CCTST Center for Clinical & Translational Science & Training

Center for Clinical & Translational Science & Training
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Just-In-Time Core Grant Cycle 2
Application Instructions
Funding Period: 8/21/2024 – 03/31/2025

Submissions Accepted: April 24, 2024 – June 3, 2024
Application Submission Deadline: June 3, 2024 (by 11:59pm)

For questions regarding these instructions, please visit the Just-In-Time webpage or contact Venois Peebles at peeblevj@ucmail.uc.edu.

1. **Background:** The Center for Clinical and Translational Science and Training (CCTST) is supported by the NIH Clinical and Translational Science Award. The mission of the CCTST is to stimulate research that has the potential to positively impact human health. The mission of the Just-In-Time (JIT) grant mechanism is to enable investigators to use UC or CCHMC Core facilities to obtain critical data for submission of a competitive extramural proposal, patent application or commercialization agreement.

2. **Purpose of grants:** This small grants program is designed to support basic, clinical and translational science investigators who require the services of an institutional core to develop key preliminary data for federal (R01, DOD, VA, etc.), or equivalent scale foundation or professional association grant funding. Investigators may apply for up to $10,000 annually in support for core services that would directly facilitate the submission of a new or revised application for extramural funding. The Just-In-Time funding must be spent within the designated funding period (8/21/2024 - 3/31/25).

3. **Eligibility**: Applications will be accepted from all full time (80% or greater FTE) faculty members in the Academic Health Center (CCHMC, UC, VAMC), including basic scientists, physicians, nurses, and other health care faculty with advanced degrees (MD, PhD, MD-PhD or equivalent). Collaborative groups of investigators spanning disciplines and programs made up of basic and clinical faculty are strongly encouraged. Fellows are not eligible for this grant. Labs/investigators that have received CCTST funding in the past 12 months are not eligible for JIT funding. **CCTST JIT, Processes and Methods and/or Pilot grant funding cannot be simultaneously held.**

4. **CCTST Membership**: All applicants for Just-In-Time grant consideration must be CCTST members. CCTST membership is free and open to all. For more information about CCTST membership or to register, please visit the CCTST member registration webpage.

5. **Process**: Applicants must submit a 1-page proposal in the format listed below. Funds must be utilized within the designated funding period (8/21/24-03/31/25)

6. Please note that applications must be submitted through the **CCTST Competition and Awards Program Site (CCAPS)**. Log in using your UC ("6+2") or CCHMC username and password.

7. **Signatures:** The signatures of all participating investigators and their respective division director or departmental chairperson(s) are required.

8. **Application forms and guidelines**: Applications must be assembled as a single PDF file and submitted through CCAPS by midnight on the application submission deadline date. The face page,

core director approval form, updated NIH biosketch templates, and the JIT application checklist can be found on the JIT webpage under "Application Documents."

9. **Prior Approval:** Applications that are funded will be required to submit prior approval paperwork in conjunction with their study (Human Subjects or Vertebrate Animal Studies). **We strongly recommend that you get all relevant regulatory processes of your study initiated such as approval by the IRB, IBC, IACUC, NCATS Human Subjects Protection, and Radiation Safety PRIOR to any award notice to ensure funding be accessible immediately at the time we release funds.** If these approvals are not in place prior to the award notice, it could result in a delay in funding. There will be no funding extensions.

10. **Review criteria:** Applications will be reviewed based on responsiveness to the RFA, scientific merit, feasibility, and the specific plans for utilizing the Pilot Data obtained from the JIT funding. Applications must clearly state how the results will support the development of an external grant funding application.

    Features of a strong JIT proposal:

    1. Contains all required documents – face page, biosketches, core director letter, JIT application checklist, project description, budget, and all attestations,.
    2. Fills a data gap required to support a prior, scored but unfunded federal proposal.

    The highest priority for JIT funding is a recent, scored but unfunded extramural proposal that cites a critical data deficiency that is addressable with UC or CCHMC Core funding. High priority will also be given to applications that support a successful letter of intent to an extramural agency, or resubmission of an unfunded, recent grant. Lowest priority will be given to applications that support a new, unreviewed extramural grant proposal.

11. **Other considerations:** Only routine core costs are allowed. Applications containing costs for supplies, animals, or salaries outside of routine core costs will be denied. Please read the below information regarding denial of applications and consider when preparing your proposal:

    The ten most common reasons that JIT applications are denied include:
    1. The applicant has received CCTST funding within 12 months preceding JIT submission.
    2. Proposal is not directed toward responding to a previously reviewed but unfunded grant.
    3. Proposal does not stipulate how the proposed core use will respond to the previously reviewed but unfunded grant.
    4. Scientific priority was low.
    5. No/inadequate description of planned/future JIT-dependent grant application submission.
    6. Proposed Core to be used gives the project a low priority for usage.
    7. Budget scope extends beyond routine core costs.
    8. The support requested overlaps with existing research funding.
    9. Project falls outside the scope of the JIT mechanism.
    10. Prior JIT grant was funded, but no extramural grant or patent was submitted.

12. **Composition of research proposal:** Proposals must include a face page, core director approval form, biosketches of the participating investigators, and a completed checklist, all of which can be found here under "Application Documents." In addition, proposals must include a maximum 1-page brief description of the project composed of the following items:

    a) Cite any prior CCTST funding, resulting grant submissions and outcomes. State if you have not previously received CCTST funding.
    b) State whether the current JIT proposal supports a successful, extramural letter of intent, scored but unfunded extramural grant submission, or resubmission of an unfunded grant.
    c) Plans for future grant submission including agency and date.

d) Background.
e) Hypothesis.
f) Aims.
g) A clear, itemized, one or two sentence description of how the funds will be spent (up to $10,000).
h) Attestations that:
    1. JIT proposal does not overlap with other CCTST funding for investigator or laboratory.
    2. You have not received CCTST funding in the past 12 months.
    3. You will notify the CCTST of future grants (submitted, received, and denied), patent applications and licensing agreements, and comply with CCTST queries and requests for information.

**Proposals must be submitted in single-spaced text, with one-half inch margins, and font no smaller than 11-point, Arial or Helvetica typeface (preferred). The proposal must be submitted as a PDF with all the elements in the order as listed in the checklist. Proposals with missing or additional components will be returned without review.

13. **Participating cores: Double check Cores and Directors info for all listed**

Advanced Cell Analysis Service Center (ACASC) (UC)

- **Purpose**: To assist the researcher in generating high-resolution, high quality, microscopy-based data for publications and presentation at professional venues. A range of services is available for both experienced and inexperienced users. Experienced users may use the Center's instruments after orientation by a staff member. Inexperienced users may choose to receive training in the use of the instruments, technical support in microscopy and image analysis, consultation in experimental design, or have the ACASC perform the microscopy for you as a service.
- **Director:** Birgit Ehmer, ehmerbe@uc.edu,513-558-5417
- **Open to:** All CCRF research personnel; other researchers as allowed by core staff. or have us perform the microscopy for them as a service.

Animal Behavioral Core (CCHMC)

- **Purpose:** Offers behavioral phenotyping of rodent models. Through the use of a wide range of behavioral assays, they help PIs characterize the nervous system function/dysfunction in mouse and rat models of all types.
- **Director:** Charles Vorhees, charles.vorhees@cchmc.org, 513-636-8622 and Michael T. Williams michael.williams@cchmc.org, 513-636-8624.
- **Open to:** All CCRF and UC research personnel; other researchers as allowed by core staff.

Biorepository (UCB) (UC)

- **Purpose**: The UC Biorepository (UCB) is a fee-for-service biospecimen procurement and storage facility that collects, stores, and dispenses high-quality human biospecimens in support of clinical, translational, and basic research. The UCB provides access to a large and growing collection of biospecimens, including malignant tissues with matched normal tissue, blood, and urine. The UCB also provides fit-for-purpose prospective biospecimen procurement services tailored to study specific requirements.
- **Director:** Kelsey Dillehay McKillip, PhD, dillehky@ucmail.uc.edu, 513-558-6010

Cardiovascular Imaging Core (CCHMC)

- **Purpose:** Provides investigators a wide range of human and animal cardiac and vascular imaging and peripheral vascular non-imaging techniques using state of the art imaging, measurement, and quality control tools. This core also offers consulting services ranging from educational seminars, workshops, to assistance with grant and industry funding support.
- **Director:** Garick Hill, garick.hill@cchmc.org, 513-636-1199

- **Open to:** All CCRF and UC personnel as allowed by core staff.

Cell Manipulations Laboratory (CCHMC)

- **Purpose**: This lab's experienced scientists can help you develop and scale up ex-vivo gene transfer and cell therapy, clinical trials or simply transfer existing at-scale technology to clean facilities which will enable one to move research to a safe and effective patient treatment plan. Their services include, Enrichment depletion of specific cell subsets; genetic modification; expansion and differentiation; product cryopreservation; cellular stability studies; as well as thawing and preparation for infusion.
- **Manager:** Carolyn Lutzko, carolyn.lutzko@cchmc.org, 513-803-2420 and CML_coordinator@cchmc.org, 513-636-6261.
- **Open to:** All CCRF research personnel; other researchers as allowed by core staff.

Center for Health Informatics (CHI) (UC)

- **Purpose**: The UC Center for Health Informatics (CHI) is a fee-for-service operational core for the Department of Biomedical Informatics (BMI) and is the academic home for health informatics at the University of Cincinnati College of Medicine. The primary functions of the CHI are to advise upon and provide data collection and management, biomedical data informatics, application and technology development, grant/ protocol/ manuscript development and review and informatics consulting and collaboration.
- **Director:** Brett Harnett, MS-IS, Brett.harnett@uc.edu, 513-558-2725.
- **Core Contact:** combmichi@uc.edu

Clinical Mass Spectrometry Laboratory (CCHMC)

- **Purpose:** Provides an analytical resource focusing on the application of mass spectrometry and allied chromatography's to the analysis of small molecules, generally of less than 1,000 daltons molecular weight, in complex clinical and biological samples.
- **Director:** Stacey Reed, stacey.reed@cchmc.org, 513-636-4203.
- **Open to:** All CCRF research personnel; other researchers as allowed by core staff.

Confocal Imaging Core (CCHMC)

- **Purpose**: Access to of state-of-the-art confocal and widefield/deconvolution microscopes for your research and computer analysis workstations. They also provide training for the microscopes and the computer analysis work stations.
- **Manager:** Matthew Kofron, matthew.kofron@cchmc.org, 513-803-9055, or cic@cchmc.org, 513-636-4425.
- **Open to:** All CCRF research personnel and others as allowed by core staff.

Diagnostic Immunology Lab (CCHMC)

- **Purpose**: Provides comprehensive, high-quality testing and research to help detect, diagnose and treat many immune system disorders.
- **Director:** Rebecca Marsh, MD, rebecca.marsh@cchmc.org.
- **Open to:** All CCRF research personnel and others as allowed by core staff.

Discover Together Biobank (CCHMC)

- **Purpose**: The Discover Together Biobank facilitates the acquisition, processing, storage, and distribution of biospecimens for research studies. Their mission is to enable world class research through availability of biospecimens, associated data, and biospecimen services to meet the needs of all CCHMC researchers. Their CAP accredited environment provides research studies with the biospecimens and infrastructure that promotes collaboration, increases competitiveness for funding, and allows for CCHMC centered external collaborations. Their ultimate goal is to enable research which leads to improved patient and community outcomes
- **Director**: Michael Pauciulo, mike.pauciulo@cchmc.org, 513-803-3842

- **Core Contact:** Steve Esslinger, 513-558-6490

DNA Sequencing and Genotyping Service (CCHMC)

- **Purpose**: Personnel provides state-of-the-art genomic and DNA sequencing evaluation for gene characterization through DNA sequencing (Next-Generation and conventional), Microsatellite genotyping, High throughput custom SNP genotyping on the Illumina platform and Whole genome genotyping on the Illumina platform.
- **Contact:** David Fletcher, david.fletcher@cchmc.org, 513-803-4897.
- **Open to:** All CCRF research personnel and others as allowed by core staff.

Flow Cytometry Core (UC)

- **Purpose:** Provides researchers access to a FACSCalibur four color flow cytometer. The instrument is available seven days a week 24 hours per day.
- **Director:** UC - William Miller, PhD, william.miller@uc.edu; CCHMC - Sherry Thornton, PhD, Sherry.Thornton@cchmc.org.
- **Manager:** CCHMC – Celine Silva Lages, PhD, Celine.Silva-Lages@cchmc.org.
- **Open to:** All clinical and research personnel and other community hospital research investigators.

Gene Expression Core (CCHMC)

- **Purpose**: Provides several different services to conduct global gene expression studies. Technology from 10x Genomics and Fluidigm is used to run single cell mRNA-Seq projects. The core uses RNA-Seq assays from Tecan Genomics, Takara and Illumina for samples with limited amounts of starting RNA. Microarray technology utilizing the Affymetrix GeneChip platform is also available.
- **Director:** S. Steven Potter, PhD, steve.potter@cchmc.org, 513-636-4850.
- **Primary Contacts:** Shawn Smith, shawn.smith@cchmc.org, 513-636-0290 and Hung-Chi Liang, hung.chi.liang@cchmc.org.
- **Open to:** All CCRF research personnel; other researchers as allowed by core staff.

Genomics, Epigenomics and Sequencing Core (UC)

- **Purpose**: GESC is a fee-for-service, one-stop facility that provides genomics and epigenomics related service and collaboration to researchers at the University of Cincinnati, Cincinnati Children's Hospital and other institutions.
- **Director:** Xiang Zhang, PhD, xiang.zhang@uc.edu, 513-558-4764

Histopathology Core Laboratory (UC)

- **Purpose**: The mission of UCHCL is to provide expertise and tissue histology services in support of Clinical and research initiatives. Their services include Routine histology services - tissue processing, embedding, and sectioning; histochemical staining; immunohistochemical staining; immunofluorescence; in situ hybridization; tissue microarray construction; whole slide digital imaging; and access to archived diagnostic tissue for research purposes.
- **Director:** Kelsey Dillehay McKillip, PhD uchistocorelab@uc.edu, 513-558-3840

Imaging Research Center (CCHMC)

- **Purpose:** Provides access to state-of-the-art MRI Research Instrumentation and diagnostic imaging technologies related to the diagnosis and treatment of diseases in children and young adults. An in-vivo microimaging laboratory is available to develop micro and molecular imaging techniques in models of pediatric disease.
- **Director:** Jonathan Dillman, MD, jonathan.dillman@cchcm.org, 513-636-7114.
- **Core Contact:** Richard Giordano, richard.giordano@cchmc.org, 513-636-3754.
- **Open to:** All CCRF research personnel; other researchers as allowed by core staff.

Live Microscopy Core (UC)

- **Purpose:** The Live Microscopy facility is designed to help investigators perform high resolution imaging with either living or fixed specimens. The facility has two advanced Zeiss confocal laser scanning microscopes for use, including one equipped for multiphoton imaging, as well as a Leica DMi8 widefield microscope system, and various stereo and dissection microscopes. Additional equipment available for use are a Laser Capture Microdissection instrument, multimode plate reader, Real-Time-PCR systems, infrared imager, and cryostat.
- **Director:** Christian I. Hong, PhD, hongca@ucmail.uc.edu, 513-558-5093.
- **Manager**: Chet Closson, clossoct@uc.edu, 513-558-4607.
- **Open to:** The facility is self-serve, open 24/7 only to users who have undergone full training so that they can work independently. Training/technical assistance available by appointment.

Magnetoencephalography (MEG) Core (CCHMC)

- **Purpose:** The purpose of the Magnetoencephalography core is to facilitate the study of normal and pathologic brain processes using magnetoencephalography (MEG). MEG involves the recording and assessment of brain activity from recordings of magnetic field fluctuations occurring just outside of the skull. The magnetic field fluctuations directly reflect changes in neuronal activity. To facilitate capture of tiny field changes, this core uses a dense array of extremely sensitive magnetic sensors (superconducting quantum interference devices, or SQUIDS), positioned in a helmet-like device. To minimize the impact of environment electromagnetic noise, recordings are conducted inside a magnetically shielded room. MEG is fully non-invasive, safe, and silent.
- **Director:** Jeffery Tenney, MD, PhD, jeffrey.tenney@cchmc.org, 513-636-7301
- **Open to:** Researchers from Cincinnati Children's Hospital and affiliated institutions including the University of Cincinnati and the Cincinnati VA medical Center. All studies require an approved IRB protocol, which needs to be reviewed by the MED SAC Committee. The core cannot accommodate animal studies since it is a shared clinical-research instrument.

Microbial Genomics and Metagenomics Core (CCHMC)

- **Purpose:** The Microbial Genomics and Metagenomics Core facility, located in the Division of Infectious Diseases, is available to PIs at CCRF, UC and outside PIs. The core offers sample storage, nucleic acid extraction, and next generation sequencing of isolated microbes or crude samples for analysis of the microbial composition. The core can assist with analysis of the NGS data and help prepare figures for publication.
- **Director:** David Haslam, david.haslam@cchmc.org , 513-803-1170
- **Lab manager:** Olivia Milburn, olivia.milburn@cchmc.org

NMR-based Metabolomics Core (CCHMC)

- **Purpose:** Provides all NMR-related metabolomics services on human and animal cells, biopsies, and body fluids. Facilitates broad spectrum and targeted metabolomics analysis of polar components, as well as methods for targeted analysis of metabolites, with experience in the analysis of cells, organ tissue (e.g. liver, muscle, intestines, tongue, and tumor), biological fluids (e.g. urine, serum, plasma, amniotic fluid and saliva), and exhaled breath collected from human subjects or animal models.
- **Contact:** Lindsey Romick-Rosendale, lindsey.romick-rosendale@cchmc.org, 513-517-0256.

Pathology Research Core (CCHMC)

- **Purpose:** Core personnel provide technical support for routine morphology based techniques including tissue processing and embedding, routine and special histochemical staining, immunohistochemistry, in situ hybridization, and electron microscopy. In addition to providing histological services, this core is also home to the BioBank. The BioBank consists of human tissue specimens available to researchers with proper IRB approval. The BioBank also serves as a storage facility for investigator-driven studies.
- **Director:** Kathryn Wikenheiser-Brokamp, MD, PhD, wikenhka@ucmail.uc.edu, 513-803-0239.
- **Open to:** All CCRF research personnel; other researchers as allowed by core staff.

Pharmacometrics Services (CCHMC)

- **Purpose:** Provides support for both pediatric (Phase I-IV) and adult (Phase I-III) clinical research studies. Provides sponsors and researchers with scientific tools, facilities, and services to conduct effective clinical research studies.
- **Director:** Alexander Vinks, PhD, sander.vinks@cchmc.org, 513-636-0159.
- **Open to:** All CCRF research personnel; other researchers as allowed by core staff.

Pluripotent Stem Cell Facility (CCHMC)

- **Purpose:** Provides high-quality, well-characterized and reliably archived human embryonic stem cells for distribution to researchers and reagents and expertise for the generation of induced pluripotent stem cells (iPSCs). Additionally, the facility will provide investigators with expert training in the protocols and techniques for proper handling and manipulation of hPSCs.
- **Director:** Chris Mayhew, PhD, christopher.mayhew@cchmc.org, 513-636-3744.
- **Open to:** All CCRF and UC research personnel.

Preclinical Imaging Core (PIC) (UC)

- **Purpose:** The facility specializes in micro-CT and micro-PET/SPECT for longitudinal research projects in small animal models, but also provides bioluminescence, fluorescence and planar x-ray imaging capabilities. A XenX cabinet irradiator is available for cell, focal, and whole-rodent irradiation.
- **Contact:** Lisa Lemen, lisa.lemen@uc.edu, 513-558-2197.
- **Open to:** All CCRF and UC research personnel at the preferred rate; external researchers as allowed by core director.

Proteomics Laboratory (UC)

- **Purpose:** The UC Proteomics Laboratory (UCPL) is committed to providing collaborative expertise & services in proteomics & biological mass spectrometry to investigators both as fee-for-service and as grant supported partnerships. Services include, but aren't limited to: comparative protein profiling; protein identification by mass spectrometry; characterization of protein complexes; and confirming and mapping protein modification sites.
- **Director:** Ken Greis, PhD, ken.greis@uc.edu, 513-558-7102.
- **Open to:** All CCRF and UC research personnel at the preferred rate; external researchers as allowed by core director.

Research Flow Cytometry Core (CCHMC)

- **Purpose:** This facility maintains six analytical cytometers for measuring fluorescence in cellular applications including immunofluorescence, cell cycle analysis, proliferation, and phospho-flow. The instruments are available 24/7 for those who have been trained by the staff. This core also operates four cell sorters for the simultaneous purification of up to four populations to be used for downstream applications.
- **Director:** CCHMC - Sherry Thornton, PhD, Sherry.Thornton@cchmc.org.
- **Manager:** CCHMC – Celine Silva Lages, PhD, Celine.Silva-Lages@cchmc.org.
- **Open to:** All clinical and research personnel and other community hospital research investigators.

Single Cell Genomics Core (CCHMC)

- **Purpose:** The Single Cell Genomics Core Facility provides several different services to conduct global gene expression studies for investigators from Cincinnati Children's, the University of Cincinnati, and other academic institutions. Since being established in 2000, the facility has generated gene expression data for over 17,500 samples and hundreds of single cell projects.
- **Director:** Rathnakumar Kumaragurubaran Rathnakumar.Kumaragurubaran@cchmc.org
- **Open to:** All clinical and research personnel as allowed by core staff.

Transgenic Animal and Genome Editing Core Facility (CCHMC)

- **Purpose:** Provides streamlined service from DNA vector to founder animals. This facility uses the latest genome-editing technologies, such as CRISPR-Cas9 and TALEN, to generate animals carrying multiple knockout or knock-in alleles in a highly efficient and time-saving fashion. This facility also uses conventional approaches to generate transgenic mice by pronuclear microinjection and chimeric mice using embryonic stem cells. Other services available in the facility include cell targeting, targeting vector construction, sperm and embryo cryopreservation, BAC transgenics, mouse recovery from cryopreserved sperm, intra-cytoplasmic sperm injection (ICSI), and embryo transfer (re-derivation).
- **Director:** Yueh Chiang Hu, PhD, yueh-chiang.hu@cchmc.org, 513-803-4962.
- **Primary Contact**: Maureen Huschart, maureen.huschart@cchmc.org, 513-636-4544.
- **Open to**: All CCRF and UC research personnel; other researchers as allowed by core staff.

Translational Trial Development and Support Laboratory (CCHMC)

- **Purpose:** Coordinates and/or performs cellular and molecular testing required to document purity, function, clonal composition, and overall safety of human ex vivo manipulated cell preparations, vector preparations, gene modified cell preparations, and patient molecular and safety monitoring samples, making compiled data accessible to investigators within and outside of Cincinnati Children's Hospital Medical Center. This facility also assists in clinical assay development; clinical trial monitoring, and gene therapy product testing.
- **Director:** Scott Witting, PhD, Scott.Witting@cchmc.org, 513-803-1066.
- **Core Contact:** Shellie Jungkunz, shellie.jungkunz@cchmc.org or ttdsl@cchmc.org.
- **Open to:** All CCRF research personnel; other researchers as allowed by core staff.

Vector Production Facility (CCHMC)

- **Purpose**: Manufacture lentiviral and retroviral vectors for the manufacturing of viral vectors in support of early phase clinical trials. Services include large-scale GMP lentiviral and retroviral vector and small to mid-scale GMP-like manufactured products. Quality compliance staff provides regulatory and quality direction and support.
- **Director: Dr. Robert Holdcraft** robert.holdcraft@cchmc.org ph. 513-636-0958

Viral Vector Core (CCHMC)

- **Purpose:** The Viral Vector Core offers production of research-grade vectors, generation of stable producer lines, and non-GMP quality control testing including vector titer by functional assay FACS or PCR, endotoxin, mycoplasma, and USP sterility testing.
- **Director: Dr. Robert Holdcraft** robert.holdcraft@cchmc.org ph. 513-636-0958

NOTE: If the Core you wish to use is not on this list, or if you are a Core Director and would like your Core to be considered, please send a formal request to Venois Peebles at peeblevj@ucmail.uc.edu to have it added to the approved list. This request should explain what services your Core provides and how your Core supports clinical and/or translational studies. The CCTST leadership will consider the request.