

NEWSLETTER

JUNE 2026 ISSUE





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SPEAKER



JAMES JORDON, PHD

**Assistant Professor
Cell & Molecular Biology
Department of Biological Science
Florida State University**

How Hepatocytes Stay Steatotic: YBX1, RNA Control, and Fatty Liver Disease

ABSTRACT: Metabolic dysfunction-associated steatotic liver disease (MASLD) affects roughly one-third of U.S. adults, yet the molecular mechanisms that sustain lipid accumulation in hepatocytes remain incompletely understood. Here, we identify Y box binding protein 1 (YBX1), an RNA-binding protein, as a regulator of hepatocyte metabolic adaptation during diet-induced steatosis. Loss of hepatic Ybx1 reduces liver lipid accumulation and broadly rewires lipid metabolism, shifting hepatocytes away from neutral lipid storage and toward membrane, sphingolipid, polyunsaturated fatty acid, and oxylipin remodeling. In cell-based fuel-use assays, the effect of YBX1 is most evident when lipid, glucose, and insulin signals converge, suggesting a role in coordinating metabolic choices under nutrient-rich conditions. Mechanistically, YBX1 links RNA regulation, RNA modification, and chromatin-associated ribonucleoprotein complexes to hepatocyte lipid handling. Together, these findings define post-transcriptional RNA control as a stabilizing layer of metabolic adaptation in MASLD.

PHD GRADUATES

CONGRATULATIONS TO OUR NEW PHD GRADUATES!



MIA TRUPIANO, PHD

Mia successfully defended her dissertation : **“Early-Life Nicotine Exposure Disrupts Striatal Inhibitory Circuits and Motivated Behavior”!**



PHD GRADUATES

MEAGHAN NAVARRETE-MATHEWS, PHD

&

Meaghan has successfully defended her dissertation:
**"Investigating The Neurobiology of Psychosis-
Associated Behavior Using 14-3-3 Mouse Models"**



PHD GRADUATES



YASMEENA THABET, PHD

Yasmeena successfully defended her dissertation :
“Deleting D2 Receptors from Developing Cortical Interneurons Increases Glutamatergic Neurons and Attenuates NMDA Antagonist-Evoked Behavioral Responses”



GRADUATE STUDENT NEWS

BRYAN W. ROBINSON ENDOWMENT FOR THE NEUROSCIENCES GRANT AWARDEES



The **Bryan W. Robinson Endowment** Annual Meeting & Award Ceremony was held on June 3rd at the FSU, College of Medicine. Two of our **PhD graduate students** won this year's **Bryan W. Robinson Endowment Grant for the Neurosciences**:

- **Danah Alquraish**, *"Peripheal FMRP Loss in Spiral Ganglion Neurons Drives Auditory Hyperexcitability and Audiogenic Seizures"*
- **Heyje Sumajit**, *"Targeting LSRP6-mediated collagen I synthesis to inhibit GBM growth and invasion"*



GRADUATE STUDENT NEWS

EUROPEAN SOCIETY OF CARDIOLOGY (ESC) 365



ANDREA VILLATORE

Andrea recently presented at the European Society of Cardiology (ESC) 365 in Nice, France, where he delivered a rapid-fire talk and poster titled ***“Genetic abrogation of osteopontin mitigates cardiac dysfunction and arrhythmias by preventing myocardial inflammation in arrhythmogenic cardiomyopathy.”*** His work highlights the role of osteopontin in driving cardiac inflammation and demonstrates its potential as a therapeutic target in arrhythmogenic cardiomyopathy.



MED IT | TIP OF THE MONTH



“There are a few simple steps to prevent laptop overheating. Keep your laptop vents, located on bottom of computer, clean and clear to avoid overheating issues. Try to avoid keeping your device on fabrics or other surfaces that can leave debris behind.”

-Saulo Cuadrado-Acosta | IT Technician

DEPARTMENT OF BIOMEDICAL SCIENCES

GRADUATE STUDENT NEWS

GOING AWAY CELEBRATION



GRACE HAMMEL, PHD

Grace Hammel, PhD, is a Postdoctoral Scholar in the Nowakowski Lab, previously part of the Ren Lab. She earned her PhD from the Department of Biomedical Sciences at the FSU College of Medicine and has spent the past two years conducting postdoctoral training in translational neuroscience. Her research focuses on neuroinflammation and blood-brain barrier changes following central nervous system injury. She also mentors students, contributes to teaching, and engages in community outreach.

Please join us in congratulating her on her new role as **Assistant Professor at Eastern Virginia Medical School** and wishing her continued success!



GRADUATE STUDENT NEWS

GRADUATE PROGRAM COMMITTEE ANNUAL AWARD NOMINATIONS



Left to right: Above are the **2025 awardees** **Ron Chastain** (Junior Randolph Rill Awardee), **Alana Chang** (Myra Hurt Leadership Awardee), **Tomiwa Lawal** (Senior Randolph Rill Awardee)

The annual award nomination for PhD students in Biomedical Sciences are **due by Monday, July 6th**. All submissions must be emailed to Dr. Gregg Stanwood, Director of Research & Graduate Programs.

Each year the committee awards two **Randolph Rill Awards** and one **Myra Hurt Leadership Award** during the BMS Graduate Program Retreat. Both awards are accompanied by a certificate and a monetary allotment.

Randolph Rill Award

The **Randolph Rill Award** recognizes one outstanding Junior & Senior graduate student. The nominated Junior graduate student should show substantial progress during the earlier stages of their research with evidence of data production and publication potential.

Senior graduates (defined as completing three years or more) are recognized to have demonstrated exemplary scholarly productivity including, but not limited to, publications, national meeting presentations, recognized research efforts, fellowships, awards & patents.

Myra Hurt Leadership Award

The **Myra Hurt Leadership Award** is awarded to a graduate student who shows clear leadership ability through their participation in programs and organizations on a national, state, regional, university and departmental levels.

Student Nominations

Student nominations are contingent on the nominator. **Nominators** are requested to **submit the students CV and nomination letter** as a **single pdf file**. Failure to provide both parts will result in the disqualification from consideration of the nominee based awards.

DEPARTMENT OF BIOMEDICAL SCIENCES

RETREAT & SCIENTIFIC SYMPOSIUM



THE ANNUAL BIOMEDICAL SCIENCES RETREAT AND SCIENTIFIC SYMPOSIUM

Featuring mini-symposium talks, 3MT and poster sessions,
engaging discussions, and more!

SAVE THE DATE

AUGUST 20TH, 2026
8AM - 5PM

FSU ALUMNI CENTER

1030 W TENNESSEE ST,
TALLAHASSEE FL 30304



ALUMI SPOTLIGHT

GRAD MADE GOOD

We are launching our Alumni Spotlight series, **Grad Made Good**, where we celebrate the incredible work and career journeys of our BMS graduates. From academia to industry and beyond, our alumni continue to make meaningful contributions in their fields. We recently had the pleasure of speaking with **Dr. Ali Darkazalli, Associate Director of Process Development** in the Therapeutic Products Program at Fred Hutch Cancer Center in Seattle, Washington. Through our conversation, he shared insights into his career path and experiences, as well as thoughtful advice for current graduate students navigating the world of science. Thank you Dr. Darkazalli for your insights.

Q: Can you share a bit about your educational journey. What motivated you to choose this path, and how did your graduate focus help shape your transition into industry?

Looking back, my educational and professional journey has always been guided by a fascination with human biology and the belief that science can meaningfully change the way we understand and treat disease. During my PhD in the Department of Biomedical Sciences, I studied the cellular and molecular mechanisms underlying the use of engineered mesenchymal stromal cells as a therapeutic platform for traumatic brain injury in the lab of Dr. Cathy Levenson. At the time, harnessing the power of engineered cells to develop a potential treatment for TBI felt like “mad science”. Little did I know, I would go on to build a career around exactly that kind of work.

My graduate research was my first foray into cell therapy development, and that incredible project



Dr. Ali Darkazalli

ultimately enabled my transition into the cell therapy industry. The move from academia to industry was appealing because it placed me closer to the point where those scientific discoveries become real, tangible therapeutic products that can improve patient outcomes.

Q: Can you share any advice that may help current or incoming graduate students?

My advice is to be intentional about building both scientific depth and practical skills that can open different career paths. You can absolutely continue pushing the boundaries of your specific research area, but you can also use the knowledge and skills gained during graduate training to solve practical problems and make an impact in new ways. Stay curious, seek out opportunities outside your immediate research focus, and don't underestimate the value of skills that may not be directly related to your dissertation.

Q: What advice would you give to graduate students who are thinking about pursuing a career in industry?

My biggest advice is to focus on building applicable technical experience. In my case, transitioning into cell therapy development required experience with a wide range of cell culture techniques, as well as, analytical methods used to characterize and understand cellular products. If cell therapy is an area of interest, developing skills in analytical areas such as flow cytometry, PCR, and ELISA will be critical and indispensable. Gathering experience with cell engineering methods including lentiviral transduction and emerging gene-editing technologies like CRISPR will also be extremely valuable. Beyond technical skills, seek opportunities to understand how science operates in an industry setting through internships, collaborations, or exposure to regulated environments. Those experiences can make a significant difference when competing for your first industry role.

Q: What did your transition into industry look like, and were there any unexpected challenges along the way?

The most challenging part of my transition into industry was simply getting the opportunity to get started. Moving from academia into biotechnology requires demonstrating that your scientific training can translate into a different environment with different priorities, timelines, and expectations. One thing I would encourage students to consider is gaining industry exposure as early as possible. Don't wait until after your postdoc to explore biotechnology opportunities. Industry experiences through internships and structured co-ops can provide valuable insight into how companies operate and they will help you build the skills that hiring managers are looking for.

Without a roadmap, the transition can feel overwhelming, but the skills you learned as a graduate student – the ability to think critically, troubleshoot problems, and learn quickly – are universally transferrable.

One of the biggest shifts from academia to industry leadership is recognizing that your impact is no longer measured only by your own experiments, but by the success of the team and the systems you help build.

Q: In your current role as Associate Director, what skill set do you find yourself using the most?

The skills I rely on most in my current role are the ability to lead through influence, communicate across disciplines, and bring people together around a shared objective. In graduate school, it is entirely possible to manage the work required for a whole dissertation largely independently, but as your career progresses, the complexity and scale of projects will grow beyond what any one person can accomplish alone. In my role as leader of a team of process development scientists, success depends on bringing together diverse expertise, aligning priorities toward a common goal, and communicating effectively across scientific and operational groups. One of the biggest shifts from academia to industry leadership is recognizing that your impact is no longer measured only by your own experiments, but by the success of the team and the systems you help build. The ability to foster strong partnerships and help others succeed has become just as important as the technical expertise that made it possible to get here.

FACULTY NEWS

TOGETHER VT 2026 CONFERENCE



DR. STEPHEN CHELKO

Dr. Stephen Chelko recently presented at Together VT 2026 in Milan, Italy, where he delivered a talk titled ***“Preclinical Platforms to Elucidate Disease Mechanisms of Myocardial Inflammation in Arrhythmogenic Cardiomyopathy.”*** His work highlights innovative preclinical approaches to better understand the inflammatory mechanisms driving arrhythmogenic cardiomyopathy.

PUBLICATIONS



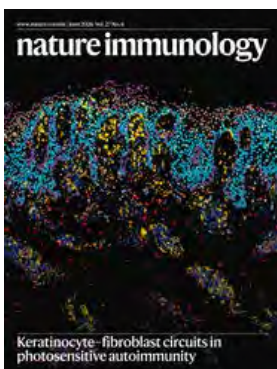
High- and moderate-intensity exercise training differentially impact microvascular function in skeletal muscle of mice lacking adiponectin



Medarev S, Xiangyu Z, Evola V, Moraj J, Parr M, Ashton A, Park H, Ghosh P, Rathakrishnan A, Machin D, and Muller-Delp J (2026). *Impact of high- and moderate-intensity exercise on microvascular function in skeletal muscle of mice lacking adiponectin*. Journal of Applied Physiology, 140(6), 1548-1559. <https://doi.org/10.1152/japplphysiol.00918.2025>

Abstract: This study examined whether a lack of adiponectin—often linked to low aerobic activity—affects muscle blood vessel function and energy capacity. Adiponectin knockout (AdipoKO) and wild-type (WT) mice either exercised at moderate or high intensity or remained sedentary for 8–10 weeks. Results showed that moderate exercise improved muscle energy capacity and capillary density in WT mice, but not in AdipoKO mice. While moderate exercise improved vasodilation in AdipoKO mice, high-intensity exercise only improved blood flow responses in WT mice. Overall, the findings suggest that adiponectin is important for the beneficial effects of exercise on muscle function and vascular health. To read the complete publication, visit [JACC](#).

Memory regulatory T cells reprogram into protective T_{FH} cell-like effectors in recurrent malaria



Charles-Chess, N.A.E., Ruberto, A.A., Bowers, C. et al. Memory regulatory T cells reprogram into protective T_{FH} cell-like effectors in recurrent malaria. Nat Immunol (2026). <https://doi.org/10.1038/s41590-026-02537-z>

Abstract: This study explored how the immune system responds to repeated malaria infections. It found that certain immune cells, which normally slow down the body's defenses during a first infection, can change their role in later infections. Instead of suppressing the immune response, these cells begin to help the body produce antibodies that fight the malaria parasite. If this change does not occur, the body is less able to protect itself. Overall, the study shows that the immune system can adapt over time, helping the body better defend against recurring malaria infections. To read the complete publication, visit [Nature Immunology](#).

PUBLICATIONS & AWARDS



Sanjay Kumar, PhD | Book Contract with Taylor & Francis/CRC Press for his book *Electrophysiology: A Zen Guide to Neuroscience First Principles*

Jarrold Mousa, PhD | American Lung Association: Emerging Respiratory Pathogen Award

Jerome Irianto, PhD | NIH R01: *"Role of cellular physical interactions in pancreatic cancer progression"*

Gary Ostrander, PhD | Florida Dept of Health: "Enhancing Niclosamide Activity for Cancer Treatment" (ENACT)