcampo@chop.edu)

Presentation time: 10:00 - 10:10 am

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SESQWP3NR73EJI5H5

The Research Information Services (RIS) Department consists of several teams providing expert advice alongside innovative and effective technology-based solutions to Children's Hospital of Philadelphia's Research Institute. CHOP Research Institute employees can view a list of RIS Department services and applications and find instructions for requesting access or support on the main Research Institute website.

https://www.research.chop.edu/research-information-services

Research Vector Core (CHOP)

Danhong Cao, Clinical Research Project Manager I (caod@chop.edu)

Presentation time: 1:30 - 1:40 pm

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SESM0NO10AR0IS9NG

The Research Vector Core (RVC) provides premium Good Laboratory Practice recombinant adeno-associated viral vectors and lentiviral vectors for use in basic research and preclinical studies. The RVC is dedicated to manufacturing top-of-the-line vectors utilizing a fine-tuned downstream process recognized internationally in industrial applications and academia. Capable of providing custom vector constructs at a variety of scales, the RVC offers state-of-the-art technology and support for investigators interested in conducting viral-based gene transfer.

https://www.research.chop.edu/research-vector-core

Small Animal Imaging Core Facility (CHOP)

Sergey Magnitsky, PhD, Technical Director (magnitsksm@chop.edu)

Presentation time: 1:30 - 1:40 pm

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SES3SMYTJ3BVQBBD7

When you're in need of radiological imaging for your research, look no further than the Small Animal Imaging Facility at Children's Hospital. We're a specialized and designated Core facility providing multi-modality radiological imaging for mice and rats. We provide a clean and state-of-the-art environment to conduct the imaging required for your longitudinal studies. Our core offers the following state-of-the-art services:

• Magnetic Resonance Imaging (MRI)
• Positron Emission Tomography/Computed Tomography (PET/CT)
• Optical Imaging
• Ultrasound
• Microimaging and NMR

We conduct research in all areas of preclinical anatomical imaging, functional imaging and molecular imaging. In addition, the core provides cardiac imaging – US; tumor development and response for a treatment – optical imaging; tumor detection and monitoring of a treatment response; detection of reactive oxygen species in neurological disorders – PET/CT; high-resolution images – CT; anatomical, diffusion, imaging, and contrast agent imaging; angiography; and functional brain imaging – MRI. Let our knowledgeable staff work with you to develop a plan designed to meet your small animal imaging needs.

Ruth and Tristram Colket Jr. Translational Research Building Room C301
3501 Civic Center Blvd Philadelphia, PA 19104

https://www.research.chop.edu/small-animal-imaging-facility

Stem Cell Xenograft Core Facility (UPenn)

Nico Skuli, PhD, Core Facility Director (nicskuli@pennmedicine.upenn.edu)**; Anthony Secreto, MRA, Associate Director** (asecreto@pennmedicine.upenn.edu)

RRID: SCR_010035

Presentation time: 12:30 - 12:40 pm

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SES7L7YY7TYTJ3FDI

The Stem Cell and Xenograft Core is a comprehensive resource laboratory committed to supporting translational research. We offer services centered around 2 components: An extensive repository of live and fully annotated cells from adult patients with hematologic malignancies (AML, ALL, MPN, MDS), and hematopoietic stem/progenitor cells from healthy donors (BM, CB, and FL). A full array in vivo services and xenograft models (PDX, humanized immune system), in a dedicated BSL-2 barrier space equipped with optical imaging, for applications ranging from immunotherapy, cancer biology, infectious diseases and regenerative medicine.

https://www.med.upenn.edu/scxc/

Transgenic and Chimeric Mouse Core Facility (UPenn)

Jean Richa, PhD, Technical Director (jricha@pennmedicine.upenn.edu)

RRID: SCR_022388

Presentation time: 12:00 - 12:10 pm

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SES7P3Z8ZDZV9XRIB

The Transgenic & Chimeric Mouse Facility provides a centralized service to efficiently produce genetically altered mice for basic research. They include transgenic, chimeric and genome-edited mice carrying transgenes or gene "knock-out" and "knock-in" of specific interest. The Core also provides embryo and sperm cryopreservation as well as in vitro fertilization and re-derivation of live and cryopreserved lines, along with long-term storage of cryopreserved samples.

https://genetics.med.upenn.edu/cores/tcmf/

Transgenic Core Facility (CHOP)

Adele Harman, Technical Director (harmana@chop.edu)

Presentation time: 12:15 - 12:25 pm

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SESGMD8ZC9CBXQ1E5

When it comes to using a mouse or rat genome to study human disease, you need the best experimental model available to advance your research and propel discovery. That's where we come in. The Transgenic Core at Children's Hospital Research Institute can build you complex mouse or rat models, genetically manipulating the mouse or rat genome to meet your specific research needs. This is accomplished by using cutting-edge and classical genetic engineering approaches. We have successfully created over 40 mouse lines using the CRISPR system, and more recently created our first CRISPR Knockout rat line. Our core features state-of-the-art services, including: CRISPR Cas9 mRNA microinjection and Cas9RNP electroporation, DNA construct microinjection, Embryonic Stem (ES) cell microinjection, Strain rederivation and rescue, Embryo and sperm cryopreservation, importation and exportation, The Transgenic Core is a service sponsored by the CHOP Research Institution to enable investigators to drive cutting-edge basic and bench-to-bedside research. The mission of the Core is to provide a cost-effective fast method for generation and preservation of genetically altered mice for the research community. We also have a variety of equipment that enhance the level of our services while further supporting your research projects. Let us show you how we can help you to conduct your transgenic and gene targeting research efficiently and cost-effectively. Contact us for a consultation or see how to get started.

https://www.research.chop.edu/transgenic

Translational Core Laboratory (CHOP)

David Stokes, PhD, Technical Director (translationalcorelab@chop.edu)

Presentation time: 11:15 - 11:25am

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SESZCLO50LH9UI25S

The Translational Core Laboratory (TCL) supports basic, pre-clinical and clinical research for principal investigators from CHOP and the University of Pennsylvania. The CHOP TCL performs immunoassays for the quantitation of protein/peptide biomarkers, cytokines, hormones, and antibodies in various body fluids. The TCL also performs blood-chemistry assays and hematology assays. Testing can be performed on human, mouse, rat, and non-human primate samples. In addition to the testing services, TCL can also assist in the overall design of research studies and trials with regards to sample type and volume requirements, sample collection guidance, storage time (analyte stability), assay platform selection, and the need for assay validation and lot-to-lot comparisons. Our cutting-edge, automated equipment used routinely in the TCL includes a Roche Cobasc311 Clinical Chemistry Analyzer, a Roche Cobas e411 Immuno-Analyzer, an Ella Automated Immunoassay System, a Meso Scale Discovery (MSD) QuickPlex SQ 120 multiplex immunoassay system, a Luminex 200 multiplex immunoassay system, and a Sysmex XT-2000iV Hematology Analyzer.

Core Facility Phone: 215-590-3338
Ruth and Tristram Colket Jr. Translational Research Building A-level
Room A450
3501 Civic Center Blvd
Philadelphia, PA 19104

https://www.research.chop.edu/translational

Vector Core Facility (UPenn)

Kenton Woodard, PhD, Director (kentonw@upenn.edu)

RRID: SCR_022432

Presentation time: 12:00 - 12:10 pm

https://pheedloop.com/VirtualCoresDay2022/virtual/?page=sessions&section=SES1HOYOPF8OAOK45

With over a decade of experience in the production of viral-based vectors, the Penn Vector Core has become an important technological resource for investigators, both within and external to Penn, interested in the use of viral-based vectors for gene transfer. The main objective of the Core is to provide investigators access to state-of-the-art adeno-associated viral vector technology for preclinical studies and other basic research applications.

https://gtp.med.upenn.edu/core-laboratories-public/vector-core

2022

https://pheedloop.com/VirtualCoresDay2022/site/home/