

Welcome to the SIB Connections!

Spring 2022



Dear Alumni,

We began the SIB Connections three years ago to better connect with our alumni and to highlight their accomplishments. Since the School of Integrative Biology was formed, our thousands of alumni have created lasting value and impact through their professional achievements. As you read the stories of other alumni just like you, I invite you to share your own stories and success with us by emailing communications@sib.illinois.edu.

As we continue to navigate the global pandemic, our students, faculty, and staff have shown remarkable resolve and resilience, continuing to develop new ways to connect with their work and others. I am especially proud of the commitment to safety shown by our students. Students were able to return to campus this past fall under the SHIELD Illinois program, allowing us to reconnect with classmates, colleagues, and friends. Our students share their perspective on what it was like to be back on campus on pg. 2.

I am pleased to share that our alumni community continues to grow through our expanding Alumni Mentor Program and SIB Career Connections. Our Alumni Mentor Program coordinator Christina Swanson has leveraged the power of online communities on Discord to create a centralized place for students and alumni to connect. Students hear directly from alumni on topics ranging from professional and graduate school applications, resume and cover letter advice, information about potential careers in all kinds of fields, and more. Students also seek and share advice on scholarships, volunteer opportunities, getting involved in undergraduate research and much more. To date, over 100 students are a part of the SIB community on Discord, and we're thrilled to have more students and alumni joining every day. More information can be found on pg. 3.

We are also pleased to announce the 2022 Outstanding Recent Alumni Award recipient – Dr. Allison Gardner! Allison's combination of research excellence, teaching ability, creative and multidisciplinary approach, and commitment to public health make her an ideal candidate for this year's Outstanding Recent Young Alumni Award. Her research into arthropod vectors of human disease and versatility as an instructor and communicator is exceptional, and we're excited to recognize her with this award. You can read more about Dr. Gardner on pg. 4.

I hope you enjoy reading about what just a few of our many talented students and alumni have accomplished this year, and I look forward to the continued growth of our alumni community.

With my best wishes,



Carla Cáceres - Director, School of Integrative Biology

Fall 2021: What was it like to be back on campus?

Throughout the COVID-19 pandemic, our students have demonstrated remarkable resilience and commitment to their work and success. Fall 2021 saw our students returning to campus under Safer Illinois procedures, which kept our community safe and able to collaborate and learn in person. Here's what a few of our SIB Peer Leaders had to say about what it was like to be back on campus. ❖



Audrey Wong | Class of 2023

It feels great being back on campus and seeing the Main Quad and Green Street lively once again. One of my favorite things that I have been able to do on campus is go to my bee research lab (under Professor Adam Dolezal). My favorite IB class I'm taking right now is IB203 Ecology since I love learning about things like populations, ecosystems, succession, and mutualism.

Hannah Caraway | Class of 2023

It's wonderful to be back to hands-on learning in the Integrative Biology Honors Program, and I'm proud to see how safe our campus community has stayed. My favorite thing I have done this semester is T.A. for general chemistry. I love getting to share my passion for STEM with other students at UIUC and help them through their journey! It's really awesome to see many of them considering IB and the career paths open to them through the program.



Labake Oyetayo | Class of 2022

It's been great to see the campus come alive once again. I was on campus during the remote year for research and walking past the nearly empty quad daily was disheartening. My favorite IB class right now is IB 430 Animal Behavior lab because the instructors provide boundaries for the research, but students are given free rein to explore research questions within those boundaries.

James Shim | Class of 2023

Even though COVID is still present, I have met a ton of new people this year that I am grateful to have in my life! My favorite IB class I am taking right now is genetics! I really like how vast the field is for something you would think would be very specific. From illnesses, to the heredity of common traits, to even understanding mechanisms in crops such as Maize and animals, I have learned so much more than I thought I would.

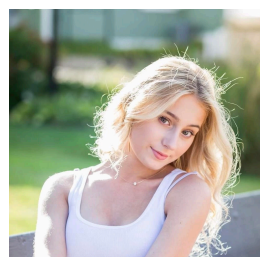


Angela Yoon | Class of 2022

I am so happy to be back on campus because I feel the sense of belonging and vibrance of the Illini community. I feel more appreciative about how each of us could make it to class each day. In retrospect, there are so many good memories I made this semester. I made a few study buddies from the classes. I did fundraising for GMT Illinois- a global medical training RSO- as a financial committee member, and it was so nice to interact with people on the quad.

Natalia Kmiec | Class of 2023

This semester, I have found a few new hobbies. I really enjoy rollerbading on the quad. I also like to spend my time studying at the spacious libraries that we have on campus. I think that even though COVID took away many opportunities for college students, it also gave us a bit of a break to reflect on how we can better our habits and how to spend our time in a more fruitful way. My favorite class is IB 204 Genetics because I can learn about many interesting genetic disorders, and I get insight on how they arise through inheritance. Also, who doesn't love doing punnet squares!



Career Connections: Linking our students and alumni



In the last five years, the School of Integrative Biology's Alumni Mentoring Program has brought together students and alumni from all different career paths, giving students a unique perspective into how they can leverage their IB degree for success. We are grateful for our alumni mentors (now over 80 individuals!), who have offered their experiences, recommendations, and support to hundreds of students.

What began as a program with a small number of alumni mentors has now grown into the SIB Career Connections, a resource hub for students and alumni seeking insight, advice, or assistance navigating the job market and their career goals. Visitors to the Career Connections page can find information about upcoming career workshops, connect with the alumni mentors both through the course and individually, get help with their job or graduate school applications, and much more.

Last year, SIB expanded its Career Connections to include a new Discord server! In this new online community space, our undergraduate and graduate students can connect with alumni in threads on all kinds of topics, such as insights into the current job market from recent graduates, job openings, how to get involved in research, which courses are best for what specific interests a student might have, how to ask for letters of recommendation, and much more.

Since its beginning in Fall 2021, we already have over 125 students, with more joining every day! Alumni are encouraged to join the Discord, which you can access here: go.illinois.edu/IBDiscord.

The success of this program is due in no small part to the efforts of our many alumni, including you! Please consider taking advantage of the Career Connection resources available to you, both as an alum with valuable perspective to offer and as a member of our community to whom we might offer support. Our graduates have gone on to do amazing things in such a wide variety of careers and industries – we'd love to hear your story and help you connect with others!

To learn more, visit: go.illinois.edu/SIBCareerConnections or email Christina Swanson directly at sillima2@illinois.edu. You can also fill out a short profile survey to let us know how you'd like to stay connected at go.illinois.edu/SIBAlumniProfile. ❖

Here's what some of our students had to say about working with alumni mentors...

"This class is a hidden gem. Instead of just telling us about what options we have available as IB students, it presents us with speakers who already have those positions and are the best available resource to know what it's like to have that kind of a career. After all, who better to ask than the person who knows what it takes to get that desired position?"

"I gained a good understanding of where I want to head in the future and what I can do to help me get there."

"I think the alumni speakers were one of the most valuable aspects of the class."

2022 Outstanding Recent Alumni Award

The School of Integrative Biology has a tradition of teaching and research excellence over 150 years old. In the last century and a half, our faculty have had the pleasure of working with tens of thousands of undergraduate and graduate students who have gone on to change the world through their impactful and cross-cutting work. To celebrate these accomplishments, in 2019 the School of Integrative Biology created the Alumni Achievement Award and the Outstanding Young Alumni Award.

The **Achievement Award** recognizes outstanding professional achievement that demonstrates the value of an education (BS, MS, or PhD) from the University of Illinois. The **Outstanding Recent Alumni Award** recognizes a recent graduate (within 10 years of final Illinois degree) for outstanding or noteworthy professional achievement. To learn more, or to access nomination information, please visit: sib.illinois.edu/alumni/awards.

The recipient of the 2022 Outstanding Recent Alumni Award is Dr. Allison Gardner!



Assistant Professor | School of Biology and Ecology, University of Maine

2012 - M.S. Pathobiology, University of Illinois Urbana-Champaign

2015 - M.S. Statistics, University of Illinois Urbana-Champaign

2016 - PhD Entomology, University of Illinois Urbana-Champaign

Dr. Allison Gardner is an assistant professor at the University of Maine, Orono. She earned her PhD in Entomology in 2016, the last of three advanced degrees (MS in Pathobiology, MS in Statistics, and PhD in Entomology) over six years at the University of Illinois Urbana-Champaign. Dr. Gardner has a longstanding interest in the ecology of arthropod (insects, arachnids, and crustaceans) vectors of human diseases. Her research into source reduction has enormous potential to improve environmental quality without compromising vector control.

At the University of Illinois, she studied the effects of multiple interacting environmental factors, including invasive species, changing land use patterns, and water chemistry, on larval stages and their potential impact on risk of disease transmission.

At the University of Maine, she has built on her doctoral work showing the possible use of leaves from terrestrial shrub species for the control of mosquito larvae in stormwater habitats – an “organic” solution to a perennial challenge in pest management. Allison is also the lead PI on an NSF grant to study the invasion of Zika viruses in the Americas, and how mobility and contact networks influence disease spread.

In addition to her research success, Allison has also displayed her versatility as an instructor, teaching in subject areas as broad as general biology for non-majors and as specific as emerging infectious diseases, across formats including lecture-based courses, field courses and online courses. Beyond her ability to integrate within the scientific community, Allison has demonstrated an extraordinary willingness to share her formidable skills to advance public welfare. This willingness is enhanced by her remarkable communication skills. As a graduate student she was a superb teaching assistant and excelled in making statistics comprehensible and useful even for students who are not mathematically inclined.

Allison’s combination of research excellence, teaching ability, creative and multidisciplinary approach, and commitment to public health make her an ideal candidate for this year’s Outstanding Recent Young Alumni Award. As her nominators shared, “she has applied the skills mastered within these fields (pathobiology, statistics, and entomology) in complementary ways throughout her professional career, achieving notable successes in the multidisciplinary scholarship that characterizes the cutting edge of 21st century science.”

Congratulations Allison!

To learn more and access nomination information for the alumni awards, please visit: sib.illinois.edu/alumni/awards. ❖

New Master of Science in Integrative Biology

The newly approved Master of Science in Integrative Biology (MS in IB) program provides students with a non-thesis, course-based advanced degree opportunity. Students in the MS program have the ability to enhance their skill sets within IB upper-level courses without having to invest in a required timely research component for the degree. Students will thus be able to graduate in one year with a degree making them more competitive for employment and future research opportunities.

This program can serve students who are in a gap year between undergraduate programs and either employment or future graduate-level programs. The MS in IB program offers advanced coursework and laboratory experience in fields such as organismal biology, behavioral ecology, anatomy and physiology, environmental science, bioinformatics, pathology, genomics, and mathematical modeling to name just a few. With a world-class advanced degree from the University of Illinois, our students are better prepared to enter the workforce and thus have higher earning potential. The MS in IB advanced degree also affords students more competitive applications for further professional school or future careers in industry, government, or academia.

Student supports and quality student instruction are considered as some of SIB's highest priorities. One of the ways the MS in IB program builds in these supports is the program's required course, IB 492: Career and Skill Development in IB, which includes more tailored mentoring. Other course goals include building confidence to find and secure a career, making connections in the field of integrative biology, and applying resources learned to aid in job searches and applications. IB 492 will serve to connect students with IB alumni and mentors in helping them to better plan their next steps and career growth through connections with our community here at Illinois. These volunteer and mentoring opportunities help to create more well-rounded applications to professional schools or employment opportunities for MS in IB students.

The MS in IB program is now enrolling students for the Summer and Fall 2022 cohorts. Learn more here: sib.illinois.edu/graduate/msib or contact Program Director, Allison O'Dwyer, at msib@sib.illinois.edu. ❖

Online Master of Science Teaching Biology Program (OMST)

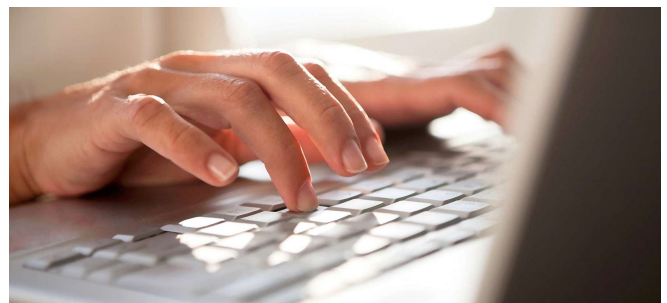
The Online Master of Science Teaching Biology (M.S.) degree program is designed to give practicing teachers the opportunity to earn the M.S. in Teaching Biological Science or graduate credits in biology while living and teaching at home.

The courses are designed to bring the teachers up-to-date with topics in biology and science education. As the courses are designed explicitly for biology teachers rather than future researchers, the overall program is extremely relevant to in-service teachers with course activities, assignments, and assessments developed to enable conversion into the teachers' classrooms. The courses are also designed specifically for the online environment, with opportunities to interact and collaborate with classmates while working with the course material.

Courses in the Master of Science in Teaching Biology meet the needs of today's biology teachers. The fully online format enables in-service teachers to bring the latest advances in biology and evolving pedagogy directly into the classroom. Teachers certified to teach biology in public schools and admitted by the University of Illinois may take any of these courses, whether they are in a degree program or are a non-degree student.

The OMST of Biological Science program offers Biology and Education courses that are 8 weeks in length and completely online. The student is free to select the Biology courses offered that are of the most interest to them, or best fit into their schedule.

Learn more here: omst.sib.illinois.edu or by emailing omst@sib.illinois.edu. ❖



Alumni Feature | Joe Weber, Four Star Mushrooms

Joe Weber (Class of 2018) is the founder and owner of Four Star Mushrooms, a small batch gourmet mushroom producer in Chicago. His mushrooms are distributed to restaurant clientele across Chicago. Learn more here: fourstarmushrooms.com.



Q: How did you become interested in starting a business selling mushrooms?

A: During my first year studying Integrative Biology (my junior year as I transferred after studying landscape architecture), Professor Carol Augspurger painted a horrifying picture of the state of ecology and the negative effects of legacy agriculture practices on native species and ecological systems. This set me on the path of doing something in the controlled environment agriculture (CEA) industry as it will undoubtedly produce much of our future food and allow for opportunities in ecological restoration. Having an entrepreneur father, I always knew I would start a business as some point in my life, I just did not know what that would be. That answer came after I listened to an interview with mycologist Paul Stamets. He blew my mind and introduced me to the methods of indoor cultivation for gourmet and functional mushrooms. It was the perfect marriage of my interest in business, design, CEA, and now mushrooms. The rest is history.

Q: How has your IB degree helped your business?

A: My IB degree not only taught me critical thinking skills but introduced me to the process of science and how to do science. This has framed not only how we grow mushrooms but also how I think about business and the world in general.

Q: What's one of your favorite memories from your time in IB?

A: My favorite memory from IB was learning how to write a research paper on forest succession in Trelease Woods. I really enjoyed learning about forest succession and how the diversity of a stand changes over time. Trelease Woods taught me that the planning for a site is ever evolving and constantly changing. One must be intentional in their favored tree species, for instance, as those will affect the understory structure, pollinator and bird population - all the way down to the soil quality and biodiversity. A professional goal of mine is to help restore our ecosystems to their former glory and getting to participate in a long-running research project opened my eyes to the planning and potential management of a designed site. Getting out in the woods for an hour and a half each week didn't hurt either!



Q: How do you grow mushrooms inside?

We begin with the substrate, hydrating USDA certified organic soybean hulls and red oak sawdust pellets in specially designed filter patch bags. These are then pasteurized to eliminate organisms that could compete with our mushroom mycelium. The substrate is then inoculated with a USDA certified organic grain spawn of myceliated rye berries and millet. The bags are sealed and sent to our temperature-controlled incubation room, where the mycelium grows to consume the entire substrate. Once mature, the substrate is moved to the fruiting room and is triggered into producing mushrooms by dropping the temperature, increasing the humidity, turning on relatively bright lights, and introducing a lot of fresh air. Mushrooms inhale oxygen and exhale carbon dioxide so we need to constantly bring in fresh air to allow for proper fruit body formation. From there, we harvest the mushrooms carefully and store them in our cold room. These mushrooms are then delivered directly to restaurants in Chicago. Our quality and shelf life are vastly superior to commodity products because we take care of the product from harvest to storage to delivery. This is the local food economy!

Q: What advice would you give other alumni?

I would like to encourage my fellow alumni to start a business if they have ever considered it. It has been the single most difficult yet rewarding experience of my life and I would not trade it for anything. Anyone who is interested in starting a business but does not know where to start is welcome to reach out to me directly. I would love to help. ❖

Hear from other IB Alumni!

Since its formation in 2004, the School of Integrative Biology has trained and educated almost two thousand alumni, many of whom have pursued careers in all kinds of fields. Learn about what these alums are doing now, and visit our website to learn more about other alumni: sib.illinois.edu/alumni/mentor/profiles. Do you know someone you'd like to see featured? Let us know! ❖



Lauren Hostert
Class of 2011
*Stream Ecologist,
Illinois Natural History Survey*

Lauren manages a monitoring program that studies the impacts of the Conservation Reserve Enhancement Program (CREP) on fish and macroinvertebrates communities in streams of Illinois.

Andrea Baldwin
Class of 2018
*Research Associate,
Assay Development,
Illumina, Inc.*

Andrea helps develop new library prep methods for genetic sequencing applications, such as early cancer detection. This involves experimental design, lab work, and data analysis.



Amir Vakili
Class of 2021
*Graduate Student
University of Illinois Chicago*

Amir is currently earning a Doctor of Dental Medicine and Master of Public Health at the University of Illinois Chicago. He will begin his D1 year in fall 2022.



Sally Feng
Class of 2014
*Program Coordinator,
Upper West Strategies*

Sally recruits students in the life sciences field, helps with resumes and cover letters, evaluates their job applications and matches them with employers as part of the LifeSci NYC Internship Program.



Kelly Hogan
Class of 2012
*Program Officer,
WildEarth Allies*

Kelly supports Wild Earth Allies' field teams and partners around the world in planning and implementing biodiversity conservation and research programs, including program impact monitoring, grant writing, and reporting.

Hannah Shushunov
Class of 2021
*Research Assistant,
University of Colorado
Anschutz Medical Campus*

Hannah is a research assistant in the department of Physiology & Biophysics, where she studies mitochondrial calcium transport proteins and ion channels.



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School of Integrative Biology

COLLEGE OF LIBERAL ARTS & SCIENCES

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How can I connect with SIB?

We would love to hear from you! Our website includes all our recent news, research updates, student blogs and more here: sib.illinois.edu. SIB is also active on Facebook, Twitter and Instagram: [@iBioIllinois](https://www.instagram.com/iBioIllinois)

Our alumni play an important role in helping to guide and mentor our undergraduate students through our Alumni Mentoring Program and the Career Connections. For more information, visit go.illinois.edu/sibcareerconnections.

For everything else, send us an email at communications@sib.illinois.edu. We look forward to hearing from you and celebrating your success! ❖

