

# Interested Faculty

Please feel free to reach out to the interested faculty members to discuss their project. Note the deadline for submissions is March 21.

## Maria Arredondo

The University of Texas at Austin Contact Email: maria.arredondo@austin.utexas.edu Country: USA Planned Project: In our research we use behavioral m

**Planned Project:** In our research we use behavioral methods (experiments, standardized clinical or educational assessments, and interviews), online platforms (Zoom, LookIT, Qualtrics), as well as neuroimaging methods (fNIRS) to study how children learn language and engages higher-cognitive functions. At our lab, you will literature reviews, study design, recruitment of potential participants, data collection (Zoom, Qualtrics), data entering, organization of lab materials, reviewing documents of testing data (e.g. videos, paper forms) and coding the data, cleaning of data (e.g. selecting portions of data and putting into large excel databases), analyzing data (e.g., averages), and putting together preliminary findings into tables and figures. Emphasis is placed on gaining applied experience with conducting research, coding/analyzing data, and a grasp for the theoretical basis of the work. The lab intersects multiple fields of social science, including human (child) development, psychology, linguistics, neuroscience, education, policy, and their related fields of study.

# **Rachel Barr**

Georgetown University Contact Email: rfb5@georgetown.edu Country: USA

**Planned Project:** Should a student come to join the Early learning project for the summer, they would work on one of two ongoing projects on examining family media ecology. They will learn about design, recruitment, implementation and data coding and collation. They will work closely with other team members. The lab uses software such as datayvu for behavioral observational coding. In particular we are looking at videochat interactions between grandparents and their grandchildren. We are also examining how parents use media collecting data via ecological momentary assessment, time use diaries and passive sensing apps.



#### **Elika Bergelson**

Duke University Contact Email: elika.bergelson@duke.edu Country: USA

**Planned Project:** The summer research student will have the opportunity to work with our datasets of naturalistic home recordings from both typically developing infants and atypically developing ones. This will involve learning our annotation schemes and getting the chance to hone their own research question that is answerable from this rich dataset in conjunction with the PI and other lab mentors. If we are back to running participants in the lab at that time (COVID dependent) the student will also help with pilot data collection for tasks involving word comprehension, and cog/social development.

#### **Alexis Black**

University of British Columbia

Contact Email: alexis.black@audiospeech.ubc.ca

Country: Canada

**Planned Project:** How do early experiences help infants build structured representations? One tool infants bring to this task is an ability to track and use statistical distributions to form categories. Current studies in our lab probe how learning changes (1) when the quality and nature of acoustic input is more or less familiar, or (2) when the infant has control over the rate and quality of input. The student will help design, implement, and code data from a statistical word learning study that addresses one of these two questions (depending on the student's interest). All activities can be conducted online. The student will participate in biweekly lab meetings, a weekly check-in with the PI, and will work with other RAs in the lab, who will assist in training on our online testing protocols and data coding.

#### **Elizabeth Bonawitz**

Harvard University Contact Email: elizabeth\_bonawitz@gse.harvard.edu Country: USA

**Planned Project:** Our lab focuses on how children learn abstract, causal concepts across development, with a focus on how prior beliefs and evidence interact to support attention, curiosity, memory, and action. Interns work closely with one or two postdocs or senior graduate students to read papers, discuss methods, help design stimuli, code behavioral and EEG data, and learn how to analyze and present results in lab meetings. Our studies currently involve online tasks (through Zoom and LookIt platforms) measuring infant looks and points. Interns will likely be "remote" for the summer, though if testing is back in person, there may be an option for "in person" in lab experience, pending University allowances and vaccination schedules.



#### Jessica Bradshaw

University of South Carolina Contact Email: jbradshaw@sc.edu Country: USA

**Planned Project:** The Early Social Development & Intervention Lab focuses on early identification and intervention of autism spectrum disorder (ASD) in the first year of life. Specifically, we are interested in: 1) quantifying the emergence of, and interrelations between, social behavior, visual attention, and motor skills in neonates, infants, and toddlers, 2) identifying aberrant neurodevelopmental pathways that lead to the emergence of autism spectrum disorder (ASD), and 3) translating these basic findings to early detection and intervention strategies for ASD. The student will have the opportunity to assist with data collection and processing of infant behavioral and heart rate measures. This will include piloting a head-mounted eye tracking study of infants before and after the achievement of motor milestones. The student will learn data collection methods for young infants, acquire skills in processing heart rate and eye tracking data, and contribute to the development of scientific posters and manuscripts.

#### **Moira Dillon**

New York University Contact Email: moira.dillon@nyu.edu Country: USA

**Planned Project:** The Lab for the Developing Mind at NYU (www.labdevelopingmind.com/) explores questions like: What do infants know about people, objects, and places even before they start talking? How does language affect attention, categorization, generalization, and learning in infancy? How can understanding early human intelligence inform models of artificial intelligence and vice versa? An intern in the lab would work with the PI and a postdoctoral researcher to help conduct studies with infants to address these questions using behavioral methods. In addition to mentorship on this project, the intern would also receive training, through lab-run workshops, on other research skills, including stimulus design in Blender, experimental design in Python, and statistical analysis in R. NYU offers a rich, lively, and collaborative research community, especially in the areas of cognitive science and cognitive development.



# **Caitlin Fausey** *University of Oregon* Contact Email: fausey@uoregon.edu

Country: USA

Planned Project: The main project for which we seek a summer intern is "Coordination between vocalizations and music in everyday environments." We are working with a large corpus of everyday audio captured for three-days-at-home for infants ages 6- to 12- months (see: https://homebank.talkbank.org/access/Password/FauseyTrio.html). We are currently pursuing manual annotations and analyses to test hypotheses about relationships among structure in the vocalization/speech and music episode streams. Tasks for summer undergraduate team members include: (1) Annotating everyday audio files for the presence of behaviors like infant vocalizations and adult speech, (2) Annotating everyday audio files for the presence of music, and/or (3) Working closely with our team to analyze annotated episode streams (e.g., building skills in programming, data visualization, and statistics). All project team members participate in weekly individual meetings with Dr. Fausey and whole-lab group meetings (currently: 3 PhD students and 4 undergraduate students), in addition to regular project team meetings that include Dr. Fausey and one current PhD student. Check out uolearninglab.com for more info about our lab.

# Lisa Feigenson

Johns Hopkins University Contact Email: feigenson@jhu.edu Country: USA

**Planned Project:** The student mentee will work on a project investigating the ways in which violations of expectation shape infants' learning.

# Naja Ferjan Ramirez

University of Washington Contact Email: naja@uw.edu Country: USA

**Planned Project:** The Language Development and Processing Lab is directed by Dr. Naja Ferjan Ramírez from the Department of Linguistics at the University of Washington. We investigate how infants and young children learn one, two, or multiple languages through interacting with the world. Our particular interest is in how diverse language environments impact language learning and processing in infancy and early childhood. For this summer internship, we will focus on parentese, a style of infant-directed speech, distinguished by its higher pitch, slower tempo, and exaggerated intonation. Students will listen to audio recordings of parent-infant interactions that include parentese in either English or Spanish



(depending on students' familiarity with these two languages), transcribe the audio recordings, and make decisions about them. The project will most likely be done entirely remotely. Students will be supervised directly by Dr. Ferjan Ramírez, and will work alongside her other graduate and undergraduate students and research assistants.

#### William Fifer

Columbia University Irving Medical Center Contact Email: wpf1@cumc.columbia.edu Country: USA Planned Project: Prenatal risk factors and infant brain-behavioral development

## John Franchak

University of California, Riverside Contact Email: franchak@ucr.edu Country: USA Planned Project: Analyzing motor and language activity collected from day-long recordings of infants' everyday experiences.

# **Gerry Giesbrecht**

University of Calgary Contact Email: ggiesbre@UCalgary.ca Country: Canada **Planned Project:** The COVID-19 pandemic has resulted in major disruption for families, and significantly limited social contact for young infants. This project will examine socioemotional milestone development in infants born during the COVID-19 pandemic. Data are being collected from a large longitudinal pregnancy cohort in Canada.

# Susan Graham

University of Calgary Contact Email: grahams@ucalgary.ca Country: Canada

**Planned Project:** Our research program focuses on young infants' inductive reasoning abilities. Briefly, inductive reasoning involves invoking the premise that things that are true for one exemplar of a category (e.g., the red ball bounces) will hold true for other members of the same category (e.g., therefore all balls bounce). Thus, inductive reasoning allows children to generalize knowledge to new



instances and new situations, resulting in increased cognitive efficiency and the opportunity to benefit from past experiences. Current projects in our lab focus on the conditions under which young infants connect properties with object categories. We have a significant dataset that focuses on 7- and 9month-olds' linkage of properties with categories. The summer intern will have access to this dataset for analyses and potential publication, in the event that further in-person data collection is not possible due to the COVID-19 pandemic.

#### **Kiley Hamlin**

University of British Columbia Contact Email: kiley.hamlin@psych.ubc.ca Country: Canada

**Planned Project:** Students would participate in a longitudinal study of infant sociomoral evaluation. In particular, this ongoing study assesses various features of social, moral, and cognitive development from birth through age 3, with a planned final sample of N=500. The student will work closely with the principal investigator, graduate students, research managers, and senior research assistants to facilitate data collection and various coding projects associated with this project.

#### Kathy Hirsh-Pasek

Temple University Contact Email: khirshpa@temple.edu Country: USA **Planned Project:** The lab conducts both theoretical and applied research on language acquisition, spatial learning, memory development, and playful learning in children aged 2 years to 6 years.

Students selected for this award will receive hands-on experience in every step of the research process. Each student will train on one or two research projects led by Dr. Kathy Hirsh-Pasek, and will be paired with a graduate student or post-doctoral fellow mentor who will serve as a resource for questions about their areas of research and graduate school. Training activities include: recruiting and scheduling lab participants, stimuli design and creation, conducting studies with children, coding and analyzing data, and discussing relevant journal articles in lab meetings

#### Zsuzsa Kaldy

University of Massachusetts Boston Contact Email: zsuzsa.kaldy@umb.edu Country: USA **Planned Project:** Given current trends in vaccination rates, I feel confident that we will be allowed to return to the Boston Children's Museum, where we have an established connection for data collection.



The student would join a vibrant group of UMass Boston graduate and undergraduate students working on a number of projects related to to working memory in 1.5-4-year-olds, a key period in the development of cognitive control. The student will design their own tablet-based WM study (based on existing scripts), collect data, analyze and present their findings at our lab meeting at the end of the internship. I have 18 years of experience mentoring UG students and received four NIH training grants to date.

#### Melissa Kibbe

Boston University Contact Email: kibbe@bu.edu Country: USA

**Planned Project:** The student will participate in a study examining how 6-month-old infants use language and communication cues from adults to help them process and remember objects. The student will have the opportunity to participate in every aspect of the research, including interacting with infants and families, running the study, coding infant behavior, participating in lively lab meetings, and presenting on their findings to the lab.

#### Eon-Suk Ko

Chosun University Contact Email: eonsukko@chosun.ac.kr Country: Korea

**Planned Project:** We are one of the few research labs in Korea dedicated to the study of infants' language and cognitive development. The lab is small but very active, and we conduct experiments based on various paradigms including eye-tracking (run on-line under pandemic), acoustic, video and text analysis. Some of the tools we use include LENA, Praat, ELAN, and R. Projects suitable for a summer research intern include (1) a cross-cultural and cross-linguistic comparison of mother-infant interaction with focus on the use of touch and/or word categories, where you can compare similarities and differences in the location, types of touch, and the word-touch alignment relationship, (2) time-course analyses of multimodal signals including speech, heart rate, temperature, etc. in the interaction of mothers and children in the Korean Ko corpus, (3) Effects of socio-economic factors on the home language environment and infant's language outcome. All projects can be conducted remotely. We have the data ready to be analyzed, and expect the student intern to have some proficiency in R or python.

Sarah Kucker Oklahoma State University



Contact Email: sarah.kucker@okstate.edu Country: USA

**Planned Project:** My program of research, in general, explores young children's cognitive and linguistic development with a focus on word learning, categorization, and mechanisms of learning. There are two primary projects students could participate in, depending on their interests. First, our DUCK (Developmental Understanding of Category Knowledge) study examines the multiple factors that predict a child's success in learning a word and respective category. This involves modeling how individual biases and knowledge (e.g. vocabulary, temperament), perceptual traits (e.g. item characteristics, novelty), and contextual cues (e.g. competing items, technology modality) come together to support success word mapping, retention, and generalization. Students can choose any of the variables to focus on for their project. The second possible study is a collaboration with a local children's museum. This Museum Study explores how the context of a museum exhibits (such as the signage present) impacts how caregivers and children communication, talk, and interact within the exhibit, and subsequently, what the child learns from these dialogues. Students would be in charge of a downward extension of this project to the "Little Lab" exhibit focused on infants and how caregivers support their children's exploration of various blocks and magnets.

#### **Elizabeth Lennon**

New York State Institute for Basic Research in Developmental Disabilities Contact Email: Elizabeth.Lennon@opwdd.ny.gov Country: USA

Planned Project: This project is designed for a student with previous experience coding behavioral data in the Social Communication Development Lab in the Department of Infant Development at the New York State Institute for Basic Research in Developmental Disabilities (IBR). Prior to the beginning of the fellowship, the student will be meeting weekly with the mentor to review the theoretical background literature for the research that will be conducted over the summer. The project will involve working with the mentor to develop and implement a coding system to identify specific patterns of mother-infant interaction for a group of 10-12 high-medical-risk infants who previously were videorecorded at 13, 19 and 25 months of age in a naturalistic free-play session as part of their participation in a larger study investigating early social communication development. The goal of the student project would be twofold: 1) collecting longitudinal descriptive data about the interaction patterns of these high-risk infants and their mothers, and 2) investigating the relationship between the patterns of interaction and subsequent social communication and language outcome. The student will work closely with the mentor and other members of the lab throughout the summer to develop research skills including behavioral coding of interaction patterns, obtaining inter-rater reliability and use of appropriate analytic methods for longitudinal data with small samples. It is expected that the data from this project will result in a poster by the student to be submitted for presentation at the 2022 ICIS meeting in Ottowa.



#### Marva L. Lewis

*Tulane University* Contact Email: mlewis@tulane.edu Country: USA **Planned Project:** A mixed-method, multicultural study of Colorism: Unpacking stories of childhood exeriences of racial acceptance and rejection

#### Vanessa LoBue

Rutgers University-Newark Contact Email: vlobue@psychology.rutgers.edu Country: USA Planned Project: The student will participate in research on the types of emotional input most common in infants' natural environments.

#### **Jeffrey Measelle**

University of Oregon Contact Email: measelle@uoregon.edu Country: USA

**Planned Project:** In brief, a student will be able to explore how perinatal nutrition and caregiving in lowincome countries creates (or detracts) from the conditions needed to support early developmental thriving. This opportunity will enable a student to utilize biological, observational, and neurocognitive development to compare the prospective effects of nutritional supplementation of nursing mothers on the developmental trajectories of Cambodian and Malagasy infants. All of our data are collected and/or being coded at present (videotaped observations of mother-infant interactions), which will afford students with the opportunity to approach a project from various points of readiness. Our goal for our student will be that they submit this work to one of several international nutrition and early development conferences as well as to develop a lead-authored manuscript using these data. Mentorship would be provided by Professors Jeff Measelle and Dare Baldwin of the University of Oregon.

#### **Daniel Messinger**

University of Miami Contact Email: dmessinger@miami.edu Country: USA

**Planned Project:** Students will participate in research examining the social and language development of preschoolers using a new generation of motion tracking and speech sensing technology.



#### **Marigen Narea**

Pontificia Universidad Catolica de Chile Contact Email: mnarea@uc.cl Country: Chile

Planned Project: The Educational Justice Center (CJE) of the Pontificia Universidad Catolica de Chile is running since 2019, the Longitudinal Study Mil Primeros Dias (One Thousand First Days). This study has two waves (2019 and 2020) with a sample of 1,161 children. Children were assessed between 12-15 months old and at 24-30 months old. The study has several objectives - Analyzed the types of care experienced by children during their first 6 years of life. How and when are the children experiencing the different transitions - maternal care to center-based care or maternal care to other types of care, and what is the impact of these transitions to children development. -Explore the role of the quality of the different types of care in children development. Through the measurement of the interactions maternal and child interactions and within the educational settings - explore the consequences of experiencing high versus low quality interactions in children socio-emotional, language and cognitive development. - The study has several measures of children development, family's environment, caregiver and child interaction and quality of center-based care. The design of the study is presented in figure 1 Figure 1: Mil Primeros D $\sqrt{2}$  as Design The student interested in the summer internship could work in our team to prepare the third wave of the study and prepare an article. We have a lot of interesting data that could be used. Some ideas are to work in an article about caregiver and children interactions (using our 900 videos of caregiver-children interaction) or explore the quality of nurseries that a small subsample of children attended. All originated ideas are welcome!

#### Stefanie Peykarjou

Heidelberg University

Contact Email: stefanie.peykarjou@psychologie.uni-heidelberg.de Country: Germany

**Planned Project:** The intern will participate in an ongoing EEG study on the influence of infant-directed speech on visual processing. While watching streams of visual input, infant- or adult-directed speech is presented and it is tested whether infant-directed speech enhances visual processing of 4-month-old infants. She/he will be trained in testing infant participants with EEG and perform testings, always together with a senior partner. Based on the student's interest, she/he will also be familiarized with video coding and/or EEG analysis. There is an option to develop a thesis project based on this internship. If, due to the pandemic, EEG testing cannot take place and/or the student cannot visit Heidelberg, she/he can alternatively participate in an online eyetracking study on the same topic (influence of infant-directed speech on visual processing).



#### **Lindsey Powell**

University of California, San Diego Contact Email: ljpowell@ucsd.edu Country: USA

**Planned Project:** Research assistants in my lab help plan and conduct studies on infant and child social cognitive development. Topics include the development of understanding affiliation, prosocial behavior, social conventions, imitation, and theory of mind.

## **Kirsten Read**

Santa Clara University Contact Email: kread@scu.edu Country: USA Planned Project: A mixed-design

**Planned Project:** A mixed-design research project on how Spanish/English bilingual caregivers use each language when reading aloud with young emergent bilinguals, and the subsequent effects of different language mixing practices on word learning.



#### A.J. Schwichtenberg

Purdue University Contact Email: ajschwichtenberg@purdue.edu Country: USA

**Planned Project:** Students will join the Sleep and Developmental Studies Laboratory at Purdue University for an in-person or remote-based research experience that will explore research questions specific to (1) sleep and development in pediatric samples, (2) associations between infant sleep and brain development, and (3) developmental trajectories in families raising young children with, or at elevated-risks for an autism spectrum disorder. Student interests and strengths will be used to match them to an ongoing project.

#### Valentina Sclafani

University of Lincoln UK Contact Email: vsclafani@lincoln.ac.uk Country: United Kingdom

**Planned Project:** Student will contribute to a project aiming at exploring early mother-infant interactions and later socio-cognitive developmental outcomes. In particular, students will be involved in coding videos of naturalistic observations between mother and babies recorded during the first 9 weeks of the baby's life as well as videos of follow up assessments at 6, 9 and 18 months.

#### Jessica Sommerville

University of Toronto Contact Email: jessica.sommerville@utoronto.ca Country: Canada

**Planned Project:** Students will can choose to work on one of three projects, each of which focuses on an aspect of socio-moral development in infancy and early preschool. One project examines the development of infants' spontaneous reward and punishment responses to moral transgressions using a novel touchscreen paradigm. Another project investigates infants' ability to generalize inferences about others' behavior across moral subdomains. A third project investigates the degree to which infants differentiate between moral norms and social conventions. Irrespective of the project chosen, students will receive training on lab protocols and procedures, attend weekly lab meetings, attend weekly project meetings with the PI and supervisory graduate student, and will have the opportunity to test participants and learn to code participant data. Students will also have the opportunity to present a poster at our summer research forum.



# **Catherine Tamis-LeMonda**

New York University Contact Email: catherine.tamis-lemonda@nyu.edu Country: USA

**Planned Project:** Remote work: Coding father and mother interactions with their infants (ages 1-2 years) or toddlers (2-3) in structured and naturalistic tasks, with focus on the use of math and spatial language and the gestural and contextual cues that aid infants' and toddlers' understanding of words. Some work may entail remotely running studies with families to videorecord interactions over zoom

## Jenny Wang

Rutgers University Contact Email: jinjing.jenny.wang@rutgers.edu Country: Canada **Planned Project:** Our project will investigate the developmental origins of abstract numerical thought, such as "10", "more", or "2+3". The research student will learn to recruit families, develop research stimuli, as well as coding infant looking time responses.

# **Tianlin Wang**

SUNY Albany Contact Email: twang23@albany.edu Country: USA

**Planned Project:** In our lab, we investigate how infants and adults learn language. We are currently conducting research in the following areas: 1) How to Speak to Babies The way we speak to babies is referred to as Infant-Directed Speech (IDS). IDS typically involves exaggerated intonation and longer vowels, which help to direct infants' attention and may facilitate their later language development. Using home-recordings, we analyze the acoustic properties of IDS and hope to identify factors in the sound patterns of speech that will predict their language development. 2) What to Read to Young Children. How much do young children internalize the stories that are read to them? Does it matter who the protagonists are and what they look like? Do children then expect to see the same in real life? Are they inspired to carry out similar actions? We are interested in addressing these questions by reading stories to children and asking them to engage in play sessions afterwards. 3) Children vs. Adults - A Learning Competition Young children learn new languages effortlessly, which is something that most adults can only wish for themselves. In a series of experiments, we are aiming to examine the differences that underlie the learning mechanism of children vs. adults when they encounter a new language.



#### Sandra Waxman

Northwestern Universiry Contact Email: s-waxman@northwestern.edu Country: USA

**Planned Project:** In our lab, we ask question like: What do babies think? How do infants learn language? What do young children know about the world around them? We blend creative research designs to understand how language and cognition unfold in the first years of life, across the world's communities. By focusing on dynamic interactions between nature and nurture, we gain insight into the infant and child mind. At ICDC, we align discovery in basic developmental science with the very real developmental challenges facing young children.

# Adriana Weisleder

Northwestern University Contact Email: Adriana.weisleder@northwestern.edu Country: USA

**Planned Project:** This summer we will be working on a longitudinal study of language development in bilingual toddlers with and without language delays. We will enroll 2-year-old children from Spanish-English bilingual homes in the Chicagoland area. We are interested in understanding how children process words they know in English and Spanish, how they learn new words in each language, and how these are related. We will also try to capture children's exposure to English and Spanish in their everyday lives – not just from parents but also from grandparents, siblings, friends, and more – and how that influences their language development.

# Janet Werker

University of British Columbia Contact Email: jwerker@psych.ubc.ca Country: Canada

**Planned Project:** The student, working under the supervision of a Postdoctoral Research Fellow at the UBC Infant Studies Centre, will work remotely to assist with a project on "cross-situational word learning" in children 2- to 3-years-old. This project will involve utilizing an online platform (e.g., https://lookit.mit.edu/) to enable the collection of looking-time data from families who participate from their homes. This project will explore whether toddlers can learn new words in a cross-situational learning context (definition: https://link.springer.com/referenceworkentry/10.1007%2F978-1-4419-1428-6\_1712) and if so, whether they can generalize their learning to new contexts. The student will be trained such that they may assist will all aspects of the study, including reading relevant background literature; coding the behavioural videos; and analyzing the data. The student will work within a project team that meets regularly via Zoom, including other undergraduate research assistants.



#### Hannah White

University of Missouri, St. Louis Contact Email: h.white@umsl.edu Country: USA

**Planned Project:** The University of Missouri, St. Louis Lifespan Development Lab (PI: Dr. Hannah White) is seeking an undergraduate researcher to work on the Tiny Triton Project in the summer of 2021. The overarching goals of the project are 1) to investigate the interplay between stress (cortisol) and immune function (Interleukin 6) early in life, 2) to document the cyclical relationships between infant temperament, parent stress, and the home environment, and 3) to examine socio-demographic variables as potential moderators of these processes. Specific tasks planned for the summer include coordinating data collection and cleaning for a parent-report daily diary study and, provided in-person data collection can be completed safely by that time, running participants through eye-tracking protocols and collecting saliva samples. Based on their individual research interests' students will also have the opportunity to propose their own exploratory analyses using existing data sets and/or add measures to the ongoing data collection.

#### Fei Xu

University of California, Berkeley Contact Email: fei\_xu@berkeley.edu Country: USA

**Planned Project:** Our research focuses on how infants understand intentional actions and how they use evidence to acquire knowledge about the physical and psychological world. In on-going projects, we investigate whether infants generalize preferences, words, and object functions across individuals and across cultural groups; we also explore how infants may use evidence to revise their beliefs about how objects move and how people behave. In general, we use looking time as well as search measures in our studies; for this summer, it is likely we will be conducting all studies via zoom. Summer interns will work closely with the PI and students in the lab.