

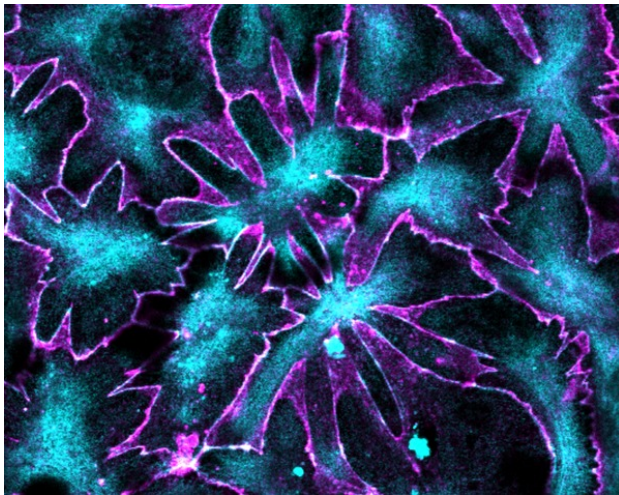


Digestive Disease Research Center

AT THE MEDICAL UNIVERSITY OF SOUTH CAROLINA

Volume 5, Issue 1

April 5, 2024



Confocal microscopy of epithelial Caco2 cells after knockdown of the actin-binding, LIM domain containing protein PDLIM1, stained by immunofluorescence for the adherens junction component E-cadherin (magenta) and for the actin binding and LIM domain-containing protein LMO7 (cyan). Adapted from *MBoFC* Vol 34(10) Dec 1, 2023 (cover). M.C. Bridges and A. Kourtidis.

On the Inside

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A Note from the Directors



Don C. Rockey
DDRCC Director

Dear All: This month marks the start of the fifth year for the first cycle of both our DDRCC P30 and CDLD P20 projects. The years have gone quickly, but our sense that we have just begun to build our Digestive Disease Research Center is quickly dispelled by the achievements that you, our members, have accrued and that we have noted while preparing the competitive renewal application for



Stephen Duncan
CDLD Director

the DDRCC, submitted in February, and the CDLD renewal due later this month. It has been fantastic to see our members' continued grant successes. Our productivity as measured in recent research manuscripts published is also remarkable. Please remember - when you use a Core, please cite this - and our Centers - in your manuscript!

This month, we're happy to post the full agenda for this year's **5th Annual Digestive Disease Research Center Symposium**, coming on the morning of **Friday, April 12th - on the 6th floor of the BSB starting at 8:00 am**. Our distinguished keynote speaker will be **Dr. Jacquelyn Maher**, Director of the **UCSF Liver Center** and DDRCC. We're pleased to report that we received a record number of abstracts for poster and oral presentations. We particularly look forward to an active and engaging poster session this year. We hope to see you there!

We like to hear about your thoughts and your progress! Send us your updates, and please make sure to respond to our Year 5 membership and cores survey that Kyu will send out soon.

Sincerely,

Don and Steve

**The 5th Annual
MUSC DDRC Retreat & Symposium
FRIDAY, APRIL 12, 2024
8:00 am - 12:00 pm
BSB and DCRI 6th Floor**

[Visit the Symposium Website](#)

Meeting Agenda and Schedule

Friday, April 12, 2024

Poster Session and Refreshments: BSB 6th floor Lobby

8:00 am: Registration, Poster set-up, coffee

8:20 am: Welcome and Introduction

Don Rockey, M.D.

Steve Duncan, D. Phil.

SESSION I:

8:30 am: **Mindy Engevik, Ph.D.**, Assistant Professor, Department of Regenerative Medicine & Cell Biology
"Altered expression of MUC5AC in the colon: insights from inflammatory bowel disease and Clostridioides difficile infection."

8:50 am: **Yuan Zhai M.D., Ph.D.**, Professor, Department of Surgery
"Group 1 innate lymphoid cells are cytoprotective in liver ischemia and reperfusion injury."

9:10 am: **Jorge Munera, Ph.D.**, Assistant Professor, Department of Regenerative Medicine & Cell Biology
"SATB2 regulates prostaglandin E2 levels and barrier integrity in human colorectal epithelial cells."

9:30 am: **Alexander Alekseyenko, Ph.D.**, Professor, Department of Public Health Sciences
"Multivariate Drift-Diffusion Framework (MD3F) captures the gut microbiome in the process of health associated critical change."

9:45 am: **BREAK & POSTER SESSIONS**

SESSION II:

10:45 am: **Aaron Hobbs, Ph.D.**, Assistant Professor, Department of Cell and Molecular Pharmacology
"Not all KRAS mutants are created equal: mutant-specific biophysical properties dictate cellular signaling."

11:05 am: **Silvia Guglietta, Ph.D.**, Assistant Professor, Department of Regenerative Medicine & Cell Biology
"Exploring unconventional pathways: the intriguing role of the complement system in the intestine."

11:25 am: **Caroline Kittrell, BS** (Drake Laboratory), Department of Cell and Molecular Pharmacology
"Establishing the N-glycome and immune cell landscape of chronic and acute pancreatitis."

KEYNOTE:

11:45 am: **Jacquelyn Maher, M.D., Ph.D.**, UCSF Liver Center
"Bringing coals to Newcastle: Population-based investigation of MASLD using iPSC-derived hepatocytes."

12:30 pm: **Closing Remarks**

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COMING SOON: Annual Membership and Cores Survey

Kyu, the Center Manager, will be sending out the Annual Membership and Cores Usage Survey at the end of this month. Please respond promptly and thoughtfully: your responses help us to manage our cores support, including identifying your unmet needs. This year we will specifically survey members about potential strategies to improve our rate of core and center citations in member publications.

PLEASE CITE OUR CORES!

In order for us to submit a successful renewal application, we need to robustly document **acknowledged core usage** in our publications and grants. Please help us to credit our Centers for their success in supporting your publications by adding a statement like the samples below to the **Acknowledgements** section of your manuscripts:

"This work was supported by the _____ core of the Medical University of South Carolina Digestive Disease Research Core Center (P30 DK123704)"

"This work was supported by the _____ core of the Medical University of South Carolina COBRE in Digestive and Liver Disease (P20 GM130457)"

News from the DDRC

New R01: Kourtidis Lab



Antonis Kourtidis,
Ph.D.

Associate Professor [Antonis Kourtidis](#) in the Regenerative Medicine and Cell Biology Department was recently awarded an NIDDK R01 grant:

"Colon cell mechanoregulation through an E-cadherin - associated RNAi machinery."

1R01 DK136658-01A

04/01/2024 - 03/31/2028

\$1,224,788 (direct)

CONGRATULATIONS Dr. Kourtidis!

New R01: Rockey Lab



Don Rockey, M.D.

Professor and DDRCC Director [Don Rockey](#) in the Department of Medicine/GI & Hepatology Division was recently awarded a new R01 grant renewal by the NIDDK :

"A Molecular Approach to the Pathogenesis of Portal Hypertension."

2R01DK113159-05A1

02/15/2024 - 01/31/2028

\$1,882,360 (direct)

CONGRATULATIONS Dr. Rockey!

Invited DDRCC Lecture: Mindy Engevik



Mindy A. Engevik,
Ph.D.

Assistant Professor [Mindy Engevik](#) in the Regenerative Medicine and Cell Biology Department was recently invited as a platform session speaker at the [Texas Medical Center Digestive Disease Research Center](#) Symposium:

"Frontiers in GI Cell Biology: Crosstalk and Communication."

Saturday, March 9, 2024

Baylor College of Medicine, Houston, TX

CONGRATULATIONS Dr. Engevik!

We like to hear about your progress and achievements!

Please send your news and announcements to the DDRCC Digest via email to the [Center Manager](#).

Enrichment Activities and Series

DDRCC / CDLD / GI & Hepatology Grand Rounds

Wednesday, 7 am EST ([Teams](#))

April 3

Elizabeth Verna, MD Yale University School of Medicine

Updates in MELD-based organ allocation

April 17

Erin Forster, MD, GI & Hepatology, MUSC, and **Rune Wilkens, MD** Bispebjerg Hospital, Copenhagen University

GI ultrasound

May 1 : Fellows Case Conference

May 8

Ali Keshavarzian, MD Rush University School of Medicine

Role of gut microbiota-derived inflammation in alcohol-associated organ damage

DDRCC / CDLD / RMCB Seminar Series

Wednesday, 11 am EST Basic Science Building Rm 611

April 3

Jennifer Stancill, PhD MUSC

Protective mechanisms in pancreatic β -cells: From antivirals to antioxidants

April 10

Lars Eckman, MD UCSD and SDDRCC

Host-microbial interactions in giardiasis

April 24

Antonis Kourtidis, PhD MUSC (WIP)

From evolution to molecules and back: why RNAs may love the junctions

May 1

Subramanya Pandruvada, PhD MUSC

Targeting tyrosine phosphatase SHP2 in oral cancers

May 29

Kristen Engevik, PhD Baylor College of Medicine

Purinergic signaling modulates multiple aspects of intestinal health and disease*

***Faculty Candidate Seminar**

To receive notifications for our Enrichment series seminars, please contact the [DDRCC Center Manager](#).

Selected GI publications by our members

Each newsletter, we highlight a subset of the many outstanding papers published and presented by our DDRCC members. We strive to mention particularly significant primary research papers where our members were lead authors or key contributors, and to represent the broad scope of clinical, basic science and clinical-translational research interests across our membership. To assist us in these efforts, we continue to encourage you to [email Kyu](#), our center manager, about your particularly significant papers and presentations.

While space does not allow us to list a comprehensive month-to-month list of our member publications, such a list can be found on our [DDRCC website here](#).

A complete listing of our DDRCC member publications since its inception can also be found through [NCBI here](#).

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**A note from the Center Manager:
PUBLICATION COMPLIANCE**

Thanks to all for helping ensure that papers we cite are PubMed and PMC compliant. Our task is largely complete for our renewal, with only a few pending recent papers.

PLEASE CONTINUE TO RESPOND PROMPTLY TO ANY EMAIL REQUESTS YOU MAY RECEIVE IN THE COMING MONTHS REGARDING CONFIRMATION AND APPROVAL of NIHMS SUBMISSIONS.

February 2024 - March 2024

Yang D, Draganov PV, Pohl H, Aihara H, Jeyalingam T, Khashab M, Liu N, Hasan MK, Jawaid S, Othman M, Al-Haddad M, DeWitt JM, Triggs JR, Wang AY, Bechara R, Sethi A, Law R, Aadam AA, Kumta N, Sharma N, Hayat M, Zhang Y, Yi F, **Elmunzer BJ**. Development and initial validation of a video-based peroral endoscopic myotomy assessment tool. *Gastrointest Endosc.* 2024 Feb;99(2):177-185. PubMed PMID: [37500019](#).

Gudi RR, Johnson BM, Gaudreau MC, Sun W, **Ball L, Vasu C**. Intestinal permeability and inflammatory features of juvenile age correlate with the eventual systemic autoimmunity in lupus-prone female SWR × NZB F1 (SNF1) mice. *Immunology.* 2024 Feb;171(2):235-249. PubMed PMID: [37947218](#); PubMed Central PMCID: PMC10842200.

Erno J, **Gregoski MJ, Rockey DC**. Diagnostic utility of CT angiography compared with endoscopy in patients with acute GI hemorrhage. *Gastrointest Endosc.* 2024 Feb;99(2):257-261.e5. PubMed PMID: [37804874](#).

Ochoa-Rios S, Grauzam SE, Gregory R, **Angel PM, Drake RR, Helke KL, Mehta AS**. Spatial Omics reveals that cancer-associated glycan changes occur early in liver disease development in a Western diet mouse model of MASLD. *J Proteome Res.* 2024 Feb 2;23(2):786-796. PubMed PMID: [38206822](#).

Elmunzer BJ, Foster LD, Serrano J, Coté GA, Edmundowicz SA, Wani S, Shah R, Bang JY, Varadarajulu S, Singh VK, Khashab M, Kwon RS, Scheiman JM, Willingham FF, Keilin SA, Papachristou GI, Chak A, Slivka A, Mullady D, Kushnir V, Buxbaum J, Keswani R, Gardner TB, Forbes N, Rastogi A, Ross A, Law J, Yachimski P, Chen YI, Barkun A, Smith ZL, Petersen B, Wang AY, Saltzman JR, Spitzer RL, Ordiah C, Spino C, **Durkalski-Mauldin V**. Indomethacin with or without prophylactic pancreatic stent placement to prevent pancreatitis after ERCP: a randomised non-inferiority trial. *Lancet.* 2024 Feb 3;403(10425):450-458. PubMed PMID: [38219767](#); PubMed Central PMCID: PMC10872215.

Macdonald JK, Clift CL, Saunders J, Zambrzycki SC, **Mehta AS, Drake RR, Angel PM**. Differential protease specificity by collagenase as a novel approach to serum proteomics that includes identification of extracellular matrix proteins without enrichment. *J Am Soc Mass Spectrom.* 2024 Mar 6;35(3):487-497. PubMed PMID: [38329320](#); PubMed Central PMCID: PMC10921462.

Accessing DDRC Cores

Quick links for DDRCC and CDLD core use

A reminder that Full Members receive subsidized usage of our [cores](#). Below are some summary details for accessing the cores and initiating projects.

This project was supported in part by NIH **P30 DK123704** (core facility) at the MUSC Digestive Disease Research Core Center.

This project was supported in part by NIH **P20 GM130457** (core facility) at the MUSC Digestive Disease Research Core Center.

Analytical Cell Models Core:

- The DDRCC and CDLD both fully subsidize the use of the ACC by its members.
- For iPSC projects, please contact the Core Director, [Dr. Steve Duncan](#).
- For primary cell isolation, please contact [Dr. Don Rockey](#).

Advanced Imaging Core:

- The DDRCC and CDLD both provide full members with a 25% discount on facility fees.
- For imaging projects, please contact the Core Director, [Dr. John Lemasters](#) and Core Manager [Li Li](#).

CDLD Animal Models Core:

- CDLD Animal Models Core: The CDLD fully subsidizes the use of the Animal Models Core for its Junior Investigators.
- Other discounts may currently apply for DDRCC members.
- For animal projects please contact the Core Director, [Dr. Kristi Helke](#).
- For gnotobiotic mouse models, please contact [Dr. Caroline Westwater](#).
- For transgenic and CRISPR/Cas9 projects, please contact the TGE Director, [Dr. Fulei Tang](#).

DDRCC Proteomics Core:

- DDRCC full members will receive a 50% discount from facility fees.
- For MS projects, please contact the Core Co-Director, [Dr. Lauren Ball](#).

Clinical Component Core:

- The DDRCC and CDLD fully subsidize biostatistical consultations with the Clinical Component Core by all of its members, including biostatistical support and mentoring for its Junior Investigators and Pilot & Feasibility applicants and awardees.
- To start a project, visit the [SPARC website](#) and submit a Biostatistics, Design & Epidemiology request, and contact Core Director, [Dr. Paul Nietert](#).

Cite our grants

For the DDRCC:

P30 DK123704

For queries regarding DDRCC news, membership and cores, please contact the Center Manager:

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Department of Medicine
CSB HE903B
96 Jonathan Lucas St.
Charleston, S.C. 29425
(843) 792-1689

[Email Dr. Lee](mailto:kyuho.lee@muscc.edu)

Visit the DDRCC Website:

<https://muscc.edu/ddrcc>

For the COBRE CDLD:

P20 GM130457

For queries regarding the COBRE in Digestive and Liver Disease, please contact the COBRE PI:

Stephen Duncan, DPhil
Department Chair
Regenerative Medicine and Cell
Biology
BSB 657A MSC508
173 Ashley Ave Charleston, SC 29425
(843) 792-9104

[Email Dr. Duncan](mailto:stephen.duncan@muscc.edu)

Visit the CDLD Website:

<https://medicine.musc.edu/departments/regenerative-medicine/cobre-digestive-liver-disease>



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