Just-In-Time Core Grant Cycle 1
Application Instructions
Funding Period: 4/26/21-3/31/22

Submissions Accepted: January 11th, 2021- February 5th, 2021
Application Submission Deadline: February 5th, 2021 (by Midnight)

For questions regarding these instructions, please visit https://www.cctst.org/programs/pilot-translational-and-clinical-studies#just-in-time-grant or contact KatPersons at personlk@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 $7,500 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 (04/26/21-3/31/22).

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.

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 and our online membership registration form go to http://cctst.uc.edu/user/register.

5. **Process:** Applicants must submit a 1-page proposal in the format listed below. Funds must be utilized within the designated funding period (04/26/21-3/31/22)

6. **Signatures:** The signatures of all participating PIs and Co-PIs and their respective division director or departmental chairperson(s) are required.

7. **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 facepage and
9. Only routine Core costs are allowed. Applications containing costs for supplies, animals, or salaries outside of routine core costs will be denied. **CCTST JIT and Pilot grant funding cannot be simultaneously held.** Labs/investigators that have received CCTST funding in the past 12 months are not eligible for JIT funding. As an example, if a JIT grant was obtained in the FY16 funding cycle (July 2015, Oct 2015, Feb 2016), the applicant is not eligible to reapply for a JIT until July 2017. **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 had 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 funded, but no extramural grant or patent was submitted.

10. **Composition of research proposal:** Proposals should include a face page, biosketch, and 1-page brief description of the project including the following items:

   a) Cite any prior CCTST funding, resulting grant submissions and outcomes.
   b) State whether current JIT proposal supports a successful, extramural letter of intent, scored but unfunded extramural grant submission, or resubmission of an unfunded grant.
   c) Background.
   d) Hypothesis.
   e) Aims.
   f) A clear, itemized, one or two sentence description of how the funds will be spent (up to $7,500).
   g) Plans for future grant submission including agency and date.
   h) Attestations that:
       1. JIT proposal does not overlap with other CCTST funding for investigator or laboratory.
       2. You will notify CCTST of future grants (submitted, received, and denied), patent applications and licensing agreements, and comply with CCTST queries and requests for information.
       3. You have consulted with the Core Director prior to submission, and he/she has completed the CCTST Just-in-Time Core Director Approval Form. 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).

**Review criteria:**

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

1. Features of a strong JIT proposal.
2. Contains all required documents – facepage, biosketch, project description, core director letter, all attestations, detailed budget.
3. 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.

11. Participating cores:

**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.

**Animal Care and Use Program (UC)**
- **Purpose:** This program oversees all activities conducted by or at the university that have a direct impact on animals which includes veterinary care, policies and procedures, personnel and program management and oversight, occupational health and safety, IACUC functions, and animal facility design and management.
- **Director:** Joanne Tetens-Woodring, 513-558-5518, tetensje@ucmail.uc.edu

**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 Autoimmune Genomics and Etiology (CAGE) (CCHMC)**
- **Purpose:** The CAGE provides services in genotyping, next generation sequencing and biobanking. Specifically, they can facilitate high-throughput custom SNP and whole-genome genotyping on the Illumina platform using the sophisticated iScan System. They can also identify de novo, rare recessive and compound heterozygote variants in the exomes of children with no family history of a particular disease. The CAGE can provide genetically defined samples to collaborators from people with and
without lupus. Alternatively, they also offer whole genome sequencing analysis and non-human (microbiome, metagenomics) sequencing analysis to identify the microbial communities in human specimens. Finally, Cage provides genetically defined samples to collaborators from people with and without lupus.

- **Director:** John Harley, MD, PhD, John.Harley@cchmc.org, 513-803-3665.
- **Open to:** All CCRF research personnel; other researchers as allowed by core staff.

**Center for Biological Microscopy (CBM) (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 BCM 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.

**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/manifest 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 chromatographies 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.

**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.Tornton@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.

**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:** Charles Dumoulin, PhD, charles.dumoulin@cchmc.org, 513-636-7721.
- **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.

**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.

**Pharmacometric 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:** James Wells, PhD, james.wells@cchmc.org, 513-636-9254.
• **Co-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.

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.
- **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.
- **Interim Director:** Carolyn Lutzko, PhD, carolyn.lutzko@cchmc.org, 513-803-2420

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:** William Swaney, william.swaney@cchmc.org, 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 have it added to the approved list to Gabe Lyon, Business Director (gabe.lyon@cchmc.org). Include rationale regarding how your Core is utilized for clinical or translational studies. The CCTST leadership will consider the request.