June

Newsletter

As we look forward to clearer skies and warmer weather, we bring you the last monthly newsletter for this season. After a brief hiatus we will resume issues starting in September.

This month we feature Lerner alumnus Dr. Dustin Thomas and the Lower Award winners Dr. Elizabeth Sweeny and Dr. Mohammed Alyamani.

This month’s newsletter includes a recap of the recent LEADERS seminars. We have an exciting report for you on how community outreach service by the LPDA and LGSA helped foster kids. If you are looking for things to do in Cleveland this summer, check out our monthly featured article.

Don’t forget to submit your accomplishments so they can be featured in our newsletter and, as always, stay active on our LinkedIn group.

~ LPDA Communication Team

Join our LinkedIn group

The Lerner Postdoctoral Association and Alumni Network is a group of current and former postdoctoral fellows, research associates and graduate students at Cleveland Clinic Lerner Research Institute. Our goals are to provide opportunities for career development, networking and highlighting our scientific achievements. We also post reminders about upcoming events, so make sure to turn on notifications.

Request to join today and tell all of your fellow trainees!
LPDA Executive Board
Co-Presidents: Defne Bayik and Timothy Mead
Secretary: Nneha Sakre

Subcommittees

Career Development and Resources
Chair: Elizabeth Sweeny
Members: Christina Cajigas-Du Ross, Vishal Nanavaty, Nneha Sakre, Xiaoqin Wu, and Nara Yoon
- Career development seminars
- Professional development workshops
- Teaching opportunities at local schools and universities
- Career/training opportunities in collaboration with RETC and Lerner Graduate Student Association (LGSA)

Mentorship/Advocacy
Chair: Iris Smith
Members: Elise Baron, Defne Bayik, Christina Cajigas-Du Ross, Emily Esakov, Vivek Narayan, and Jie "Jane" Yang
- Research mentorship network in collaboration with LGSA
- Mentorship seminars and workshops
- Mentor graduate students
- Address concerns and complaints to appropriate channels
- Interact with RETC and the Lerner Central Office

Communication
Chair: Chinthasagar Bastian
Members: Suhail Andrabi, Kelsey Bohn, Xiaoguang Fang, Mihyun Hwang, Isha Kapoor, Benjamin Krishna, Ashley Nemes and Maksim Sinyuk
- Advertise postdoc-related events
- Social media (LinkedIn)
- Monthly postdoctoral fellow newsletter

Social/Outreach
Chair: Aimalie Hardaway
Members: Tim Mead, Vijay Nagampalli, Vivek Narayan, Nneha Sakre, Lingjun Zhang and Yee Peng Phoon
- Social events
- Promote networking opportunities
- Community outreach
In which lab were you at Lerner? How long ago?
I was a graduate student in the Molecular Medicine PhD program and worked in Dr. Tom Egelhoff’s lab in the Department of Cellular and Molecular Medicine. I started the program in 2010 and defended my thesis in November 2015. Following graduate school, I started a postdoc position with Dr. Doug Robinson in the Cell Biology Department at Johns Hopkins School of Medicine. I was in that position for two years.

What did you work on at Lerner?
I studied how the non-muscle motor protein myosin IIB contributed to nuclear translocation in migrating cancer cells.

Where are you now, and what do you work on?
Currently, I work at the Food and Drug Administration (FDA) as a microbiology reviewer. I work on applications of new sterile drugs to help assure the safety of drug products on the market.

How did your time at Lerner prepare you for your current role?
My current position at the FDA requires critical analytic skills to assess reports that ensure safety. Furthermore, the technical writing skills learned from manuscripts and grant proposals is highly valuable to concisely convey findings of my review.

Is there something you particularly miss from your time at Lerner?
I worked and studied in Lerner for almost nine years, including employment as a research technician prior to grad school. I did a lot of growing there where I nurtured close friendships and learned a great deal about science and gaining confidence and independence. It is difficult to narrow down one aspect of Lerner that I miss when it felt like a second home for so long. As a graduate student, there was a great deal of support not only from department heads and PI's, but also the core services that made me feel like Lerner was a good team.

How was the transition to your current role?
Moving from highly active bench work to a federal desk job was a bit of an adjustment. In a lab, keeping an eye on three to four things at the same time was a requirement, such as running a gel while doing cell culture and spinning down samples. Now, I focus on a single task. It took a while for me to retrain my brain not to panic that my gel was over running.

What is your favorite part of your current job?
I feel my current job has a direct effect on the well being of people and I find it very fulfilling. Plus, the work/life balance is much improved and allows me to spend time with my family and watch my kids grow.

In one sentence, what advice would you give current Lerner postdocs and graduate students?
Enjoy what you do, work hard, do great things, but don’t forget to take care of yourself and get out of the lab every once in a while.
Dr. Elizabeth Sweeny grew up in St. Paul, Minnesota. She got her BS in chemistry with an emphasis in biochemistry at Loyola University Chicago and her PhD in the Department of Biochemistry and Molecular Biophysics at the Perelman School of Medicine at the University of Pennsylvania (what a mouthful). Right now, she is in Dr. Stuehr's lab in the new Department of Inflammation and Immunity, studying the regulation and novel roles of heme proteins. She chose Dr. Stuehr's lab because she is interested in how various forms of cellular homeostasis are regulated in cells. Specifically, understanding protein:protein interactions and how these are affected and controlled by various stimuli and what these changes in interactions mean for cell health. Recently, she won the the Lower Award for her paper titled “Glyceraldehyde 3-phosphate dehydrogenase is a chaperone that allocates labile heme in cells,” which identifies Glyceraldehyde 3-phosphate dehydrogenase (GAPDH) as a key mediator of heme homeostasis in the cell. This paper shows that GAPDH is responsible for binding the majority of labile heme in the cell, and that the GAPDH-bound heme represents the pool of bioavailable heme for delivery to downstream heme proteins including inducible nitric oxide synthase and the yeast transcription factor Hap1. Her future goal is to obtain a tenure track position at a research institution and run her own lab. She has a pond in her yard that she enjoys growing giant tropical lilies in, including Victoria lilies, the pads of which can get large enough to stand on.

“Regulation of various forms of cellular homeostasis is the focus of my research”
-Dr. Sweeny
Dr. Mohammad Alyamani, who recently won the Lower Award for his paper titled “HSD3B1 (1245A>C) variant regulates dueling abiraterone metabolite effects in prostate cancer," is from Amman, Jordan. He joined Dr. Sharifi’s lab in the Department of Cancer Biology to study prostate cancer. Dr. Alyamani’s research focuses on identifying biomarkers for treatment resistance in prostate cancer. His principal focus is developing novel liquid chromatography tandem mass spectrometry methods to study the metabolism of steroids and novel therapeutic agents in prostate cancer patients. The outcome of his projects will help establish the best route of treatment for patients. Dr. Alyamani’s research is funded through a Department of Defense young investigator award.

“I am thrilled and honored to receive the Lower Award.”

-Dr. Alyamani
UPCOMING EVENTS

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

**Preparing Materials For Presentation**
- 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.

**Giving a Professional Presentation**
- 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.

**Farmers Market - Main Campus**
Every Wednesday from 10:30 a.m. -1:30 p.m. (June 5 - October 16)
**Location:** Crile Mall, Main Campus
Stop by the market for fresh produce and other local products.
Did you miss the LEADERS seminars on ‘Basic Statistical Methods’ by Amy Nowacki, PhD? Here is a recap of the seminars!

“Critical reviewers of the biomedical literature have consistently found that about half the articles that used statistical methods did so incorrectly.”

The best solution to this problem is to educate researchers on proper statistical analyses.

**Top Ten List**

**Error #10: Using Descriptive Statistics Incorrectly**
The goal of descriptive statistics is to understand the distribution of each variable. While many researchers report mean and standard deviation, most biomedical research is not normally distributed. Therefore, reporting the mean and standard deviation is not always the most appropriate way to show the distribution of the data. Instead we should report the median and interquartile range or range.

**Error #9: Confusing the Standard Error and the Standard Deviation**
The standard deviation (SD) describes the spread of the actual data around the mean of a single sample. The standard error is a measure of the precision for an estimated statistic. The mean and SD are the preferred summary statistics for normally distributed data, and the mean and 95% confidence interval are preferred for reporting an estimate and its measure of precision.

**Error #8: Reporting Only P Values for Results**
Although the term “statistically significant” is widely used in the biological literature, its meaning and implications are misunderstood surprisingly often. The P value is an index of compatibility between your data and the null hypothesis. Besides reporting the P value, it is best to state what the effect was, the effect size, its clinical importance and precision of the estimate (95% confidence interval).

**Error #7: Not Confirming Test Assumptions are Met**
While many of us have taken a biostatistics course in our education, we often do not test our data for the assumptions necessary to run specific tests. If the assumptions are suspect, the results of the analysis are suspect.

**Error #6: Using a Chart or Graph in which the Visual Message does not support the Message of the Data**
We remember the visual message of an image more than the message of the data on which it is based. While bar graphs are appropriate for categorical data to describe frequency, it is important to be mindful of how a chart presents the data.
Error #5: Not Reporting Whether or How Adjustments were Made for Multiple Hypothesis Tests
In biological science, we tend to run many tests on our data and report multiple P values. This increases the risk of making a type I error. You can adjust for this using a Bonferroni correction to establish a new alpha level:
“new alpha” = “old alpha” / number of comparisons

Error #4: Using “Dynamite Plots”
Bar graphs with a single positive error bar on top (shown by the image on the right) are called “dynamite plots”. They are not good plots because they cannot fully represent the data like a dot or box plot (shown next to the dynamite plot on the right).

Error #3: Interpreting Studies with Nonsignificant Results and Low Power as “Negative”, when they are Inconclusive
The absence of proof is not proof of absence. Statistical power is the ability to detect a difference of a given size. Studies with low statistical power that are not statistically significant are not negative, they are inconclusive. For differences that are clinically important, but not statistically significant, report the observed difference, the 95% confidence interval and the P value. Never say that results “trend towards” or “approach” significance.

Error #2: Claiming to Prove the Null Hypothesis
We never prove the null. We reject the null or fail to reject the null. “Not statistically different” is not the same as “no difference.” Our research is merely a sample of a larger population, and therefore an estimate.

Error #1: Confusing Statistical Significance with Clinical Importance
Small differences between large samples can be statistically different, but clinically unimportant, and large differences between small samples can be clinically important but not statistically significant. Think about what your data is telling you and what it means in the bigger picture!

If you are interested in learning more, Cleveland Clinic offers a course taught by Dr. Nowacki!
Medical Biostatistics Part 1 (September-December)
Medical Biostatistics Part 2 (February-May)
Tuesdays from 7:00-8:00 a.m.
For more information, click here.
Dr. Christa Pawlowski, co-founder and CSO at Haima Therapeutics and Manager of Technical Operations at BioMotiv, was the speaker at the LPDA Career Development Seminar held on May 17th. She earned her PhD in biomedical engineering from Case Western Reserve University and is experienced in early drug discovery and development. Her first exposure to industry was through a summer internship at Athersys. She continued to gain industry experience by participating in an entrepreneurship postdoctoral position through the I-Corps@Ohio program with Cleveland Clinic Innovations. Dr. Pawlowski gave some advice and discussed some misconceptions about working in industry with a PhD:

1. Having a PhD does not make you overqualified. Companies are especially looking for PhDs for research and development.

2. You don’t have to stay in the same field of research. Your problem-solving, teamwork, and project management skills are more important than your expertise on one subject.

3. Networking really does matter. It’s also more than just introducing yourself or passing out your business card. You need to develop relationships with people in your community that you can tap into later.

4. Research in industry is not that different from research in academia, but it does have to be marketable and profitable.

5. Don’t let job description requirements scare you too much. Unless you are not qualified for most of the position, still apply. Sometimes job postings are vague and can be molded to you if your skillset is desirable enough.

She also provided a comparison of working for a startup company versus an established company:

<table>
<thead>
<tr>
<th>Startup</th>
<th>Established Company</th>
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<tbody>
<tr>
<td>The work is broad, varies day-to-day and sometimes ambiguous</td>
<td>May focus on one particular aspect of a broader project, clear direction</td>
</tr>
<tr>
<td>Technology AND business focused</td>
<td>May choose technology OR business focus (often not both)</td>
</tr>
<tr>
<td>Solve problems on your own</td>
<td>Access to network of experienced people to help solve problems</td>
</tr>
<tr>
<td>Highly agile</td>
<td>Hard to shift gears (e.g. many levels of approvals, etc.)</td>
</tr>
<tr>
<td>Little oversight / little mentorship</td>
<td>Potential for micromanagement / opportunity for mentorship</td>
</tr>
<tr>
<td>Volatile</td>
<td>Stable</td>
</tr>
</tbody>
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If you are interested in a career in industry, but you aren’t sure, Dr. Pawlowski recommends investigating now: conduct informational interviews with people in your network to find out what their job entails, audit a business or entrepreneur class, and speak with Cleveland Clinic Innovations to learn more about tech transfer.
More than 2,700 children in Cuyahoga County are in foster care – up from roughly 2,400 last year at this time. The Lerner Postdoctoral Association (LPDA) and Graduate Student Association (LGSA) partnered with the Cuyahoga County Division of Children and Family Services (CCDCFS) in 2018 to campaign throughout Cleveland Clinic Lerner Research Institute to collect school supplies and holiday toys for children in foster care.

Many of these children and families do not have access to the necessary school supplies for the school year. Moreover, for children in foster care, holiday traditions with family may not be possible due to unforeseen circumstances, making the holidays an even more difficult time. It takes compassionate communities to help these children who have had to endure a life-changing crisis and find themselves in foster care.

Thanks to the generosity of the Lerner research community, the 2018 school year and holiday season were made brighter for children and teens under the care of CCDCFS. “School supply donations collected from LRI were enough to provide for over 1,200 children representing over 100 school districts. These supplies help families and their children get ready for the school year,” said Kristin Gardner, CCDCFS Outreach Coordinator.

“The total number of families Cleveland Clinic adopted for the holidays was fifteen in addition to the numerous toys and gifts collected at its annual holiday event, where toys were distributed to over 3,000 children. CCDCFS was very thankful for the collaborative effort to collect school supplies and holiday toys,” said Gardner. Currently, CCDCFS works with over 6,000 children and teens throughout all of Cuyahoga County. In 2017, 140 kids were adopted out – a small fraction of the nearly 2,700 kids currently in foster care.

Gardner said she hopes that the Lerner research community will continue to partner with CCDFCS in the future to support the ever-growing needs of these kids in foster care. “I want to give a major thank you to Cleveland Clinic LRI LPDA and LGSA community for coming together. We truly appreciate your support and help to make this a successful campaign year,” Gardner said. On May 10th, 2019, CCDFCS awarded Cleveland Clinic LPDA’s partnership coordinator, Iris Nira Smith with a “Rising Star” award, recognizing her for her commitment in organizing LRI’s campaign to support children in foster care at CCDFCS and the surrounding community. Smith said, “I am humbled by the support and generosity of my fellow colleagues who selflessly gave of their time and resources to help foster children and their families. There is no greater joy than coming together to help another individual through this life – in doing so, together we rise!”

The LPDA and LGSA looks forward to participating in campaigning for the foster kids again next year with one goal in mind – to surpass last year’s donations and exceed the school supply needs for children and their families in the coming year!
Summer has finally begun to make itself known in Cleveland. The bees have started to buzz, the flowers are in full bloom, and the entire city is practically humming with new energy. Summer is a special season for Cleveland. It is a time of transformation as the city and its people come alive. The sheer number of amazing events, festivals, food trucks, and things to do around town during the summer are far too numerous for a single article so I would simply like to describe a few experiences that you do not want to miss.

Returning for its second year, the Cleveland Metroparks Zoo will host the Asian Lantern Festival presented by Cleveland Clinic Children’s. The experience will stun guests with 40 large-scale illuminated displays composed of hundreds of lanterns. Each evening, festival-goers will be able to enjoy live performances with acts including foot juggling, contortion, martial arts and many more. Guests will also be able to browse and shop at an Asian craft market while enjoying culturally-inspired dishes from local restaurants including Li Wah, King Wah, Thai Thai, and others. This limited time, after-hours event will only be around Thursday-Sunday evenings from 6:30 PM to 10:00 PM June 20th. to July 28th. Tickets can be purchased through the Cleveland Metroparks Zoo homepage.

This summer, Cleveland is host to the 2019 Major League Baseball All-Star Game. While getting tickets may prove difficult, fear not, because the Cleveland Orchestra has announced details for the 30th annual free community concert in downtown Cleveland. The Star-Spangled Spectacular presented by Cuyahoga Arts & Culture will take place on Wednesday August 7th at 9:00 PM. The annual concert will be held on Cleveland’s Mall B, located at 300 St. Clair Avenue. The concert will include classical and patriotic performances culminating in a fireworks display.

For a thrilling, fun-filled, family-friendly time, don’t miss out on the annual Cleveland National Air Show on Labor Day weekend, August 31st-September 2nd. Headlined by the U.S. Air Force Thunderbirds and featuring the very first demonstration of the U.S. Air Force F-35A Lightning II, the Air show is sure to delight people of all ages. Tickets can be purchased at Discount Drug Mart locations or online at www.clevelandairshow.com
LOOKING FOR A JOB? NOW HIRING!

**Postdoctoral Fellow- Jackson Lab, NIH main campus, Bethesda**
A postdoctoral fellow position is available at the NIH headed by Dr. Sadhana Jackson. The Jackson lab combines CNS pharmacokinetic evaluations and cell biological approaches to understand the interplay between BBB cell permeability and brain tumor cell proliferation (for more lab details [click here](#)). The position will be fully funded by the NIH. The successful candidate must have a PhD in a relevant discipline (biomedical engineering, biophysics, biochemistry, molecular biology or cellular biology) with a strong publication record that reflects individual accomplishment, a demonstrated proficiency in animal tumor modeling, molecular biology, cell biology and image processing. Interested applicants should send a CV, names of 3 references, and a brief summary of their previous research and future career goals to Sadhana Jackson. Please write "Post-doc application" in the subject header.

**Postdoctoral positions-Cincinnati Children's Hospital**
Multiple postdoctoral positions are available in various areas at Cincinnati Children’s Hospital Medical Center. Currently, opportunities are available in Biomedical Informatics, Cancer and Blood Diseases, Cardiovascular Research, Epidemiology and Biostatistics, Genetics, Development and Disease Biostatistics, Imaging Research, Immunology/ Inflammation, Neurology, Behavioral and Developmental Neuropsychiatry and Biostatistics. For more details [click here](#)

**Research Assistant Professor-School of Medicine and Dentistry- University of Rochester**
A Research Track position in influenza virology and immunology is immediately available in the laboratory of Dr. David Topham in the Department of Microbiology and Immunology, Center for Vaccine Biology and Immunology, at University of Rochester, New York. The position requires a PhD in a relevant field, with 3 or more years of postdoctoral training. The position is a Research Track Faculty position with the potential to switch to a Tenure-track Faculty Position based on research success, productivity, and experience. For more details [click here](#)

**Assistant Professor-School of Medicine and Dentistry-University of Rochester**
The David H. Smith Center for Vaccine Biology and Immunology at the University of Rochester School of Medicine and Dentistry is recruiting for a tenure-track faculty (preferably Assistant Professor) position to complement current strong research programs in understanding inflammation and infectious disease. Areas of research focus might include high-resolution, dynamic analysis of immune responses; advanced data analytics; immune interactions with the microbiome; and either innate of adaptive responses. Qualified candidates should have a successful research background in basic immunology/host defense, and an MD, PhD or equivalent degree. For more details [click here](#)

**Research Scientist I-Cancer Biology-Broad Institute**
Cambridge, MA, US
Seeking an exceptional candidate for a Research Scientist position within the Broad Institute Cancer Program. Applicants should have established expertise in cancer biology, as demonstrated by a track record of high-impact publications. For more details [click here](#)
RECENT ACCOMPLISHMENTS

Congratulations to Dr. Ajai Tripathi from the Dutta lab in the Department of Neurosciences!

Dr. Tripathi published an original article titled “Expression of disease-related miRNAs in white-matter lesions of progressive multiple sclerosis brains” in *Annals of Clinical and Translational Neurology* (March 2019).
For more details, [click here](#).

Congratulations to Dr. Jie Yang from the Hine lab in the Department of Cardiovascular and Metabolic Sciences!

Dr. Yang published an original article titled “Non-enzymatic hydrogen sulfide production from cysteine in blood is catalyzed by iron and vitamin B6” in *Nature Communications Biology* (April 2019).
For more details, [click here](#).

Congratulations to Dr. Gregory DeGirolamo from the Byzova lab in the Department of Neurosciences!

Dr. DeGirolamo is moving to St Xavier University (Department of Psychology) in Chicago, IL, as a tenure-track assistant professor of psychology. He will be researching how spatial memory changes from young adulthood to late adulthood (60-80 years of age) and what separates healthy neurocognitive aging from clinical neurocognitive aging. He will also be teaching courses related to cognitive psychology, gerontology, neuroscience, developmental psychology, and statistics.
Dear friends,

It has been a great pleasure in leading the LPDA communication subcommittee over the past year. It is indeed the hard work and passion of all members of the communication subcommittee that is reflected in the monthly LPDA newsletter. We hope that you have enjoyed reading the newsletters and we are grateful for the feedback we have received from the students, postdocs, technicians and the Lerner Leadership. We always welcome feedback and strive to include interesting, entertaining, and helpful material.

June marks the next election in the LPDA council for all leadership positions. Remember that as postdocs and research associates you are automatically part of LPDA. I would highly recommend that interested postdocs and RAs join and serve in one or more subcommittees. I request all PIs to encourage their postdocs and graduate students to be involved in committees to help with their professional growth. I sincerely thank my PI, Dr. Selva Baltan who highly encouraged me to serve in the LPDA council. Not only have I made several good friends from departments other than mine, it has improved my communication skills and enhanced my sense of belonging to Cleveland Clinic and the Lerner community. Lastly, I also consider this as a way of giving back to Lerner.

Chinthasagar Bastian, MBBS, PhD
Chair, Communication subcommittee
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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