With the summer coming to an end, we are eager to resume our monthly newsletter! Moving forward, the LPDA and LGSA will be collaborating to provide one newsletter featuring trainees at both the graduate student and postdoc level.

This month we feature Lerner alumna Dr. Anabelle Visperas, fellow Dr. Joseph Fogerty, and graduate student Tyler Alban.

We also provide recaps of recent LEADERS seminars you may have missed, an update on the success of the LPDA’s community outreach event to collect donations of school supplies, and more information about the activities planned for the National Postdoc Appreciation Week!

Don’t forget to submit your accomplishments so they can be featured in our newsletter and, as always, stay active on our LinkedIn group.
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Interview with a Lerner Alumna - Dr. Anabelle Visperas

"Always be networking and if someone is willing to help, take them up on the offer. Who knows what doors will open because of it?"

- Dr. Anabelle Visperas

**In which lab were you at Lerner? How long ago?**
I completed my PhD in Molecular Medicine with Dr. Booki Min about 4 years ago.

**What did you work on at Lerner?**
I worked on CD4 T cell differentiation in the intestines under steady state and inflammatory conditions. I also studied novel functions by which γδ T cells can limit the generation of inducible regulatory T cells.

**Where are you now, and what do you work on?**
I have been working at Cleveland Clinic for the last three years as a Research Coordinator in Orthopedic Surgery. I manage clinical research studies and run the basic research program looking to develop a clinically relevant rabbit model of periprosthetic joint infection after total knee replacement. We plan to use this model to test different local treatment modalities.

**How did your time at Lerner prepare you for your current role?**
Being part of the Molecular Medicine PhD Program, we had a clinical component to our curriculum. During this time, I was actively involved in investigator-initiated clinical research studies with the Digestive Disease Institute which gave me experience in clinical research. Also, having previously worked in the LRI, I had the contacts and experience to start up the basic research part in our department.

**Is there something you particularly miss from your time at Lerner?**
The helpfulness of everyone in basic research. Everyone is always willing to help or get you in contact with someone who could help you. I also miss the camaraderie on the 3rd floor of NB. We had quite a few graduate students on the floor making our time here more enjoyable.

**How was the transition to your current role?**
There was a large learning curve going from basic science to clinical research, but definitely manageable when you can ask for help from others on your team. There are a lot more regulatory hoops to jump through and I had to learn a completely different field at the same time. Nevertheless, the transition back to basic research within Orthopedics has been an easier transition other than working with a different animal model.

**What is your favorite part of your current job?**
Since it is a completely new field, I’m constantly learning and the surgeons I work with are extremely helpful. They are always willing to teach me just for my own knowledge since I am not a surgeon.

**In one sentence, what advice would you give current Lerner postdocs and graduate students?**
Always be networking and if someone is willing to help, take them up on the offer. Who knows what doors will open because of it?
Dr. Joseph Fogerty grew up near Milwaukee, Wisconsin where he attended Carroll University, a small liberal arts school majoring in Biology. After graduating, he started working with Dr. Joseph Besharse at the Medical College of Wisconsin where he started as a technician and rose through the ranks over 7 years into a lab manager position. He eventually decided to enter graduate school working with Dr. Besharse, where he serendipitously isolated a line of mice from one of their colonies that had a dramatic retinal degeneration phenotype, which he discovered was due to a mutation in the gene *Mfrp*. The mice are very similar to humans with advanced Age-Related Macular Degeneration. He showed that the innate immune response is activated early in the course of the disease in these animals, with peripheral macrophages invading what is normally an immune-privileged space. The involvement of the immune system in this way is being recognized more and more as a central theme in cases of retinal disease and injury, and it’s something that he continues to be interested in studying. Dr. Fogerty was involved in a lot of different projects over the 13 years that he worked with Dr. Besharse. One of these projects was studying the role of dynein- and kinesin-based ciliary trafficking in the rod and cone cells of the retina. Dr. Brian Perkins, who at that time was at Texas A&M, collaborated with the Besharse lab on that project but moved to Cleveland Clinic about the same time that Dr. Fogerty graduated. Moving to Cleveland and working with him was a great opportunity to stay involved in the retina field and learn from Dr. Perkins’s expertise in zebrafish biology, which at the time was just beginning to experience the benefit of TALEN and CRISPR gene editing technologies. Dr. Fogerty has been in the Perkins lab for about 6 years and was just promoted to Research Associate last fall. He continues to research the retina and its response to disease and injury, with the ultimate goal of developing a therapy that can improve outcomes for patients with blinding diseases. He recently published a paper in *Scientific Reports* in which he developed a panel of zebrafish with mutations in a cluster of microRNAs that are highly expressed in sensory neurons, and showed how these miRNAs cooperate with each other. He also recently received a Career Starter Grant from the Knights Templar Eye Foundation that helps to fund the retinal regeneration project. Outside of the laboratory, Dr. Fogerty spends time with his wife and three very active children who each play sports all year round. He also enjoys hiking, woodworking, gardening and playing the clarinet.

“At some point I realized that I was doing the same kinds of things that the postdocs and research scientists in the laboratory were doing, and in many cases they were coming to me for training. That’s when I decided to enter graduate school.”

-Dr. Fogerty
Tyler Alban is a 5th year graduate student who recently won the first place Graduate Student Award for Excellence for his paper titled “Global immune fingerprinting in glioblastoma patient peripheral blood reveals immune-suppression signatures associated with prognosis.” He is from Massillon, Ohio and earned his Bachelor of Science in biology from Baldwin-Wallace University. Before beginning the Molecular Medicine PhD program, Tyler was a research technician at The Hygenic Corporation. He joined Dr. Lathia’s lab in the Department of Cardiovascular and Metabolic Sciences. Tyler’s research focuses on immune monitoring in glioblastoma peripheral blood with the use of CyTOF and 10X genomics single-cell sequencing. He saw this lab as an excellent place to train because the clinical collaborations enable him to gain experience working on multiple clinical trials. Lerner provides a place to train where his PhD work has the best chance of directly impacting patients. Tyler’s graduate thesis work is funded by an NIH F31 Predoctoral Fellowship awarded in 2017. Outside of the lab Tyler enjoys the outdoors including mountain biking, hiking and camping.

“The support provided by RETC and the translational focus of my project make Lerner an ideal environment for graduate training.”

-Tyler Alban
Dr. Defne Bayik Watson is from Antalya, Turkey. The city is located on the Mediterranean coast and part of Turkish Riviera. She received her BS from Bilkent University, Turkey, and completed her PhD in immunology at the National Cancer Institute as part of the Graduate Partnership Program. She is investigating sexual dimorphism in glioblastoma immune response and the differential role of myeloid-derived suppressor cell subsets in glioblastoma immunosuppression, with the aim of developing more effective immunotherapies. Her mentor, Dr. Justin Lathia, is a world-renowned expert in glioblastoma. She decided to join LRI due to its very strong basic science program, as well the many clinical collaborators that enable high-impact research which can translate the findings to improve patient outcome. She enjoys reading, playing piano, traveling, hiking and playing tennis.

“Cleveland Clinic enables us to do high-impact research and translate our findings to improve patient outcome”
-Dr. Watson, LPDA Co-President

Dr. Maksim Sinyuk was born in Lutsk, Ukraine. His family immigrated to the United States in 1994 and he has been living here ever since. Dr. Sinyuk completed his BS at Cleveland State University and his PhD in Regulatory Biology at Cleveland State University with Dr. Justin Lathia. He is currently a research fellow in the Department of Neurosciences working with Dr. Jessica Williams. His current work focuses on the molecular mechanisms behind neuroinflammation and remyelination in multiple sclerosis. He decided to stay and pursue a postdoc at LRI because of all of the wonderful friends he has made and because he has been able to see Lerner and Cleveland Clinic grow in prestige and stature in both the scientific and clinical fields. He loves the support that LRI and Cleveland Clinic give to its employees including options for career development and advancement. Outside of work his hobbies include a love of cooking, frisbee golf, gaming, attending local sports events of all kinds, and finding new places to eat.

“Cleveland Clinic and LRI grow in prestige and stature in both the scientific and clinical fields.”
-Dr. Sinyuk, LPDA Co-President

Gabrielle Mey is from Brook Park, Ohio, a suburb on the west side of Cleveland. She received her BS from Walsh University in North Canton, Ohio in biology/pre-medicine. Gabrielle is a graduate student in the Molecular Medicine PhD program of Case Western Reserve University where she works in the DeSilva lab. She is currently studying the role of glutamate signaling on pericytes where she is using the visual system to assess myelin and axonal damage and neurodegeneration in order to define mechanisms underlying inflammatory diseases in the central nervous system. The translational component of the Molecular Medicine program highlights the importance of studying basic science mechanisms of human disease to better inform treatment options and preventative disease measures in the future. She enjoys walking and hiking in Rocky River Reservation and the Cleveland Metroparks.

“At Lerner I can study mechanisms of human disease to contribute to better treatment options.”
-Gabrielle Mey, LGSA President
UPCOMING EVENTS

Lerner Experience in Advanced Development of Education and Research Skills (LEADERS)

Networking

- Provides Lerner trainees with career development tools that will accelerate their professional development.
- Sessions open to all postdoctoral fellows and graduate students.
- 20 sessions in 2019
- Receive a certificate of completion if 75% of sessions are attended.

WHO: Justin Lathia, PhD
Department of Cardiovascular & Metabolic Sciences, LRI

WHEN: September 9, 2019
3:00 - 4:00 pm
WHERE: NE1-2059

Grant Writing

- Provides Lerner trainees with career development tools that will accelerate their professional development.
- Sessions open to all postdoctoral fellows and graduate students.
- 20 sessions in 2019
- Receive a certificate of completion if 75% of sessions are attended.

WHO: Charles Tannenbaum, PhD
Department of Inflammation and Immunity, LRI

WHEN: September 23, 2019
3:00 - 4:00 pm
WHERE: NE1-205
UPCOMING EVENTS

Lerner Graduate Student Association
Town Hall

Have Questions?
Next Step?
Let’s Discuss Together

GRAD STUDENT TOWN HALL

Thursday, Oct. 10th
- 4:00pm to 5:00pm
- NE1-205
- Door Prizes
- Quick Presentation

Refreshments Provided

By Grad Students
For Grad Students
We are pleased to announce that the Lerner Postdoctoral Association (LPDA) and the Research Education and Training Center (RETC) will be hosting the annual National Postdoc Appreciation Week from September 14th to September 21st, 2019. Making up a large part of researchers at the LRI, postdocs are crucial for the institution’s success. They serve in many roles ranging from bench scientists, mentors, writers, editors, volunteers, and a multitude of others. They accomplish these tasks all while often starting new families or adjusting their lives to new locations and labs. They can blast through deadlines, grant submissions, manuscripts, and any number of setbacks to succeed in their careers, all while adding to Lerner’s academic reputation. While we hope our postdocs feel appreciated throughout the entire year, the LPDA and RETC have organized a week of events to say “thank you”. Join us as we celebrate all of the hard work and accomplishments of Lerner postdocs that push the boundaries of science and medicine. Starting with a pet-friendly hike at the Historical Lakeview Cemetery and Park and ending with the American Heart Association Heart Walk at Mall C in downtown Cleveland, the week has a variety of events organized for career development, engagement, and outreach. Don’t forget to save the date!
Highlights from the LPDA Career Development Seminar: Medical Affairs, a Spotlight on the Medical Science Liaison Role

-Kelsey Bohn, PhD

Disclaimer: The content provided in Dr. Yonkers’ presentation is representative of her own opinions and experiences. The views here are neither provided nor supported by her current employer, Sanofi Genzyme.

Dr. Nicole L. Yonkers, PhD spoke at the July LPDA Career Development Seminar about her career as a medical science liaison (MSL). She described how the field of medical affairs fits into the larger picture of “Industry” along with the commercial and research & development sectors. MSLs work as a non-promotional employee of the company, meaning that they don’t serve to sell a product and need to maintain separation from the commercial side. A career in medical affairs can include scientific education, clinical trial research support, off-label support of marketed products and regulatory support. An MSL position at one company can differ greatly from an MSL position at another company. The size of the company and the region that the MSL needs to cover will determine the amount of travel and distinct responsibilities required of the position.

A good candidate for an MSL position is flexible and receptive to change, an excellent communicator, innovative, self-motivated, and personable in addition to being well versed in the science. Since an MSL’s role is to bridge knowledge and establish collaborations, you need to be able to successfully communicate with both scientists and corporate partners. Dr. Yonkers recommended several strategies to obtaining an MSL role for the first time: network with everyone you meet, be open to relocating, be persistent, and gain relevant skills such as clinical trial experience and presentation skills.

Her advice was to start talking to people now! Find out what you need to add to your resume and spread the word that you are interested. Current Lerner trainees can access the slides from this presentation at http://bit.ly/MSL-CareerDevSlides.
RECENT EVENTS

Highlights from LEADERS Seminars

-Gabrielle Mey and Alyson Wolk

Did you miss the LEADERS seminars on ‘Bioinformatics: Getting Started’ by Adam Kim, PhD? Here is a recap of the seminars!

Postdoctoral fellow, Dr. Adam Kim from the Department of Inflammation and Immunity led a two-part seminar series in August. The goal was to introduce applications of bioinformatics, with an emphasis on how and where to get started as a beginner. Dr. Kim first explained how bioinformatics courses vary greatly, and it is important to customize your learning to your area of interest (i.e. protein analysis, DNA or RNA sequencing, NMR, etc.). He addressed some important questions to answer if you would like to learn bioinformatics, including:

- What are your research goals?
- How will you learn these skills?
- What tools/skills do you need?
- How will you get started?

In addition, he acknowledged that bioinformatics requires a significant amount of time and dedication, and that you should determine if it is feasible to learn it yourself, or if it would be better to request services from an expert. He provided several recommendations for getting started in bioinformatics, which can help you decide whether to pursue the field:

1. Read a book on programming (examples below)
2. Decide what you want to learn and think of a project to answer your research questions
3. Download R and R studio, and practice some basic programming by making a personal academic website for yourself (this is also a good way to make your information more accessible to potential employers or collaborators)

Dr. Kim also suggested using an available dataset for the tissue, cell, drug, etc., that you are interested in studying in order to answer your questions without collecting new data first. Using an available dataset is also a good way to practice bioinformatics by repeating previous analyses in a published study. Dr. Kim showed an example page of R studio and how to create a graph using this software. He also explained the general process of obtaining raw data, aligning that data, identifying/counting your item of interest, and generating a functional annotation of the results.

The second seminar on Aug. 26th focused on experimental design in bioinformatics. Dr. Kim used one of his previous publications as a case study, focusing on the important steps in designing and executing a bioinformatics project. Dr. Kim emphasized the importance of quality control (QC) while analyzing your data. QC can be performed with various programs including FastQC and IGV, which allows you to directly view your sequencing reads for each sample. Dr. Kim had some helpful firsthand tips for those who may begin their own analyses on the command lines, such as how to best label and organize files.

Lastly, Dr. Kim reviewed some practical considerations when doing high throughput experiments, including library prep, sequencing depth, and number of samples needed. In all, Dr. Kim delivered useful and engaging seminars preparing us to embark upon new scientific endeavors in the realm of bioinformatics.

Book Recommendations:
(1) O’Reilly Learning R: A Step by Step Function Guide for Data Analysis by Richard Cotton and (2) O’Reilly Learning Python by Mark Lutz
In July, the LPDA hosted a back-to-school supply drive in association with the Cuyahoga County Division of Children and Family Services (CCDCFS). Collection boxes were placed at various departmental offices all across Lerner. The generous folks working in LRI opened their hearts (and wallets) to donate magnanimously, and we were able to almost fill up an entire car with school supplies for the kids!

On August 1st the CCDCFS held a back-to-school resource fair and backpack giveaway at Public Square where they gave out 500 backpacks. Since then, they have given out over 1500 more backpacks for youth involved with the agency.

The LPDA would like to give our heartfelt thanks to everyone involved for helping us and CCDCFS make this event a great success!
LOOKING FOR A JOB? NOW HIRING!

Postdoctoral Scholar, Biomedical Engineering  
Case Western Reserve University
Postdoctoral opportunities are available to advance new solutions in cardiovascular and ophthalmological biomedical imaging using computer vision and machine learning approaches. Projects include mass screening of disease, diagnosis/staging, treatment evaluation, and image guided therapies. Successful applicants should have a background in biomedical imaging, computer vision, quantitative imaging, and/or image guided therapies. For more details click here.

Tenure-track faculty position, Cell Biology  
Emory University of School Medicine
The Department of Cell Biology at Emory University School of Medicine seeks outstanding applicants to fill a tenure-track faculty position at the Assistant Professor level to complement department research interests in cell biology, developmental biology and neuroscience. For more details click here.

Postdoctoral Fellow, Bioengineering  
University of Pittsburgh, Hillman Cancer Center
A postdoctoral position is available at the Tumor Microenvironment Engineering lab in the Department of Bioengineering and UPMC Cancer Institute. Applicants should hold a PhD in bioengineering, biomedical sciences or related fields. A strong background in cancer biology is preferred, including experience with quantitative assay development and optimization, microscopy. Openings are also available for candidates with a computational/mathematical background with expertise in mechanistic modeling and systems analysis. For more details click here.

Assistant, Associate or Full Professor of Microbiology  
University Park campus, Penn State
The Department of Biochemistry and Molecular Biology at Penn State invites applications for one or more tenure-track Assistant, Associate or Full Professor appointments in the area of Microbiology. Competitive applicants will have a PhD, an outstanding record of research accomplishments, an innovative future research plan, an ability to achieve teaching excellence at both the undergraduate and graduate levels, and a commitment to fostering a diverse and inclusive community in the practice and teaching of science. For more details click here.

Research Associate, Department of Biology  
University of Virginia
The Department of Biology at the University of Virginia seeks a Post-Doctoral Research Associate to join the lab of Dr. David Parichy, studying post-embryonic development using zebrafish and related species. A PhD in Biology, Molecular Cell Biology or related field is required by the start date of the appointment. For more details click here.

Staff Scientist, Cell Biology  
Thermo Fisher
Thermo Fisher is seeking an individual with a strong background in immunology and multi-color flow cytometry panels to join their Flow Cytometry Group. The Staff Scientist, Cell Biology will be responsible for performing Research and Development activities related to tools, technologies and workflows relevant to flow cytometry instruments and reagents. For more details click here.
Congratulations to Dr. Brian Yard from the Abazeed lab in the Department of Translational Hematology and Oncology Research!

Dr. Yard published an original article titled “Cellular and genetic determinants of the sensitivity of cancer to alpha-particle irradiation” in *Cancer Research* (August 2019). For more details, [click here](#).

Congratulations to Jasmine Gajetton from the Stenina lab in the Department of Cardiovascular and Metabolic Sciences!

Jasmine recently was awarded the Case Comprehensive Cancer Center Trainee Travel Award and won a Poster Award at the FASEB 2019 Science Research Conference: *Matricellular Proteins in Tissue Remodeling and Inflammation Conference* in Lisbon, Portugal.

Congratulations to Dr. Yuxin Wang from the Stark lab in the Department of Cancer Biology!

Dr. Wang won the 2019 ICIS Young Investigator Award at the International Cytokine and Interferon Society 7th Annual Meeting in Vienna, Austria. The title of the talk was "Phosphorylation of STAT2 on T404 is critical for interferon-mediated signaling and antiviral defense.” For more details, [click here](#).
Congratulations to Dr. Erin Mulkearns-Hubert from the Lathia lab in the Department of Cardiovascular and Metabolic Sciences!

Dr. Mulkearns-Hubert was recently promoted to Research Associate. Her work focuses on the role of gap junction intracellular communication, specifically through connexin 46, in the malignant brain tumor glioblastoma.

Congratulations to Ashraf Duzan from the Hazen lab in the Department of Cardiovascular and Metabolic Sciences!

Ashraf recently won the Cardiovascular Outreach Award at the American Heart Association Basic Cardiovascular Sciences Scientific Sessions for his work titled “Development of a New Structural Family of Microbial Choline Trimethylamine Lyase Inhibitor for the Treatment and Prevention of Cardiovascular Disease.”

Congratulations to Dr. Defne Bayik from the Lathia lab in the Department of Cardiovascular and Metabolic Sciences!

Dr. Bayik received the Ruth L. Kirschstein National Research Service Award (NRSA) Individual Postdoctoral Fellowship as Principal investigator, titled “Contribution of sex differences in glioblastoma immune suppression for improved immunotherapy response”. The goal of this project is to identify the basis of sexual dimorphism in anti-tumor immune response and develop effective immunotherapies accounting for sex as a biological variable.
Seeking talented writers

Interested in writing an article for the LPDA newsletter?

We invite our fellow postdocs and research associates to send us your non-scientific articles of interest to our readers to be featured in our monthly newsletter.

Topics could range from a travel article to a write-up on ‘Things to do in Cleveland’. Be creative! Please include photos (preferably taken by you).

*Please note that all articles and photos are moderated and submission does not guarantee automatic publishing in the newsletter.

Thanks!
The LPDA Communications Team

Please submit your articles to the LPDA at lri-postdoc-assoc@ccf.org.
GET INVOLVED!

Did you publish a paper recently or receive a grant or award? We want to highlight your accomplishments in the next newsletter! As part of the LPDA, we strive to improve this organization to its maximum potential. To do so, we will need the participation and input of all postdoctoral fellows and research associates. If you would like to be involved with our events or have any suggestions or accomplishments we can highlight, please email lri-postdoc-assoc@ccf.org.

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