

SCIENCE TEACHER ACCESS TO RESOURCES AT SOUTHWESTERN

2015 STARS Summer Research Program for Teachers
Our 2015 SRP was a huge success! See what the teachers
had to say:

STARS Notes
September 2015
Issue XIV, Number 2

Core funding for the STARS Program is provided by the
State of Texas.

“The Potential of Decellularized Extracellular Matrix as Treatment for Acute Lung Injury”



Corey Atkins
Travis Elementary School

Hosted by:
Connie Hsia, M.D.
Internal Medicine/Pulmonary

“I'm glad for this opportunity to have visited an intellectual space where I've never been. I don't doubt that STEM will be the way to success for many of my students. Now, because of my participation in the STARS Summer Research Program, I'll be able to offer my students a more descriptive preview of the possible vistas and landscapes that they might encounter when they embark on their professional journeys.”

“Femoroacetabular Impingement: Is it a Hip or Lumbar Spine Problem?”

Mary Batalla
Crockett Middle School

Hosted by:
Avneesh Chhabra, M.D.
Radiology

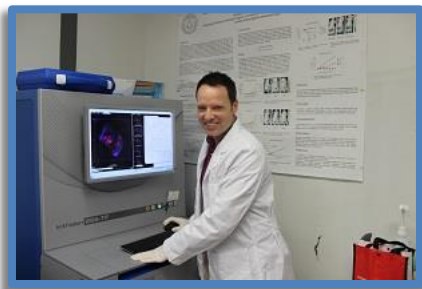


“I never let my education get in the way of my learning. Participating in the UTSW STARS Program is certainly one of the best ways of learning new things outside the classroom.”

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“Evaluating the Effects of Vascular Disrupting Agents on 4T1-wildtype Mouse Breast Tumor Cells Through the Use of Liminol Versus the Use of Luciferin on Transgenic 4T1-luc Mouse Breast Tumor Cells”



Jeff Bivins
Richardson High School

Hosted by:
Ralph Mason, Ph.D.
Radiology

“It has only taken me 10 years but boy was it worth it! I became aware of this program 10 years ago but due to summer conflicts I never had the opportunity to take part in the program. This year was different! I made a conscious decision to not plan anything for this summer in hopes that I would be selected to take part in the program. Fortunately, it worked in my favor and I have had the most amazing experience! I have always had a desire to work in cancer research and this summer gave me a glimpse into what it takes to make it in the research world. I have learned so many lab techniques and used some of the most current research equipment that will truly enhance my teaching for years to come. This summer has not only had an impact on my life but it will also have an impact on my students as they will benefit from my gained knowledge through this program. Thank you STARS!”

“Validating the Expression of the SCD-1 Enzyme in PC-3 against MDA-MB-231”

Adriane Davis
Dallas Environmental Science
Academy

Hosted by:
Orhan K Oz, M.D., Ph.D.
Radiology



“From taking the theoretical to the practical, moving from the textbook to the actual, the STARS Summer Research Program has allowed me a laboratory experience that challenged me both personally and professionally. As a result I am better equipped to bring higher level science inquiry lessons to the classroom. Thank you STARS for allowing me this opportunity!”

“Developing the Technology to Induce a Stroke with Nanoparticles”



Jennifer Hooker
W.T. White High School

Hosted by:
Woo-Ping Ge, Ph.D.
Children's Medical Center
Research Institute

“The privilege of being chosen to participate in the UT Southwestern STARS program is not lost on me as I have been surrounded by incredibly hard-working and dedicated people all summer. I have learned so much about cutting-edge scientific research and methods this summer that I cannot advocate for this program enough. Getting to work in Dr. Ge's neuroscience lab was not only a huge honor but all of the people in my lab were incredibly helpful and patient. I feel reinvigorated about science in general and excited to implement what I have learned in my classroom.”

*“Computational Predictions and Experimental Tests of Stereo selectivity:
An Investigation of Substituent Effects for Diels-Alder Reactions”*



Jose Sanchez
Franklin D Roosevelt High School

Hosted by:
Uttam Tambar, Ph.D.
Biochemistry

“The UT Southwestern STARS program provides teachers an opportunity that is invaluable to developing one’s craft. The outcome of this program is simple: science teachers become **better** at *teaching* science by actually *doing* science. Too often teachers get caught up in teaching the most content, but often do so at the cost of engaging students the least. What the STARS program emphasizes is that science is a way of thinking, not a list of standards or lesson objectives students should memorize. This has been evident to me since my first day in the program. Upon arriving to Dr. Tambar’s lab, who has so graciously mentored me and inspired me to be a top-notch chemist and science teacher, I have been asking questions, developing hypotheses, running reactions, working up reactions, analyzing data, getting frustrated with inconclusive results, making mistakes, and most importantly, I have been learning. Thanks to this experience I now know that to be a great scientist, as a teacher, I must focus on providing my students the experience that the *Tambar Group* provided me on a daily basis—I must teach them that without frustrations and that without mistakes real learning does not happen. I have been lucky to see the basic principles of chemistry and physics I teach my students at play every day in lab and in the seminars I attended where I learned about cutting-edge research from UT Southwestern’s very own professors and Nobel Laureates. I cannot wait to take back what I have learned from the STARS program to my classroom this fall!”

*“Sub-cellular Measurement of Reactive Oxygen Species Using Genetically
Encoded Probes in Live Cells”*

Chaztin Stigers
Duncanville High School

Hosted by:
Asaithamby Aroumougame, Ph.D.
Molecular Radiation



“The STARS Summer Research Program has given me an opportunity to use some of the skills that I teach in a research environment. This program has truly been the best professional development opportunity that I have had the opportunity to take part in. Working alongside people of different cultures, experiences and education has been a pleasure. The passion that the faculty and staff have towards science and education is earnest and revitalizing. I know that the connections that I have made in this program will be a great asset in helping guide my students to be more interested in the scientific community as a whole.”

“Association Between Measures of Everyday Resilience and Student Performance in High School”

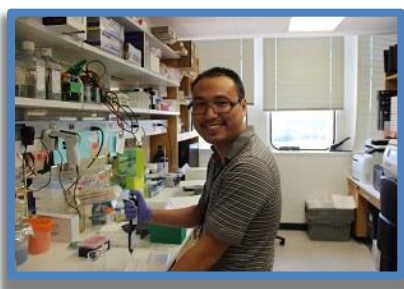
Kelly Suckow
Uplift Luna Preparatory

Hosted by:
Madhukar Trivedi, M.D.
Psychiatry



“My experience this summer has been fantastic. Not only was I working in a department that I had an interest in before this summer, but I learned a tremendous amount about the careers related to psychology and psychiatry. Everyone that I worked with this summer was warm, welcoming, and more than willing to share their past experiences with me. I benefitted greatly from listening to how they came into this field and job. It has helped me think about my own future pathway and what graduate school I would like to attend. I had the chance to work on a project that was relevant to school-age kids, and I am excited to bring my experiences back to the classroom. This summer has revitalized my interest in helping my kids emotionally and supporting them in such a volatile time of their lives. I would encourage other teachers to apply to the STARS program as a way of revitalizing their interest in science and giving them tools to bring back to their classrooms about science careers and hot topic issues in science right now.”

“Estrogen Hinders the Immune Response to Infection by Pseudomonas aeruginosa”



Stephen Teng
Newman Smith High School

Hosted by:
Raksha Jain, M.D.
Internal Medicine/Pulmonary

“The STARS program has been an unforgettable experience. It has been a privilege to research with some of the top scientists in the nation on the frontiers of biomedical science. While in the classroom, many scientific concepts can seem abstract, science comes to life in the lab. The STARS program has also given me the privilege of working with the top science teachers and students in the Metroplex. Working with them reminds me of why I went into teaching. I look forward to bring this experience back to my classroom.”

“Correlation of Dose-Volume Parameters and Clinical Rectum Side Effects in Cervical Cancer Patients Treated with High Dose-Rate Brachytherapy”

Teresa Walker
Sam Houston Middle School

Hosted by:
Xun Jia, Ph.D.
Radiation Oncology



“For many years, our science coordinator in Garland ISD would send out the UT Southwestern STARS flyer to all the secondary science teachers. Each year, I would read over it and think how nice it would be to participate in the program. Like so many teachers, my summers were filled with week-long trainings and/or professional developments sprinkled throughout the entire summer, so I felt I never had the time to commit to the program. When the email and flyer was sent in November, I read it as always, but decided I was going to apply. I had always wanted to do try research. I am so glad I did. I have had a **wonderful** and **informative** experience. Dr. Ravnik and Lynn Tam have made my transition from teacher back to student a pleasant one. The STARS program was extremely organized, which is something that is important to me. The weekly seminars were outstanding. In addition to the various ideas and concepts I have learned while working with the STARS program, I have met some amazing and intelligent teachers. Although I did not work in a traditional lab setting, I have enjoyed the atmosphere in the radiation oncology office. Dr. Xun Jia and everyone in the office were extremely kind to me, which made coming to UT Southwestern everyday very enjoyable. I plan on taking the various ideas and thoughts that I have learned during the STARS program and share them with my science team during our weekly PLCs.”

2015 STARS Dallas ISD Professional Development Sessions

Cassandra Cartmill, AP Biology teacher at Creekview High School in CFBISD, was the Master Teacher for the four 2-day Professional Development workshops hosted by STARS for Dallas ISD Biology teachers. The topics that were addressed included:

- Macromolecules
- Homeostasis
- Cell proliferation and cancer
- Viruses

Two of these topics will be covered each day in the 2-day workshop. They included lectures, wet labs or activities, and visits to UTSW research labs. The following are the teachers who attended the Workshop.

- Shanelle Joseph
Dallas ISD
- Shanna Hines
Dallas ISD
- Sweta Srivastava
Zan Wesley Holmes Middle
School
- Brittonie Wright
Sunset High School
- Patricia Fisher
Seagoville High School
- Brandon Morales
Maceo New Tech High School



- Isaac Olivares
W.T. White High School
- Khuong Nguyen
Thomas Jefferson High School
- Tony Nguyen
Molina High School
- Darron Thomas
Skyline High School
- Mario DuPree
Adamson High School



2015 STARS Summer Research Program for Students

Name	School	Host
Madeleine Ash	Booker T. Washington HSPVA	Bruce Beutler, MD
Lauren Baron	Greenhill School	Khuloud Jaqaman, PhD
Lane Cordy	(SEM) Science and Engineering Magnet school	Fan Gao, PhD
Enrique De Alba	(SEM) Science and Engineering Magnet School	Genevieve Konopka, PhD
Mark De Los Santos	Nolan Catholic High School	Qing Zhong, M.D., PhD
Azim Dharani	Hebron High School	Diana Tomchick, PhD
Martin Donjuan	Irving High School	Helmut Kramer, PhD
Erika Galindo	Duncanville High School	Carole Mendelson, PhD
Eskedar Girmash	Wylie High School	Adrian Rothenfluh, PhD
Kevin Gonzalez	Greenhill School	Mike Buszczak, PhD
Sean Howard	Jesuit College Preparatory School of Dallas	Dwight German, PhD
Catherine Jiang	The Hockaday School	Kim Orth, PhD
Mahesh Krishna	John Paul II High School	Xiankai Sun, PhD
Kartik Kulkarni	Independence High School	Nikhil Munshi, MD, PhD
Josh Kurian	Plano West Senior High School	Vitaly Margulis, MD
Stu Mair	Lovejoy High School	Ram Mani, PhD
Sujal Manohar	North Hills Preparatory School	Matt Petroll, PhD
Jordan McCoy	Lake Dallas High School	Ram Mani, PhD
Maria Mendoza	Irma Rangel Young Women's Leadership School	Guosheng Liang, PhD
Rosa Mendoza	Irma Rangel Young Women's Leadership School	Jennifer Kohler, PhD
Hailey Modi	Texas Academy of Math & Science	Benjamin Chen, PhD
Yesibel Molina	Harmony School of Nature	Rajiv Chopra, PhD
Diana Olmos	Uplift Williams Preparatory	Ganesh Raj, MD, PhD
Molly Paley	Booker T. Washington HSPVA	Linda Baker, MD
Sanjana Ravi	Plano East High School	Deepak Nijhawan, MD, PhD
Alejandro Rey Hipolito	Jesuit College Preparatory School of Dallas	Peter Tsai, M.D., PhD
Jonathan Rodriguez	Lamar High School	Dominika Borek, PhD
Jasmine Rodriguez	School of Health Professions at Townview	Dawen Zhao, MD, PhD
Javier Sigala	Irving High School	Hasan Zaki, PhD
Aliya Somani	(TAG) Talented and Gifted Magnet High School	Chalermchai Khemtong, PhD
Lily Sumrow	The Hockaday School	Rajiv Chopra, PhD
Mera Tegene	(TAG) Talented and Gifted Magnet High School	Ann Stowe, PhD
Samantha Taussig	The Hockaday School	Kirsten Tulchin-Francis, PhD
Lorena Tirado	Irving High School	Jon Graff, MD, PhD
Luis Vazquez	Sunset High School	Li Liu, PhD
Aaron Vengalil	Jesuit College Preparatory School of Dallas	Ming-Chang Hu, MD, PhD
Annie Vu	Highland Park High School	Sandeep Burma, PhD
Ashley Watson	Woodrow Wilson High School	Shin Yamazaki, PhD
Heather Xiao	The Hockaday School	Sherwood Brown, MD, PhD



2015 STARS Summer Science Camps

STARS was able to hold 3 Summer Science Camps in Biology, Chemistry, and Physics. These workshops gave teachers an opportunity to fine-tune their teaching skills. Teachers were coached by two “Master Teachers” as they presented biology, chemistry, and physics lessons and laboratory exercises to 25-30 rising 9th, 10th, and 11th grade students. The students learned concepts in biology, chemistry, or physics through presentations and various laboratory exercises. Students also received information about careers in science and medicine, and had an opportunity to tour our science labs.

Biology



Master Teachers



Adam Jacobson
Wylie ISD



Susan Moran
Highland Park
High School

Learning Specialist

Chemistry



Master Teachers



Karen Compton
Plano East Sr.
High School



Jane Smith
Frisco
Centennial
High School

Physics



Master Teachers



Fred Hurst
New Tech
High School



Dr. Ken Hahn
John Brown
University

Biology Teachers

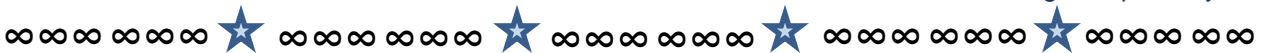
- Candace Edmerson
Grand Prairie High School
- Taniya Fatticci
Samuell High School
- Ashley Flores
Grand Prairie High School
- Carolyn Jacobsen
County Residential Center
- Margo Walker-Pierlus
Molina High School
- Dominique Sapp
Thomas Jefferson High School
- LaToya Smith
Italy High School
- Chauncy Stafford
Early College
- Joel Strachan
Student Teacher

Chemistry Teachers

- Shayma Alzubi
Carter Riverside
- Bruce Boehne
Zion Lutheran Middle School
- Paul Dhillon
Molina High School
- DeAnna Francis
Conrad High School
- Carolyn Jacobsen
County Residential Center
- William Kulian
Early College
- Brooke Parsons
Hampton Preparatory
- Billy Sikes
County Residential Center

Physics Teachers

- Aaron Anderson
Spence Middle School
- Paul Dhillon
Molina High School
- Dolores Echevarria
Alternative Education Center
- Carolyn Jacobsen
County Residential Center
- Rahmatu Kassimu
Spruce High School
- Shandria Kelly
Samuell High School
- Stacy Samuels
Kimball High School
- Billy Sikes
County Residential Center
- Lindsey Townsend
IDEA College Preparatory



2015 Biology Workshop
Teachers



2015 Chemistry Workshop
Teachers



2015 Physics Workshop
Teachers

STARS Upcoming Events

Science Symposia

All events are held on the UT Southwestern Medical Center Campus.
For directions and to register, visit the STARS Web page.
www.utsouthwestern.edu/stars

Calendar of Events 2015 - 2016

<p>Mini-Symposium: What Parasites Can Teach Us Monday, Sept. 14, 2015 5:30 - 8:00 p.m. Lecture Hall, D1.502</p>	<p>September</p> <table border="1"> <tr><td></td><td></td><td>1</td><td></td><td></td><td></td></tr> <tr><td></td><td>14</td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td>30</td><td></td></tr> </table>			1					14									30		<p>Basic Science Symposium: Neuroscience Saturday, Oct. 10, 2015 9:00 a.m. - 3:00 p.m. Lecture Hall, D1.502 Please Invite Students to Attend With You.</p>																		
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<p>Mini-Symposium: TOR, Superhero of Metabolism Monday, Nov. 2, 2015 5:30 p.m. - 8:00 p.m. Lecture Hall, D1.502</p>	<p>November</p> <table border="1"> <tr><td>1</td><td>2</td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td>30</td><td></td></tr> </table>	1	2															30		<p>Teacher In-service: Zebrafish as a Model System Saturday, Dec. 12, 2015 9:00 a.m. - 3:00 p.m. Meeting Room K2.610 Limited Enrollment</p>																		
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<p>Mini-Symposium: The Lung Monday, Jan. 11, 2016 5:30 p.m. - 8:00 p.m. Lecture Hall, D1.502</p>	<p>January</p> <table border="1"> <tr><td></td><td></td><td></td><td></td><td></td><td>1</td></tr> <tr><td></td><td>11</td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>31</td></tr> </table>						1		11										31	<p>Teacher In-service: Hands-on Biology: Making Learning Memorable! Saturday, Feb. 13, 2016 9:00 a.m. - 3:00 p.m. Meeting Room K2.610 Limited Enrollment</p>																		
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<p>Special Symposium: WISMAC Saturday, Feb. 27, 2016 9:00 a.m. - 3:00 p.m. Lecture Hall, D1.600 Please Invite Female Students to Attend With You.</p>	<p>February</p> <table border="1"> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>27</td></tr> <tr><td></td><td></td><td></td><td></td><td>29</td><td></td></tr> </table>												27					29		<p>Mini-Symposium: Innate Immunity Monday, April 4, 2016 5:30 p.m. - 8:00 p.m. Lecture Hall, D1.502</p>																		
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<p>To Register for an Event STARS events are offered FREE of charge to Texas teachers. Please register for an event at least two weeks in advance on our website: www.utsouthwestern.edu/STARS/register</p>	<p>May</p> <table border="1"> <tr><td>1</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>31</td></tr> </table>	1																	31	<p>Other Important Dates Friday, Dec. 11, 2015 Deadline to submit requests for Science Fair Judges Monday, Feb. 1, 2016 by 11:59 p.m. Application deadline for the Summer Research Program Monday, June 6, 2016 Summer Research Program begins Friday, July 29, 2016 Summer Research Program ends</p>																		
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	<p>July</p> <table border="1"> <tr><td></td><td></td><td></td><td></td><td>1</td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>31</td></tr> </table>					1													31	<p>August</p> <table border="1"> <tr><td>1</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>31</td></tr> </table>	1																	31
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Science Teacher Access to Resources at Southwestern
The University of Texas Southwestern Medical Center
Voice: 214-648-9505 Fax: 214-648-9508



Exploring Post @ UT Southwestern



Upcoming Meetings:
6pm to 7:30pm

- Monday-Sept. 21st
- Monday-Oct. 26th
- Monday-Nov. 16th
- Monday-Dec. 14th
- Monday-Jan. 25th
- Monday-Feb. 22nd
- Monday-Mar. 21st
- Monday-April 25th
- Monday-May 23rd

2015-2016 Exploring Post Officers

- @Irma Zamarripa, President
- @Jason Mendoza, Admin. VP
- @Maya Reddi, Programs VP
- @Sasha Thomas, Secretary

Register For Exploring Post@
explorer@UTSouthwestern.edu

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PROGRAMS

SYMPOSIA
Basic Science Symposia
Mini-Symposia

OUTREACH
Bureau of Science Fair Judges
Research Assistance
Science Ambassadors
Student Mentoring

SUMMER RESEARCH
Summer Research Program for
Teachers
Summer Research Program for
Students

TOURS
UT Southwestern School of
Health Professions
UT Southwestern Medical
Center
Parkland Health & Hospital
System of Dallas
Children's Medical Center Dallas

IN-SERVICE SESSIONS
Hands-on Biology: Making
Learning Memorable
Zebrafish as a Model System

SCIENCE CAMPS
Biology
Chemistry
Physics

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