



**Funding Opportunity for Pilot & Feasibility Projects through the
University of Chicago's NIH/NIDDK-Sponsored
Center for Interdisciplinary Study of Inflammatory Intestinal Disorders (C-IID)
and the Duchossois Family Institute (DFI)**

****Applicants wishing to obtain more information or advice should contact Dr. Eugene B. Chang (C-IID Pilot and Feasibility Program Director) or Dr. April Ross (P&F Research Program Administrator) prior to July 26, 2024****

FULL SUBMISSION DEADLINE: Friday 5 p.m. CT, August 23, 2024. All submissions must be completed online via [2024 C-IID and DFI P&F Application](https://www.surveymonkey.com/r/2024_C-IID_DFI_PF_Application)

(url: https://www.surveymonkey.com/r/2024_C-IID_DFI_PF_Application)

Goals: The **Center for Interdisciplinary Study of Inflammatory Intestinal Disorders (C-IID)** [formerly named the Digestive Diseases Research Core Center (DDRCC)], the **Section of Gastroenterology, Hepatology, and Nutrition** and the **Duchossois Family Institute (DFI)** have joined in partnership to award up to 5 Pilot and Feasibility awards at \$50,000 each for research on digestive health and diseases. Proposals that involve studies of inflammatory bowel diseases (IBD) and related areas of intestinal inflammation, the gut immune system, the gut microbiome, host-microbe interactions, microbiome-based biotherapeutics, hepatic and digestive functions, host-microbe metabolism, and epithelial biology/developmental regulation of the gut will be given special consideration. Applicants from underrepresented communities and investigators that research involve Diversity, Equity and Inclusion efforts are encouraged to apply. NIH-designated U.S health disparity populations include: Blacks and African Americans, Hispanics and Latinos, American Indians and Alaska Natives, Asian Americans, Native Hawaiians and other Pacific Islanders, persons with disabilities, and gender minorities.

Investigator Tracks (in order of preferential consideration)

Track I. Early stage investigators proposing investigations in the mission areas of the NIDDK, C-IID and DFI. This is the principal target group and is intended ideally for candidates without current NIH or other significant extramural support to initiate research into digestive health and diseases.

Track II. Established faculty outside of gastrointestinal research who wish to extend their investigations into the mission areas of the NIDDK, C-IID and DFI.

Track III. Faculty doing research in digestive health and diseases who wish to branch out into new areas or test novel hypotheses that are significantly different from their mainstream research.

Suggested Research Topics: The following represent areas of research of interest to the NIDDK, C-IID and DFI. Please feel free to ask for guidance if unsure about the suitability of your topic or project.

- Host-microbiome interactions, pathogens and opportunistic infections, symbionts and pathobionts, and the development of microbial biotherapeutics relevant to digestive health and disease, particularly in humans.
- Basic, clinical, and translational research relevant to mucosal inflammation, the gut immune system, and genetics of the digestive tract.
- Growth and differentiation, development, stem cell biology, regulation, integrative biology, biology and pathobiology of the gastrointestinal tract (including the luminal GI tract, liver, pancreas, biliary system, etc.).
- The pathogenesis, genetics, epigenetics, and organismal aspects of digestive diseases.
- Nutrition, metabolomics, metabolism, and nutritional interventions relevant to the digestive system and organs.

2023 award recipients:

- *Coherent Multi-Omics of Host and Microbiome in Crohn's Disease* – Anindita Basu, PhD
- *Decoding the mechanism underlying the autoimmune liver inflammation in a mouse model of Primary Biliary Cholangitis* - Axel R. Concepcion, PhD
- *Assessment of Fecal Microbial Metabolomics to Evaluate the Efficacy of Nutritional Education and Practices for Metabolic Health of Underserved and Underrepresented Minority Urban Communities*- Edwin McDonald IV, MD
- *Elucidating the mechanisms by which preoperative nutritional modulation prevents colorectal cancer recurrence in a murine model* - Benjamin Shogan, MD
- *Electrostatically Assembled Polysaccharide Hydrogel Composites for Colonic Mucosal Barrier Enhancement* - Bozhi Tian, PhD

Core Facilities/Services: Applications that propose to use C-IID cores and services and/or involve collaborative interactions with other members of the C-IID and DFI will be given special consideration. Please see our website ciid.uchicago.edu for further details of our Research Cores and examples of funded P&F projects.

- **Integrative Clinical and Biospecimen Core** (Sonia Kupfer, MD, Joel Pekow, MD, Christopher Weber, MD, PhD): Offering the patient registry, tissue biobanking facilities, and support in designing clinical studies in areas such as human gut microbiomes in health and disease, IBD, gastroenterology, and hepatology, and celiac diseases.
- **Host-Microbe Core** (Alexander Chervonsky, MD, PhD, Ran Blekhman, PhD, Betty Theriault, DVM, DACLAM): Provides unique approaches to the study of host-microbe interactions, including cell/tissue models and gnotobiotic mouse technologies. The Core also offers bioinformatics analysis and interpretation of microbiome data and other genomic data in the context of digestive disorders. This includes, but not limited to, processing and analysis of data generated by 16S rRNA sequencing, metagenomic shotgun

sequencing, metabolomics, transcriptomics, and epigenomics, as well as integration of various datasets using various statistical and computational approaches.

- **Tissue Engineering and Cell Models Core** (Eugene B. Chang, MD, Cambrian Liu, PhD): Offering unique cell and tissue models, enteroids/organoids, and mouse models along with molecular and genetic engineering approaches to develop new model systems.
- **Multiparametric Host Cell Analysis Core** (Luis Barreiro, PhD, Bana Jabri, MD, PhD): The MHC Core aims to provide expert consultation, training, experimental and bioinformatic support in the use of the growing array of highly specialized cutting-edge technologies that are available for flow cytometry and genomic analysis, specifically related to the study of gastrointestinal disease.
- **DFI Microbiome Metagenomics Facility (MMF)** (Anitha Sundararajan, PhD, Eric Pamer, MD): The MMF provides bacterial 16S ribosomal RNA gene and shotgun metagenomic sequence analyses on intestinal contents and other samples containing complex microbial populations. The MMF will work with investigators to analyze microbiota sequence data from experimental and clinical samples. Analysis tools are available to classify bacterial sequences down to the genus level (and to the species level when possible) to determine both community membership and structure. Analyses include graphic visualization of the bacterial composition of individual samples and determination of microbial population diversity within and between samples.
- **DFI Host-Microbe Metabolomics Facility** (Ashley Sidebottom, PhD, Eric Pamer, MD) This facility measures and characterizes metabolites that are produced or modified by commensal microbes with the goal of defining how these molecules function in microbe-microbe and host-microbe interactions.

Period and Amount of Funding: Up to 5 Pilot & Feasibility awards \$50,000 each will be jointly funded by the C-IID and DFI partnership for an initial period of one year beginning December 2024. Funds will be dispersed in two installments, the latter contingent on a review of progress made by the program director. Funds may be requested for personnel (with the exception of PI salary), supplies, services and other costs (not equipment or travel). A detailed budget with justification is essential for the application.

Applications: Interested applicants are advised to contact Drs. Eugene B. Chang or April Ross by July 26, 2024, prior to submitting a full application, Pilot & Feasibility applications should conform to a standardized format, which can be found below.

Pilot and Feasibility Projects Application Format

(* 5 page limit for sections 4-6. Minimum 0.5 inch margins, 11 pt. Arial)

1. Title of proposal
2. Investigator(s) and Co-Investigators
3. Research Strategy; Brief description of the project: including hypothesis, one sentence description of each Aim, one to three sentences identifying the conceptual and/or technical innovation, relationship to the Center's theme and goals; how the project will benefit from specific

collaborations with Center members if relevant, and plans for follow-up upon the successful completion of the project.

4. Specific Aims*:
5. Significance/Project narrative*:
6. Methods of Procedure* (including incorporation of measures to insure rigor and reproducibility)
7. References
8. Justification and Need for Center Use of Funding: Pilot & Feasibility applications are strongly advised to contact and discuss with Core Directors their potential use of C-IID and DFI Core facilities and services, in certain cases, a fee-for-service charges may be involved which should be included in the budget). A narrative (5-10 lines) should be provided that describes how the C-IID and/or DFI Cores will be used.
9. Budget (please use budget template below for upload) and provide budget justification

Personnel cost	
Reagents and Supplies	
Services	
Other Costs	
Total	

*PI salary, equipment and travel excluded

10. Other support with dollar amounts listed.
11. IRB/Animal care review status and approval notification (if applicable)
12. Inclusion-enrollment report for human studies (if applicable)
13. Biographical sketch (NIH formatted)

PLEASE COMPLETE ONLINE APPLICATION AT [2024 C-IID and DFI P&F Application](#)
NO LATER THAN 5:00 PM on **Friday, August 23, 2024**

For questions regarding the application please contact:

April Ross, PhD (aprilross@bsd.uchicago.edu) (C-IID Research Program Administrator)

Eugene B. Chang, MD (echang@bsd.uchicago.edu) (2-6458) (C-IID Pilot and Feasibility Program Director)

Review and Processing: 1. Applications will be initially screened by the C-IID Executive Committee for their appropriateness for Pilot & Feasibility funding. 2. Following this initial screen and if necessary, applications may be returned to applicants for modification prior to submission to the External Advisory Board. 3. The completed applications will be reviewed by the Center's

External Advisory Board who ultimately will determine funding priorities at their meeting in October of 2024. 4. Selected applicants will be asked to present a brief research presentation for the External Advisory Board. 5. Applicants will be notified of the funding decision in October with a funding start date of December 2024.