

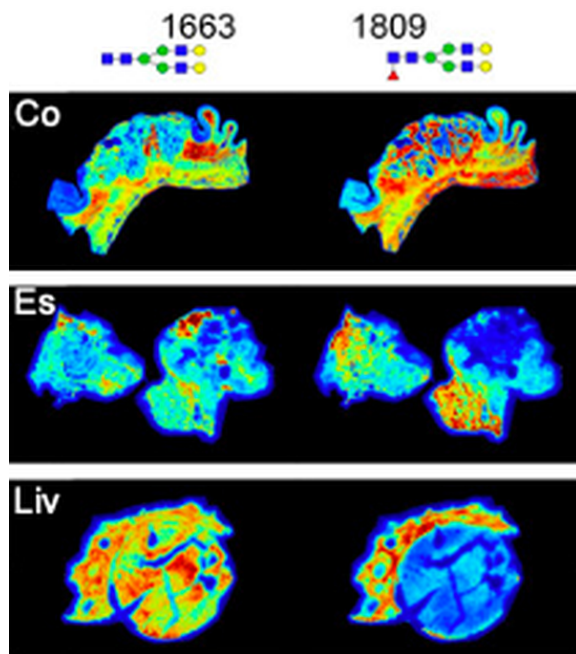


Digestive Disease Research Center

AT THE MEDICAL UNIVERSITY OF SOUTH CAROLINA

Volume 4, Issue 5

February 9, 2024



Differential profiling of normal and embedded tumor N-glycan structures detectable by MALDI-imaging MS Adapted from Wallace et al., PMID [38177192](https://pubmed.ncbi.nlm.nih.gov/38177192/) (see Publications).

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A Note from the Directors



Don C. Rockey
DDRCC Director

Dear All: 2024 is now in full swing, and with it the submissions of competitive renewal applications for both the DDRCC and the CDLD COBRE. Taking stock of our programs, we are again thrilled with the progress that you, our Members, have made over the last four years. A few notable highlights include: 1) increasing our funded Full Member cadre from 23 to its current 36 members;



Stephen Duncan
CDLD Director

2) increasing our Members' funding base from \$8.3 million to \$11.8 million; 3) our cores support of 136 manuscripts, 55 of which involved co-authored collaborations between members; 4) adding 17 New Investigators from various departments to our membership; and, 5) increasing the percentage of women faculty Full Members from 22% to 40%.

Much of our member growth and development has been supported by partnership with parallel programmatic and training grants, not least of which is the CDLD, and our excellent cores. Please note below that our **DDTP** pre-doctoral training grant is again accepting applications for the coming year. Also, the Advanced Imaging Core is offering an educational seminar on the use of their latest image-analysis software, **Imaris AI**.

All of these very positive metrics help us to make a strong case for successful renewal. As well, your continued robust feedback via our membership and cores surveys helped us to make process improvements and changes in our proposed core line-up to continually improve our support of you. Remember also - when you use a Core, please cite this - and our center - in your manuscript!

Along those lines, please make sure to respond to our Year 5 membership and cores survey that Kyu will send out soon. Also, please submit your abstracts and register for our **5th Annual Digestive Disease Research Center Symposium**, coming on **Friday, April 12th**. We hope to see you there!

We like to hear about your progress! Send us your updates, and/or join our next Science Socials at Fuel (coming soon!)

Sincerely,

Don and Steve

Request for Applications Digestive Disease Training Program MUSC NIH/NIDDK T32

Deadline for application

February 28, 2024

[Click Here for More Information](#)

Applications are now being received for predoctoral fellowships in the NIH/NIDDK T32 **Digestive Disease Training Program (DDTP)**. The goal of the DDTP is to train a cadre of researchers who will drive the future of liver and gastrointestinal (GI)-related biomedical research within three fundamental thematic areas: 1) Inflammation and Fibrosis; 2) Metabolic Disease; and 3) Organ and Tissue Failure. **We will not accept applications with a cancer focus.**

The award includes a stipend of **\$27,144.00 per year, for two years**, but the overall stipend will be \$34,000.00. Mentors will provide the difference in funds. Note ** Federal funds may not be used for stipend supplementation unless specifically authorized under the terms of the program from which funds are derived. The award also includes an allowance of \$1,000 for travel to a national meeting and pays tuition for the trainee.

The application should include the following materials:

- Completed application form (attached)
- MUSC transcript
- NIH biosketch
- Letter from the mentor sponsoring the student for the program and including their evaluation of the student's potential
- One page statement of their interests, academic, and broader scientific goals/interests (ex., communication, education, entrepreneurship, etc.) including a paragraph explaining why they would want to participate in the T32 Digestive Disease Training Program.
- One page summary of the proposed project
- Mentor's biosketch

The deadline for the application is February 28, 2024

For more information, contact CDLD Director [Dr. Stephen Duncan](#).

The 5th Annual MUSC DDRC Retreat & Symposium FRIDAY, APRIL 12, 2024

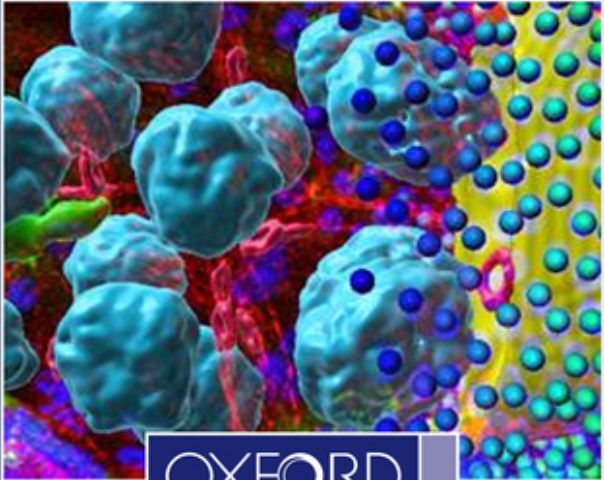
March 8, 2024 (midnight)

Initial Abstract Deadline/Consideration for Platform Presentation

March 22, 2024 (midnight)

Final Abstract Deadline



[Click Here to Register & Submit your Abstract!](#)



Imaris AI Image Analysis

Tomas Santisteban, Ph.D.

Date: February 12 2024
Time: 11am ET



The **Advanced Imaging Core** is offering a training tutorial on using the latest Imaris AI software to optimize your confocal imaging analysis

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 our publications successes 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 Training Award: Kourtidis Lab



Alyssa Risner

PhD pre-doctoral student **Alyssa Risner** in the Kourtidis Laboratory in the Regenerative Medicine and Cell Biology Department was recently awarded an NIDDK F31 fellowship:

"Cadherin complexes recruit PIWIL2 to suppress transposons and maintain the normal epithelial phenotype."

1F31DK138780-01

02/01/2024 - 05/30/2025

\$72,189

CONGRATULATIONS Alyssa!

New Mentoring Award: Don Rockey



Don Rockey, MD

DDRCC Director Don Rockey was recently awarded a grant by the NIDDK to establish a Helping to Accelerate research Potential (HARP) Program for mentoring Underrepresented-in-Medicine (UIM) clinical faculty:

"MUSC Mentoring Program in Digestive & Liver Disease."

1UE5DK137316

01/10/2023 - 06/30/2028

\$161,000 / yr

CONGRATULATIONS Dr. Rockey!

We like to hear about your progress and achievements!

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

Enrichment Activities and Series

DDRCC / CDLD / GI & Hepatology Grand Rounds

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

February 7

Noa Cleveland, MD University of Chicago **IN PERSON**

Novel approaches to imaging in IBD

February 14 Fellows Case Conference

February 28

Les Lenert, MD GI & Hepatology, MUSC

Gastroenterology in seven decades: some highlights and reflections

March 6 : Fellows Case Conference

March 13

Linda Sharp, MD Newcastle University

Epidemiology of GI cancer

March 20

Wajahat Mehal, MD, DPhil Yale Medical School

Establishing a clinical fatty liver disease program

March 27

David E. Cohen, MD, PhD Harvard Medical School

Leveraging energy expenditure in the management of MASLD

DDRCC / CDLD / RMCB Seminar Series

Wednesday, 11 am EST Basic Science Building Rm 611

February 14

Asma Nusrat, MD University of Michigan

Plasticity of the epithelial barrier: insights into junctional signaling events and repair

February 28

Benoit Ladoux, PhD Institut Jacques Monod, CNRS &
Université Paris Cité

Mechanical imprints of cell fate and cell competition

March 6

Andrew Fire, PhD Stanford University School of Medicine

Pioneers in Science - Elsie Taber Lecture: Enduring responses to
change in biological systems

March 13

Ben Stanger, MD, PhD University of Pennsylvania School of
Medicine

TBA

March 20

Wajahat Mehal, MD, DPhil Yale Medical School

The role of STING in regulating HSC activation

March 27

David E. Cohen, MD, PhD Harvard Medical School

Leveraging energy expenditure in the management of MASLD

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](#).

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.

Young LEA, **Nietert PJ**, Stubler R, Kittrell CG, Grimsley G, Lewin DN, **Mehta AS**, Hajar C, Wang K, O'Quinn EC, **Angel PM**, **Wallace K**, **Drake RR**. Utilizing multimodal mass spectrometry imaging for profiling immune cell composition and N-glycosylation across colorectal carcinoma disease progression. *Front Pharmacol.* 2023;14:1337319. PubMed PMID: [38273829](#); PubMed Central PMCID: PMC10808565.

Wallace EN, West CA, McDowell CT, Lu X, Bruner E, **Mehta AS**, Aoki-Kinoshita KF, **Angel PM**, **Drake RR**. An N-glycome tissue atlas of 15 human normal and cancer tissue types determined by MALDI-imaging mass spectrometry. *Sci Rep.* 2024 Jan 4;14(1):489. PubMed PMID: 38177192; PubMed Central PMCID: PMC10766640.

Novotny LA, Evans JG, Guo H, Kappler CS, **Meissner EG**. Interferon lambda receptor-1 isoforms differentially influence gene expression and HBV replication in stem cell-derived hepatocytes. *Antiviral Res.* 2024 Jan;221:105779. PubMed PMID: [38070830](#); NIHMSID:NIHMS1952923.

Guo Y, Tian W, Wang D, Yang L, Wang Z, Wu X, Zhi Y, Zhang K, Wang Y, Li Z, Jiang R, Sun G, Li G, Tian Y, **Wang H**, Kang X, Liu X, Li H. LncHLEF promotes hepatic lipid synthesis through miR-2188-3p/GATA6 axis and encoding peptides and enhances intramuscular fat deposition via exosome. *Int J Biol Macromol.* 2023 Dec 31;253(Pt 5):127061. PubMed PMID: [37751822](#).

Ahmad W, Pishevar N, Cochrane LJ, Reynolds A, Kim J, Korostenskij I, Geiser VL, Carson MD, Warner AJ, Chen P, Yao H, **Alekseyenko A**, **Hathaway-Schrader JD**, **Novince CM**. Antibiotic prophylaxis dysregulates dental implant placement surgery-induced osteoimmune wound healing and attenuates the alveolar bone-implant interface in mice. *J Clin Periodontol.* 2023 Dec;50(12):1670-1684. PubMed PMID: [37667415](#); PubMed Central PMCID: PMC10840745.

Sasso R, Khalifa A, Guimaraes M, **Rockey DC**. Comparison of the Safety of Transjugular and Percutaneous Liver Biopsies. *J Vasc Interv Radiol.* 2023 Dec;34(12):2120-2127.e2. dPubMed PMID: [37625665](#).

Moore JA, **Schreiner AD**, Zhang J, **Mauldin P**, Moran WP, **Koch DG**. Chronic liver disease is not associated with statin prescription in a primary care cohort. *J Investig Med.* 2023 Dec;71(8):830-837. PubMed PMID: [37395332](#); PubMed Central PMCID: PMC10761601.

Bridges MC, Nair-Menon J, Risner A, Jimenez DW, Daulagala AC, Kingsley C, Davis ME, **Kourtidis A**. Actin-dependent recruitment of AGO2 to the zonula adherens. *Mol Biol Cell.* 2023 Dec 1;34(13):ar129. PubMed PMID: [37819702](#).

Rivas A, Pherwani S, Mohamed R, Smith ZL, **Elmunzer BJ**, Forbes N. ERCP-related adverse events: incidence, mechanisms, risk factors, prevention, and management. *Expert Rev Gastroenterol Hepatol.* 2023 Jul-Dec;17(11):1101-1116. PubMed PMID: [37899490](#).

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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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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