

PEDIATRIC INSIGHTS

WINTER 2022 • An Update From the Division of Pediatric Gastroenterology, Hepatology and Nutrition



News and Updates from the Pediatric Hepatology Program at UPMC Children's

The Hepatology Program in the Division of Pediatric Gastroenterology, Hepatology and Nutrition is in the midst of a transformational period with new leadership, faculty, and a new transplant hepatology fellow joining the Division.

New Hepatology Director



In July, the Division welcomed its new Director of Hepatology, **Simon P. Horslen, MB, ChB, FRCPCH**. Dr. Horslen takes over as director of Hepatology from former director Patrick J. McKiernan, MD, who served in the role for five years. Dr. Horslen

was most recently Director of the Hepatobiliary Program and the Medical Director of Solid Organ Transplantation at Seattle Children's Hospital, where he practiced for the last 15 years.

Dr. Horslen's clinical work and research focus on acute liver failure, cholestatic and metabolic liver disease, and liver and intestinal transplantation.

In addition to his appointment as professor of Pediatrics in the Department of Pediatrics at the University of Pittsburgh School of Medicine and Director of Hepatology at UPMC Children's, Dr. Horslen is a faculty member of the Pittsburgh Liver Research Center.

"I am excited to take on this new leadership position and expand the hepatology program at UPMC Children's in order to improve patient access to our world-class care and transplant programs. Ongoing challenges in the field, such as biliary atresia, genetic causes of liver disease, and the increasing incidence of fatty liver disease in children, require new clinical approaches to management and the search for curative therapies. Improving access to and outcomes in transplantation also is paramount, and both are areas that UPMC Children's has been a leading institution in for many decades," says Dr. Horslen.

Dr. Horslen is active in numerous national and international organizations devoted to advancing the science of pediatric liver disorders and transplantation outcomes. He is an investigator in the National Institutes of Health Childhood Liver Disease Research and Education Network (ChiLDReN), and he has held leadership positions with, among others, the Society of Pediatric Liver Transplantation, PALF-IRN, SRTR, and UNOS. He is a Fellow of the American Association for the Study of Liver Disease and of the American Society of Transplantation.

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Chronic Gut Disorder Impairs Oral Vaccine Effectiveness

A chronic gut disorder that occurs in regions with poor sanitation disrupts intestinal immune responses and impairs oral vaccine effectiveness in a mouse model of the disease, according to research led by UPMC Children's Hospital of Pittsburgh and University of Pittsburgh School of Medicine scientists.

The finding, published in *Immunity*, is important because oral vaccines delivered by liquid drops to the mouth, such as polio and rotavirus vaccines, are especially useful in low-income countries that may not have health care workers trained in administering vaccines through needles. They also may stimulate better local immunity in the gut, which is key for fending off diseases contracted by contaminated food and water — including some of the very infections that contribute to the gut disorder, called environmental enteric dysfunction, or EED.



"It is tragic that the exact vaccines that might help prevent EED don't work in children who have the disease," says **Timothy Hand, PhD**, senior author of the study and assistant professor of Pediatrics and Immunology at the R.K.

Mellon Institute for Pediatric Research at UPMC Children's and director of Pitt's Gnotobiotic Animal Core Lab.

EED is caused by malnutrition and chronic gastrointestinal infection from contaminated food and water. Infection with viruses, parasites, or bacteria combined with poor diet can trigger gut inflammation and damage the finger-like projections called villi that help absorb nutrients from food.

"EED can affect anyone, but it's a major problem in children because they're still developing," said Hand. "The result is that children with EED are stunted. They end up shorter in stature. But perhaps more importantly, it can significantly affect brain development. These children have less cognitive ability. And this is a lifelong problem; you can't restore that development later in life."

Healthy vs EED Gut Release

To learn more about the mechanisms behind oral vaccine failure, Hand and his team developed a mouse model of the disease. They induced EED-like symptoms by feeding the rodents a diet deficient in fat and protein and inoculating them with a strain of *E. coli* bacteria that invades gut cells.

Like humans with the disease, EED mice had stunted growth, shifts in the gut microbiome composition, elevated gut inflammation and shortened gut villi compared with control mice that received a normal diet with adequate fat and protein or animals that received a normal diet and bacteria or a poor diet without bacteria.

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New NIH R56 Grant Awarded to Arjumand Ghazi, PhD



Arjumand Ghazi, PhD, associate professor of Pediatrics in the Division of Pediatric Gastroenterology, Hepatology and Nutrition was awarded a National Institutes of Health (NIH) R56 grant for a study titled “Role of the Transcription Elongation and Splicing Factor TCER-1 in Repressing Immunity and Promoting Fertility.”

The aim of Dr. Ghazi’s study is to more fully explain how the protein TCER-1 alters fat metabolism to mediate the complex association between immunity and fertility status.

Research from the Ghazi Laboratory has shown that lifespan-promoting transcription factors coordinate fat production and breakdown to enhance longevity. Recently, her laboratory discovered a novel role for one such factor, TCER-1, in having opposite impacts on lifespan and healthspan, and in repressing immune-resistance to divert cellular resources towards fertility. This prior work formed the basis for her new NIH R56 award further exploring the mechanisms of TCER-1 action.

Recent Selected Publications from Dr. Ghazi

Loose JA, Ghazi A*. Auxin Treatment Increases Lifespan in *Caenorhabditis Elegans*. *Biol Open*. 2021 May 15; 10(5): bio058703.

Naim N, Amrit FRG, Ratnappan R, DelBuono N, Loose JA, Ghazi A*. Cell Nonautonomous Roles of NHR-49 in Promoting Longevity and Innate Immunity. *Aging Cell*. 2021 Jul; 20(7): e13413.

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More About Dr. Ghazi

Arjumand Ghazi, PhD, trained as a developmental biologist, completing her graduate studies in fly muscle development at the National Center for Biological Sciences, Tata Institute for Fundamental Research, India, and postdoctoral research at the University of California, San Francisco (UCSF) on the genetics of aging in *C. elegans*. As a postdoctoral researcher, her work demonstrated that the proteasomal pathway of protein degradation regulates lifespan and identified genes and pathways that influence longevity based on signals from the reproductive system. Dr. Ghazi leads a research group that studies the molecular genetic pathways that link length of life (lifespan) with reproductive fitness, quality of aging (healthspan) and stress resistance mechanisms.

Dr. Ghazi is committed to, and active in, graduate education and mentoring. She is the associate director of the Molecular Genetics and Developmental Biology (MGDB) graduate program, and a member of the Cell Biology and Molecular Physiology (CBMP) and Integrated Systems Biology (ISB) graduate programs. Dr. Ghazi is also an associate member of the University of Pittsburgh’s Aging Institute and the Magee-Womens Research Institute. She has faculty appointments in the Departments of Developmental Biology and Cell Biology and Physiology.

Updates From Pediatric Hepatology Program *Continued from Page 1*

Dr. Horslen's most recent published research in 2021 includes studies on cardiac function after pediatric liver transplant, outcomes after liver transplant for the youngest infants, monogenic cholestasis, hepatopulmonary syndrome, teduglutide for pediatric short bowel syndrome patients, and the OPTN/SRTR 2019 Annual Data Report: Intestine, published in the *American Journal of Transplantation*, and for which he was the lead author.

"Dr. Horslen is an internationally respected hepatologist and transplantation expert. We are excited to have him join our Division at UPMC Children's and lead our pediatric hepatology program and expand our transplantation work in liver and intestinal transplantation," says **Andrew Feranchak, MD**, chief of the Division of Pediatric Gastroenterology, Hepatology and Nutrition.

Expanding Faculty Ranks



Also joining the Division in July 2021 was **Vikram K. Raghu, MD, MS**. Dr. Raghu joined the Division and the Hepatology Program as an assistant professor of Pediatrics immediately upon completing his fellowship in pediatric gastroenterology at UPMC Children's. Dr. Raghu also completed the Division's one-year advanced fellowship in transplant hepatology.

Dr. Raghu earned both his undergraduate degrees (mathematics and neuroscience) and medical degree from the University of Pittsburgh and a Master of Science in Clinical Research. Dr. Raghu's pediatric residency was conducted at UPMC Children's.

Dr. Raghu's clinical practice and research seek to develop and implement innovative methods to improve the value of care provided to patients with gastrointestinal disease, with a special focus on intestinal rehabilitation, intestinal failure, and intestinal transplantation.

His primary work involves using cost-effectiveness analysis to evaluate interventions in pediatric intestinal rehabilitation and transplantation under the mentorship of Dr. Kenneth Smith. He serves as a trainee member in the Intestinal Rehabilitation and Transplant Association, where he has actively participated in developing an international Intestinal Failure Registry. Further, as a member of the North American Society for Pediatric Gastroenterology, Hepatology, & Nutrition (NASPGHAN) Intestinal Failure

Special Interest Group, Dr. Raghu is codeveloping a position statement on the management of central venous access.

*In addition to Drs. Horslen and Raghu, the Hepatology Program at UPMC Children's includes **James Squires, MD, MS** (Transplant Hepatology Fellowship Director); **Veena Venkat, MD**; and **Andrew Feranchak, MD** (Division Chief).*

Transplant Fellow Update



Mary H. Ayers, MD, FAAP, who has been a pediatric gastroenterology, hepatology and nutrition fellow since 2018, is taking part in the Division's fourth year advanced ACGME-accredited fellowship in pediatric transplant hepatology.

A graduate of the University of Illinois School of Medicine, Dr. Ayers completed her pediatric residency at the Cleveland Clinic Children's. During her pediatric gastroenterology fellowship at UPMC Children's, Dr. Ayer's conducted research on cholestatic liver disease in a mouse model in the Department of Experimental Pathology at the University of Pittsburgh. Her clinical interests, in addition to transplant medicine, focus on liver disease.

The one-year advanced fellowship in pediatric transplant hepatology is designed to enable physicians looking to accrue additional experience in the care of pediatric patients with hepatobiliary diseases, including those who undergo liver transplantation. The one-year fellowship is open to individuals who have completed a three-year fellowship in pediatric gastroenterology.

About the Hepatology Fellowship Director



James E. Squires, MD, MS, associate professor of Pediatrics and an attending physician in the Hepatology Program, serves as the Pediatric Transplant Hepatology Fellowship director.

Dr. Squires' clinical work revolves mainly around metabolic liver disease, acute liver failure, and liver transplantation. He is a co-investigator in the Children Liver Disease Research Network (ChILDRen), an NIH-funded consortium working to improve the lives of children with rare cholestatic liver diseases. He is also a member of the Society of Pediatric Liver Transplant (SPLIT), a multifaceted organization focused on improving outcomes for children receiving liver transplantation.

IBD News from UPMC Children's



Sandra C. Kim, MD, director of the Inflammatory Bowel Disease Center at UPMC Children's Hospital of Pittsburgh, started her term as President of the Crohn's and Colitis Foundation Western Pennsylvania/West Virginia Chapter for 2021-2022 in January 2021.

Dr. Kim is a nationally respected expert in pediatric inflammatory bowel diseases (IBD) and is continually active in the areas of patient advocacy, education, and professional development. Most recently, Dr. Kim served as the chair of Government Affairs for the Crohn's and Colitis Foundation National Scientific Advisory Committee. She remains active in Improve Care Now, an international pediatric IBD quality improvement network as a member of the Physician

Leadership Group, past chair of the Clinical Practice Committee, and current co-chair of the Diversity, Equity and Inclusion Committee. She also remains active in the North American Society for Pediatric Gastroenterology, Hepatology & Nutrition (NASPGHAN) as outgoing chair of the NASPGHAN First Year Fellows Conference and as a member of the Public Affairs and Advocacy Committee.

Dr. Kim is a sought-after speaker at national and international conferences. In May 2021, Dr. Kim recorded a Bowel Sounds podcast for NASPGHAN. Dr. Kim's discussion, titled "Treatment of Pediatric IBD...Except the Medications," focuses on the treatment of IBD in children apart from medication selection and the hurdles and challenges patients and their families experience when faced with a new IBD diagnosis.

About the UPMC Children's IBD Center

The Inflammatory Bowel Disease (IBD) Center at UPMC Children's employs a multidisciplinary team approach to provide each patient with the most advanced medical care available and compassionate support for the entire family. The team is comprised of pediatric gastroenterologists, surgeons, an IBD nurse practitioner, nurses, a dietitian, psychologists, a social worker, quality improvement specialists, and research coordinators dedicated to improving the care of all children living with IBD. Currently, they care for over 1,000 children and young adults living with IBD in Pennsylvania and surrounding states.

The IBD Center provides comprehensive, state-of-the-art clinical care to control the symptoms of IBD and to improve the quality-of-life for children with the disease. The Center's clinical services include:

- Individualized clinical teaching sessions for newly diagnosed patients
- A full range of diagnostic services, such as upper endoscopy, colonoscopy, and capsule endoscopy

- Nutritional services to optimize children's diets to treat their disease and facilitate growth
- Complete radiology services, including CT scans, MRI, and interventional radiology
- Complete pediatric surgical services including minimally invasive surgery
- Access to the latest, most innovative therapies
- Clinical trials for novel therapeutics
- Involvement in ImproveCareNow, a pediatric IBD quality improvement collaborative

Furthermore, the IBD Center is committed to providing educational and social support to patients and families living with IBD. The Center hosts an annual education day for teenagers living with IBD ("IBD Grow"). In addition, the IBD Center is actively involved in the Western PA chapter of the Crohn's and Colitis Foundation. Members of the Center serve on the Board of Directors, volunteer in the Camp Oasis program, and donate time and other efforts in all philanthropic events.

Oral Vaccine *Continued from Page 2*

After giving the mice an oral vaccine, the researchers found that immune responses were severely compromised in those with EED. Vaccine-specific CD4+ T cells in the small intestine were about 18 times lower than in control mice. Further experiments indicated that oral vaccine failure in EED mice was mediated by their gut microbiome. In response to microbiome-associated inflammation, T regulatory (Treg) cells accumulate in the small intestine of EED mice.

“Treg cells arise because there’s too much inflammation and they help tamp down that inflammation,” said Hand. “But unfortunately, a side effect is that they prevent local accumulation of vaccine-specific CD4+ T cells.”

When the team used antibiotics to eliminate gut bacteria, vaccine effectiveness was restored in EED mice.

According to Hand, these findings support the idea that targeting the microbiome could help treat EED and improve vaccine success in children.

“Judicious use of antibiotics in these children might be able to reset the small intestinal microbiome, reduce inflammation in the small intestine and reduce those Tregs.”

EED is rare in resource-rich countries but common in poorer countries that lack sewage systems and sanitation. About

150 million children worldwide live in conditions that put them at risk of getting the disease.

“If we could get flush toilets and plumbing to the world, we wouldn’t have this disease,” says Dr. Hand. “What’s causing these chronic infections is that people are either drinking contaminated water or flies are transporting diseases from sewage to food.”

In the future, Hand and his team plan to collaborate with researchers in countries where EED is a problem to better understand vaccine outcomes in children with this disease.

Additional authors on the research are Amrita Bhattacharjee, PhD, Ansen H.P. Burr, Abigail E. Overacre-Delgoffe, PhD, Justin T. Tometich, and Brydie R. Huckestein, all of Pitt or UPMC, or both; Deyi Yang, of UPMC and Central South University, China; Jonathan L. Linehan, PhD, Sean P. Spencer, MD, PhD, Jason A. Hall, PhD, Oliver J. Harrison, PhD, Denise Morais da Fonseca, PhD, and Yasmine Belkaid, PhD, all of the National Institutes of Health; and Elizabeth B. Norton, PhD, of Tulane University.

This research was supported by National Institutes of Health awards R21AI142051, 2015/25364-0 and T32AI089443, the R.K. Mellon Institute for Pediatric Research and UPMC Children’s Hospital of Pittsburgh.

Save The Date: September 29 – October 2, 2022

Pediatric Intestinal Failure and Rehabilitation Symposium

Join us in 2022 for the return of the live version of the 12th International Pediatric Intestinal Failure and Rehabilitation Symposium, scheduled for **September 29 – October 2, 2022** at the Sheraton Centre Toronto Hotel in Toronto, Ontario, Canada.

The biannual event is sponsored by UPMC Children’s Hospital of Pittsburgh and SickKids Transplant & Regenerative Medicine Centre.

This global meeting is designed to bring together pediatric gastroenterologists, surgeons, hepatologists, scientists, and allied health professionals who have dedicated themselves to the care of children with intestinal failure.

So much has transpired in the past two decades, and this meeting will celebrate the tremendous advances in

medical and surgical care for the intestinal failure patient while addressing the challenges that face the field.

The premeeting symposia as well as the main meeting will address the latest developments in etiology, pathophysiology, surgical and nonsurgical therapies, quality-of-life, and outcomes-based work in the field.

PIFRS integrates medical and surgical dialogue to help build off the dramatic interdisciplinary work that has characterized intestinal failure management. Global leaders in the field will set the stage for important next steps and networking.

Additional symposium details and registration information will be forthcoming in the future.

Research Update in Pediatric Intestinal Failure, Rehabilitation, and Transplant

Research teams from UPMC Children's Hospital of Pittsburgh Division of Pediatric Gastroenterology, Hepatology and Nutrition published three new papers in March and April 2021 in the *Journal of Pediatric Gastroenterology and Nutrition*.

The first study,¹ "Caregiver Decision-Making in Pediatric Intestinal Failure: A Qualitative Study Focused on Iron Deficiency Anemia," was led by **Vikram K. Raghu, MD, MS**. The study involved interviews with caregivers of children with intestinal failure to better understand their decision-making perspectives regarding anemia treatment in intestinal failure.

In the April 2021 edition of the *Journal of Pediatric Gastroenterology and Nutrition*, faculty from the Division's Intestinal Care and Rehabilitation Center (ICARE) published findings² on the treatment and outcomes of patients with megacystis microcolon intestinal hypoperistalsis syndrome (MMIHS). The study is the largest single-center case series on MMIHS patients to date. The retrospective analysis examined cases (n=25) over a 17-year period, finding that MMIHS patients had notably good outcomes relative to long-term survival,

growth, and liver function. Former Division fellow Krishnapriya M. Prathapan, MD, was the lead author of the study. Division clinical director, **Feras Alissa, MD**, (left)



and **Jeffrey A. Rudolph, MD**, (right) director of UPMC Children's ICARE were senior authors of the study.

Additionally, **Jeffrey Rudolph, MD**, and **Vikram K. Raghu, MD, MS**, were coauthors of a position paper³ from the North American Society for Pediatric Gastroenterology, Hepatology & Nutrition (NASPGHAN) detailing best practices for the management of central venous access (CVA) in children with intestinal failure. The extensive paper reviews the current evidence-based approaches to central-line management with recommendations for optimizing care and reducing complication rates and the risk of adverse events.



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Recent Publications From Division Faculty

Molina LM, Zhu J, Li Q, Pradhan-Sundd T, Krutsenko Y, Sayed K, Jenkins N, Vats R, Bhushan B, Ko S, Hu S, Poddar M, Singh S, Tao J, Sundd P, Singhi A, Watkins S, Ma X, Benos PV, Feranchak A, Michalopoulos G, Nejak-Bowen K, Watson A, Bell A, Monga SP. Compensatory Hepatic Adaptation Accompanies Permanent Absence of Intrahepatic Biliary Network Due to YAP1 Loss in Liver Progenitors. *Cell Rep*. 2021; 36(1): 109310.

Raghu VK, Squires JE, Mogul DB, Squires RH, McKiernan PJ, Mazariegos GV, Smith KJ. Cost-Effectiveness of Primary Liver Transplantation versus Hepatoportoenterostomy in the Management of Biliary Atresia in the United States. *Liver Transpl*. 2021; 27(5): 711-718.

Raghu VK, Mezzoff EA, Cole CR, Rudolph JA, Smith KJ. Cost-effectiveness of Ethanol Lock Prophylaxis to Prevent Central Line-Associated Bloodstream Infections in Children With Intestinal Failure in the United States. *JPEN J Parenter Enteral Nutr*. 2021 Apr 28. Online ahead of print.

Prathapan KM, King DE, Raghu VK, Ackerman K, Presel T, Yaworski JA, Ganoza A, Bond G, Sevilla WMA, Rudolph JA, Alissa F. Megacystis Microcolon Intestinal Hypoperistalsis Syndrome: A Case Series With Long-term Follow-up and Prolonged Survival. *J Pediatr Gastroenterol Nutr*. 2021 Apr 1; 72(4): e81-e85.

Loose JA, Ghazi A. Auxin Treatment Increases Lifespan in *Caenorhabditis Elegans*. *Biol Open*. 2021 May 15; 10(5): bio058703.

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Squires JE, Alonso EM, Ibrahim SH, Kasper V, Kehar M, Martinez M, Squires RH. North American Society for Pediatric Gastroenterology, Hepatology, and Nutrition Position Paper on the Diagnosis and Management of Pediatric Acute Liver Failure. *J Pediatr Gastroenterol Nutr*. 2021 Aug 3. Epub ahead of print.

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Abdelhadi RA, Rempel G, Sevilla W, Turner JM, Quet J, Nelson A, Rahe K, Wilhelm R, Larocque J, Guenter P; ASPEN Enteral Nutrition Task Force Pediatric Work Group. Transitioning From Nasogastric Feeding Tube to Gastrostomy Tube in Pediatric Patients: A Survey on Decision-Making and Practice. *Nutr Clin Pract*. 2021 Jun; 36(3): 654-664.

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New Study Finds Importance of YAP1 in Liver Development



Division chief **Andrew Feranchak, MD**, was a coauthor on a new multidisciplinary study from collaborators at the University of Pittsburgh and UPMC that investigated the role of the YES-associated protein 1 (YAP1) in liver development.

The study was published in July in the journal *Cell Reports* under the title “Compensatory Hepatic Adaptation Accompanies Permanent Absence of Intrahepatic Biliary Network Due to YAP1 Loss in Liver Progenitors.”

While the YAP1 protein in prior research has been shown to play an important role in cell plasticity in the setting of hepatic injury, hepatic regenerative processes, and liver cancer, little has been understood about its potential role in how the liver develops.

Findings from the new study uncovered a role for YAP1 in regulating bile duct development during liver formation, and the research team also found that hepatoblasts upregulate YAP1 expression during the process of liver development. Furthermore, with the YAP1 protein knocked out in their mouse model, even though the animals exhibited severe forms of liver disease, they continued to survive for long periods of time through alterations and changes in metabolic pathways and how bile acid is transported.

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Molina LM, Zhu J, Li Q, Pradhan-Sundd T, Krutsenko Y, Sayed K, Jenkins N, Vats R, Bhushan B, Ko S, Hu S, Poddar M, Singh S, Tao J, Sundd P, Singhi A, Watkins S, Ma X, Benos PV, Feranchak A, Michalopoulos G, Nejak-Bowen K, Watson A, Bell A, Monga SP. Compensatory Hepatic Adaptation Accompanies Permanent Absence of Intrahepatic Biliary Network Due to YAP1 Loss in Liver Progenitors. *Cell Rep*. 2021. 36(1): 109310.

Abstract on Stem Cell Transplantation for Juvenile Systemic Sclerosis

A multidisciplinary team of investigators from UPMC Children's Hospital of Pittsburgh presented findings from new research using autologous stem cell transplantation to combat treatment resistant juvenile-onset systemic sclerosis at the American College of Rheumatology (ACR) meeting in November 2021.

Members of the multidisciplinary team includes faculty from the Divisions of Pediatric Rheumatology, Cardiology, Pulmonary Medicine, and the Division of Blood and Marrow Transplantation and Cellular Therapies led by **Paul Szabolcs, MD**.



Additional members of the team to provide expertise in gastrointestinal and motility disorders amongst patients with systemic sclerosis include **Vibha Sood, MD**, (left) medical director of the Neurogastroenterology and Motility

Program in the Division of Pediatric Gastroenterology, Hepatology and Nutrition. The presenting author of the abstract was **Katherine Torok, MD**, from the Division of Pediatric Rheumatology.

The team's abstract presents preliminary safety and clinical response data for the first three patients to undergo an autologous peripheral blood stem cell transplant protocol to treat aggressive or treatment-resistant forms of systemic sclerosis in children.



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DIVISION NEWS

Hepatology Director Chairs Transplant Workshop at AASLD 2021



UPMC Children's new Hepatology Program Director, **Simon P. Horslen, MB, ChB, FRCPCH**, chaired the Transplant Surgery Workshop at the American Association for the Study of Liver Diseases "The Liver Meeting®" held virtually from November 12-15, 2021.

UPMC Children's Pediatric Gastroenterology Faculty Presented at 2021 NASPGHAN and 2021 AASLD

Faculty and fellows from the Division of Pediatric Gastroenterology, Hepatology and Nutrition presented numerous research abstracts at the North American Society for Pediatric Gastroenterology, Hepatology & Nutrition (NASPGHAN) 2021 annual meeting. Below is a summary of activities from faculty. Learn more at the NASPGHAN 2021 annual meeting website.

Poster Presentations and Abstracts

Presenters: Vikram K. Raghu, MD, Rita Sico, Jeffrey A. Rudolph, MD, George V. Mazariegos, MD; Judy Squires, MD; James E. Squires, MD, MS

Title: Sarcopenia prevalence in pediatric intestinal transplant recipients: implications on post-transplant outcomes

Elizabeth Sinclair, MD, presented four abstracts during the meeting:

Title: Untargeted Metabolomics in Pediatric Eosinophilic Esophagitis.

Title: Severe Iron Deficiency Anemia due to Whipworm Infestation in an Internationally Adopted Toddler with Trisomy-21 and Duodenal Atresia.

Title: Repair Evolving Clinical Care in Esophageal Button Batteries: Impact of Expert-Opinion Guideline Adoption and Continued Gaps in Care.

Title: Presentation and Initial Care of Esophageal Button Battery Impactions 2007-2020.

Authors: Kevin Cesa, MD; Whitney Sunseri, MD

Title: Myocarditis and Pericarditis in Pediatric Inflammatory Bowel Disease: A Multidisciplinary Review of the Literature.

Lead author: Montserrat Corbera-Hincapie, MD, FAAP

Title: Geospatial Analysis of Food Deserts and Their Impact on Health Outcomes in Children With Cystic Fibrosis.

Additional mentors/authors include Traci Kazmerski; Daniel Weiner; Sandra Kim, MD; Mark Hincapie; Anthony Fabio; Kirsten Kurland.

Lead author: Xiaoyi Zhang, MD, PhD

Title: Peripheral Blood Monocytosis Is a Novel Biomarker of Long-Term Disease Severity in Pediatric-Onset Inflammatory Bowel Disease.

Pediatric Gastroenterology Faculty Obtain New Grants



Division chief and the Carol Ann Craumer Endowed Chair for Pediatric Research **Andrew P. Feranchak, MD**, was awarded a new grant from the Cystic Fibrosis Foundation to study the "Mechanisms of Cholangiocyte Secretion and Cystic Fibrosis Liver Disease."

Dr. Feranchak is a distinguished researcher in the fields of cholestatic liver diseases and the basic mechanisms of bile formation. Dr. Feranchak did much of his medical training in Pittsburgh and then returned to UPMC Children's in 2017 to lead the Division.



Vikram K. Raghu, MD, MS, was awarded a grant from the ASPEN Foundation for a new study titled "Optimal Lipid Supplementation Strategy for the Prevention and Treatment of Parenteral Nutrition-Associated Liver Disease in Children with Intestinal Failure."

Pediatric Gastroenterologist Honored with Educator Award



Arvind Srinath, MD, MS, associate professor in the Division of Pediatric Gastroenterology, Hepatology and Nutrition, was recently elected to the University of Pittsburgh School of Medicine Academy of Master Educators (AME).

The AME is comprised of approximately 80 faculty members of the more than 2,000 faculty member UPMC system, and rewards excellence in education, strives to advance educational initiatives through innovation and professional development of faculty, and promotes educational scholarship. Members are nominated by faculty of the University of Pittsburgh School of Medicine and reviewed by a membership committee.

AME members are appointed to five-year terms and remain involved with education of medical students, graduate students, and residents across the institution.

Earlier this year, Dr. Srinath also was recognized for his outstanding professionalism by students from the University of Pittsburgh School of Medicine and was recognized as one of the top 10 educators by the residency program.

More About Dr. Srinath

Arvind Srinath, MD, MS, is an associate professor of Pediatrics in the Division of Pediatric Gastroenterology, Hepatology and Nutrition. He also currently serves as the Associate Vice Chair For Education for Fellowship Training, and is the Director of the Pediatric Gastroenterology Fellowship.

Dr. Srinath has won numerous awards and accolades for his educational and training efforts during his training and as a faculty member in the Department of Pediatrics. One of his most recent accomplishments was being awarded the Teri Li Young Educator Award from the North American Society for Pediatric Gastroenterology, Hepatology & Nutrition (NASPGHAN) in 2019.

Whitney Sunseri, MD, Receives Patient Experience Award



Whitney M. Sunseri, MD, was honored with a 2020 Excellence in Patient Experience Award. Dr. Sunseri was only one of 48 recipients of the award out of 7,600 physicians and advanced practice providers across all specialties at UPMC.

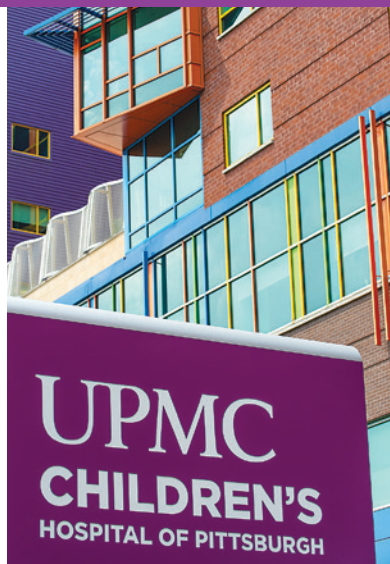
Dr. Sunseri's award was presented at the 2021 Dr. Loren Roth Quality and Patient Safety Awards Celebration held virtually on September 29, 2021.

More About Dr. Sunseri

Whitney M. Sunseri, MD, is an assistant professor of Pediatrics in the Division of Pediatric Gastroenterology, Hepatology and Nutrition. She currently serves as the assistant program director for the Division's fellowship program, and she is the program director of the Advanced Practice Provider Gastroenterology, Hepatology and Nutrition Fellowship program.

Dr. Sunseri earned her medical degree from the University of Illinois, and she completed her pediatric residency and fellowship in pediatric gastroenterology at UPMC Children's Hospital of Pittsburgh. She joined the Division in 2017 after completing her fellowship. Dr. Sunseri's clinical focus is on inflammatory bowel disease (IBD) and very early onset IBD.

Affiliated with the University of Pittsburgh School of Medicine and ranked among the nation's best children's hospitals by *U.S. News & World Report*.



About UPMC Children's Hospital of Pittsburgh

Regionally, nationally, and globally, UPMC Children's Hospital of Pittsburgh is a leader in the treatment of childhood conditions and diseases, a pioneer in the development of new and improved therapies, and a top educator of the next generation of pediatricians and pediatric subspecialists. With generous community support, UPMC Children's Hospital has fulfilled this mission since its founding in 1890. UPMC Children's is recognized consistently for its clinical, research, educational, and advocacy-related accomplishments, including ranking 15th among children's hospitals and schools of medicine in funding for pediatric research provided by the National Institutes of Health (FY2019) and ranking on *U.S. News & World Report's* Honor Roll of Best Children's Hospitals (2021–22).