Cleveland Clinic

December 2024

Lerner Trainee Newsletter

AND THE REAL PROPERTY AND ADDRESS OF THE PARTY OF THE PAR

INSIDE THIS ISSUE Click to navigate

- 2 <u>Puzzle</u>
- 3 <u>Recent Events</u>
- 6 <u>Upcoming Events</u>
- 9 <u>Meet your Fellow</u>
- 10 Meet your Grad Student
- 11 <u>Recent Accomplishments</u>
- 14 <u>Opportunities</u>
- 18 <u>Monthly feature: CCF</u> Innovations
- 24 Wellness Resources

25 Behind the Scenes

This newsletter is written by members of the Lerner Trainee Association Communications Committee. We welcome your questions and suggestions!

Email <u>LRITraineeAssoc@ccf.org</u> to connect with us. Happy Holidays! Welcome to the December issue of our Lerner Trainee Newsletter! We're here to keep you informed and inspired with important updates and resources to help you succeed in your training! This month, check out our newest section, a science-themed puzzle with a chance to win a prize!

In *Recent Events*, we highlight the 44th Annual Research Day. Thank you to all trainee participants! It is heart-warming to see many researchers & caregivers enjoy their time at recent LRI- and Clinic-wide Halloween and Winter Celebration events. In *Upcoming Events*, we highlight the Cleveland Clinic's Art and Medicine team's Holiday Pop-up Art Therapy Studio event, which runs through the end of January, as well as two special music performances at the main campus.

In the *Meet your* sections, learn about the productive works of Postdoc fellow, Dr. Amanda Daulagala, who is also our LTA Communications co-chair. We are also proud to highlight PhD student, Rupleen Kaur, and learn about her multi-disciplinary work. Be sure to visit our *Recent Accomplishments* section and congratulate your colleagues for their awards, publications, talks, and career milestones. Want to get featured? Check out the *Opportunities* section and start applying (Hint: there is a fellowship program that will bring you to Denmark!)

This month, *CCF Innovations* introduces Dr. Hunter Rogers, a recognized rising star in healthcare innovation. He shares his experience working with multiple innovation offices and inspires everyone to stay creative and collaborative.

Lastly, trainees can find *Wellness Resources* that provide Yoga, Meditation, Fitness, and Culinary Medicine sessions. If you would like to contribute to the newsletter, please reach out to us at LRITraineeAssoc@ccf.org.



Join our LinkedIn Group

The Lerner Postdoc and Grad Student Alumni Network on LinkedIn is a group of current and former postdoctoral fellows, research scholars and graduate students at Cleveland Clinic Lerner Research Institute. We share opportunities for career development, networking and highlighting our scientific achievements. We also post reminders about upcoming events, so be sure to turn on notifications! <u>Request to join here.</u>

LTA Newsletter Puzzle

How to play:

Fill in the crossword below and submit a picture to this <u>link</u> or by scanning the QR Code.

Rules:

- Crosswords must be filled in completely and correctly to enter the raffle.
- Only one entry per person into raffle.
- One raffle winner will be selected at random and notified via CCF email to pick up prize.

Down:

- 1. This human internal organ produces renin
- 3. The only organs that can float in water
- 5. This lung is bigger than the other
- 6. This makes up around 7-8% of the total body weight
- This organ can only survive for up to minutes without oxygen depending upon the severity

Across:

- 2. The topic of this crossword puzzle
- 3. The only internal organ to regenerate
- 4. This organ can survive for ~11 days without sleep
- 8. This organ produces a new layer of mucous for every two weeks









Recent Events

2024 Lerner Halloween Celebration

Lerner researchers gathered for an early LRI-wide Halloween celebration on Oct 15, enjoying a funfilled event with creative costumes, good company, and festive treats. The costumes showcased the imagination and playful spirit of our community. Check out the photos to see some of the fantastic outfits from the celebration! Take a look at the photos to relive the festivities and marvel at the incredible costumes our researchers dreamed up. Congratulations to this year's winners! We can't wait to see what you come up with next year!



Photo courtesy of LRI Communications Office

Recent Events

44th Annual Cleveland Clinic Research Day

On October 30, Lerner trainees participated in the 44th Annual Research Day, where they showcased their fascinating work and received valuable feedback from LRI faculty and peer scientists. If you missed Research Day or our speakers' talk, you can watch a recording <u>here</u>.



Congratulations to all the winners and finalists of the F. Merlin Bumpus Junior Investigator Award. Named after F. Merlin Bumpus, PhD, who served as Chair of the Institute from 1966-1985, the award highlights excellence in research by graduate and postdoctoral trainees in both basic (left photo) and clinical (right photo) research.



Photo courtesy of LRI Communications Office

Recent Events

2024 Winter Celebrations

We're excited to highlight the recent Cleveland Clinic-wide Winter Celebration at the Intercontinental Hotel and the Cardiovascular & Metabolic Sciences Department's Winter Celebration at LRI. These festive events brought together caregivers and researchers to celebrate the holiday season in a joyful spirit. With delicious food, refreshing drinks, and lively music, researchers—especially trainees—came together to reflect on a year filled with new experiences, learning, and accomplishments. As we look back on the successes and challenges of the past year, we eagerly anticipate a new year filled with positivity and exciting opportunities.





Upcoming Events

Holiday Pop-Up Art Therapy Studio



Join the Arts and Medicine team as we offer special projects each week during the winter holidays, as well as Open Art Studio time.

Monday – Friday* 10 a.m. – 2 p.m.

Miller (J) Building, across from Panera

Patients, families, visitors, and caregivers welcome!

Special Projects

-hearen verales		So Bretty personal the Local	
Nov. 18-22	Gratitude banners	Dec. 30, Jan. 2 & 3 New Year's memory jars	
Nov. 25-27	Seasonal wreaths	2025	
Dec. 2-6	Relaxation bath salts	Jan. 6-10	Beaded spiral sun catchers
Dec. 9-13	Ornaments	Jan. 13-17	Snow globes
Dec. 16-20	Birdhouses	Jan. 20- 24	Watercolor resist lanterns
Dec. 23, 26, 27	Winter landscape painting	Jan. 27-31	Marbled mini bowls

÷

Open Art Studio Participants do not need to be artists to participate and will work together with the art therapist with a variety of interventions and available media. For more information, please contact Tammy Shella, PhD, ATR-BC, LPAT Art Therapy Manager at **216.444.4792** or **Shellat@ccf.org**.

*Hours subject to change.

Upcoming Events

Enjoy the holidays with music!

Enjoy the following Special performances on the Main Campus

December 20th - 12:00-1:00 p.m. Miller Pavilion Lobby (J Building) Special Event: Marshall Griffith - Piano & Virginia Crabtree – Flute

December 23rd - 12:00-1:00 p.m. Miller Pavilion Lobby (J Building) Special Event: OPUS 216 Holiday Trio



Upcoming Events

Please mark your calendars for **Tuesday, January 21st at 4PM.** Jeremy Schifeling, co-founder of <u>The Job Insiders</u>, will lead an interactive online workshop on advanced LinkedIn and AI techniques for career exploration, CV development, and interview prep.



ONLINE WORKSHOP Career Exploration with LinkedIn and ChatGPT

Jan 21st 4PM – 5PM MS Teams



Speaker:

Jeremy Schifeling Co-founder of the Job Insiders and <u>best-selling</u> author Register to attend via MS Teams at

https://forms.office.com/r/ 8diiib3ExQ



Jeremy Schifeling has devoted his career to helping others succeed in theirs. He has led education marketing at LinkedIn, published the best-selling LinkedIn book on Amazon, and produced the most-viewed video in LinkedIn's history. He now partners with over 250 top universities to train their students, alumni, and staff on advanced LinkedIn and AI techniques for career exploration, CV development, and interview prep.

All postdocs, research scholars, and PhD students welcome!

Alert! **T** Extra Opportunity: RETC is covering the cost for all of you to access Jeremy's Complete Career Masterclass Collection on LinkedIn + ChatGPT. Claim your free access to the course collection by registering here before July 1st, 2025, for lifetime access!



Meet your Fellow Amanda Daulagala PhD

Where are you from?

I'm from Sri Lanka

What is your educational background?

I completed my B.Sc in Biochemistry in SUNY Oswego where I participated in several research projects. One project was investigating the interaction between Acetobacter and Lactobacillus in host-accompanied environment under the guidance of Dr. Peter D. Newell. In another project, I focused on developing novel CO-releasing molecules that can deliver CO with low toxicity in clinical environments under the supervision of Dr. Nin N. Dingra. After graduation, I worked on two different research projects. First, with the help of Dr. Kestutis Bendinskas, I measured biomarkers such as Interleukin 6 (IL-6), TNF Alpha, Intercellular Adhesion Molecule 1 (sICAM-1), and C-Reactive Protein (CRP) in human samples to understand the effects of vacation on stress levels. In addition, with Dr. Webe Kadima. I studied the inhibition of phosphoenolpyruvate carboxykinase (PEPCK) by Musanga cecropioides, a tree in Kongo to develop a plant-based therapy with minimal side effects for type 2 diabetes.

What did your graduate research focus on?

Our lab focused on cell-cell adhesion complexes which regulate miRNAs to suppress oncogene expression and tumorigenesis. I was able to successfully identify a novel mechano-sensitive mechanism tethering ECM remodeling with cell behavior, through AJ-associated RNAi machinery. This mechanism creates a vicious feedback loop which contributes to a fibrotic phenotype in mice colon epithelium.

How did you decide to pursue your current postdoc at Cleveland Clinic?

I met my current mentor at a seminar, and I liked his research.

Which lab do you work in and for how long have you been a part of this team?

I work with Dr. Andrei Ivanov at the Department of Inflammation and Immunity, It's been a year since I joined the lab.

What is your current research focus?

Our lab focuses on the epithelial barrier integrity in the small and the large intestines. My project specifically looks at the PHACTR family of proteins and how they regulate the intestinal epithelial barrier via the actin-cytoskeleton in Inflammatory Bowel Disease (IBD).

What do you like to do outside of the laboratory?

I like to read books, listen to music and paint. And of course, I like being a part of the LTA association!

Meet your Graduate Student

Rupleen Kaur



Where are you from?

I am from Ludhiana, India. I moved to the US with my sister for higher education.

What is your educational background?

After arriving in the U.S., I attended a community college - American River College in Sacramento, California - for two years before transferring to the University of California-Davis and earning a bachelor's degree in Genetics & Genomics. After graduation, I joined an intramural research training fellowship program at the National Institutes of Health. In 2020, I started the Medical Scientist Training Program (MD-PhD) here at Case Western Reserve University. I am currently in the Systems Biology and Bioinformatics (SYBB) program.

Which lab do you work in and for how long have you been a part of this team?

I work in Dr. Andrew Dhawan's lab at the Cleveland Clinic in the Cardiovascular and Metabolic Sciences (CVMS) Department at the Lerner Research Institute (LRI). I joined the lab in August 2023. Our lab integrates data science, genomics, mathematics, wet lab biology, and patient registry studies to identify and validate biomarkers for neurogenetic and neurooncologic diseases, like glioblastoma. Our goal is to enhance both the quantity and quality of life for patients through biomarker-driven approaches in neurology.

How did you decide on the Cleveland Clinic?

I have always prioritized working in environments that foster interdisciplinary research. The Cleveland

Clinic, with its strong emphasis on translational research and patient-centered care, offered the ideal setting for my training as a physicianscientist. Yet, the primary reason was my lab and the supportive, collaborative environment created by my peers. I am fortunate to work alongside peers and mentors who not only inspire me to work harder and better but also make the work both exciting and intellectually stimulating!

What is your current research focus?

My thesis project focuses on understanding the mechanisms driving the growth and therapy outcomes drivina breast cancer brain metastases. Specifically, I study how breast cancer cells interact with resident brain establish and promote astrocytes to combination metastasis. use а of bioinformatics, mathematical modeling, and experimental approaches to investigate these interactions. By integrating these different approaches. I aim to identify novel biomarkers and therapeutic targets that could improve the diagnosis and treatment of patients with breast cancer brain metastases.

What do you like to do outside of the work?

Outside of work, I enjoy spending quality time with my family and friends, exploring new Thai and Indian restaurants, and going on long walks or hikes. I also love attending live concerts in and around the Cleveland area.

Alumni Association Postdoctoral TravelAward

Each year, the Cleveland Clinic Alumni Association provides funding for the professional development of postdoctoral research fellows at the Lerner Research Institute. Using these funds, the Research Education and Training Center (RETC) established a travel award to be used by Lerner postdocs to attend a nationally recognized scientific conference and present their research. We are proud to announce the following 2024 Cycle 2 winners. **Congratulations to the winners and thank you to the Alumni Association for sponsoring this effort!**

Congratulations to our 2024 Cycle 2 Winners!



Rebecca Anderson Department: Cancer Biology PI: Seth Corey

Meeting: Zebrafish Disease Models Society



Vipin Shankar Chelakkot Govindalayathil Department: Cancer Biology PI: Joshua Arbesman

Meeting: The 21st International Congress of The Society for Melanoma Research



Penglei Gao Department: QHS PI: Xiaofeng Wang

Meeting: Conference on Empirical Methods in Natural Language Processing



Dia Roy, PhD Department: THOR Pl: Lily Wang

Meeting: Society for Immunotherapy of Cancer



Daniel Vail, PhD Department: CITI PI: Babal Jha

Meeting: American Society of Hematology

We love celebrating trainee accomplishments! To submit your own news or to recognize someone else, email **LRITraineeAssoc@ccf.org**



The Mary B Stark Travel Award for Graduate Students

The LRI Research Education and Training Center (RETC), together with Dr. George R Stark would like to thank all of you who submitted materials for this year's Mary B Stark Travel Award for Graduate Students. This award was made possible by the generous donations of friends and colleagues of both Mary and Dr. George Stark in honor of Mary's memory and her unwavering dedication to Cleveland Clinic, especially to students like yourself.

Congratulations to our 2024 Cycle 2 Winners!



Kaitlyn Daff PI: Gail Cresci Meeting: ASPEN 2024 Nutrition Science and Practice Conference



Kala Mahen Pl: J. Mark Brown Meeting: The 49th Annual Meeting of the Japanese Society for Investigative Dermatology



Layan Hamidi Nia Pl: Jan Claesen Meeting: 2024 Biomedical Engineering Society Annual Meeting



Mark Orland Pl: Jaroslaw Maciejewski Meeting: American Society of Hematology Meeting and Exposition



Kartik Lakhotiya Pl: Jaroslaw Maciejewski Meeting: American Society of Hematology Meeting and Exposition



Nam Than PI: Hyun Jung Kim Meeting: FASEB Science Research Conference



The winners were invited to a celebratory lunch with Dr. Stark at the North Coast Café in the InterContinental Hotel.

Congratulations to Dr. Qiu from the Cheng Lab in the Genomic Medicine Institute for a series of accomplishments!

The recent article by Dr. Yunguang Qiu titled "A structurally informed human protein–protein interactome reveals proteome-wide perturbations caused by disease mutations" was published in *Nature Biotechnology*. https://doi.org/10.1038/s41587-024-02428-4





He also won the 2024 Best Postdoctoral Poster Award (Nutrition, Metabolism and Dementia PIA) at the <u>Alzheimer's Association International Conference (AAIC)</u> 2024 in Philadelphia, Pennsylvania. The title of the talk was "Systematic characterization of multi-omics landscape between gut microbial metabolites and GPCRome in Alzheimer's disease".



Congratulations to Dr. Dutra from the Wilson Lab in the Cole Eye Institute!

The recent article by Dr. Barbara Dutra titled "Topical Losartan Dosage Response and Corneal Toxicity at Higher Concentrations" was published in *Cornea*.

https://doi.org/10.1097/ICO.00000000003725

Congratulations to Dr. Dutta from the Brown Lab in the Department of Cancer Biology!

Dr. Sumita Dutta was selected to give a talk at the <u>2024 American Heart</u> <u>Association's Early Innovators Spotlight Basic Science</u> in Chicago, Illinois. The title of the talk was "Gut microbial N-acyl serinols regulate obesity-driven heart failure with preserved ejection fraction by GPR119 signaling".



We love celebrating trainee accomplishments! To submit your own news or to recognize someone else, email

Congratulations to Dr. Shrestha and Dr. Pant from the Vachharajani Lab in the Department of Inflammation and Immunity!

The recent article by Dr. Deepmala Shrestha (left) and Dr. Bishnu Datt Pant (right) titled "Immunometabolic Chaos in Septic Shock" was published in *Journal of Leukocyte Biology*. <u>https://doi.org/10.1093/jleuko/giae211</u>



Additionally, Dr. Pant won a Travel award for the 2024 Alcohol and Immunology Research Interest Group (AIRIG) conference in Chicago, IL. The title of the talk was "Mitoquinol Improves Phagocytosis and Glycolysis in Ethanol-Exposed Macrophages via HIF-1α-PFKP Axis."

Opportunities

Cleveland Clinic – Denmark: Quantum-Al Biomedical Frontiers Postdoctoral Fellowship Programme 2025

Call for application- NOW OPEN! Deadline January 29, 2025, 8:00 AM EST

A unique opportunity for LRI postdoctoral fellows to spend up to three years at one of the Danish research institutions (and, similarly, will bring postdocs from Denmark to labs at LRI), allowing both groups to gain cutting-edge skills and develop expertise in the transformative fields of quantum and AI.

Find more detailed information, guidelines, and applications in the link below: https://novonordiskfonden.dk/grant/cleveland-clinic-denmark-quantum-aibiomedical-frontiers-fellowship-programme

Kindly direct all questions about this program to Dr. Priya Putta at puttap@ccf.org.

We love celebrating trainee accomplishments! To submit your own news or to recognize someone else, email

Opportunities

Professional Development

- Learn how to advance your research with the Center for Computational Life Sciences (CCLS). Whether you're looking to expand your research through biospecimens or high-performance computing, CCLS offers a variety of opportunities to learn and collaborate across the enterprise. With state-of-the-art resources and facilities including the Cleveland Clinic BioRepository and the Discovery Accelerator, we can advance our research like never before. Find more information, including a video about the progress made in CCLS programs, <u>here</u>.
 - Lara Jehi, MD, Director of CCLS and Chief Research Information Officer, recently shared more about how clinicians and researchers can get involved with the CCLS's programs. Topics covered in her webinar included:
 - How institutes across CCF are collaborating on Discovery Accelerator projects
 - Funding opportunities as an entry point to implementing high-performance computing in research projects
 - Bio-R growth and sample availability, as well as new tools to search biospecimens
 - How Bio-R co-enrollment can support future studies
 - Discover the progress each program has made and all the ways you can get involved in the video <u>here</u>.
 - For more questions, feel free to contact <u>ccls@ccf.org</u> or visit these pages:
 - BioRepository intranet
 - DA internet/website
 - CCLS intranet
- Complete Career Masterclass Collection: RETC is covering the cost for all of you to access Jeremy's Complete Career Masterclass Collection on LinkedIn + ChatGPT (see Upcoming Events, page 8). Claim your free access to the course collection by registering here before July 1st, 2025, for lifetime access!

We love celebrating trainee accomplishments! To submit your own news or to recognize someone else, email

Opportunities

Funding, Awards, and Grant Writing

- The POSTDOCKet | A Personal Guide to Applying for the NIH K99/R00 by Debosmita Sardar, PhD: The NIH's K99/R00 Pathway to Independence Award provides up to five years of grant support in two phases two years of mentored postdoctoral training (K99) and additional funding for up to three years of independent research support (R00). This prestigious and highly competitive award can fund up to approximately 1 million dollars and is the only NIH funding available for international postdocs. This article aims to discuss the overlooked aspects of the K99/R00 award in two parts. Part I will focus on the period before and during the preparation of the application; while Part II will delve into what happens after the submission and the potential of resubmission.
- National Postdoc Association | SmartSkills: SmartSkills is a free, virtual course for postdocs who are members of the NPA. Monthly classes are taught by experts and focus on building skills critical to career and personal success. Check out all SmartSkills offerings <u>here</u>.
- **CCF Internal Opportunities:** Explore various funding and collaboration opportunities through the CCF Office of Research Development. Be sure to visit the Competition Space on <u>InfoReady</u> for the latest updates on internal opportunities tailored to support your research goals and levels.

Career and Jobs

 Cancer Pathobiology Tenure-track Assistant Professor | University of Pennsylvania Perelman School of Medicine: The Children's Hospital of Philadelphia is seeking an outstanding individual who will establish and maintain an independent, extramurally funded research program at the intersection of some of the most dynamic areas in experimental oncology, including but not limited to: functional cancer genomics and transcriptomics | genome editing | metabolism and proteomics | chemical biology | precision medicine | cancer immunotherapy. Find more information and apply <u>here</u>.

> We love celebrating trainee accomplishments! To submit your own news or to recognize someone else, email

Opportunities

Career and Jobs

- Assistant, Associate, or Full Project Scientist | UC San Diego School of Medicine Department of Cellular & Molecular Medicine: Seeking candidates who will be responsible for performing studies and experiments. In addition, the successful candidates will analyze and prepare presentations and reports, summarizing results from experiments and research data. The selected candidates will teach and mentor postdocs and students in the laboratory. Find more information here.
- Tenure-track Assistant/Associate Professor | University of Massachusetts Chan Medical School: The Division of Cardiovascular Medicine is seeking promising scientists to establish and lead an independent research program within a dynamic academic research and clinical environment. We are particularly interested in candidates with potential in basic/translational cardiovascular research. Our division has a strong tradition of excellence in research, education, and clinical care, and we are eager to support the next generation of investigators in this critical field. Learn more and apply <u>here</u>.
- Education Institute Positions: The EI has announced new positions have been posted to support our new organizational structure, including several leadership and program management positions: Program Manager, GME (I, II, IV): Requisition – 282048 – apply <u>here</u>.
- Spring CSU Undergraduate Course | Cell and Tissue Biology: part-time teaching opportunity for senior postdoctoral fellows and research associates from January to May of 2025. The expectations are that the candidate will have a PhD in biological sciences or a related field, possess excellent communication skills, and be willing to spend 3h or so every week to prepare and teach the course. Grading will be minimal, and the standard stipend for part-time instruction at CSU is around \$5K per course. Inquiries should be sent to Dr. Chandra Kothapalli at c.kothapalli@csuohio.edu.

We love celebrating trainee accomplishments! To submit your own news or to recognize someone else, email



CCF Innovations

<u>Cleveland Clinic Innovations (CCI)</u> is the commercialization arm and tech transfer office of the Cleveland Clinic.

Hello LRI Trainees! For this issue, we wanted to introduce and highlight CCI's Hunter Rogers, PhD. Hunter is a Principal on the Innovations NewCompany/Ventures team specializing in Therapeutics and Diagnostics. He received his PhD at Northwestern University and worked in a reproductive science lab where he developed a model of the female reproductive tract. Fun fact, Hunter was recently recognized by Becker's as a <u>Rising Star: One of the Top Healthcare Leaders</u> <u>Under 40</u> for 2024! The below Q&A dives deeper into the journey that led him to Cleveland Clinic Innovations.

As always, if you would like to connect on anything innovations related, please reach out to your LRI Engagement Partners (Morgan Carter, PhD and Matt Koletsky, MS as leads for Therapeutics and Diagnostics, <u>Nicole Byram</u> as lead for Medical Device, and <u>Michelle Leung</u> as lead for Digital Health). We are here for any questions and/or to discuss the innovations process or ideas you may have. Also please check our <u>Inventor Portal</u>. This page also has lots of information and resources for you.



Q&A with Hunter Rogers, PhD

Principal CCI NewCompany/Ventures team – Therapeutics and Diagnostics

What brought you to Cleveland Clinic and how long have you been here?

I've been with Cleveland Clinic for about a year and a half, and for the past six months, I've been part of the Ventures office. Before that, I worked in the Investment office, where I focused on managing the broader investment portfolio that supports Cleveland Clinic's clinical operations through its endowment. My role involved conducting macroeconomic research, although my background is in biomedical engineering and life sciences.

Transitioning to the Ventures team has been a great opportunity for me to align my work with my passions. While I valued my previous role, I was eager for a position that allowed me to engage more directly with people in the community.

CCF Innovations



Cleveland Clinic is an incredible place to be, particularly in the healthcare investment space, and I'm proud to contribute to its mission. Initially, I joined the Investment office to help drive our goals and ensure sound investments for the future of Cleveland Clinic. Now, in the Ventures office, I'm excited to support our scientists and clinicians as they develop innovative technologies, giving them the best chance to succeed in the real world.

What made you interested in working in Innovations?

My background is primarily in biomedical engineering and life sciences, and I completed my PhD at Northwestern University, where I truly developed my skills in the innovation space. I have always been passionate about projects that are easily translatable into real-world applications. During my doctoral studies, I became particularly interested in the tissue-on-a-chip field, which focuses on creating advanced in vitro models for experiments.

These models not only capture the complexities of biological systems, going beyond single-cell analyses but also aim to reduce the reliance on animal testing. By integrating multiple tissues or organs into a single system, we can obtain more accurate data and potentially use these models as substitutes for in vivo experiments.

At Northwestern, I worked in a reproductive science lab where we developed a model of the female reproductive tract. This work served both basic biology and disease modeling purposes, such as for polycystic ovary syndrome (PCOS), facilitating drug discovery and testing. This technology has significant translational potential.

I also collaborated closely with Northwestern's Innovation Office, navigating their Invention Disclosure Form (IDF) process. Having experienced both the scientist's and the investor's perspectives, I have gained valuable insights into the challenges faced on both sides. This understanding allows me to empathize with principal investigators (PIs) and scientists, particularly regarding their timelines and the intricacies of translating their technologies into market-ready products.

Additionally, my experience in the public markets and biotech sectors has equipped me with knowledge about what investors seek in companies poised for an exit, whether through initial public offerings (IPOs) or acquisitions. I am familiar with the pathways leading to a successful public company, which positions me well to guide emerging ventures from their earliest stages to potential exits. Understanding this spectrum enables me to effectively support and mentor companies as they navigate the complexities of innovation and commercialization.

CCF Innovations

What is your role within Cleveland Clinic Innovations?

As a Principal on the team, I lead our initiatives in the life sciences sector of our portfolio, focusing primarily on therapeutics and diagnostics. My time is divided between supporting our current portfolio companies and exploring new opportunities.

For our existing companies, I assist with various aspects, including fundraising efforts, not only internally but also by identifying potential venture capital investors. I provide strategic insights as these companies develop their research and development (R&D) roadmaps, helping them navigate the complexities of asset development. This includes determining which diseases to target and outlining the preclinical development pathways for those indications, along with offering management and financial guidance.

On the other side of my role, I evaluate potential new ventures, primarily technologies emerging from Cleveland Clinic, whether from clinicians or PIs at the Lerner Research Institute (LRI). We receive hundreds of Invention Disclosure Form (IDF) proposals each year, and while many are promising, only a select few are viable as standalone companies. My responsibility is to assess which ideas have the potential to form independent companies and to identify those that may be better suited for licensing or partnerships.

Additionally, I explore opportunities to combine complementary ideas to create viable companies. Building a strong team around these ventures is essential, so I work to bring in entrepreneurs-inresidence and external consultants. Collaborating closely with PIs and clinicians, we strive to refine our vision for each company, ensuring that we incorporate valuable feedback on their therapies and how best to translate their technologies into the marketplace.

What do you find inspiring about your role?

I find it inspiring to witness the diverse range of work being done by our ventures at Cleveland Clinic. The scope is truly broad, reflecting the innovative spirit of our clinicians and PIs. Many of our clinicians focus on device innovations that enhance procedures based on their extensive experience. Having performed thousands of hours of similar operations, they often develop simple yet effective solutions to streamline their work.

On the other hand, our PIs at the Lerner Research Institute are advancing the development of drugs and devices, identifying novel targets, and generating groundbreaking modalities. The breadth of work emerging in Cleveland Clinic, particularly in the life sciences sector, is genuinely remarkable.

CCF Innovations

What's particularly exciting is the strong commitment to fostering innovation within Cleveland Clinic, evident in initiatives like the Innovation District, the Cleveland Clinic Center for Therapeutic Development, and the new Biologic Discovery Center. These developments signify a robust investment in broadening and catalyzing innovation, ensuring that our pipeline of new ideas will grow exponentially over the next five to 10 years. This presents an exciting opportunity for me in my current role, and I'm eager to be a part of this transformative journey.

What does it mean to you to receive the Becker's Healthcare 42 Rising Stars Under 40 award?

I consider it a tremendous honor to be recognized in this way. Looking at the list of 41 other individuals, I'm struck by how accomplished they all are. Being included among such esteemed peers is truly humbling, and I am deeply grateful to Becker's for selecting me as part of this distinguished group.

The breadth of positions represented is impressive, featuring C-suite leaders from healthcare systems across the country, including Chief Marketing Officers (CMOs) and Chief Executive Officers (CEOs). Being included in this company is not only exciting but also reflects the strength of Cleveland Clinic, which undoubtedly carries significant weight in the industry. I believe my affiliation with Cleveland Clinic has played a crucial role in this recognition, and I am proud to be part of such a remarkable organization.

What does innovation mean to you?

At its core, I believe innovation is fundamentally about problem-solving. It involves identifying an issue and developing a solution, which can range from simple fixes to more intricate inventions. While some of the best innovations are remarkably straightforward, the complexities of human biology often lead to more sophisticated solutions, especially in the life sciences.

Interestingly, even in these complex scenarios, you can find that simple approaches or minor adjustments to existing technologies can unlock new possibilities for treating diseases previously thought untreatable. So, in essence, I see innovation as a blend of creativity and problem-solving, a perspective shaped by my engineering background. Engineers are trained to identify challenges and devise effective solutions, and I apply that same mindset in the realm of life sciences.



CCF Innovations

Is there a particular technology that you are excited about?

One of the projects I've been focused on since my first week here involves developing therapeutics that target the complement cascade. This initiative originates from a PI at LRI, and from the moment I was introduced to the assets, I knew this was a path I wanted to pursue. It's a unique opportunity, particularly given the depth of expertise and the impressive quality and quantity of assets being generated in the lab.

I was genuinely excited from the start, and now we're making significant progress. I believe we're approaching a point where we might be able to establish a new company centered around these assets in the near future. This is what truly excites me about our work!

Was there anything that changed about your thoughts on innovation after recently becoming a father?

I feel like I'm still in the early stages of fatherhood, but it definitely shifts your perspective. It makes you think more about the future and not just about the innovations that will benefit my wife, my parents, and my siblings, but also about the technologies that will shape my son's generation and beyond. It really extends your time horizon. Instead of just considering the next 20 or 30 years, you start to think about what will impact the next 80 years.

What publications or people within the healthcare innovations industry do you follow?

Having been involved in the public side of biotech, I've learned that it's essential to stay connected with all facets of the industry. Over time, I've built a diverse network of contacts and outlets that I truly enjoy following. One standout is Brad Loncar, who recently launched a comprehensive media platform called Biotech TV. He's incredibly knowledgeable and well-connected, with a strong background in biotech that spans both public and private sectors.

Brad and his team do an excellent job of covering various aspects of the biotech and healthcare markets, from late-stage clinical trials to early-stage venture capital innovations. I look forward to tuning into his Biotech TV episodes every Thursday. They consistently offer valuable insights.

Are there any trends that you're following closely within the healthcare innovation space?

One area I'm particularly interested in is the glucagon-like peptide-1 (GLP-1) space. It's fascinating to see how it's evolving. Currently, there are two main assets on the market, but given projections for the market's growth, I'm curious about how many options we might see in the future. Will it remain limited to those two, or could we eventually have a diverse range of 10 to 20 alternatives?





Moreover, as more innovative approaches beyond GLP-1 enter clinical trials, I wonder if we'll discover therapies that are not only more effective for obesity but also impactful for other diseases. The breadth of their potential effects will be intriguing to follow.

Another significant trend is in cell therapies for autoimmune diseases. These therapies have shown promise in treating liquid tumors, and there's growing interest in applying them to solid tumors and autoimmune conditions like lupus. I believe we'll see some major clinical developments in this area over the next two to five years.

What advice would you give to someone interested in inventing who may be intimidated by the process?

Having gone through this process myself, my top piece of advice is to avoid going through it alone if you can help it. In academia, it's common for us to feel like the experts in our specific fields, leading us to believe that we don't need input from others. However, I've learned that this isn't always the case. While you may be the foremost authority in your particular area, there are many other factors to consider when developing a new tool or therapy, beyond just the biological rationale.

Bringing in diverse perspectives can be invaluable. Whether it's feedback on the biological aspects or insights from the business side, understanding the market opportunity for your innovation is crucial. Some inventions might be impressive in a lab or operating room but lack broader market potential.

Before investing significant time and effort, it's essential to gauge whether your idea can translate into a product that serves a wider audience. Seeking feedback early and often is a key strategy that can help guide your efforts effectively.

Wellness Resources





Daily Wellness Tools for YOU Program

Weekly, live and virtual. Ongoing self-help support.

Meditation Monday 12:15 – 12:45 pm Fitness Friday 10:00 - 10:30 am

Yoga - Therapeutic Chair 12:15 - 12:45 pm Tuesday - Level 1 Wednesday - Level 2 Thursday - Level 3 Culinary Medicine/Nutrition Friday 12:15 - 12:45 pm two times per month (see event page for dates)

All sessions will be held via the Webex platform, registration is required at: clevelandclinic.org/CILMevents

Join in on live virtual Yoga, Mediation, Fitness and Culinary Medicine sessions. These are available for free to all caregivers. All sessions will be held via the Webex platform, registration is required at:

http://clevelandclinic.org/CILMevents

Graduate Students are welcome to join!

Well-Being, Self-Care and Emotional Support for Caregivers

Please note: A connection to the Cleveland Clinic network is required to access many of these resources.

Caregiver Experience Wellness Portal: disconnect, unwind or say thank you virtually

Caring for Caregivers: confidential services that preserve, restore and enhance wellbeing of our caregivers. Available at 1-800-989-8820 (including new Boost telephone appointment).

Cleveland Clinic Office of Caregiver Experience on Facebook and Instagram.

Connect Today/Learner Connect: resiliency resources to help you manage complex, changing times (virtual meetings, change and stress management, and communication)

Occupational Health: If you have further questions about COVID-19 please contact the COVID-19 Caregiver Hotline at 216-445-8246.

OneClick to Well-Being: well-being information and resources for staff

Spiritual Care and Healing Services:

information for the religious and spiritual needs of CCF patients, their families and loved ones, and Cleveland Clinic caregivers. (216) 444-2518

CCPD Victim Advocacy: resource to help educate and support the CCF community on domestic violence. Email the committee at: dvcommittee@ccf.org

Behind the Scenes

This newsletter is written by the Communications teams of the Lerner Trainee Association Leadership Council and fellow trainees. We welcome your questions and suggestions!

Email <u>LRITraineeAssoc@ccf.org</u> to connect with us.

LTA Communications Team

Jason Ross, Nam Than, William (BJ) Massey, Swapnil Dey, Susan Afolabi, Julia Myers, Lavanya Jain



Lerner Trainee Association Leadership Council

Executive Board Co-Presidents: Jia Liu, Hope Zehr Coordinator: Molly Guthrie Treasurer: Noah Dubasik Advisors: Edward Carson, Lavanya Jain, Kelsey Bohn

Career Development and Resources Co-Chairs: Ujjwal Dahiya Members: Pooneh Koochaki, Mary Vincent Advisor: Sumit Bhutada

Mentorship/Advocacy

Co-Chairs: Kavya Vipparthi, Amira Salim, Andras Ponti Members: Omer Onur **Communications** Co-Chair: Nam Than Members: William (BJ) Massey, Swapnil Dey, Susan Afolabi, Julia Myers

Social/Outreach

Co-Chairs: Daniela Duarte Bateman, Kristen Kay Members: Zaida Laventure, Naoko Uno, Mary Jo Talley, Maximilian Strobl, Rachel Hohe, Lavanya Jain Instagram: ClevelandPetriDish