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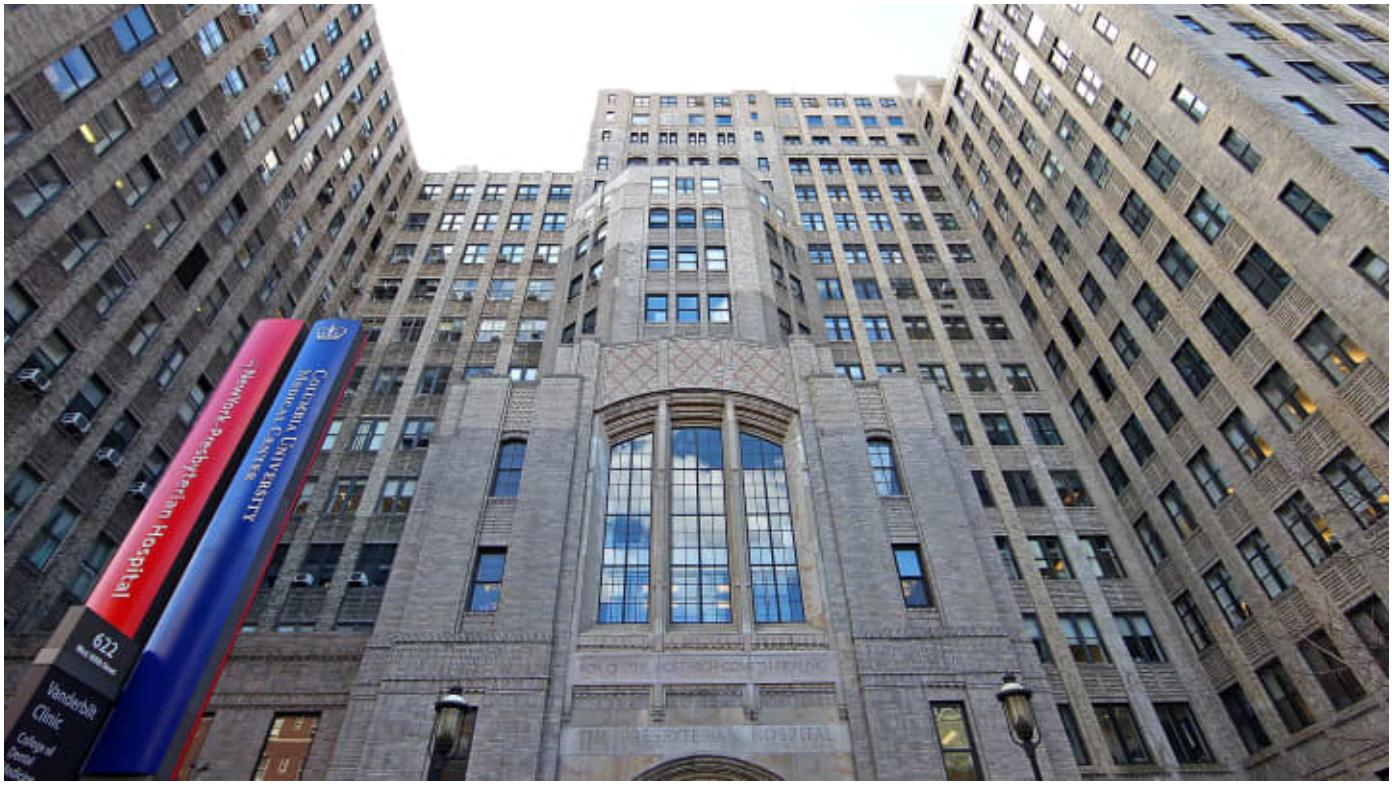


Division of Digestive and Liver Diseases

&

Columbia University Digestive Disease Research Center

Newsletter Winter Issue, February 2021

Welcome to the Winter 2021 issue!

Timothy Wang, MD

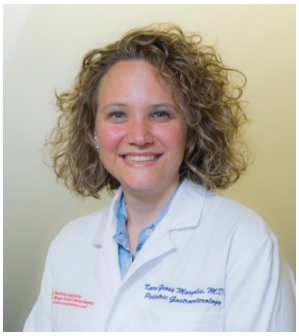
Division Chief, Division of Digestive & Liver Diseases
Director, Barrett's Esophageal Translational Research Network (BETRNet)
Dorothy & Daniel Silberberg Professor of Medicine
Columbia University Irving Medical Center

John Poneros, MD

Clinical Chief & Director Endoscopy
Associate Professor of Medicine
Columbia University Irving Medical Center

Robert Schwabe, MD

Director, CU-DLDRC
Professor of Medicine
Columbia University Irving Medical Center



Kara Margolis, MD

Co-Director, CU-DLDRC
Associate Professor of Medicine
Columbia University Irving Medical Center

We are excited to announce that the Division of Digestive & Liver Diseases in collaboration with the Columbia University Digestive & Liver Diseases Research Center have decided to produce a Joint Newsletter.

Both the Division and Center have many shared goals, that includes promoting collaborative and multidisciplinary research in digestive and liver diseases while integrating clinical, basic and translational expertise to support innovative and creative approaches to research, teaching and patient care.

We wish you all a productive and safe 2021, salute our common members, and extend a special welcome to the new faculty, postdoctoral fellows, student and staff members! Sincere gratitude to our COVID-19 responders!

COLUMBIA UNIVERSITY
DEPARTMENT OF MEDICINE

DIVISION OF DIGESTIVE AND LIVER DISEASES
DIGESTIVE AND LIVER DISEASES RESEARCH CENTER

Awards, Honors and Promotions

Peter Green, MD is selected as the recipient of the 2021 AGA Distinguished Clinician Award, Academic Practice. A virtual ceremony is scheduled for Spring, 2021.

Charles J. Lightdale, MD has recently designated to be a "Master of the American Society for Gastrointestinal Endoscopy." Dr. Lightdale has also received recognition from Castle-Connolly as being "America's Top Doctors in Gastroenterology for 20 years."

Daniela Jodorkovsky, MD, has been promoted to Associate Professor of Medicine, effective December 1st 2020.

Kara Margolis, MD, was invited to serve on the NIDDK-sponsored NIH committee designating a research roadmap to study the brain-gut axis in Parkinson's Disease.

Grants

Julian Abrams, MD, was awarded an NIH R01 grant from NCI for his study titled "The Role of the Microbiome and Notch Signaling in Esophageal Adenocarcinoma"

Nicholas Arpaia, PhD is co-PI on an NIH/NCI U01 grant titled "Engineering immunotherapeutic probiotics to mitigate IRAE."

Lei Ding, PhD was awarded an NIH/NHLBI R01 grant for his project titled "Understanding and targeting bone marrow microenvironment in myelofibrosis"

Yiping Han, PhD was awarded an NIH/NIDCR grant for her project titled "Investigation of FADA Adhesin from *Fusobacterium nucleatum*"

Kara Margolis, MD was awarded an NIH R01DK126644 for her project titled "Linkage of p11 to enteric 5-HT4-mediated serotonergic signaling roles in GI motility, enteric nervous system development and co-morbid dysfunction of gut and brain."
Dr Margolis also received a $100,000 donation to study "A multi-interventional longitudinal approach in children with severe autism."

Anil Rustgi, MD successfully led a competitive renewal effort for the Herbert Irving Comprehensive Cancer Center as an NIH designated comprehensive cancer center. The redesignation comes with a five-year support grant of $26.5 million, an increase of nearly 40% in funding. This marks more than forty years since the HICCC has maintained its status among the top Comprehensive Cancer Centers in the US.

Robert Schwabe MD, was awarded the Takeda-NYU-Columbia Alliance grant for his project titled "Master regulators of hepatic stellate cell activation and fibrosis in human NASH."

Ji-Yeon Shin, PhD was awarded the Gilead Sciences Research Scholars Program award in liver diseases. The $130,000, two year award will begin Dec 1st 2020.

Anne-Catrin Uhlemann, MD, PhD is co-PI on an NIH U01 grant project titled "Optimizing SARS-COV-2 waste-water based surveillance in urban and university campus settings"

Timothy Wang, MD, was awarded the Takeda-NYU-Columbia Alliance grant to study "Treatment of liver injury and fibrosis with novel ADRB2 antagonists"

Xiao Zhao, MD was awarded a K08 award by NIH/NIDDK for her project titled "Molecular mechanisms of Toxin-induced Biliary Atresia"

Invited Speakers

Julian Abrams, MD, MS spoke on the "Long-term risk of Barrett's esophagus and esophageal cancer after esophageal atresia repair" 2020. Updates on Esophageal Atresia/Tracheoesophageal Fistula; Columbia University, November 12, 2020

Daniela Jodorkovsky, MD spoke at the NYSGE Annual Meeting, Esophageal Motility Cases on December 18th 2020.

Dr. Jodorkovsky also spoke on November 7th 2020 on "Esophageal Motility" at the Memorial Sloan Kettering weekly didactic lecture series

DLD and COVID-19 Response

DLD Re-deployment: DLD Faculty have stepped forward to respond to the COVID crisis through attending on GI consult, General Medicine, MICU, Triage, ED, COVID research, WFH&S COVID screening and volunteer responses. We would like to recognize the following faculty who have served on Gen Med or have been redeployed since the Fall: David Markowitz, Kelley Yan, Suzanne Lewis, Julian Abrams, Richard Rosenberg, Daniel Freedberg, Timothy Wang, Anna Krigel, Stella Davis, Fay Kastrinos, Javelle Wynter, Sheila Rustgi, Ivonne Ramirez, Reuben Garcia-Carasquillo, Sara Welinsky, Kavel Visrodia, Joel Gabre, and Andy Liu.

Impact on Endoscopy: Prior to COVID, the HIP13 GI endoscopy averaged 932 procedures per month, April 2020 had the lowest number with 72 procedures (7% of pre COVID volume). By August, 790 procedures were performed (85% of pre-COVID volume). From October through December 2020 GI endoscopy averaged 970 procedures per month exceeding the pre COVID monthly average.

GI Clinics: (DLD Faculty Practice): Prior to COVID, DLD averaged 860 office visits per month. May 2020 had the lowest number of office/telemedicine visits with 321 (37% of pre-COVID volume). By August, 620 office/telemedicine visits were performed. From October through December 2020 DLD averaged 836 office/telemedicine visits per month or 97% of pre COVID monthly average.

GI Consults: GI consult volume decreased last 2 weeks of March, but rapidly returned to pre-COVID levels in April. All inpatient procedures required COVID testing and full Personal Protection Equipment (PPE) which continues to the present.

COVID and Research: As of September 2020, DLD faculty published 31* papers in national peer reviewed journals relating to GI and COVID on a range of topics, famotidine use for COVID, GI symptoms and COVID, new approaches to GI practice, COVID and GI bleeding and impact on endoscopy practice.

A total of 5* COVID related grants were submitted and 1 supplement and 1 grant have been awarded with others being in review. (**the number of papers and grants submitted have definitely increased since 09/2020*)

Laboratories downsized, but did not shut down, and research productivity was maintained.

The main categories of COVID related research include:

Fellowship: Nine out of eleven fellows redeployed to serve as medicine hospitalists, ICU attendings or ICU triage attendings. All eleven rotated to cover GI consults.

Endoscopy training had a two month gap, but seniors met their targets prior to graduation.

Curriculum: Didactics and meetings continued virtually and attendance rates were higher due to ease of participation.

Outpatient clinics: AIME has been mostly virtual/telephone encounters and off-site.

Wellness: Frequent virtual check-ins, townhalls and resources provided support for emotional and mental health.

Impact on Faculty: A few faculty needed to reduce patient volume in response to the pandemic, which resulted in and was covered by referrals to the DLD faculty practice.

Announcements

- The *Columbia-NYU-Takeda Alliance* have formed a collaborative research alliance to initiate and advance gastroenterology (GI) research programs with high potential to impact the development of new therapeutics for patients with GI disorders.

Takeda is a global, value-based R&D-driven biopharmaceutical leader headquartered in Japan, committed to bringing better health and a brighter future to patients by translating science into highly innovative medicines. Takeda has its GI research laboratories in San Diego, California, and Cambridge Massachusetts.

The Columbia-NYU-Takeda Alliance has issued a Request for Proposals (RFA) to advance sponsored research for 2021. An award of $75,000 will be given to winners. The application is open to all Columbia and NYU faculty, early-career faculty are encouraged to apply.

The **Letter of Intent (LOI)** is due **February 22nd 2021.**

For complete RFA, and other questions, please contact Mitchell Fullerton mf3399@columbia.edu

- The *First International Virtual Symposium of Fusobacteria* is scheduled for **April 15th 2021**.

Many of the talks are related to GI diseases and should be of interest to the DLD and DLDRC community.

The weblink for the Symposium: http://dental.columbia.edu/first-international-symposium-fusobacteria

Questions can also be sent to: Dr Yiping Han, PhD ywh2102@cumc.columbia.edu

- *Voting for US News & World Report Specialty Rankings* will begin mid-February 2021.

Voting on Doximity is critically important for ranking of Hospitals

To prepare for the vote:

Ensure your Doximity log-in is up to date.

Reach out to your colleagues to ask them to add NYP to their list of nominations.

Email vote@nyp.org or *Helena Logan hl2040@cumc.columbia.edu* with any questions

▲ *CU-DLDRC website*: Please visit our website at https://www.columbiadldrc.org for information of Core Facilities specific to DLD that you can avail of; information about DLDRC Pilot grants, Retreats and other activities that our Center has initiated and continues to develop.

▲ *Pilot & Feasibility Awards, 2021, CU-DLDRC*: Under the Leadership of Kara Margolis, MD and Utpal Pajvani, MD, PhD, the DLDRC is planning a new round of funding- the 2021 Pilot & Feasibility Grants to stimulate innovative ideas and interactive projects with a focus on priming careers of junior investigators. Details and RFA will be available soon.

▲ *Retreat 2021, CU-DLDRC*: The Executive Committee: Robert Schwabe, MD, Kara Margolis, MD, Timothy Wang MD and Anil Rustgi, MD have initiated the planning for the 2021 DLDRC Retreat which is part of the Enrichment Program with interaction among students, trainees, researchers and faculty for scientific exchange. Events will include Keynote speeches and Session Speakers. Agenda will be available soon.

Upcoming DLDRC Seminar speakers

Robert Schwartz, **MD, PhD**, Weill Cornell Medicine "Modeling human liver disease using bioengineered tissues" February 10, 2021

Joel Gabre, MD, Columbia University Irving Medical Center "iPSC approaches to investigate esophageal development and disease" February 24, 2021

Bernd Schnabl, MD, University of California, San Diego "Translating microbiota research into therapies for liver disease" March, 3rd 2021

Ken Cadwell, NYU Langone March 17th 2021

For details and zoom invitations, please contact Jenny Lee, jl4516@cumc.columbia.edu

Selected Recent Publications

Julian Abrams

Annavajhala MK, May M, Compres G, Freedberg DE, Graham R, Stump S, Que J, Korem T, Uhlemann AC, **Abrams JA**. Relationship of the esophageal microbiome and tissue gene expression and links to the oral microbiome: a randomized clinical trial. Clin Transl Gastro. 2020 Dec; 11(12):e00235. doi: 10.14309/ctg.0000000000000235.

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Freedberg DE, Wang TC, **Abrams JA**. Famotidine and COVID-19. Gastroenterology. 2020 Dec 30:S0016-5085(20)35602-X. doi: 10.1053/j.gastro.2020.12.044.

Daniel Freedberg

Gupta A, Madhavan MV, Sehgal K, Nair N, Mahajan S, Sehrawat TS, Bikdeli B, Ahluwalia N, Ausiello JC, Wan EY, **Freedberg DE**, Kirtane AJ, Parikh SA, Maurer MS, Nordvig AS, Accili D, Bathon JM, Mohan S, Bauer KA, Leon MB, Krumholz HM, Uriel N, Mehra MR, Elkind MSV, Stone GW, Schwartz A, Ho DD, Bilezikian JP, Landry DW. Extra pulmonary manifestions of COVID-19. Nat Med. 2020 Jul;26(7):1017-1032. PMID: 32651579 Review.

Freedberg DE, Wang TC, Abrams JA. Famotidine and COVID-19. Gastroenterology. 2020 Dec 30:S0016-5085(20)35602-X. doi: 10.1053/j.gastro.2020.12.044.

Ben Lebwohl

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Faye AS, Wen T, Soroush A, Ananthakrishnan AN, Ungaro R, Lawlor G, Attenello FJ, Mack WJ, Colombel JF, **Lebwohl B**. Increasing Prevalence of Frailty and Its Association with Readmission and Mortality Among Hospitalized Patients with IBD. Dig Dis Sci 2021; in press.

Faye AS, Lee KE, Laszkowska M, Kim J, Blackett JW, McKenney AS, Krigel A, Giles JT, Wang R, Bernstein EJ, Green PHR, Krishnareddy S, Hur C, **Lebwohl B**. Risk of Adverse Outcomes in Hospitalized Patients with Autoimmune Disease and COVID-19: A Matched Cohort Study from New York City. J Rheumatol 2020; in press.

Blackett JW, Faye AS, Phipps M, Li J, **Lebwohl B**, Freedberg DE. Prevalence and Risk Factors for Inappropriate Continuation of Proton Pump Inhibitors After Discharge From the Intensive Care Unit. Mayo Clin Proc 2020; in press.

Lebwohl B, Söderling J, Roelstraete B, Lebwohl MG, Green PH, Ludvigsson JF. Risk of Skin Disorders in Patients with Celiac Disease: A Population-Based Cohort Study. J Am Acad Dermatol 2020; in press.

Penny HA, Raju SA, Lau MS, Marks LJ, Baggus EM, Bai JC, Bassotti G, Bontkes HJ, Carroccio A, Danciu M, Derakhshan MH, Ensari A, Ganji A, Green PHR, Johnson MW, Ishaq S, **Lebwohl B**, Levene A, Maxim R, Mohaghegh Shalmani H, Rostami-Nejad M, Rowlands D, Spiridon IA, Srivastava A, Volta U, Villanacci V, Wild G, Cross SS, Rostami K, Sanders DS. Accuracy of a no-biopsy approach for the diagnosis of coeliac disease across different adult cohorts. Gut 2020; in press.

Zhen J, Stefanolo JP, Temprano MP, Tedesco S, Seiler C, Caminero AF, Enrique de-Madaria, Huguet MM, Vivas S, Niveloni SI, Bercik P, Smecuol E, Uscanga L, Trucco E, Lopez V, Olano C, Mansueto P, Carroccio A, Green PHR, Day A, Tye-Din J, Bai JC, Ciacci C, Verdu E, **Lebwohl B**, Pinto-Sanchez MI. The Risk of Contracting COVID-19 Is Not Increased in Patients With Celiac Disease. Clin Gastroenterol Hepatol 2020 Oct 12;S1542-3565(20)31398-7.

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Russo C, Wolf RL, Leichter HJ, Lee AR, Reilly NR, Zybert P, Green PHR, **Lebwohl B**. Impact of a Child's Celiac Disease Diagnosis and Management on the Family. Dig Dis Sci. 2020 Oct;65(10):2959-2969.

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Wolf RL, Vipperman-Cohen A, Green PHR, Lee AR, Reilly NR, Zybert P, **Lebwohl B.** Portable gluten sensors: qualitative assessments by adults and adolescents with coeliac disease. J Hum Nutr Diet. 2020;33:876-880.

Kara Margolis

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Hiroshi Nakagawa

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Utpal Pajvani

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John Poneros

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Jianwen Que

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Anil Rustgi

Tang Q, Lento A, Suzuki K, Efe G, Karakasheva T, Long A, Giroux V, Islam M, Wileyto EP, Klein-Szanto AJ, Nakagawa H, Bass A, **Rustgi AK**. Rab11-F1P1 mediates epithelial-mesenchymal transition and invasion in

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Robert Schwabe

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Special Events

Benjamin Lebwohl MD, appeared in a performance of "Winter" from The Four Seasons as a tribute to health care workers led by violinist Joshua Bell
https://www.youtube.com/watch?v=G_TdbYgJToc

The Leadership, Faculty and Staff of the Division of Digestive & Liver Diseases at Columbia University would like to extend a special note of appreciation to all who volunteer their time and serve in innumerable ways during the COVID crisis.

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Disclaimer: *Any omissions or errors are un-intentional, and efforts will be made to rectify them.*