



Gastro

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A Quarterly Publication by Cynthia C. Wetzel, PhD

Request for Pilot and Feasibility Applications



The Digestive Health Center (DHC) is accepting applications for pilot projects to conduct basic, translational, patient based, or outcomes research broadly relating to pediatric digestive disease.

Funds will support highly focused projects with the goal of generating prelimi-

nary data sufficient to support an application for independent research through traditional NIH mechanisms. Funding for projects will range from \$40,000 to \$50,000.

Eligible applicants must have a faculty appointment as of July 2021. <u>DHC membership is not required</u>.

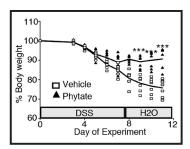
Applications are due Monday November 30, 2020 at 5:00 pm. Application forms and submission guidelines are available on the <u>DHC website</u>.

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For more information contact: Aaron Zorn, PhD, DHC Pilot and Feasibility Program Director at aaron.zorn@cchmc.org or Cindy Wetzel, PhD, DHC Manager at cynthia.wetzel@cchmc.org.

Member's Research Receive National Attention



Body weight improved in a mouse model of inflammatory bowl disease (IBD) after treatment with phytate. The research work of DHC Members Drs. Theresa Alenghat (previous Pilot & Feasibility Award Recipient), Ted Denson, and David Haslam was published online July 30 in *Nature*. The Alenghat lab discovered that the intestinal microbiota generates inositol trisphosphate (IP3) that can in turn activate HDAC3 (histone deacetylase 3, a protein that regulates gene expression) in epithelial cells of the intestine. The research team then used a mouse model system that had human-like intestinal damage and inflammation to demonstrate that healing was enhanced by IP3 and phytate, a dietary product that bacteria break down to IP3. They saw similar intestinal growth when they used cells from patients with Inflammatory Bowel Disease to generate mini intestines called colonoids and treated then with IP3. The research team used the following

DHC supported cores: Pathology Research, Confocal Imaging, Research Flow Cytometry, Stem Cell, and Bioinformatics to generate data for their publication. To read more about this study visit the Cincinnati Children's Newsroom Website.

Additionally, the research work of DHC member Dr. Stavra Xanthakos along with members of the NASH (non-alcoholic steatohepatitis) Clinical Research Network (including DHC Member Marialena Mouzaki) was published online July 23 in *Gastroenterology*. Analysis of two multicenter randomized pediatric clinical trials showed that 1/2 of the children with NAFLD (non-alcoholic fatty liver disease) receiving standard of care life-

children with NAFLD (non-alcoholic fatty liver disease) receiving standard of care lifestyle advice experienced improvement in NASH and/or in fibrosis. However, only 3 resolved NAFLD completely. Another 1/3 demonstrated progression in NASH and fibrosis severity within 2 years. Progression of disease severity was associated with increasing obesity and worsening glycemic control. The research team concluded that lifestyle counseling can benefit some children with NAFLD, but a significant proportion fail to respond, highlighting the need to identify more efficacious interventions.

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DHC Seminar Series- Fall Virtual Presentations



Our fall seminar series will begin on Tuesday September 15 with Ramesh Shivdasani, MD, PhD from Dana-Farber Cancer Institute. His research focuses on the molecular mechanisms of the gut.

The enrichment series includes distinguished speakers from out-

side the Cincinnati area as well as conferences by internal investigators.

Seminars are held on <u>Tuesdays at noon</u>. Due to the COVID-19 pandemic, our seminars will be virtually via Zoom. Please look for the weekly seminar email announcement for the link.

See page 4 for a complete listing of our Fall 2020 DHC Seminar Series.

2020 William and Rebecca Balistreri Lecture



Dr. Norah Terrault will be the 2020 William and Rebecca Balistreri Lecturer for Translational Research in Hepatology. She is Professor and Chief of Gastroenterology and Hepatology at Keck Medical Center at University of

Southern California.

Dr. Terrault's research focuses on the progression and treatment of viral hepatitis C (HCV) and

hepatitis B (HBV), especially in liver transplant patients

Dr. Terrault will present her research on <u>Tuesday October 13</u> as part of the DHC Seminar Series. Additionally, she will participate in the "Balistreri" Rounds, an opportunity to discuss a complex liver patient case on Wednesday October 14 at 7:30 am. Both events will be virtual.

Please look for email announcements on how to access these events.

Save the Date - Annual Scientific Symposium

The DHC will host its Annual Scientific Symposium and External Advisory Board Meeting on Tuesday February 23, 2021. This is a great opportunity to learn about the digestive disease cutting edge research being performed in Cincinnati and to establish new collaborations.

The day will include a poster session and keynote address by Dr. Holger Willenbring from University of California, San Francisco. Dr. Willenbring's research focuses on using hepatocyte stem cell technology to treat liver disease.

We encourage you to present your digestive disease research by submitting an abstract for the poster session. You do not have to be a DHC member to present a poster.

Abstracts are due Friday January 29, 2021. Prizes will be given to students and trainees for the best poster presented at the symposium.

As of now we are planning for an in person symposium. The format may change based on the COVID-19 pandemic infection rates.

Stay tuned for more details.



Abstracts Due



For all publications, please acknowledge the DHC as follows:

"This project was supported in part by NIH P30 DK078392 (*insert name of core that you used*) of the Digestive Diseases Research Core Center in Cincinnati."

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Keystone Symposium- Tissue Plasticity



Tissue Plasticity: Preservation and Alteration of Cellular Identity
October 5-7, 2020 Virtually

The conference will bring together scientific experts in the fields of stem cell, developmental, regenerative, and cancer biology to explore how cellular plasticity contributes to homeostasis and regeneration after tissue injury. The program will include the following sessions with emphasis on early endoderm and digestive organs:

- 1. Plasticity in the Early Embryo
- 2. Tissue Plasticity in Invertebrates and Vertebrates
- 3. Epigentics, Transcription and Plasticity
- 4. Inflammation and Plasticity
- 5. Cancer Stem Cells and their Niche
- 6. Plasticity and Renewal/Regeneration

Dr. Aaron Zorn, DHC Associate Director, and Dr. Stacey Huppert, DHC member, will be featured speakers.

To register visit the **Symposium Website**.

For more information contact the Conference Co-scientific Organizer, Dr. Stacey Huppert at Stacey.Huppert@cchmc.org.

Transition to Full Membership - Dr. Xiaonan Han



Xiaonan Han, PhD Department of Pediatrics, Division of Gastroenterology, Hepatology, and Nutrition at Cincinnati Children's received his first NIH R01 from the National Institute of Diabetes and Digestive Kidney Diseases (NIDDK). The title of his grant is "Regulation of Niche Cell Differentiation to Sustain Intestinal Stem Cell Regeneration Against Gut Inflammation".

Congratulations to Dr. Han for transitioning to Full Membership status in the DHC.

DHC Welcomes New Members



Jonathan Dillman, MD, MSc is an Associate Professor and Associate Chief of Research in the Department of Radiology at Cincinnati Children's. Dr. Dillman is the Medical Director of the Imaging Research Center. He investigates novel ultrasound and MRI-based

methods for detecting and measuring tissue perturbations in Crohn's disease and chronic liver diseases such as biliary atresia, autoimmune liver diseases, and non-alcoholic fatty liver disease.

Chandrashekhar (Shekhar) Pasare, DVM, PhD is

a Professor in the Department of Pediatrics, Division of Immunobiology at Cincinnati Children's and is the Co-Director for the Center for Inflammation and Tolerance. His research focuses on examining the importance of IL-1 receptor signaling in regulating the anti-



microbial response by intestinal epithelial cells.

<u>Interested in becoming a DHC member?</u>

By becoming a DHC member, you will receive subsidies for many core services. Visit <u>our website</u> for further instructions.

For more information regarding the DHC visit our **website** or contact one of the following:

Director: Jorge Bezerra, MD Associate Directors: Ted Denson, MD

Heidi Kalkwarf, PhD, RD Aaron Zorn, PhD

Cynthia Wetzel, PhD

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Center Manager:

Seminar Series- Tuesdays at Noon, Virtually via Zoom See weekly email announcement for link

Date	Presenter	Title
9/15/20	Ramesh Shivdasani, MD, PhD Dana-Farber Cancer Institute	"Storage and Retrieval of Developmental Epigenetic Memory"
9/22/20	Krishna Roskin, PhD CCHMC: Bioinformatics Collaborative Services	"The Bioinformatics Collaborative Services (BCS) Group at CCHMC"
9/29/20	Artem Barski, PhD CCHMC: Allergy and Immunology	"Following the Fate of T Cells During Oral Immunotherapy for Food Allergy"
10/6/20	Bryan Copple, PhD Michigan State University	"Immune Dysregulation in Acute Liver Failure"
10/13/20	Norah Terrault, MD, MPH University of Southern California	Topic: Treatment of Viral Hepatitis in Liver Transplant Patients
10/20/20	Jennifer Kaplan, MD, MS CCHMC: Critical Care	"The Effect of Obesity During Critical Illness: Helpful or Harmful?"
10/27/19	Alex Bondoc, MD CCHMC: Pediatric Surgery	"Glypican-3 as a Therapeutic Target for Human Hepatoblastoma"
11/3/20	Kenneth Sherman, MD, PhD UC: Dept. of Internal Medicine Division Digestive Diseases	"CCR5 and Hepatic Fibrosis in HIV-infected Patients"
11/10/20	Christopher Mayhew, PhD Yueh-Chiang Hu, PhD CCHMC: Pluripotent Stem Cell & Transgenic Animal and Genome Editing Cores	"Novel CRISPR Tools for Genome Editing Human IPSCs to Study Digestive System Development and Disease"
11/17/20	No Seminar due to American Association for the Study of Liver Diseases Meeting	
11/24/20	No Seminar Due to the Thanksgiving Holiday	
12/1/20	Leah Kottyan, PhD CCHMC: Center for Autoimmune Genomics and Etiology (CAGE)	"Identification of EOE-Risk Genotype and IL13-dependent Transcriptional Regulation in the Esophagus"
12/8/20	Sarah Orkin, MD CCHMC: Gastroenterology	"Food Insecurity and Non-alcoholic Fatty Liver Disease"