

NDRB Signals

DEPARTMENT OF NEUROSCIENCE, DEVELOPMENTAL AND REGENERATIVE BIOLOGY

OFFICIAL NEWSLETTER
SEPTEMBER 2022

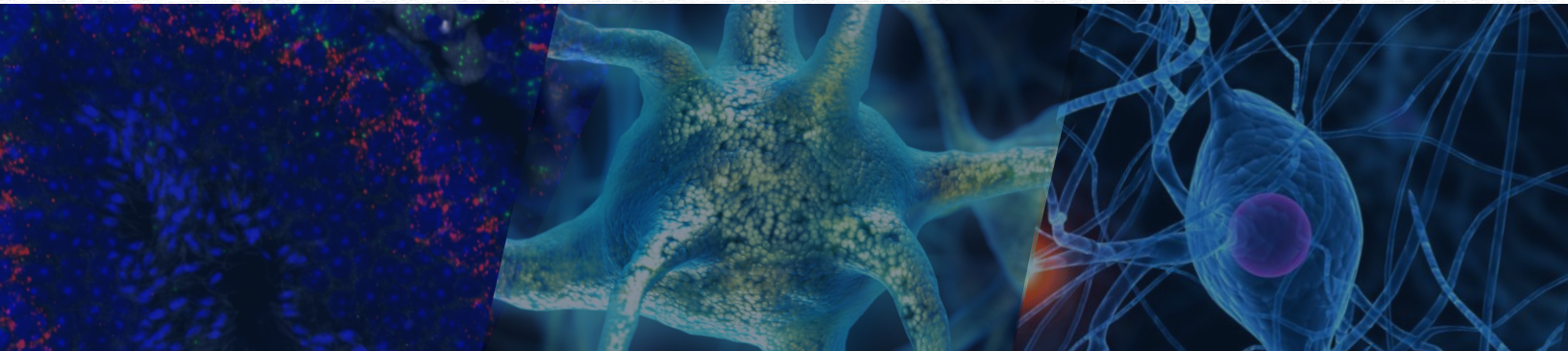


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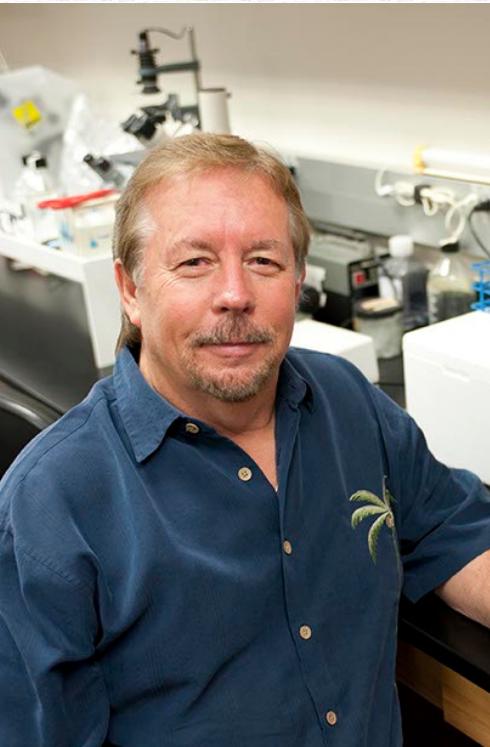
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FROM THE UNDERGRADUATE ADVISOR OF RECORD (UGAR) - DR. WILLIAM RAMOS

The recent reorganization of the Biology Department into three new departments – Integrative Biology (IB), Molecular Microbiology and Immunology (MMI) and Neuroscience, Developmental and Regenerative Biology (NDRB), paved the way for NDRB to create and offer a BS in Neuroscience program beginning Fall 2022. I am happy to report that we have over 150 students with more joining every week. Please meet with your advisor if you wish to change your major. They can assist you with the form. Also, the Cell and Molecular Biology (CMB) PhD program is splitting into two new PhD programs – the Molecular Microbiology and Immunology (MMI) PhD program which will be housed in the MMI Department and the Developmental and Regenerative Sciences (DRS) PhD program, along with the Neuroscience PhD program, will be housed in the NDRB Department. All our neuro PhD students will have the opportunity to conduct research in state-of-the-art laboratories pursuing areas in Regenerative Medicine and Developmental Biology. This is an exciting time to be in the NDRB department!



FROM THE GRADUATE ADVISOR OF RECORD (GAR) FOR DEVELOPMENTAL AND REGENERATIVE SCIENCES (DRS) - DR. JOHN MCCARREY



In conjunction with the recent reorganization of the Biology Department into three new departments – Integrative Biology (IB), Molecular Microbiology and Immunology (MMI) and Neuroscience, Developmental and Regenerative Biology (NDRB), the Cell and Molecular Biology (CMB) PhD program is undergoing reorganization as well. The CMB PhD program is transitioning into two new PhD programs – the Molecular Microbiology and Immunology (MMI) PhD program housed in the MMI Department and the Developmental and Regenerative Sciences (DRS) PhD program housed, along with the Neuroscience PhD program, in the NDRB Department. The new DRS PhD program will feature research opportunities in state-of-the-art laboratories pursuing cutting-edge studies in basic, applied, clinical and biotechnology areas of Regenerative Medicine and Developmental Biology.

FACULTY SPOTLIGHT

DR. LACY BARTON

Q: WHAT IS YOUR AREA OF EXPERTISE AND HOW LONG HAVE YOU BEEN WORKING IN YOUR RESEARCH AREA?

"While both my undergraduate and graduate degrees were in Biochemistry, I am much more of a geneticist, cell and developmental biologist by training. I use those frameworks to study reproductive development, specifically the development of special cells that will become sperm and oocytes called germ cells. I have been studying various aspects of germ cell development and maintenance for 12 years."

Q: WHERE DID YOU GET YOUR DEGREE AND WHAT ATTRACTED YOU TO BECOMING A PROFESSOR?

"I grew up in rural Wisconsin loving nature and biology but not having a clue one could do biology research as a career. So my first jobs were in the social work realm, which I did full time while attending (and struggling at!) my local community college. At the age of 24, I happened to see a televised academic lecture on newt limb regeneration. Seeing a scientist describe their work was revolutionary to me. I was hooked and transferred to a four year campus within the University of Wisconsin LaCrosse system, completed a bachelor's of science in a year and a half and then obtained a PhD at the University of Iowa.

I am a professor because it allows me to combine the two things I love most: increasing our understanding of how our biological world works and introducing the next generation to science."

Q: WHAT ARE YOU MOST LOOKING FORWARD TO IN YOUR NEW ROLE WITH NDRB?

"I am so excited to meet all of you! At every campus visit, I was so impressed by the dedicated and driven students that I saw around campus. I am really looking forward to interacting with you during various departmental events."



Q: WHAT DO YOU THINK WILL CHANGE ABOUT YOUR RESEARCH OVER THE NEXT FIVE YEARS?

"My research currently focuses on a very special stage in reproductive development whereby newly specified germ cells must migrate through many tissues in the early embryo to reach the developing ovary or testes. If germ cells don't reach their target on time, they don't contribute to the germline pool and can cause tumors. My research group will first focus on how germ cells migrate properly to reach their target tissue. During their epic journey, germ cells undergo a sequential series of developmental steps to prepare for their ultimate job to yield a haploid sperm or oocyte via meiosis. As my research program progresses, we will start to explore some of these other developmental processes that simultaneously occur while they migrate to the gonad."

Q: WHAT ARE YOUR FUTURE PLANS?

"My future research plans are aimed to understand the very dynamic and important stage in germ cell development described above. In the context of this research program, I plan to build a framework to introduce students to scientific research and related career paths at an early stage. Early introduction reduces barriers people face getting into science and we will all benefit from fewer barriers."

Q: WHAT INSPIRED YOU TO WORK IN YOUR CURRENT FIELD?

"My interest in tissue regeneration and stem cells led me to the field of reproductive biology unexpectedly. As a graduate student, I chose a mentor and a research project where I could study adult stem cells in their normal environment these were germline stem cells, which provide a steady pool of gametes in adults. It was during this time that I fully realized just how special and critically important germ cells are. They must develop properly and be protected from early embryogenesis through adulthood in order to yield healthy children and grandchildren. For me, nothing is more important or profound. My research mission is to understand the many requirements for proper germ cell development so that we can have a fuller picture of the many ways fertility and the health of offspring can be compromised."

Q: WHAT ADVICE WOULD YOU GIVE TO OUR FIRST-YEAR NEUROSCIENCE STUDENTS?

"Before becoming a scientist, I was a crisis counselor for survivors of domestic violence and sexual assault. One day while working at the shelter, a client said to me, 'there are two things people can never take away from you: your experience and your education.' It was such a profound statement given that she had just lost her belongings and stability.

My advice to first year neuroscience students is to embark on this journey knowing that all the education and experiences you gain will be yours for life. Cherish this truth and take advantage of every opportunity to gain more."

STUDENT SPOTLIGHT

KAYLIE MANZANO



Kaylie is a senior graduating in May, 2023. She is from Brooklyn, NY and moved to Texas 4 years ago. She is an only child but grew up super close to her cousins and considers them the siblings that she's never had. Kaylie loves to travel and experience new cultures! She also loves to read; thriller is her favorite genre, but she reads all types of novels. She loves learning new things and putting that new information to use.

Q: WHY DID YOU CHOOSE NEUROSCIENCE AS YOUR MAJOR?

"Neuroscience wasn't my first major here at UTSA. I changed my major quite a bit because it never felt right for me. It always felt like it wasn't something I was supposed to be studying and when I found out about the new neuroscience major, it all changed for me. It was the first major where I was truly comfortable and excited to learn."

Q: WHAT WAS YOUR FAVORITE CLASS AT UTSA AND WHY?

"My favorite class at UTSA was Physiological Psychology. I had an amazing professor who really cared about her students and was a great teacher overall. I was very engaged and intrigued the entire semester and I learned so many fascinating things about neuroscience and human behavior."

Q: WHAT ADVICE WOULD YOU GIVE TO THE INCOMING NEW STUDENTS?

"To incoming students, college is so different from high school and it can be a huge 'culture shock'. I made a handful of mistakes my freshman year and I wish I would've known at least half of the things that I know now. Having time management skills is so important and can save you from late assignments and cramming for exams. Get a planner and be organized! Writing down exam days and due dates will make things so much easier. Lastly, find a study method that works for you, and watch YouTube videos on study hacks or tips! Work smarter, not harder."

DR. JENNY HSIEH, RECIPIENT OF THE EMPLOYER SUPPORT OF THE GUARD AND RESERVE PATRIOT AWARD

Congratulations to Dr. Jenny Hsieh for receiving the Employer Support of the Guard and Reserve Patriot Award on October 19, 2022. Dr. Hsieh was nominated by her Ph.D. student, CPT Courtney McMahon, who serves as a reservist in the US Army Medical Service Corps. The Patriot Award is given to recognize individual supervisors and bosses for their support of "citizen warriors", or their employed Service Members, through various measures such as flexible working schedules, time off prior to and following deployment and training, granting leaves of absence, and supporting Service Members' family.

Courtney has been in Dr. Hsieh's lab for almost 5 years. While presenting the award alongside Chair of the San Antonio ESGR Committee, Caryl Hill, Courtney stated that Dr. Hsieh has been incredibly accommodating to her military responsibilities. She mentioned that Dr. Hsieh has always been very understanding of her odd work hours, time away from the lab, and progress delays during her 2-week military training each year and her monthly drills. Courtney concluded her remarks by saying that "it isn't always easy balancing a civilian job with serving in the military, but Dr. Hsieh has made the process much less stressful and enjoyable."



AWARDS AND RECOGNITION

Congratulations to Angelica Ramos and Hope Msengi for receiving the Society for Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS) Award! Angelica and Hope both are Neuroscience majors conducting research in Dr. Anthony Burgos-Robles' lab.

This October, Angelica and Hope will be travelling to the SACNAS conference in San Juan, Puerto Rico to present their research projects.



Angelica Ramos (L) and Hope Msengi (R)

SACNAS Award offers support for outstanding students from underrepresented groups to gain experience and exposure in the field of sciences by attending the annual SACNAS conference. The award supports their traveling, lodging, and registration to the conference, as well as additional workshops and training sessions for career development. This is a great opportunity for these students to facilitate networking with many other students and scientists from across the nation, and to gain recognition for their research work.

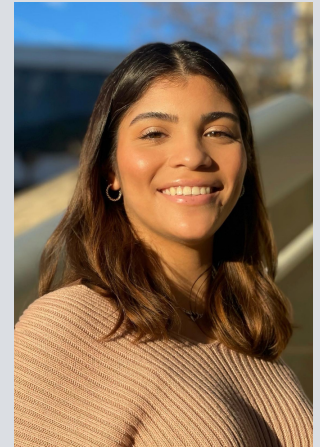


Dr. Nicole Wicha

Congratulations to Dr. Nicole Wicha, professor of neuroscience, developmental and regenerative biology, for being awarded the Brain Health Consortium Collaborative Seed Grant, along with Dr. Alicia Swan, assistant professor of psychology. They are the two co-PIs on this project (Effect of mild traumatic brain injury on predictive processing in language comprehension). Learn more here:

[UTSA Knowledge Enterprise awards annual seed grants to expand faculty research](#)

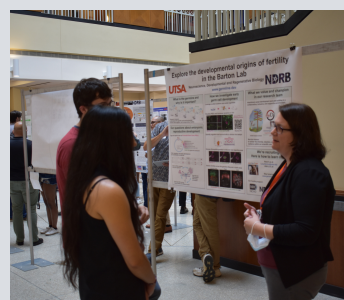
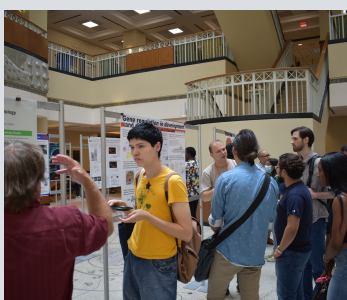
Congratulations to Aranis Muniz Perez, a senior majoring in Biology, with a concentration in neuroscience, for receiving the National Institutes of Health (NIH) award. The grant itself (U01DA054170) is a Diversity Supplement, an extension of one of Dr. Hsieh's U01 grants ("The role of ARX mutations in marmoset brain organoids"). Through this project, Aranis will be investigating the impact of Aristaless homeobox (ARX) mutations on marmoset cortical neuron development and interneuron migration via the generation of 3-D brain organoids from pluripotent stem cells.



Aranis Muniz Perez

NDRB RESEARCH SHOWCASE

The department held a Research Showcase on Monday, August 22, 2022, which had a great turnout! We thank all the faculty who presented posters on their research focus and discussed available research opportunities in their labs. Students are encouraged to visit [the department website](#) and learn more about research opportunities and how to contact faculty to discuss joining their lab.



NDRB WELCOME DAY



Thank you to everyone who came to the NDRB Welcome day on August 23! It was great to see the faces we missed for almost two years.

We hope you enjoyed the fun activities, food, and great conversations with our faculty and fellow classmates.



NEURO-MIND ASSOCIATION (NMA)

The Neuro-Mind Association is excited to announce its Fall 2022 General Meeting schedule.

General meetings will be held:

9/6/2022 @6pm-7pm

10/4/2022 @6pm-7pm

11/1/2022 @6pm-7pm

Meetings will be located at BSB 3.03.02

To get involved for the Fall semester, visit [Rowdy Link](#) or email at neuromindutsa@gmail.com



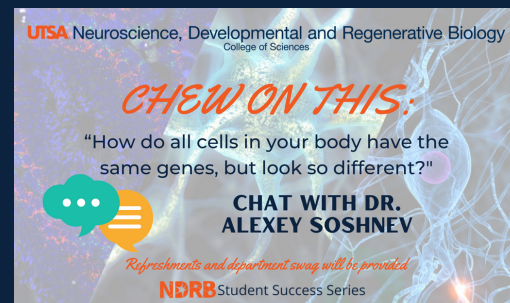
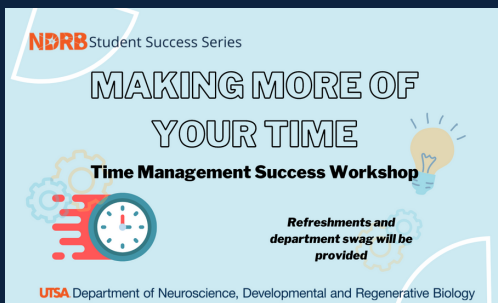
FALL 2022 NEURO SEMINARS

Date	Speaker	Affiliation	Title	Host
9/15	Zayd Khaliq PhD	NINDS	Local receptor control of axonal excitability and striatal dopamine release	Dr. Wilson
9/22	Nicole Wicha PhD	UTSA	Electrophysiological signatures of cognitive development and bilingualism in processing simple arithmetic	Dr. Wilson
9/29	Alfonso Apicella, PhD	UTSA	Cortical Circuits: Auditory Processing	Dr. Wilson
10/6	Nicolas Tritsch PhD	NYU	intrinsic reward-like dopamine and acetylcholine dynamics in striatum	Dr. Wilson
10/13	Mel Feany PhD	Harvard Univ.	Genetic Analysis of Neurodegeneration	Dr. Lee
10/20	Annual Neurosciences Symposium - "3D models of human cortex development and function"			
10/27	Michael Scofield PhD	Med. Univ. SC	Cortico-striatal plasticity and cue-induced cocaine seeking	Dr. Wanat
11/3	Harold Zakon PhD	UT Austin	Diversity of communication signals in electric fish: neurobiology meets molecular evolution.	Dr. Troyer
11/10	Lynette McCluskey PhD	Augusta Univ. Med. College of Georgia	Immune regulation of taste function	Dr. Macpherson
11/17	Susan Sangha PhD	Indiana Univ. Sch. Med	Using Learned Safety Cues to Map the Behavioral and Circuit Mechanisms of Fear Regulation	Dr, Burgos-Robles
12/1	Shannon Macauley PhD	Wake Forest Sch. Med.	TBD	Bhaskar

FALL 2022 CMB/DRS SEMINARS

Date	Speaker	Affiliation	Title	Host
9/12/2022	Jungsu Kim	Indiana University	Emerging roles of glial cells in Alzheimer's disease	Hyoung-gon Lee
9/19/2022	Jake Lehle	UTSA DRS student	Epigenetic Reprogramming in a Dish – An In Vitro Model of Transgenerational Epigenetic Inheritance	John McCarrey
9/26/2022	Anukriti Singh	UTSA DRS student	Primate Spermatogonial stem cells and their niche: a single-cell view	Brian Hermann
10/3/2022	Victor Corces	Emory/Whitehead	Mechanisms of transgenerational inheritance of obesity epiphenotypes	Jenny Hsieh
10/10/2022	Toshi Shioda	Harvard/MGH	Human Primordial Germ Cells: Normal Development and Diseases	John McCarrey
10/17/2022	Erzsebet Kokovay	UTHSA	The role of microglia in neural stem cell aging	Brian Hermann
10/24/2022	Jenna Schmidt	WNPRC/University of Wisconsin	Editing the macaque embryonic genome: challenges and considerations - VIRTUAL	Brian Hermann
10/31/2022	Marcel Daadi	TBRI	Physical and Cognitive-Based Regenerative Rehabilitation in Nonhuman Primate Model of Parkinson's Disease	Brian Hermann
11/7/2022	Idse Heemskerk	University of Michigan	Decoding the signaling dynamics that control human gastrulation, with pluripotent stem cells	Lacy Barton
11/14/2022	Todd MacFarlan	NICHD	Zinc finger genes vs. Retroviruses: a story of combat and cooperation in mammals	Jake Lehle
11/21/2022	James Lechleiter	UTHSA	Targeting Astrocytes as a Strategy to Treat Brain Injuries	Gopakumar Changarathil
11/28/2022	Qi Chen	UC Riverside	Sperm RNA Code: How many bits of information for epigenetic inheritance?	Brian Hermann

UPCOMING EVENTS



Time Management Success Workshop

Tue. Sep. 13, 2022 **2 pm 3 pm**

@ BSE 3.03.02 Loeffler Room

Refreshments and department swag will be provided.

Graduation Help Desk Resources Workshop

Mon. Sep. 19, 2022 **3pm 4pm**

@ BSE 3.03.02 Loeffler Room

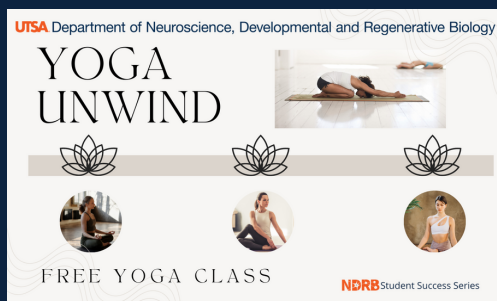
Refreshments and department swag will be provided.

Chew on this: Chat with Dr. Alexey Soshnev

Tue. Sep. 27, 2022 **11am 12pm**

@ BSE 3.03.02 Loeffler Room

Refreshments and department swag will be provided.

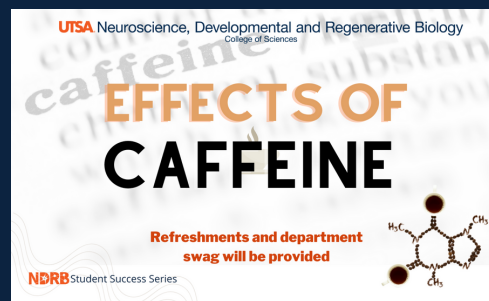


Yoga Unwind - NDRB Student Success

Tue. Oct. 18, 2022 **2 pm - 3 pm**

@ BSE 3.03.02 - Loeffler Room

FREE YOGA CLASS



Effects of Caffeine Workshop - NDRB Student Success

Wed. Oct. 26, 2022 **2pm - 3pm**

@ BSE 3.03.02 - Loeffler Room

Refreshments and department swag will be provided.

To view full NDRB events calendar: <https://bit.ly/3Qvql6Z>

To view COS SSC events: <https://rowdylink.utsa.edu/organization/cosssc>

UPCOMING DEADLINES

September 8 (Thu) – October 24 (Mon) Drop Time Frame (**Automatic "W"**) All students (undergraduate & graduate) may drop an individual course via ASAP, or withdraw (drop all classes) and receive a grade(s) of "W." Students must see advisor to drop developmental classes.

September 12 (Mon) Challenge Examination Requests Due. Last day to submit an approved Request to Challenge Examination form to the One Stop Enrollment Center. Challenge examinations should be administered by this date.

September 19 (Mon) 25% Refund Date. Last day to withdraw from all classes and receive a 25% refund of tuition and fees. *

September 27 (Mon) Second installment payment is due for students who select the three payment plan.

FALL 2022 ACADEMIC CALENDAR