



# Animal Behavior Bulletin

## 2024

Dear Animal Behavior Community,

Welcome to the 2024 Bulletin, full of examples of energetic students, committed faculty and staff, and successful programs. It's an honor to direct this outstanding program.

Graduate students are critical to CISAB's mission. In this issue, we congratulate the CISAB grad students who recently completed PhDs, as well as our graduate fellowship recipients.

CISAB graduate students and postdocs organized our 31st Animal Behavior Conference, which provided a wonderful venue for students and postdocs to present their research. We were especially pleased to host plenary speaker and 2024 Exemplar Awardee MayDianne Andrade, and we thank CISAB faculty member David Polly for his keynote talk.

With 174 students, Animal Behavior is the eighteenth largest major in the College. Our undergraduates continue to tailor learning experiences to their interests via internships, honors thesis research, and more. We're so proud of our energetic, committed, and intellectually engaged students, and thrilled to be able to support some of their efforts through our Summer Scholarship Program and the Alex Black Memorial Scholarship.

Our NSF-funded Research Experiences for Undergraduates, directed by Laura Hurley continues to thrive, and this year six REU alums presented their work at the Animal Behavior Conference. Likewise, the NIH-funded Common Themes in Reproductive Diversity training grant is currently in its 19th year of funding. With four new predoctoral trainees and two postdocs, the CTRD continues to provide outstanding mentoring for its trainees and a venue for fertile exchange of research ideas.

As always, Animal Behavior/CISAB relies on the strength of its engaged faculty and student members, both past and present. Thank you for your continued support!



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# Congratulations CISAB and CTRD Fellowship Recipients

## CISAB Fellowship Recipients 2024-2025



Lauren Brunner  
Hurley Lab



Yasmin Lord  
Wasserman Lab



Susan Reed  
Ketterson Lab

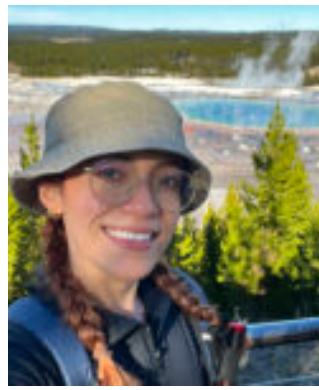
## CTRD Predoctoral Fellows 2024-2025



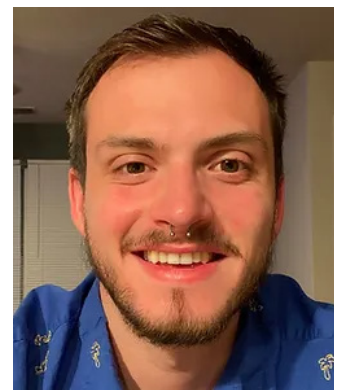
Elizabeth Coggeshall  
Demas Lab  
Wasserman Lab



Emily Hibbard  
Sengelaub Lab



Yadira Pene-Garcia  
Hahn Lab



Dustin Rousselle  
Silveyra Lab  
Nephew Lab

## CTRD Postdoctoral Fellows 2023-2025



Rebecca Westwick  
Moczek Lab



Isaac Miller-Crews  
Rosvall Lab  
Hahn Lab



# Congratulations to Graduating Animal Behavior Majors



Front row, left to right: Amanda Sitz, Kelly Hammond, Jacqueline Jou, Shadazisha Tolbert, Jada Harris, Meghan Brown  
 Middle row, left to right: Kenzie Banta, Kai Lora, Camille Metzger, Hinako Barnes, Londyn Riley, Natalie Childers  
 Back row, left to right: Kailey Everhart, Carly Craft, Harley Cretin, Ariel Tysver, Stephanie Wilder, Evan McGuire

## 2024 Graduates

Miranda Anderson  
 Carmella Babbitt  
 Kenzie Banta  
 Hinako Barnes  
 Meghan Brown  
 Natalie Childers  
 Carly Craft  
 Harley Cretin  
 Morgan Dixon  
 Kailey Everhart  
 Lydia Goodpaster  
 Darian Gossett  
 Ryan Hamburg

Kelly Hammond  
 Jada Harris  
 Kaitlyn Henderson  
 Alexis Hill  
 Mo Horne  
 Andy Jeong  
 Jacqueline Jou  
 Camren Litwiller  
 Kai Lora  
 Jaclyn Maleckas  
 Evan McGuire  
 Camille Metzger

Railyn Poynter  
 Brooklyn Reynoso  
 Alyssa Riffle  
 Londyn Riley  
 Amanda Sitz  
 Shadazisha Tolbert  
 Anna Torvik  
 Miranda Towse  
 Ariel Tysver  
 Morgan Weathersbe  
 Hailey Weymouth  
 Stephanie Wilder  
 Hayley Wilson

# A CISAB First: New Faculty Member Dr. Erica Cartmill



The Program extends a warm welcome to Professor Erica Cartmill (Animal Behavior, Anthropology, and Cognitive Science). Our first tenure-track faculty member with a joint appointment in Animal Behavior, Erica was an Associate Professor at UCLA before joining us at IU in Spring 2024. Dr. Cartmill studies the evolution of language and social cognition, gesture, primate communication, and parent-infant interaction.

## Congratulations CISAB Students

### PhDs awarded to CISAB Graduate Students in 2024



**Sierra McAlister** *Hurley Lab*

DECODING SALIENCE IN RODENT VOCALIZATIONS:  
UNDERSTANDING HOW MULTIMODAL CUES AID IN  
MALE PERCEPTION



**Katie Talbott** *Ketterson Lab*

IMPACTS OF PLASMODIUM ON REPRODUCTIVE  
PHYSIOLOGY AND BEHAVIOR OF THE DARK-EYED  
JUNCO (*JUNCO HYEMALIS*)

## 2024 Animal Behavior Phi Beta Kappa Electees

### Spring

Carly Craft  
Harley Cretin

### Fall

Lydia Goodpaster  
Wylah Brahaum

# Congratulations CISAB Students

## 2024 Animal Behavior NSF Graduate Research Fellowship Recipients



Jonathan  
Enriquez Madrid  
Bashey-Visser Lab



Atalanta Ritter  
Rosvall Lab



Hailey Storsved  
Wellman Lab

## 2024 Excellence in Undergraduate Thesis Research in Animal Behavior: Ariel Tysver



### **Artificial Light at Night, Parasite Loads, and Leukocyte Profiles in the Dark-eyed Junco (*Junco hyemalis*)**

As the human population continues to grow and urbanization increases, exposure to artificial light at night (ALAN) will continue to increase for many wildlife species. This poses a large challenge to many species, including songbirds, that mediate various physiological processes and behaviors based on the light cycle. Disruption of these body processes can have consequences for the health, behavior, and fitness of an organism. Research has established that exposure to ALAN decreases melatonin production in songbirds, which has broader implications for immune function and regulation. Given these significant effects, it is likely that prolonged ALAN exposure may also alter other aspects of the phenotype, such as the gastrointestinal parasite community in these birds. We exposed a subset of our birds to constant dim ALAN for 7 weeks, while others experienced a natural photoperiod, and quantified the amount of coccidia, a common gastrointestinal parasite three times throughout the experiment to test whether exposure to ALAN alters the population of these parasites within their host. We also investigated how ALAN impacts immune function through quantification of white blood cells. By examining how exposure to ALAN impacts the parasite communities and immune function in songbirds, we hope to shed light on the potential health risks that are caused by light at night.



# Animal Behavior Outreach

## Science Fests

The year of 2024 held not one but two Science Fests! The first came in April, highlighting the total eclipse that we all witnessed on April 8, 2024. October saw the return to the normal annual Science Fest schedule. Animal Behavior would like to thank all the amazing volunteers who helped make both Science Fests special.



Left to right: ABEH volunteers help visitors play Race Against the Chimpanzee, a demo highlighting animal cognition; during the Migration Game, visitors get “banded” with an ABEH bracelet representing scientists banding birds for research.



Left to right: ABEH volunteers helping visitors make “bird paper planes” to take on their migration journey; a visitor rolls the die to determine where to move next in the Migration Game.



Left to right: During October Science Fest, volunteers helped visitors build motor neurons with pipe cleaners and pony beads; our Wheel of Animal Behavior is always a hit! Visitors enjoy testing their knowledge of animal behavior and getting a prize.



# Animal Behavior Outreach

## Spending the Afternoon with Braintree Academy



On a beautiful day in October, Animal Behavior volunteers met with a group of homeschoolers from Braintree Academy at Bryan Park. ABEH volunteers set up two of our most popular demos.

Race Against the Chimpanzee is an activity that Dr. Chris Martin at the Indianapolis Zoo adapted for ABEH to introduce animal cognition and Animal Computer Interaction—or ACI—to the public. It was fun to see the children work together to try and beat Aymu, the chimpanzee’s best time.



As always, the Migration Game was a big hit. Children chose to play the giant boardgame repeatedly. The stuffed animals especially drew in the toddlers!

Thank you to Outreach Coordinator Charli Taylor and graduate student volunteers Atalanta Ritter, Josie Fornara, Cassandra Sheridan, and Alec Iruri-Tucker!





# 2024 Alex Black Memorial Scholarship

## Samantha Norman Interned with the Indianapolis Zoo, Indianapolis, IN



During my internship, I assisted with caring for the African plains animals, including giraffes, rhinos, ostriches, kangaroos, and gazelles. My daily tasks included cleaning outdoor exhibits, preparing feeders, and sanitizing indoor areas, as well as collecting browse for grazing animals and preparing their sleeping areas for the night.



Highlights of my experience included assisting in feeding the giraffes, learning to identify various plants, observing tactile training sessions, and shadowing veterinary procedures such as laser treatments and neonatal exams. I particularly enjoyed assisting in the veterinary hospital, where I observed in-depth procedures on macaques and gained more knowledge about blood pathology.

Although I initially wanted to be a zookeeper, my internship made me realize my true passion for veterinary medicine. Despite the initial challenge of a demanding schedule, which I adjusted with the help of my coordinator, this experience confirmed that pursuing a career as a registered veterinary technician, rather than a zookeeper, aligns better with my skills, interests, and career goals.



Top to bottom:  
Samantha takes a selfie with Gloria the rhino, who was placed in the side yard for the day;

Giraffes Makena, Mwezi, and Kita line up for the public feeding;

Samantha spent time with the veterinary technicians learning about hematology and processing lab samples.

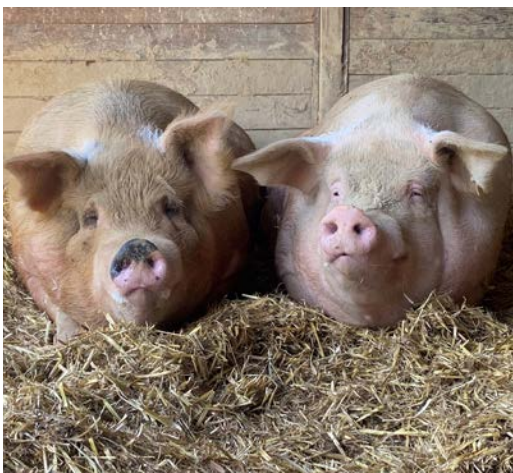


# 2024 Alex Black Memorial Scholarship

## Josie Miller Interned with PEAK Animal Sanctuary, Freedom, IN



My internship experience at PEAK Animal Sanctuary was very positive and rewarding. During this internship, I gained hands-on experience working with farm animals saved from factory farms. This included over 40 animals, from a feisty 2-lb rooster to a shy and sweet 2400-lb cow. My experience included feeding, cleaning, providing aid and medication, and providing enrichment for the animals as well as working on outdoor projects for the farm, assisting with tours for visitors, and giving out as many belly rubs as possible! I spent most of my free time playing with the animals and talking with the kind staff, as well as sitting with the five big pigs in the forest at night, sharing pieces of fruit with them before they went to bed in their little houses. I was even able to invite friends to visit whenever I had time off, which is unique for an internship and contributed to my overwhelmingly positive experience. I had a wonderful time here and was so lucky to have this opportunity and would recommend it for anyone interested in learning about ethical animal care.

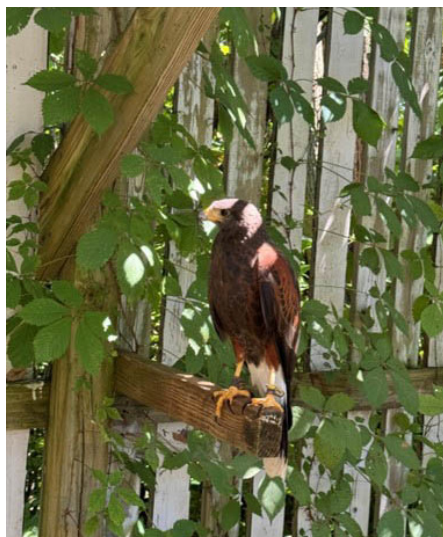


Top to bottom, then left to right: Josie petting PEAK Animal Sanctuary resident Sally, the potbelly pig; a PEAK resident enjoying a puddle; Thelma (left) and Louise (right), senior pigs living out the rest of their lives at the sanctuary; Josie petting PEAK resident Freeda who shares a pasture with three other cows.



# ABEH Summer Scholarships

## Katie Medland Interned at WildCare Inc., Bloomington, IN



My time at WildCare Inc. has ultimately been one of the most engaging and rewarding experiences of my college career. My involvement with this organization has not only solidified my future career choice of working with wildlife, but has also given me a new appreciation for so many species of animals. This internship allowed me to experience many aspects and responsibilities associated with wildlife care, rehabilitation, and release, such as intake examinations, food preparation, medicine administration, euthanasia, educational outreach, patient charting, and more. Working two eight-hour shifts per week, I quickly built connections with many other like-minded people, and I felt that I significantly contributed to the facility's overall mission. This internship provided me with crucial knowledge in the realm of animal care and medicine and helped to further develop many useful skills that will be beneficial for my future career working with wildlife. Following the completion of my internship, I was offered a paid job as an animal care technician at the facility. I am thrilled to continue my time at WildCare Inc. and take this position during the school year. This summer internship experience has been incredibly enjoyable, and I will forever be grateful for the opportunities I was given.



Top to bottom, then left to right: Kaos, a Harris's hawk and WildCare education ambassador; adult opossum food prepped by age and cage grouping, then portioned and measured to guarantee proper nutrition; juvenile opossums eating a mix of formula and adult food (referred to as "olders" food) as they transition to adulthood; baby turtle cared for by Katie during her internship; Sullivan, an African spurred tortoise—another WildCare Education Ambassador.



# ABEH Summer Scholarships

## Miranda Towse Attended a Tropical Biology Field Course in Grand Cayman, Cayman Islands



I wanted to take the Tropical Biology class in Grand Cayman because it gave me an opportunity to see marine and tropical wildlife more up close and learn if I might be interested in pursuing marine research as a future career. The class was focused on a mix of terrestrial and marine wildlife. We learned common and scientific names of the native plants, corals, fish, and birds on the island, and practiced identifying them. We had an ocean dive almost every day of the trip, with local guides showing us the corals and fish we had learned about on the surface. Getting scuba certification for this really let me see the coral, plants, and animals more closely than textbooks or pictures ever could. On hikes and dives, we conducted our own surveys of the wildlife and kept observations in a notebook. My favorite moments from the trip include seeing my first shark(s), identifying and finding multiple endemic bird species, trying invasive lionfish tacos for the first time, and waking up at sunrise to watch shorebirds and little tide animals on the beach. Because of this trip, I am much more interested in looking into marine careers and am continuing my education in scuba and marine life in the near future!



Top to bottom, then left to right: the class hiking through a nature preserve, learning about native plant species; scuba diving at the ocean floor during a tour of a coral reef; blue iguana, a species endemic to Grand Cayman, which is the subject of many conservation efforts; Caribbean reef shark—Miranda's first shark sighting; the group looking for native plants and insects in the forest.

# Animal Behavior Conference

This year's IU Animal Behavior Conference brought together animal behaviorists from across the country, with about 190 people from 29 institutions, from as far away as Canada and Rhode Island to as close as Ohio and Illinois. We welcomed back alumni of both our undergraduate and our graduate programs, as well as previous interns in our summer REU program. Demonstrating the breadth of the perspectives represented at the conference, 2024 Exemplar Award winner Dr. MayDianne Andrade gave a marvelous plenary talk on the ecological and social factors influencing reproductive tactics in widow spiders, while our own Professor David Polly treated us to a fascinating keynote talk on what the fossil record reveals about the evolution and ecology of predatory behaviors in cats. Many thanks to our grad student organizers, who once again did an exemplary job!



Cover designed by Michelle Benavidez

## CISAB Exemplar Award 2024: Maydianne Andrade

Dr. Andrade earned a bachelor's degree from Simon Fraser University, a master's degree from the University of Toronto at Mississauga, and a PhD from Cornell University. She is currently a University Professor and Canada Research Chair in the Biology department at the University of Toronto Scarborough, where she studies how reproductive behaviors evolve via the interaction of natural and sexual selection in changing ecological contexts, and how this influences phenotypes of both individuals and populations. To answer these questions, she studies widow spiders in the field and the lab, using techniques that span levels of analysis, from physiological to evolutionary and ecological.

Her research excellence has been recognized with numerous awards: for instance, she is a Fellow of the AAAS, the Royal Canadian Geographical Society, and the Animal Behavior Society, and she serves on the Scientific Advisory Committee of the Council of Canadian Academies. A leader in developing practices to increase inclusivity in STEM fields, Dr. Andrade founded the Toronto Initiative for Diversity and Excellence, an organization that provides evidence-based talks, workshops, and practical advice on increasing representation and inclusion. She is also the co-founder and president of the Canadian Black Scientists Network, which fosters pathways to increase the representation of Black scientists in STEM. Finally, Dr. Andrade makes science accessible to the public via radio, podcasts, and documentaries.





# Animal Behavior Awards

## Hanna Kolodziejski Award 2024: Liz Aguilar

Liz is pursuing a PhD in Biology and is mentored by Kim Rosvall. An outstanding young scholar, her thesis research combines genomics and behavior in wild animals, integrating neurobiology, ecology, and evolution to identify the determinants of individual differences in aggression. Liz has received research grants from inside and outside of IU, as well as an NSF graduate fellowship. Liz is also an outstanding project manager, an excellent leader, and consummate teacher of science to students with varying skills and backgrounds. Liz's service to IU and the community is aimed at diversifying STEM fields. For instance, she developed a 1-page guide for prospective students on how to find a PhD advisor, which is freely available on the Rosvall website. Liz sends the guide annually to instructors of upper-level courses at IU. Liz is also a founding member of a reading group focused on anti-racist pedagogy and recruitment, and she incorporates these perspectives on Biology's DEI committee. She also helped revise the Rosvall lab's recruitment policies to be more equitable and inclusive for their undergrad field techs. Liz also engages in community outreach, making science accessible to the public at IU's Science Fest, and mentoring high school students from underrepresented groups in the Holland program, a 2-week summer research camp. Most recently, Liz worked with collaborators at Luddy to develop a publicly available app that uses short scan sampling to collect citizen science data on bird behavior before, during, and after the recent total eclipse.



## Rowland Award 2024: Liz Aguilar



Rowland Awardees 2024:  
Lauren Brunner and Liz Aguilar

Liz has served an outsized role as a mentor of high schoolers, REU students, IU undergrads, and even grad students in the Rosvall lab. Liz emerged as the go-to mentor in the lab, serving as a role model for the lab's team of undergrads during the summer 2021 field season, guiding her first REU mentee through a field behavioral project. She has continued to mentor undergrads and REU interns since then. While one of her REU mentees is still in college, the other went on to pursue a PhD in animal behavior, based on the positive experiences she had working with Liz. Kim notes that unofficially, Liz has mentored practically everyone else in the lab (including a postdoc).

# Animal Behavior Awards

## Rowland Award 2024: Lauren Brunner

Lauren Brunner, a PhD student in Biology, is mentored by Laura Hurley. During her time at IU, she has been an exceptional mentor to seven undergraduates, including three REU students. A talented and generous mentor, Lauren's first REU mentorship experience was in 2021. During the summer program, she and her REU student, Gabriel Jimenez, simultaneously participated in a National Research Mentoring Network (NRMN) program called Communicating Across Differences. This program focuses on building mentorship skills between mentors and mentees that come from different cultural backgrounds. A testament to the success of their mentoring relationship: Lauren and Gabriel made a video about his project that the NRMN features on their website. She has also mentored three students in the Hudson-Holland program, and two of these students are completing honors theses based on their work. According to Laura, Lauren sees the potential of every student; values their goals and works with each of them to fulfill those goals; allows her students the space to grow as scientists, by equipping them with the basic skills they need to succeed and letting them explore and develop their own research; and provides affirmation, encouragement, and instrumental support to her mentees.



## 2024 ABC Undergraduate Poster Awards



**Anna Kelson** *Indiana University*

A COMPARISON OF REPRODUCTIVE METRICS IN CAPTIVE AND WILD DARK-EYED JUNCOS

**Erica Griffin** *University of Michigan*

UNDERSTANDING THE EVOLUTIONARY PUZZLE OF VARIATION IN MATERNAL CARE IN NORTH AMERICAN RED SQUIRRELS

**Brooklyn Worthen** *Wright State University*

THE EFFECTS OF ECOLOGICALLY RELEVANT AND IRRELEVANT SOUNDS ON EARTHWORM BEHAVIOR IN AN OPEN FIELD ENVIRONMENT



# Animal Behavior Conference

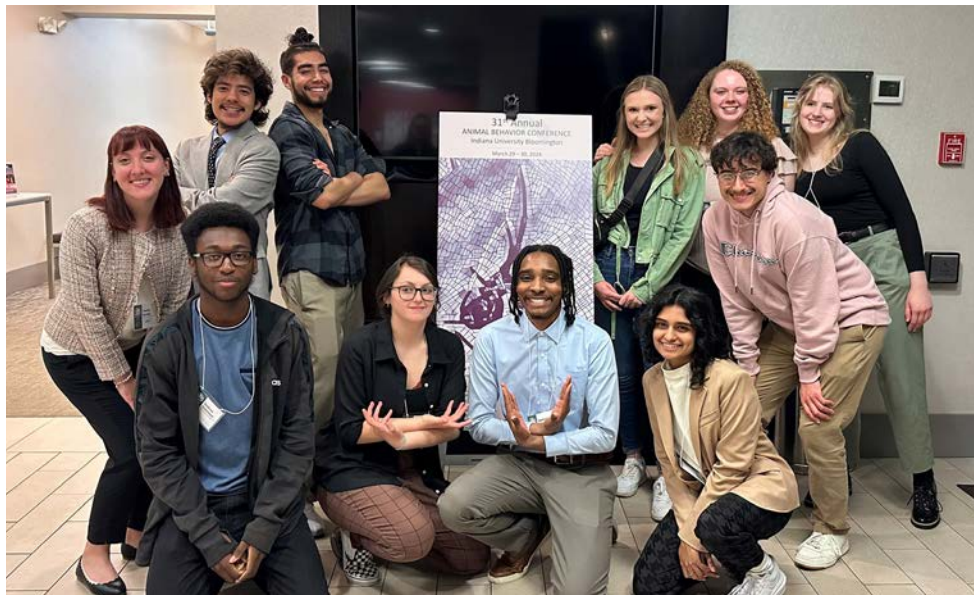
## 2024 Linda Summers Conference Fellows



Left to right: Anna Kelson, Symphony Weston, Lauren Bonner, Santonio Resonno Jr., Manuel Cortes Romero, DaQuan Greenwell

The Animal Behavior Conference saw six former REU interns return to present their research from the 2023 REU Summer Internship at the Friday evening poster session.

## 2024 ABC Welcomed Three Generations of REUs



Top row left to right: Manuel Cortes Romero (2023), Jonathan Enriquez Madrid (2021), Kaitlyn Ross (2021), Ariel Tysver (2022), Anna Kelson (2023). Middle row: Lauren Bonner (2023), Ethan Guardado (2022). Bottom row: DaQuan Greenwell (2023), Symphony Weston (2023), Santonio Resonno Jr. (2023), Audrey Sequeira (2022)

# 2024 Trainee Exchange

The Program in Animal Behavior and Georgia State University's Center for Behavioral Neuroscience have a long tradition of hosting graduate students and post docs at each other's conferences. During our Animal Behavior Conference, Morgan Gomez gave a talk, while Isaac Miller-Crews presented a poster at CBN's Annual Brains and Behavior Retreat.



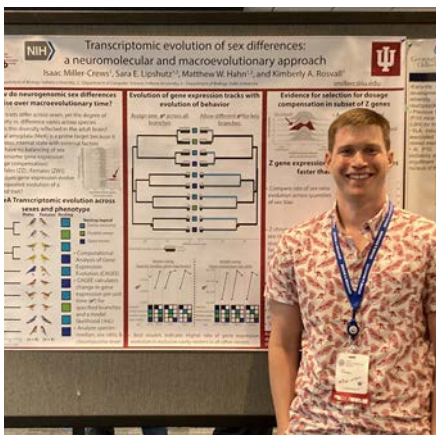
## Animal Behavior Conference

### MORGAN GOMEZ

EARLY LIFE PAIN ALTERS THE RESPONSE TO AN IMMUNE CHALLENGE IN ADULT MALE AND FEMALE RATS

*Center for Behavioral Neuroscience,  
Georgia State University*

## Annual Brains and Behavior Retreat at Georgia State University



### ISAAC MILLER-CREWS

I had a wonderful time visiting Georgia State University this past summer to attend the Brains and Behavior symposium as a part of the CBN exchange program. This was a great opportunity for me to bring a slice of Bloomington down to Atlanta. I really appreciated the chance to share my work to a new department in an environment that encouraged questioning and growth. The conference introduced a unique mix of art and science with presentations

from a broad scope of research spanning the field of neuroscience. While I learned a lot about the work going on there, I got some great feedback on my own research that helped improve it immensely. I especially enjoyed the chance to make connections with other scientists of different career stages and even set up some correspondences to help with some of the analyses going on there. I also enjoyed the more casual interactions at the conference and having a chance to meet some of the scientists whose work I have been reading about for so long. I am quite grateful that I was able to get to experience the conference and benefited greatly from the strong relationship between IU and the GSU programs. I look forward to welcoming our colleagues from GSU next spring!



Contributions to the Program in Animal Behavior help CISAB, our scholarship and fellowship programs, travel awards for graduate and undergraduate students, the Animal Behavior Conference, and more.

Please donate at [myiu.org/one-time-gift](http://myiu.org/one-time-gift). Type 'ANIMAL' in the Search Box to find "Program in Animal Behavior Fund"



Animal Behavior Program  
Center for the Integrative Study of Animal Behavior  
Indiana University  
409 N Park Avenue  
Bloomington, IN 47405  
812-855-9663  
abeh@iu.edu  
[animalbehavior.indiana.edu](http://animalbehavior.indiana.edu)