



Front Left to Right: (1) Summer 2022 Ph.D. Graduate in Neuroscience, Vanessa Cerda, (2) Dr. Jenny Hsieh and her two Fall 2022 graduate students, (3) Erin Hurley (Neuroscience) (4) Courtney McMahon (CMB). Back row, (1) Summer 2022 graduate Lorena Roa De La Cruz (2) Dr. Lacy Barton, (3) Dr. Lindsey Macpherson (4) summer 2022 graduate student Bryan Fowler (Neuroscience), and (5) Summer 2022 graduate, Yu-Huey Lin (CMB)

WHAT'S INSIDE

- From the UGAR - Dr. Ramos
- First BS in Neuroscience
- Scholarship Shoutout
- Meet our students
- Meet a few of our Ph.D. Graduates
- Pictures of our NDRB / MMI Doctorate Investiture Ceremony Pictures
- Women in Neuroscience - Flyer
- UTSA Brain Health Consortium
- "UTSA's new doctoral program to give graduates a competitive edge in the emerging regenerative medicine sector"

Congratulations Graduates!!

Roadrunner Creed:

I will:

- Uphold the highest standards of academic and personal integrity by practicing and expecting fair and ethical conduct;
- Respect and accept individual differences, recognizing the inherent dignity of each person;
- Contribute to campus life and the larger community through my active engagement; and
- Support the fearless exploration of dreams and ideas in the advancement of ingenuity, creativity, and discovery.

Guided by these principles now and forever, I am a Roadrunner!



UTSA Honor Pledge: "As a UTSA Roadrunner, I live with honor and integrity."

NDRB would like to extend a heart-felt congratulations to all UTSA Fall graduates. I hope your time at UTSA was a memorable experience as it was for the NDRB faculty and staff. You are now prepared to move on to the next phase of your life and take on the new challenges you may encounter along the way. As you leave UTSA, remember the experiences created, knowledge you gained and the relationships you made as they have made you into the successful person you are today. Be an example! Be an example for you family, friends, and colleagues. Share your experiences and what you learned at UTSA with others. We are proud of you and now go show the world what you can do!

FIRST BS IN NEUROSCIENCE RECIPIENT



Pictured: Isabella Sarno (left) Dr. David Silva, Dean COS (right)

Isabella Sarno Marin is the first undergraduate in our Neuroscience Program and recently received the Dean's Excellence Award Ceremony. Isabella is a senior neuroscience major minoring in biology and psychology. She became involved with the Wicha Lab: Brain, Language, and Cognition as an undergraduate research assistant where she recruited participants, learned the process of building and carrying out a study, conducted data analysis, and experienced the hurdles of writing, editing, and publishing results and findings. She plans to pursue a Ph.D. upon completion of her undergraduate studies.

Read her Article on
[#ThisishwhataScientistlookslike](#)

Q: Why did you choose UTSA?

Because it had the best program for the major that I was interested in when applying (Neurobiology).

Q: Why did you choose Neuroscience?

I changed my major to Neuroscience because, while I still loved Biology, I've always had a passion for Psychology. Neuroscience brought both together.

Q: What have you enjoyed about the program thus far?

The classes, they're extremely interesting. It might be because they're upper divisions so they're more in-depth but the classes I've taken in the Neuroscience program are all fascinating.

Q: Any favorite exchanges/interactions with faculty?

I've loved almost every single exchange with Dr. Gamblin. He's a very real, down-to-earth professor who made a 9 AM class not only tolerable but engaging. Even when we went overtime by accident, no one ever wanted to leave or complained. We were all absolutely enthralled by the subject.

Q: Any interest/excitement towards joining a lab to conduct research?

I did join a lab! I joined the Wicha Lab: Brain, Language, and Cognition. I've loved every second of it, conducting cognitive research with human participants can be challenging but it's been extremely rewarding and fun. Dr. Wicha's mentoring has made it an extremely enjoyable experience.

Q: Any recommendations to improve our program?

I believe more student engagement in the form of seminars would be good. I've attended some of the seminars meant for Graduate students and really enjoy them. You'd be surprised by how many Undergrads want to learn more outside of the classroom.

Q: What are your fun plans over the break?

Job hunting. Not very fun but very necessary after graduation! Aside from that, celebrate Yule with my friends and enjoy their company.

SCHOLARSHIP SHOUTOUT



CHEYENNE WILSON

Cheyenne was awarded the Arcie and Craig Jordan Endowed Undergraduate Scholarship in the Sciences. The scholarship supports an undergraduate student who will work in close collaboration with a faculty member to help develop the content and instruction techniques in undergraduate science classes. Cheyenne will be working on materials and active learning modules related to action potentials and synaptic transmission/plasticity that neuroscience students often find difficult. The materials are intended for Intro to Neuroscience, but they can also be used as review materials for Neurobiology, Brain and Behavior, and other advanced Neuro courses.

MEET OUR STUDENTS

Mayra Landeros - Freshman



Major: Neuroscience

Q: What are your fun plans over the break?

or the winter break, I am glad to say that I will be able to travel back home to spend this precious time of the year with my family and friends. Even though I am loving my time at San Antonio and at UTSA, I cannot help but miss the ones I love the most.

Q: Why did you choose UTSA?

I chose UTSA because I really wanted to pursue my dream major, which was not available at any colleges or universities in my hometown. Once I heard UTSA had just opened the neuroscience program and learned about all the remarkable things this university can offer, I was convinced it would be the place for me.

Q: Why did you choose Neuroscience?

I chose neuroscience because I have always dreamed about working in medicine to help people and save lives. Tying that to my strong interest in the brain and anything associated with it made me narrow down my choices to something that I am very fond of so far.

Q: What have you enjoyed about the program thus far?

I have enjoyed the numerous amounts of involvement opportunities that are available to us. I have seen so many events that are even open to students of all majors and departments. Seeing interactions can be very heartwarming, especially among peers.

Q: Any favorite exchanges/interactions with faculty?

This month, I got the opportunity to meet Jay Wilson, the program manager. Interacting with him was very nurturing because of his caring nature. Hearing him talk about being open to our opinions about the program to improve it to the best of his ability made me feel more human.

Q: Any interest/excitement towards joining a lab to conduct research?

I am heavily interested in joining a research lab in the future. Seeing various of them being advertised has sparked a great interest in taking part in them sometime during my college career. I am very intrigued by what can come out of them and what awaits me.

Q: Any recommendations to improve our program?

I do not have much to say about improvements to the program, but I do believe it would be great for the program to improve on advertising. So many amazing events and resources are not appreciated enough because it can be difficult to be aware they are available.

Adhishree Chidambaram - Sophomore

About Adhishree:

Adhishree is a Sophomore majoring in Neuroscience and a Top scholar student. She is specifically interested in traumatic brain injuries, neurodevelopment, and neuroplastic healing. Adhishree is diligent, curious, and determined to reach her goal to be a pediatric neurologist while spreading awareness and advocating for neurodivergent patients.

Q: Why did you choose UTSA?

I chose UTSA because I wanted to immerse myself in a diverse environment of like-minded individuals who are driven by their future goals and to give back to their community. I am excited to be a part of the new Neuroscience program.

Q: Why did you choose Neuroscience?

I have personally seen the long-term effects of injury to the brain and how our overall health is linked to the proper function of the brain. For me, the brain is like an enigma. How one changes in the physiology of the brain or a single nerve excites and intrigues me. The brain is a new frontier waiting to be discovered and understood, and I want to be a part of solving the enigma that is our brain.

Q: What is your dream job?

My dream job is to be a pediatric neurologist and treat traumatic brain injuries and neurodevelopmental disorders. I have always wanted to work with children and have a career in neuroscience. Over 100,000 kids in the last year have been diagnosed with a neurological disorder in the US but there are only 904 pediatric neurologists in the US. I believe this is a specialty that needs more doctors to treat children.

Q: Tell us a fun fact about yourself.

I have been learning Bharatanatyam (an Indian classical dance style) for the last 15 years, so I often spontaneously burst out in dance.



Major: Neuroscience

Jordyn Haynes - Junior



Major: Neuroscience with a concentration in Behavioral Neuroscience

Q: Why did you choose UTSA?

I chose UTSA because it was one of the only universities in Texas that aligned with my passion for Neuroscience. I felt I could really excel in this environment and I could help make an impact on this campus.

Q: Why did you choose Neuroscience?

I chose neuroscience because I have always been interested in the development and behavior of the brain since I was small. I loved learning about people's experiences in life and how they shaped them into the person they are as well as the biological aspects of that. I always wanted to learn more about the brain and I felt like this was a great first step.

Q: What have you enjoyed about the program thus far?

I have enjoyed the constant communication from the department chairs and program managers to keep us in the loop of all new things coming into the major that can help us succeed and thrive in the new major.

Q: Any favorite exchanges/interactions with faculty?

I haven't had a lot of professors specific to the program yet, but I enjoyed Dr. Troyer's intro to neuroscience course, and I am really excited to take neurobiology with Dr. Jaffe.

Q: Any interest/excitement towards joining a lab to conduct research?

I am currently a part of a lab. I am a research assistant in the TARDIS lab with Dr. Meca. I love it because it lets me explore my behavioral interests in psychology.

Q: Any recommendations to improve our program?

I think we should have more courses offered for those who are also interested in the psychology aspect of neuroscience available.

Q: What are your fun plans over the break?

Sleep! I am also excited to spend time with my friends and family and get things ready for the spring semester regarding the courses and organizations I am a part of.

Adriana Moreno - Junior

Q: Why did you choose UTSA?

I chose to study at UTSA because it is close to home, and I was excited when I learned that UTSA offered an undergraduate program for students interested in studying neuroscience.

Q: Why did you choose Neuroscience?

I choose to study neuroscience because I have a family member who has autism and I wanted to learn about the effect that autism spectrum disorder has on the brain and how it has a different effect on each person who is on the spectrum.

Q: What have you enjoyed about the program thus far?

I have only been in the new neuroscience program for about a semester, but I have enjoyed learning about the history of neuroscience in the course "Introduction to Neuroscience" and I look forward to taking the other neuroscience-based courses that are offered by the program.

Q: Any favorite exchanges/interactions with faculty?

I enjoyed taking Biosciences I and II with Dr. Perry. He is a great professor and made the field of biology very interesting to learn about.

Q: Any interest/excitement towards joining a lab to conduct research?

I would be interested in joining a lab that conducts research on Alzheimer's disease and the effect that the neurodegeneration caused by the disease has on the brain.

Q: Any recommendations to improve our program?

I would recommend for the program offer neuroscience-based courses in the summer semester as well.

Q: What are your fun plans over the break?

I am excited to spend time with my family and friends back at home over the break because I haven't seen them at all since the semester started.



Major: Neuroscience with a concentration in Pre-Medical Neuroscience

GET TO KNOW A FEW OF OUR PHD GRADUATES



LORENA ROA DE LA CRUZ

Lorena studied the mechanisms that characterize the development of the initial (“foundational”) population of spermatogonial stem cells (SSCs) in testes of fetal male mice and the processes that facilitate their self-renewal and/or contribution to the spermatogenesis differentiation pathway. Results from single-cell RNA-sequencing and lineage tracing studies suggest that foundational SSCs arise preferentially from a determined subpopulation of dividing prospermatogonia during a narrow window of fetal development. Additionally, results from gene expression analyses support a model whereby the pattern of gene expression found in SSCs in the postnatal testis is regulated by differential transcription, rather than by differential RNA stability. Lorena successfully defended her dissertation in the summer of 2022 and will be joining Dr. Lacy Barton’s laboratory at UTSA as a postdoctoral fellow in 2023 to study germ cell development in *Drosophila*.

Q: WHY DID YOU CHOOSE TO PURSUE YOUR PH.D. AT UTSA?

I was looking for an institution that would foster my scientific skills and help me grow as a scientist. While interviewing for the program, I realized UTSA was the best fit for me for its excellent research and exceptional scientists. Furthermore, the UTSA community was always welcoming and supportive, which also played a tremendous role during the development of my Ph.D.

Q: WHAT HAS BROUGHT YOU THE MOST ENJOYMENT IN THE PROGRAM?

As an international student, I enjoyed meeting scientists and students from all around the world. Sharing my Ph.D. experience with my cohort (now Dr. Chen, Dr. Jordan, Dr. Lin, Dr. Negron, Dr. Sarker, and Dr. Vellanki!) was a unique experience that will always stay with me. I'm immensely proud of what we've accomplished and how much we have grown!

Q: ANY FACULTY KUDO?

I want to thank my PI and committee members, Dr. Hermann, Dr. McCarrey, Dr. McPherson, Dr. Ruan, Dr. Geyer (East Carolina University), the NDRB department staff, especially Wanda Guntz, Janice Marshall, and Tony Alvarez, as well as Sean Vargas at the Genomics Core. They were imperative to my success in the Ph.D. program and always motivated me to strive for the best.

Q: WHAT ARE YOUR PLANS AFTER GRADUATION?

I will start a postdoctoral position in Dr. Lacy Barton's lab (UTSA) to study germ cell development in *Drosophila*.



COURTNEY MCMAHON

Courtney's research looks at the neurological consequences of the SARS-CoV-2 virus because she and her team saw a lot of neurological symptoms occurring from COVID-19 cases. They first investigated how SARS-CoV-2 interacted with human brain tissue by using neural organoids derived from human embryonic stem cells. After they found that it could quickly infect the brain at low levels and that it infected critical non-neuronal cells of the brain such as glial and choroid plexus cells, they decided to look a little deeper and see how an infection would affect the fetal brain if a pregnant woman caught COVID-19. She and her team used a mouse model that expresses human ACE-2, the primary receptor that SARS-CoV-2 binds to, for this study, and they did have some really interesting (and a bit scary) findings. SARS-CoV-2 was getting to the brains of the developing babies and was infecting a wide variety of cells. So now, Courtney's plans for after graduation are to finish the story and see what this infection of the fetal brain means for the offspring later in life. Other viral pathogens are well-known to lead to or lower the threshold for neuropsychiatric disorder development at some point in life after in-utero exposure, and so she wants to see if prenatal COVID-19 exposure does the same.

Q: WHY DID YOU CHOOSE TO PURSUE YOUR PH.D. AT UTSA?

I came to UTSA as a master's student, not sure if I wanted to do a Ph.D. yet, but during that time, I discovered my love for research. I decided to stay at UTSA for my Ph.D. because I knew about the resources and level of scientific expertise we had here, which put us on the path to our R1 classification. I also really appreciated the collaboration and camaraderie between the labs and students and looked forward to being a part of that.

Q: WHAT HAS BROUGHT YOU THE MOST ENJOYMENT IN THE PROGRAM?

This is a hard one to answer because there has been so much I've enjoyed! I have a really fun lab, so that made the (almost) 5 year process a lot easier and more enjoyable. I've also become close with a lot of other students in the program, so graduating with a Ph.D. and life-long friends is pretty great. I did really love my project though and knowing that my work will benefit the world in some way. There's also just something about that moment when you analyze the data from your experiment, find something exciting, and know that you're the only one who knows it at that moment.

Q: ANY FACULTY KUDO?

I have a lot of faculty kudos, but first, my main mentors Dr. Jenny Hsieh and Dr. Christopher Navara. I was very lucky to have mentors that cared so much, offered a lot of guidance in both science and life, and gave me the opportunities that they did. Also to everyone running the NDRB department, because I could never keep up with the paperwork and workload that you guys do, and still reply to emails within minutes.

Q: WHAT ARE YOUR PLANS AFTER GRADUATION?

I'll be staying on for a short postdoc with Dr. Hsieh. We made some pretty exciting discoveries in the realm of COVID and want to pursue that a bit more so we can tell the full story.



YU-HUEY LIN

Yu-Huey's doctoral research was focused on studying whether epigenetic memory from different source cell types may 1) impact the reprogramming and Differentiation efficiency and 2) limit the complete epigenetic reprogramming that can be achieved during cell fate transitions in vitro. The cell fate transitions were focused on the transitions from differentiated source cell types to induced pluripotent stem cells (iPSCs) and from iPSCs to primordial germ cell-like cells (PGCLCs) in a dish. Results from gene expression and methylation sequencing data of iPSCs suggested that iPSC lines derived from four different source cell types did indeed display residual gene expression and epigenetic programming patterns characteristic of the corresponding source cell type. Interestingly, the results of sequencing data from the PGCLC populations showed very little persistence of epigenetic/transcriptional memory being retained from iPSCs from which they derived. Taken together, they suggested that this outcome reflects the differential extent of epigenetic programming that normally occurs in the preimplantation embryo and fetal germ line, respectively, in vivo. Yu-Huey graduated in the summer of 2022 and now works in Dr. John McCarrey's laboratory at UTSA as a postdoctoral fellow studying DNA methylation profile in marmoset PGCLCs derived from marmoset iPSCs in a dish.

Q: WHY DID YOU CHOOSE TO PURSUE YOUR PH.D. AT UTSA?

One of the main reasons that I chose to pursue my Ph.D. at UTSA was that the UTSA Graduate School provided me with an immediate fellowship opportunity in addition to the stipends while I was making this decision. Also, I liked the structure of the CMB program. For example, the written qualifying exam was separated into several sections along with the main courses which not only reduced my stress but also gave me opportunities to learn from other different topics outside of my main interests.

Q: WHAT HAS BROUGHT YOU THE MOST ENJOYMENT IN THE PROGRAM?

I was able to meet and work with nice and like-minded colleagues and immerse myself in an environment full of energy and encouragement. I really enjoyed attending multiple conferences which widened my thoughts, strengthened my knowledge, and expanded my professional skills.

Q: ANY FACULTY KUDO?

This dissertation would not have been possible without the help of my PI and mentor, Dr. John McCarrey, who gave me the opportunity to join the lab and introduced me to the world of Germ Cell Biology. I truly appreciate that he provided me with essential guidance and expertise to teach me to grow and think like a scientist. His passion for science is contagious and always provided me with encouragement and support during my time in the program. I would also like to express my great appreciation to Dr. Brian Hermann, Dr. Christopher Navara, and Dr. Yufeng Wang for providing helpful and constructive feedback and advice on my research.

Q: WHAT ARE YOUR PLANS AFTER GRADUATION?

After graduation, I will continue working in Dr. McCarrey's laboratory as a postdoctoral fellow to study DNA methylation profiles in marmoset stem cells and germ cell-like cells made in a dish. If my future plan still remains the same after my postdoc position, I would like to continue working in the field of Reproductive Biology and Medicine, especially studying the mechanisms of cellular and molecular processes during the germ cell development and its genetic and epigenetic regulation. My ultimate goal is to contribute my effort to this field and gametogenesis in a dish and hopefully, it can be used as a solution for curing infertility one day.



Photos from our NDRB / MMI Doctorate Investiture Ceremony













Doctorate Investiture Ceremony Program

PhD Graduate Kaira Church
Dr. Astrid Cardona

PhD Graduate Erin Hurley
Dr. Jenny Hsieh

PhD Graduate Yu-Huey Lin
Dr. John McCarrey

PhD Graduate Courtney McMahon
Dr. Jenny Hsieh

PhD Graduate Lorena Roa De La Cruz
Dr. Brian Hermann

PhD Graduate Jacqueline Williams
Dr. Hans Heidner

NDRB Upcoming Opportunities

WOMEN IN NEUROSCIENCE

INTERNSHIP OPPORTUNITY



June 5 - July 29, 2023

- 8-week internship in a research lab or clinic
- Open to students from any university or major
- Year-round community, resources, and support
- Opportunities for placement at UT Austin, Dell Medical School, UTSA, and UT Health San Antonio
- \$3,000 Stipend**
- Leadership training, professional development, and career mentorship

Informational Session for
UTSA Students
Tuesday, 1/17/23 @ 5:30pm
Zoom
Meeting ID: 895 4824 7819

Application Deadline
March 1, 2023:
neurowomen.org/apply

Questions?

Email: programs@neurowomen.org





The UTSA Institute of Regenerative Medicine and Brain Health Consortium jointly present...

“Synergizing Research Capabilities at UTSA”

Friday, February 17, 2023

Travis & Harris Meeting Rooms in the H-E-B Student Union

9:00 am - 5:00 pm

Lunch, beverages & snacks provided

...A 1-day workshop featuring presentations by UTSA researchers from multiple departments and colleges highlighting unique research approaches, resources, and methodologies relevant to studies of regenerative medicine and brain health.

Please plan to join us at this event designed to promote new collaborative interactions by leveraging research expertise resident on the UTSA campus.

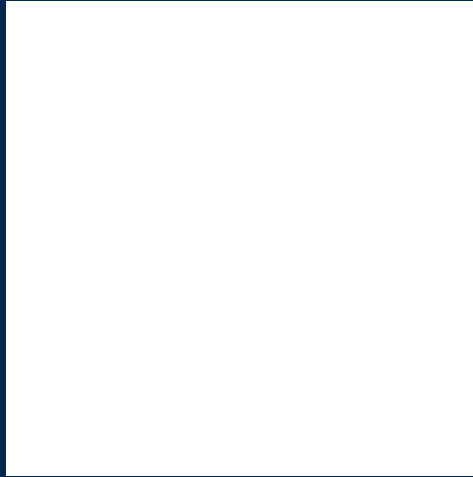
UTSA researchers will present short (15-20 minute) summaries of specialized research capabilities they routinely utilize in their own labs in a format that will exemplify how others might adapt those capabilities for use in their research programs. A question and answer period will follow each presentation. A list of presenters will be circulated soon.

Snacks and beverages will be provided throughout the day and lunch will be provided to each attendee. Faculty, postdocs, students, and staff are all welcome to attend. **There is no fee for attendance, but you must register in advance at...**

<https://utsa-irm.org/events>

We look forward to seeing you there! - John McCarrey, Eric Brey & Jenny Hsieh

Our Department Website



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