

# School of Integrative Biology

## SIB CONNECTIONS



### A Message from the Director

Dear alumni,

It's wonderful to connect with you again!



Each year, the School of Integrative Biology looks forward to reaching out through our SIB Connections to celebrate the amazing achievements of you and your peers. As we

embark on our sixth year of this

newsletter, we're thrilled to share even more exciting developments from our vibrant SIB community.

Reflecting on this past year, there have been several advancements in opportunities within SIB. We welcomed our first cohort of BSLAS + MS in Integrative Biology students, a program that allows students to earn their master's degree within a year. We expanded our IB Undergraduate Research Assistant Program for both fall and spring semester and we offered additional iBio Scholar summer internships as well. Finally, our study abroad program continues to grow with assistance from the Delcomyn International Study Abroad Award in Biology. For the IB496 Special Courses classes—the course for students to study abroad—Professor James Dalling and Dr. Chris Taylor lead our students to the global south. Students can choose to travel with our IB faculty experts to study either the tropical forest ecology in Panama or the natural history of coral reefs in Belize.

Of course, Connections thrives on the incredible accomplishments of our alumni. We invite you to share your own stories by reaching out to us at [communications@sib.illinois.edu](mailto:communications@sib.illinois.edu). Your experiences and successes inspire your fellow alumni and strengthen our community.

As we move forward, we encourage you to stay engaged with the School of Integrative Biology. Your contributions inspire others to excel in their fields, and your ongoing involvement plays a crucial role in the success of Illinois.

Thank you for being such an important part of our community. We can't wait to celebrate your successes, share your stories, and keep our IB Connections strong through this newsletter.

Wishing you all the best as you continue your journey!

Sincerely,

Carla Cáceres

*G. William Arends Professor and director,  
School of Integrative Biology*

*Professor, Department of Evolution, Ecology,  
and Behavior*

### Keep up on all SIB news!



*Interested in the latest research, events, and more? Use the QR code to read some of the latest news that has been taking place over the past year.*

# Biology Abroad

Enriching the IB global perspective

**When it comes to studying abroad with SIB,** it's tough to find a more unique opportunity to explore global biodiversity while learning about the cultures in the places being visited. By allowing our students to immerse themselves in a different country, we are allowing them to experience hands-on fieldwork, collaborate with international researchers, and observe ecosystems and species that they may not encounter at the university. This exposure broadens their perspective on ecological and evolutionary processes, enriching both their academic and practical knowledge.

Additionally, studying abroad enhances personal growth by pushing students out of their comfort zone, helping to develop adaptability, independence, and cross-cultural communication skills. Engaging with a global network of students and professionals opens doors to future research and career opportunities, as well as providing a rich cultural experience. SIB supports students in making the most of this adventure, combining academic rigor with real-world exploration in a way that can transform both their education and worldview. The following is a story from a recent IB major who took advantage of this opportunity in Vienna.

## Samantha Florey and experiences from IB in Vienna and Croatia

**“Last semester, while studying abroad in Vienna, Austria,** I had the opportunity to participate in a field research course in the Kornati Islands of Croatia. During this course, I stayed on Pasman Island, Croatia for two weeks. Each day I was traveling by boat to different islands to conduct a research project focused on observing how plant species had changed over the past six years. This experience deepened my understanding of the research process and challenged me to develop my teamwork skills, as I collaborated with students from the University of Vienna who I did not know before this project.

This course was unique from others I've taken at the University of Illinois Urbana-Champaign because of its immersive environment in which we were fully engaged in collecting data for two consecutive weeks. This format is particularly beneficial to anyone who might be interested in pursuing a career in research and it played a role in my decision to consider a career in research during my gap year before applying to medical school.

Additionally, while abroad, I had the chance to shadow a physician in my host city throughout the semester. This allowed me to gain insights into

general medicine practices, observe the differences in healthcare systems between countries, and practice my German language skills.”



### Learn more about the program.

*Want to know more about study abroad? Learn about the reasons why students go abroad, the different programs available to them, and more.*

# Major in BSLAS + MS in IB

A one-year master's program at its finest

**The BSLAS + MS in IB is a joint degree program** offering a five-year, non-thesis pathway that combines undergraduate and advanced coursework in areas such as genetics, evolution, anatomy, physiology, ecology, and molecular biology. After completing foundational courses, students engage in advanced

studies across fields like bioinformatics, genomics, and environmental science. While traditional master's programs typically require two years and a thesis, this course-based program allows students to gain in-depth knowledge, career preparation, and advanced lab skills without a thesis requirement.

## Lexanne Halama, BSLAS + MS in IB student



**“My experience in the BSLAS + MS program has been great so far** and I've really enjoyed it. Initially, I wasn't sure what I wanted to do. I finished my undergraduate in three years and as a student athlete I had one more year to play on the golf team. I believed I couldn't get a master's degree in that time but then this

program began last year. I thought ‘this is great’ because it allowed me to be able to keep learning about things I was interested in. I'm able to keep pursuing science while earning a master's degree and still playing sports.

I've had a great time in IB. There's not a single person I can say I've had a bad experience with. I've loved it and if you ask my teammates, I'm constantly talking to them about what I've learned and I'm happy I still have one more semester.

With this program you can double count credits from your undergrad and apply them to requirements in the master's program. So last semester I took seven hours of credit to apply to my master's this year. One class I've really enjoyed was IB 432 Genes and Behavior because I was able to see how to read and dissect a science article. We did a lot of different readings in that course. It taught me how to understand figures and how to turn these figures into fact sheets, which now lets me move through literature quickly. It's helped in my other classes this year, as I can do meta-analysis and skim through articles to find the meat of the paper.”

### More information on a BSLAS + MS degree.

*Is this the first you're hearing of this program? That's because its new! Take a look at what goes into earning a BSLAS + MS, what the degree requirements are, and the overall learning outcomes.*





# Undergraduate Job Opportunities

Providing expanded employment opportunities for our students

In recent years, IB has introduced several paid student roles to support students, thus empowering them to gain leadership skills and other resume-building opportunities. These roles include peer leaders, advising desk clerks, recruitment representatives, peer advisors, laboratory prep staff, classroom assistants, and undergraduate research assistants.

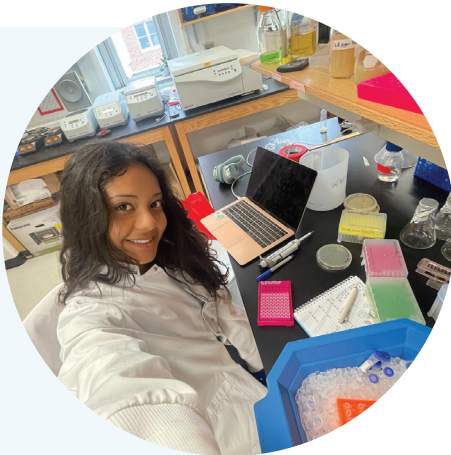


## Jessamine Britt - IB laboratory prep staff

"I'm going into my fourth year at the university and second year working in prep staff. I really enjoy this job because it's helped me figure out what kind of career I'd like to pursue. Prep staff is both an independent and team-oriented job. Some days I'm working entirely by myself making gels for a genetics lab or feeding crabs for a physiology lab. Other days I'm working alongside a coworker setting up an elaborate evolution lab. I really like the flexibility in that and it's something I'll look for in a future career."

## Farwah Wasiq - iBio Scholar

"During my summer project, I focused on improving the efficiency of Rubisco, a key photosynthetic enzyme, to enhance photosynthetic performance and agricultural yield. This involved using directed evolution techniques with *E. coli* as a host, aiming to engineer Rubisco for improved catalytic efficiency. My specific goal was to delete three genes (*rpiA*, *rpiB*, and *edd*) to make bacterial growth dependent on Rubisco activity, paving the way for selecting the best Rubisco variants. This experience gave me hands-on exposure to lab skills and the collaborative nature of scientific research, which further solidified my passion for pursuing a career in medicine with a focus on research."



## Undergrad Opportunities.

As SIB continues to grow, so do our opportunities for students to gain experience. From peer leaders to research assistants, IB undergrad opportunities have never been stronger!

# IB Alumni Careers

Keeping up with your fellow Illini

For 20 years, the School of Integrative Biology has proudly trained and educated over 2,000 alumni, many of whom have gone on to excel in a diverse range of careers. Discover what our graduates are achieving today and visit our website to explore more inspiring alumni stories.

Do you know someone you'd like to see featured? Send info to [communications@sib.illinois.edu](mailto:communications@sib.illinois.edu).



## Stephanie Klein

After graduating in 2013 with a degree in integrative biology, Stephanie spent a year at Chromatin, Inc. Although she initially planned to pursue a biomedical career, her experiences in IB 203 and research at the SoyFACE facility inspired her to pursue a PhD in plant biology at Penn State. She now holds a postdoctoral position at Iowa State. Stephanie's current research focuses on how root systems help plants adapt to stress, with an emphasis on nitrogen variability and sustainability in agricultural systems.



## Johnny Tenegra

Johnny earned a bachelor's in integrative biology in 2005, a master's in biology in 2007 from the University of Illinois, and an MD from Ross University in 2011. For the past decade, Johnny has been an academic family physician in Decatur, Illinois, practicing full-spectrum family medicine. He is also the director of point of care ultrasound and faculty development for Southern Illinois University's Department of Family & Community Medicine. His interests include leadership development and medical education research, particularly simulation training, point-of-care ultrasound, and faculty development.



## Erin Murphy

Erin earned a bachelor's in integrative biology in 2013 and a master's in geology in 2015 from the University of Illinois, followed by a PhD from Arizona State in 2023. She is now an adjunct professor at Arizona State. Her work focuses on the impact of plastic pollution on marine life and the social and ecological costs of plastic interventions. Erin's integrative biology degree laid the foundation for her research on coastal pollution, supporting her academic and professional success.

## We want to hear from you!

Are you or someone you know a great fit for Connections? Let us know! Scan the QR code and email the provided address to share your news and stories for upcoming editions.







## IB Alumni Feature

### James Caruso, M.D.

**Title:** Chief medical examiner and forensic pathologist

**Employer:** City and County of Denver

**Previous Roles:** Medical officer, US Navy (for 30 years)

**After finishing his undergraduate degree in biology, Jim stayed at Illinois for his MD from the College of Medicine.**

He was on a Navy Health Professions Scholarship for medical school so upon graduation he headed off to an internship at the Naval Medical Center in Portsmouth, Virginia. During a 30-year career in the Navy Jim practiced shipboard medicine, diving and submarine medicine, aviation medicine, hospital-based pathology, and forensic pathology. He was a diving medical officer with the Navy Explosive Ordnance Disposal Unit for three years and cared for Navy divers and SEALs. Jim completed a residency in anatomic and clinical pathology along with a fellowship in diving and hyperbaric medicine at Duke University Medical Center; his forensic pathology training was at the Maryland Chief Medical Examiner's Office in Baltimore. He is board certified in all of these medical specialties.

Jim has performed autopsies all over the world, including hostile environments like Iraq. He also served in administrative medicine roles, supervising numerous departments and groups of departments in military hospitals, including overseas facilities. He has dozens of peer-reviewed scientific papers to his credit as well as numerous book chapters. Upon retirement from the Navy, Jim was appointed chief medical examiner and coroner for Denver, Colorado, where he runs a medical examiner office for a large city and is faculty for the local medical schools. He has performed over 3,000 autopsies and supervised an equal or greater number.

Jim is also a rabid hockey fan, particularly when it comes to the Chicago Blackhawks.

## What's New at SIB? *A look at new faces and spaces*

**This past year has been a busy one, as we have continued in creating new spaces to engage with alumni.** SIB is proud of the lasting connection it builds between graduates and their alma mater, using a combination of this newsletter, social media, and our mentoring program. These spaces, whether physical or virtual, provide a platform for alumni to stay connected, share their experiences, and contribute to the growth of SIB.

This year, we said goodbye to our old LinkedIn group and hello to our new LinkedIn page. As we continue to build our page, we encourage everyone to follow it to find potential career opportunities within your field, news and updates, and to connect with one another. We can be found at [linkedin.com/company/ibioillinois](https://www.linkedin.com/company/ibioillinois). We look forward to speaking with you there!

Additionally, we welcomed a few new staff members to the SIB community. We're excited to have them on board as we continue to fulfill the teaching and research missions of SIB.



**Joe Zhou** - *professor; Kearns, Metcalf and Flint Endowed Chair in the Department of Entomology*

Joe is an insect toxicologist by training, but his interdisciplinary experiences help him to understand the adaptive innovations in insects dealing with various biotic and abiotic challenges during evolution. In his free time, Joe and his daughter have been co-teaching a visual art class at a local Chinese School in Lexington, Kentucky, for the past seven years, while also enjoying some college basketball.

**Jeff Hansen** - *research greenhouse specialist in the Department of Plant Biology*

Jeff is assisting in management of the plant biology greenhouse space and is facilitating research projects as well as working with the plant collections and conservatory. In his spare time, he likes to garden and play trombone.



**Rose Marks** - *assistant professor in the Department of Plant Biology*

Rose's research focuses on understanding local adaptation, convergent evolution, and the mechanisms of desiccation tolerance in "resurrection" plants. In addition to science, Rose's favorite things include rock climbing, spending time with friends and family, and pastries!



## We're looking to award our alumni!

**Did you know that SIB has alumni awards?** We've got two to be exact. If you know someone you think deserves one, read up on the qualifications and then let us know.

## Join our LinkedIn Community!

**While we have made the change from a group to a page, that doesn't mean you still can't be engaged.** In addition to sharing IB news and events, we'll also be sharing career opportunities as we find them.





## SCHOOL OF INTEGRATIVE BIOLOGY

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# Alumni & Friends!

**You and your investment play an invaluable role in the success of our students, faculty, and staff.** Your impact is evident in the cutting-edge discoveries and transformative educational experiences that have emerged from our school.

As we continue to push the boundaries of scientific understanding, we would like to convey our gratitude to you for being instrumental in shaping the future of biological sciences and fostering a community committed to excellence by supporting our School through fellowships, scholarships, and essential upgrades to laboratories, classrooms, and technologies.



**Looking for more ways to support SIB?** Follow the QR code, visit [go.illinois.edu/SIBAlumni-GetInvolved](https://go.illinois.edu/SIBAlumni-GetInvolved), or contact Paul Winterbotham, associate director for advancement, at [paulww@illinois.edu](mailto:paulww@illinois.edu) to learn more.

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