

DHC Newsletter Bench-to-Bedside Research in Pediatric Digestive Disease





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A Quarterly Publication by Cynthia C. Wetzel, PhD

2021 Digestive Health Center (DHC) Pilot and Feasibility Recipients



Jasbir Dhaliwal, MBBS, MRCPCH, MSc

Department Pediatrics; Division Gastroenterology, Hepatology and Nutrition

Project Title: "Leveraging Machine Learning to Delineate Histologic Features Predictive of Pediatric Ulcerative Colitis Disease Course"

Dr. Dhaliwal will use deep learning approaches to define the role of novel histologic features in predicting the disease course in children with a new diagnosis of Ulcerative Colitis.



Makiko Iwafuchi, PhD

Department Pediatrics; Division Developmental Biology Project Title: "Elucidating the Role of Epigenetic Repressor in Human Liver Development & Reprogramming" Dr. Iwafuchi will identify the role PRDM1, a transcriptional repressor, plays in human liver development and reprogramming.

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Anna Peters, MD, PhD

Department Pediatrics; Division Gastroenterology, Hepatology and Nutrition Project Title: "Transcriptional T Cell Dynamics in Pediatric Liver Transplant Rejection" Dr. Peters will study the role T cells play in late acute cellular rejection and identify therapeutics to treat liver transplant rejection.

See page 2 for details on the next cycle of requesting applications.

In Memoriam- DHC & Internal Advisory Board Member- Dr. Jim Heubi



On Wednesday August 4, 2021 James E. Heubi, MD passed away after a private battle with cancer. Dr. Heubi was a DHC member and served on the DHC Internal Advisory Board from the very beginning when the DHC was a NIDDK funded Digestive Diseases Research Development Center in 2003.

Dr. Heubi's passion for training the next generation of clinician scientists was demonstrated by successfully competing for the NIH Gastroenterology T32 training grant in 1995. The grant is now in its 27th year with Ted Denson, MD, DHC Associate Director, as the PI.

Mitchell Cohen, MD, DHC founding director and current Chair of Pediatrics at the University of Alabama at Birmingham, said "Dr. Heubi was an exceptional individual and clinician who always made time for mentoring. He was not only the doctor's doctor but also the mentor's mentor."

Jorge Bezerra, MD, current DHC director, stated "As a scientist, he developed an FDA approved drug, Cholbam, to treat children with bile acid defects. As a teacher, he guided many young physicians who now lead successful careers."

Dr. Heubi was an extraordinary clinician-scientist, colleague, mentor, and friend to the DHC leadership team who will dearly miss him.

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Request for Pilot and Feasibility Applications

The 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 preliminary data sufficient to support an application for independent research through traditional NIH mechanisms. Funding for projects will range from \$40-50,000. Eligible applicants must have a faculty appointment as of July 2022. <u>DHC membership is not required</u>.

Applications are due Monday November 22, 2021 at 5:00 pm. Application forms and directions are available on the DHC website.

For more information contact:

Aaron Zorn, PhD, DHC Pilot and Feasibility Director at aaron.zorn@cchmc.org or Cindy Wetzel, PhD, DHC Manager at cynthia.wetzel@cchmc.org.

Save the Date - Annual Scientific Symposium



The DHC will host its Annual Scientific Symposium and External Advisory Board Meeting on Tuesday February 22, 2022.

The day will

include presentations from research trainees/staff and keynote address by Dr. Lopa Mishra from Feinstein Institutes for Medical Research and Cold Spring Harbor Laboratory.

Dr. Mishra's research focuses on identifying

the mechanisms involved in TGF- β driven liver/gastrointestinal development and disease.

We encourage you to submit an abstract to present your digestive disease work. You do not have to be a DHC member to present a poster. Abstracts are due Friday January 28, 2022. 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 pandemic infection rates. Stay tuned for more details.

2021 William and Rebecca Balistreri Lecture



Dr. Binita Kamath will be the 2021 William and Rebecca Balistreri Lecturer for Translational Research in Hepatology. She is Director of the Hepatology Program and Fellowship Training Director in the Division of Gastroenterol-

ogy, Hepatology and Nutrition at The Hospital for Sick Children in Toronto.

Dr. Kamath's research focuses on understanding

the natural history of Alagille Syndrome and identifying therapeutics.

Dr. Kamath will present her research on <u>Tuesday October 5 in T8.334</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 6 at 7:30 am in T8.334. Both events will be virtual and in-person. Please look for email announcements on how to access these events.

DHC NIH Competitive Renewal Submitted



Our Silvio O. Conte Digestive Diseases Research Core Center competitive renewal application comprising over 1,100 pages was submitted to NIH on July 1. The application will be reviewed later this year.

We thank all the DHC members for their prompt response in providing us with their research summaries, grant funding, and NIH biosketch.

The DHC leadership showcased the high quality of research being done by our members and the state-of-the-art services by our research cores.

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Associating DHC Members' Publications to DHC Grant

The National Institutes of Health (NIH) requires publications that are authored by DHC members be associated to the DHC grant even if the publication did not officially acknowledge receiving support from the DHC grant. The DHC manager is able to manually link the publication to the DHC grant in the DHC Director's MyNCBI Bibliography profile.

Help the DHC be compliant by acknowledging the grant in your publications by stating:

"This work was supported by NIH grant P30 DK078392 (insert here the name of the core used) of the Digestive Diseases Research Core Center in Cincinnati."

New IAB Member: Jeffrey Molkentin, PhD



The DHC Internal Advisory Board (IAB) consists of senior faculty and institutional leaders. The IAB ensures that the strategic objectives of the DHC are aligned with the strategic goals of Cincinnati Children's and the University of Cincinnati, College of Medicine.

Dr. Jeffrey Molkentin has joined the DHC IAB. He is the Co-Director of the Heart Institute and the Director of Division of Molecular Cardiovascular Biology in the Department of Pediatrics at Cincinnati Children's.

Dr. Molkentin joins the other IAB members:

- Kris Justus, PhD; Vice President and Associate Director Research Operations, Cincinnati Children's Research Foundation
- Rafi Kopan, PhD; Associate Director of Basic Sciences and Director, Division of Developmental Biology
- Patrick Tso, PhD; Director of the Mouse Metabolic Phenotype Center at the University of Cincinnati
- Susa Wells, PhD; Director Epithelial Carcinogenesis and Stem Cell Program

DHC Member Highlight: Jim Wells, PhD Editor of Development



James Wells, PhD, DHC member and Stem Cell/Organoid and Genome Editing Core Director has been named an Academic Editor for the journal *Development*. He is Professor in the Developmental Biology Division, Department of Pediatrics and Chief Scientific Of-

ficer for the Center for Stem Cell and Organoid Medicine (CuSTOM) at Cincinnati Children's.

Dr. Wells and his research team focus on understanding the development of gastrointestinal organs and generating 3-dimensional human tissues from pluripotent stem cells to use as models of digestive diseases.

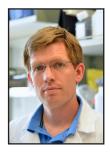
Congratulations on being selected as an editor!

DHC Welcomes New Members



Karthickeyan Chella Krishnan, PhD is an Assistant Professor and new faculty member in the Department of Pharmacology and Systems Physiology at the University of Cincinnati in the College of Medicine. He is studying how host genetic background and sex

differences influence the mitochondrial function/ dysfunction and increases the susceptibility to non-alcoholic fatty liver disease (NAFLD). Ty D. Troutman, PhD is an Assistant Professor in the Department of Pediatrics, Division of Allergy and Immunology at Cincinnati Children's. His research focuses on investigating gene regulation of liver macrophages using quantitative epigenetics.



<u>Want to Be a DHC Member?</u> Membership is granted to faculty with research interest in digestive disease. Visit <u>our website</u> for instructions.

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

Date	Presenter	Title
9/14/21	Theresa Alenghat, VMD, PhD CCHMC: Immunobiology	"Regulation of Host-Microbiota Interactions in the Intestine"
9/21/2021	Arianne Theiss, PhD, AGAF University of Colorado Denver	"Mitochondrial Dysfunction and Ileitis"
9/28/2021	Anna Peters, MD, PhD CCHMC: Gastroenterology	"One Life, One Liver, One Cell: Single Cell Transcriptomics of Pediatric Liver Transplant Rejection"
10/5/2021	Binita Kamath, MBBChir, MRCP, MTR Hospital for SickKids	"Alagille Syndrome: A Global Perspective on Natural History and Novel Therapeutics"
10/12/2021	Makiko Iwafuchi, PhD CCHMC: Developmental Biology	"The Role of Epigenetic Repressor in Human Liver Development and Reprogramming"
10/19/2021	Nobuhiko Kamada, PhD University of Michigan	"Who is the Troublemaker? Identifying Disease-associated Pathobionts in Crohn's Disease"
10/26/2021	Shailendra Patel, BM, ChB, DPhil UC: Dept Internal Med, Div Endo	"Sterols: No Fussin', No Cussin'"
11/2/2021	Akihiro Asai, MD, PhD CCHMC: Gastroenterology	"The Liver Avatar System in the Clinical and Mechanistic Research"
11/9/2021	Jonathan Dillman, MD, MSc Diana Lindquist, PhD CCHMC: Imaging Research Center	"Of Mice and Men: MRI for Translational Research"
11/16/2021	No Conference due to American Association for the Study of Liver Diseases Meeting	
11/23/21	No Conference due to the Holiday	
11/30/2021	Jasbir Dhaliwal, MBBS, MRCPCH, MSc CCHMC: Gastroenterology	"Leveraging Deep Learning to Predict Disease Course in Pediatric Inflammatory Bowel Disease"
12/7/21	Rachel Akers, MPH Cyndie Wells, BS Matthew Fenchel, MS Data Management and Analysis Center	"Introducing DMAC: Data Management and Analysis Collaboration for Your Research Studies"

For more information regarding the DHC visit our <u>website</u> or contact one of the following:

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