STARS NOTES September 2022

Providing no-cost educational resources to students and teachers since 1991



Core funding provided by the State of Texas

Summer 2022 Event Re-Cap

The lessons from 2020 and 2021 allowed the STARS Program at UT Southwestern Medical Center in Dallas, TX to innovate and refine our Summer Research Program and Summer Camp experiences for students and teachers this year.

To help provide students and teachers with the best possible learning enviroment, STARS Team members Ms. Kristie Conner and Ms. Pearlie Crawford were onsite in Irving, TX and helped manage and facilitate the schedules of two sessions of Summer Camps, three courses each.

During the months of June and July, the STARS Team provided the Summer Seminar Series in a hybrid format so that people who have an interest in learning about scientific developments could learn and ask questions along with our on campus cohort. We had attendees join us from around the world, in countries such as Nigeria, South Korea, and Pakistan. Summer Seminar Speaker List:

- Kim Orth, Ph.D, Department of Molecular Biology, "Black Spot, Black Death, Black Pearl: The Tales of Bacterial Effectors."
- Bruce Beutler, M.D., Center for the Genetics of Host Defense, "Mutagenesis in the Mouse."
- 3. Jim Collins, Ph.D., Department of Pharmacology, "It's No Fluke: Using Planarian to Guide Our Understanding of Parasitic Schistosomes."
- 4. Sean Morrison, Ph.D., Children's Medical Center Research Institute, "Stem Cells and Cancer."
- 5. Khuloud Jaqaman, Ph.D., Department of Biophysics, "A Single Molecule View of Receptor Organization and Signaling."
- Trish Perl, M.D., Department of Internal Medicine, "Déjà vu (Co): Coronavirus - An Existential Threat."

Top News

Summer Research Program 2022 Highlights

Hear from this term's teachers on their perspectives with the Program!

Summer Camps in Irving

Check out the camps that STARS hosted this summer at DeZavala Middle School in Irving, TX

Upcoming Events

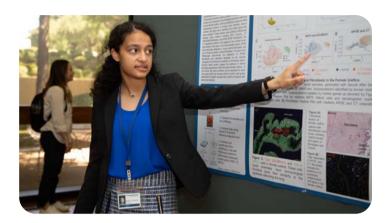
Registration for events is now available for in-person Fall 2022 and Spring 2023 programs!



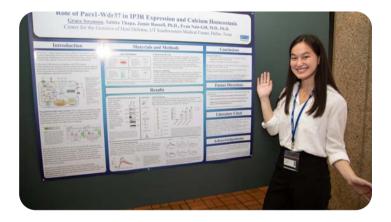
Dr. Jim Collins presents on his research over parasitic flatworms called schistosomes. His work aims to develop new therapeutic avenues to combat these parasites which have impacted the lives of millions of people.

2022 STARS Summer Research Program

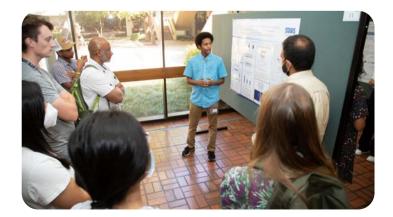
In 2022, the STARS Program hosted the Summer Research Program for 47 students and four teachers on campus. At the end of the internship, the students and teachers presented their posters over their research and answered questions by guests, many of whom were UT Southwestern graduate students, postdoctoral researchers, and faculty members.













Applications for Summer Research Program 2023 will be available from December 1, 2022 - February 1, 2023.

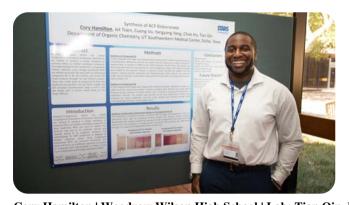
2022 STARS Summer Research Program Students

Name	School	Lab
Samatha Belatur	Lovejoy High School	Steven Gray, Ph.D.
Juliana Blazek	The Hockaday School	Raquibul Hannan, M.D., Ph.D.
Ashley Boscco	Grand Prairie Collegiate Institute	Michael Reese, Ph.D.
Millie Castoldi	Lakehill Preparatory School	Yuki Obata, Ph.D.
Biya Cham	Ursuline Academy of Dallas	Christoph Lehmann, M.D.
Emyah Cox	Irma Rangel Young Women's Leadership School	Kevin Williams, Ph.D.
Elizabeth Craig	J. J. Pearce High School	Hume Stroud, Ph.D.
Vipin Eapen	Hebron High School	John Hulleman, Ph.D.
Husam Elnager	Brighter Horizons Academy	Genevieve Konopka, Ph.D.
Sachi Hansalia	Texas Academy of Math and Science	Venuprasad Poojary, Ph.D.
Dimitri Ivanov	Founders Classical Academy	David Corey, Ph.D.
Anjali Iyer	Plano Senior High School	Tao Wang, Ph.D.
Miranda Jefferds	The Hockaday School of Dallas	Kim Orth, Ph.D.
Amav Khambete	Coppell High School	Mark Henkemeyer, Ph.D.
Eman Khan	Harmony Science Academy Euless	Chen Liu, Ph.D.
Veda Kutagula	Allen High School	Jacqueline Gallet, Ph.D.
Jiwang Lee	Coppell High School	Prassana Alluri, M.D., Ph.D.
Leo Li	Townview TAG	Melanie Cobb, Ph.D.
Aldo Lomas	Barack Obama Male Leadership Academy at A Maceo Smith	Todd Roberts, Ph.D.
Angela Lu	School of Science and Engineering	Maralice Conacci-Sorell, Ph.D.
Srinidhi Mahadevan	Rick Reedy High School	Shin Yamazaki, Ph.D.

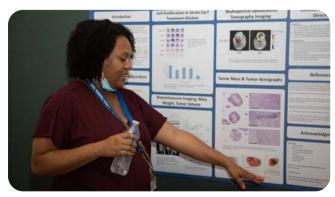
2022 STARS Summer Research Program Students

Name	School	Lab
Natalie Martinez	Harmony School of Excellence	Michael Reese, Ph.D.
Jon Noquil	Jesuit Dallas	Chunyu Cai, M.D., Ph.D.
Doris Onyedionu	MacArthur High School	Mustafa Husain, M.D.
Manas Patel	Wylie High School	Jacques Lux, Ph.D.
Kaylee Pfister	Flower Mound High School	James Collins, Ph.D.
Charlotte Purcell	Greenhill School	Danielle Robertson, O.D., Ph.D.
Jennifer Ramirez-Mendoza	Irma Lerma Rangel YWLS	Dominika Borek, Ph.D.
Raghav Ramki	Plano East Senior High	You Zhang, Ph.D.
Giann Ruiz	Ursuline Academy of Dallas	Daisuke Hattori, Ph.D.
Daisy Sanchez-Calderon	Townview School of Health Professions	Wei Xu, Ph.D.
Akshara Sankar	Coppell High School	Yunsun Nam, Ph.D.
Emily Santos	The Hockaday School	Ivan D'Orso, Ph.D.
Medha Sundar Rajan	Uplift North Hills Preparatory	Ping Mu, Ph.D.
Grace Swenson	Allen High School	Evan Nair-Gill, M.D., Ph.D.
Anthony Tang	School of Science and Engineering	Ganesh Raj, M.D., Ph.D.
Nikitha Thoduguli	Greenhill School	Douglas Strand, Ph.D.
Vishnu Vasudev	Liberty High School	Glen Liszczak, Ph.D.
Ryan Virkar	Jesuit College Preparatory School of Dallas	Yuh Min Chook, Ph.D.
Zane Wallace	St. Mark's School of Texas	Helmut Kramer, Ph.D.
Catherine Wang	The Oakridge School	Elisabeth Martinez, Ph.D.
Leon Wang	Wylie High School	Matthew Petroll, Ph.D.
Michelle Xing	Highland Park High School	John Minna, M.D.
Jason Xu	Plano West Senior High	Ralph DeBerardinis, M.D., Ph.D.
Jayna Yoon	Liberty High School	Michael Buszczak, Ph.D.
Ella Zhang	John Paul II High School	Fei Wang, Ph.D.
Hannah Zhou	Greenhill School	Sherwood Brown, M.D., Ph.D.

2022 STARS Summer Research Program for Teachers

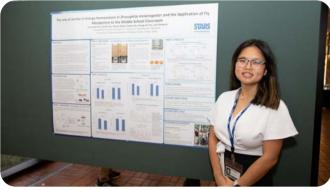


Cory Hamilton | Woodrow Wilson High School | Lab: Tian Qin, Ph.D. My experience with the STARS Program has been both wholesome and enlightening. I was able to perform organic chemistry research with Dr. Tian Qin's laboratory. A few of the laboratory techniques I focused on were thin-layer chromatography and fraction analysis. There would be times when I felt that my technique was not up to par, but the laboratory helped me understand and troubleshoot where my errors would arise from. I felt that "If something didn't work well the first time, I'd try it again a little differently." Which in turn produced good results. However, this is just one of many amazing experiences I had within the program. The opportunity to listen to stellar seminars from a plethora of speakers, informative programs, unique trainings, and so much more has made this one of the best programs I have been a part of!



Jasmine Jones | Skyline High School | Lab: Li Liu, Ph.D. The STARS Program renewed my perspective of learning and application in science. Often our curriculum is district or state tested in a way that prompts teaching a subject singularly. This experience enlightened me to applications of science research in an interdisciplinary way that will now reflect in my approaches to teaching and learning laboratory work in my classroom. I learned many modern techniques, new roles, and aspects to the process of research related to biological sciences, chemistry, and physics

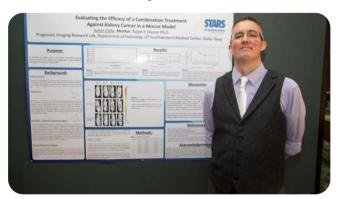
that I can now expose my students to.



Emma DeVine | Greenhill School | Lab: Joel Elmquist, D.V.M., Ph.D.

The STARS Summer Research Program has been one of the most fulfilling and enriching professional development experiences one could ask for as a teacher. For eight weeks, you take off your teacher hat and step into the shoes of being a true novice and student again. Working in a science research setting has exposed to me to new skills and tools that I can bring back to classroom to further enhance my content knowledge and teaching pedagogy.

The support you receive from your laboratory, mentors, the research community at large, and the STARS Team is invaluable. I am inspired to return to my campus with new perspectives and ideas to strengthen our curriculum.



<u>Aaron Chila | Harlingen School of Health Professions |</u> <u>Lab: Ralph Mason, Ph.D.</u>

The STARS Research Program has been a fantastic summertime opportunity, both professionally and personally. Having the opportunity to participate in emerging research has ignited curiosity on scientific topics I previously had not considered. In this way, I felt as I was both a teacher and a student. As a teacher, I was learning about skills and processes that I can take back to the classroom. As a student, I was learning about new technologies and research that I can integrate into my own interdisciplinary knowledge base. I feel that this mindset and experience of hands-on research has empowered me to approach the upcoming school year with a new appreciation for science and learning.

2022 STARS Summer Science Camps

The STARS Summer Science Camps were hosted this year at Lorenzo de Zavala Middle School in Irving, TX. There were two sessions of camps that were held throughout the summer: Session One consisted of Chemistry, Anatomy and Physiology, and Biotechnology. Session Two was comprised of Physics, Biology, and Middle School Science. We would like to express our sincere gratitude to Catalina Pineda, Bibiana Mendez, and Jokasta Maldonado-Mullet for their teaching assistance during the camp programming.



Chemistry Camp

Master Teachers: Beverly Lawson, Ph.D. Rachmad Tjachyadi (Hebron High School)

Classroom Teachers:

Angeles Ano-Os (Benjamin Franklin Middle School) Janee Hall (Leonard High School) Brandon Harston (Lancaster High School) Elizabeth Ochoa (Ambleside School of Fredericksburg)

Anatomy and Physiology Camp

Master Teachers:

Carolyn Hess (Lakeview Centennial High School) Yvonne Morgan (School of Health Professions at Townview Center)

Classroom Teachers:

Candyce Dotsy (Lancaster STEM Early College High School) Kametrice Gray (Village Tech Schools) LaCoya Hall (School of Health Professions at Townview Center) Andrejs Krumins (Cistercian Preparatory School) Demona Ostonal (Flower Mound High School) Dominique Webster (Cedar Hill High School)





Biotechnology Camp

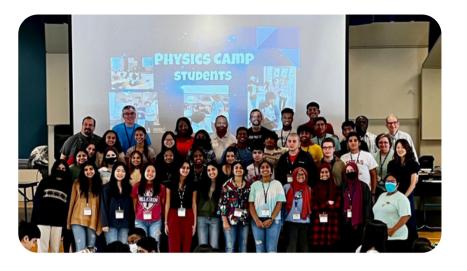
Master Teachers: Jessica Crowley (The Hockaday School) Barbara Fishel, Ph.D. (The Hockaday School)

Classroom Teachers:

Anju Bhalla (Independence High School) Justin George (Sunset High School) Joel Strachan (Wipro Science Education Fellowship)

Applications for Summer 2023 Camps will be available from February 15 - April 1, 2023.

2022 STARS Summer Science Camps



Physics Camp

Master Teachers: Wesley Baker (Creekview High School) Fred Hurst (R.L. Turner High School)

Classroom Teachers:

Burhan Ay (Harmony School of Innovation - Euless) Paula Johnson (T.W. Browne Middle School) Roy Luevano Jr. (Benjamin Franklin Middle School) Kossi Nomagnon (W.H. Adamson High School) Eli Sierra (Skyline High School)

Biology Camp

Master Teachers: Hillary Kasbarian, Ph.D. (Ursuline Academy of Dallas) Treavor Kendall, Ph.D. (Greenhill School)

Classroom Teachers:

Bay Abdullah (Irving High School) Samah Alhamadi (Justin F. Kimball High School) Diana Alvarado (Skyline High School) Cynthia Brackens-Richard (Roosevelt High School) Joycelyn Davis (Hillcrest High School) Lisa Howe (Hebron High School) Mary Rinehart (St. Rita Catholic School)





Middle School Camp

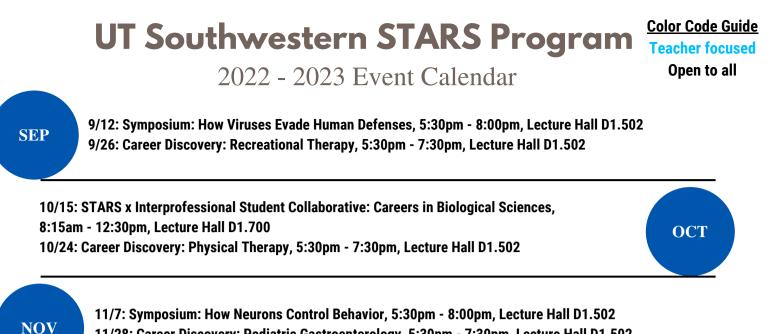
Master Teachers: Jennifer Beall (Renner Middle School) Rebecca Bottin (Schimelpfenig Middle School)

Classroom Teachers:

Adriane Davis (Irma Lerma Rangel Young Women's Leadership School) Danielle Flanigan (Crockett Middle School) Amaris Manriquez (Young Women's STEAM Academy at Balch Springs Middle School) Greg McGrath (Schimelpfenig Middle School) Cynthia Rosas (Sam Houston Middle School - Irving ISD)

Cynthia Rosas (Sam Houston Middle School - Irving ISD Laura Villa (Sam Houston Middle School - Irving ISD)

Applications for Summer 2023 Camps will be available from February 15 - April 1, 2023.



11/28: Career Discovery: Pediatric Gastroenterology, 5:30pm - 7:30pm, Lecture Hall D1.502

12/1: Application for Summer Research Program 2023 opens 12/3: Teacher In-service: Physics Labs Made Easy. 8:30am - 3:00pm. Lecture Hall D1.502 12/10: STARS x UTSW Neuroscience, 8:30am - 3:00pm, North Campus NG3.112 12/12: Career Discovery: Occupational Therapy, 5:30pm - 7:30pm, Lecture Hall D1.502

JAN 2023 1/9: Symposium: Factors that Control Delivering a Healthy Baby, 5:30pm - 8:00pm, Lecture Hall D1.502 1/23: Career Discovery: Pediatric Gastroenterology, 5:30pm - 7:30pm, Lecture Hall D1.502

2/1: Application for Summer Research Program 2023 closes at 11:59pm 2/15: Applications for Summer 2023 Camps open **FEB** 2/25: Women in Science and Medicine Symposium, 8:30am - 3:00pm, Lecture Hall D1.700

2/27: Career Discovery: BioLabs, 5:30pm - 7:30pm, Lecture Hall D1.502

MARCH

3/20: Career Discovery: BioLabs, 5:30pm - 7:30pm, Lecture Hall D1.502 3/25: Teacher In-Service: BioLabs, 8:30am - 3:00pm, BioLabs is located in Pegasus Park

4/3: Symposium: Looking at Cells and Molecules in New Ways, 5:30pm - 8:00pm, Lecture Hall D1.502 4/15: Applications for Summer 2023 Camps close at 11:59pm 4/24: Career Discovery: BioLabs, 5:30pm - 7:30pm, Lecture Hall D1.502

MAY

5/15: Career Discovery: BioLabs, 5:30pm - 7:30pm, Lecture Hall D1.502

utsouthwestern.edu/stars Phone: 214-648-9505 | starsmail@utsouthwestern.edu All programs are no-cost to attend

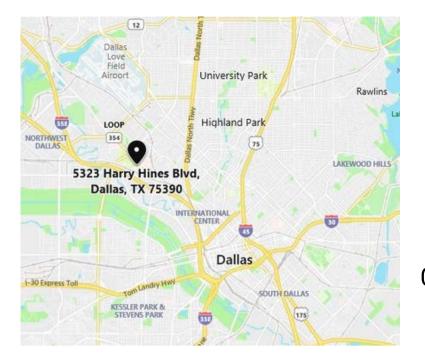


Scan the QR code to find our social media pages and registration website.

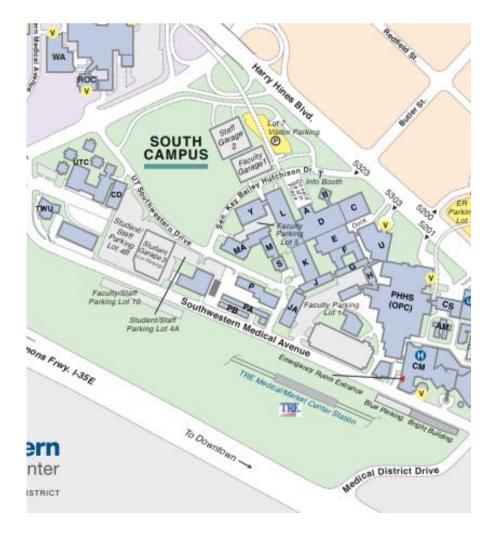


APRIL

DEC



The STARS Program The University of Texas Southwestern Medical Center 5323 Harry Hines Blvd. Dallas, TX 75390-9137 Phone: (214) 648-9505 Fax: (214) 648-9508 Core funding for the STARS Program is provided by the State of Texas



Directions to UT Southwestern:

- 1. From Stemmons Freeway (I-35E) take the Inwood Road exit.
- 2. Go east on Inwood to Harry Hines Boulevard.
- 3. Go south on Harry Hines and take a right at the light at Butler Street.
- 4. Take an immediate right past the information booth and park in the Visitors' Lot or in Garage I (free after

hours & weekends).

5. Walk across the plaza to the Visitor Information Center. The Lecture Halls D1.502, and D1.700 are located below McDermott Plaza at 5323 Harry Hines Blvd., Dallas, TX 75390

Meet the STARS Team



Joel Goodman, Ph.D. | STARS Program Director Lynn Tam, M.Ed. | STARS Program Associate Director Kristie Conner | Program Coordinator Pearlie Crawford | Education Coordinator Maria Sandlin | Education Coordinator Mary Leyendecker | Education Assistant



Scan the QR code to find our social media pages and registration website.



utsouthwestern.edu/stars Phone: 214-648-9505 | starsmail@utsouthwestern.edu All programs are no-cost to attend