2016 STARS Summer Research Program for Teachers
Our 2016 SRP was a huge success! See what the teachers had to say:

“Innovations in Visualizing the Activity of Vascular Disrupting Agents”

Jeff Bivins
Richardson High School

Hosted by:
Ralph Mason, Ph.D.
Biomedical Engineering

“I am thrilled to have had the opportunity to be welcomed back for a second year! The experience I gained the first year was enhanced this summer. The team that I worked with challenged me and pushed me to new intellectual heights. The analytical and research skills that I learned this summer will enhance the learning environment in my classroom. Thanks to an amazing group of team members, I will be able to share with my students the latest techniques in research, the technological advances in science, and the statistical analysis of research data. I would encourage every teacher to take advantage of this opportunity provided by the STARS program. This is an experience of a lifetime and one that I wish I could do every summer!”

“Generation of Ezh2 Knockout Embryonic Stem Cells by CRISPR-Cas9”

Stephanie Cartwright
Travis Middle School

Hosted by:
Jian Xu, Ph.D.
Pediatrics

“The STARS program has been an amazing experience because it combines learning techniques in an actual lab setting with seminars about new and intriguing scientific research and lesson plans that will be engaging to bring back to the classroom. It rekindles my passion for learning and teaching and reminds me of how exciting science can be for students.”
“A Comparative Analysis of PGRMC1 Versus the Sigma-2 Receptor Using Varied Imaging”

Adriane Davis  
Dallas Environmental Science Academy  
Hosted by:  
Orhan K. Oz, M.D., Ph.D.  
Radiology

“The impact of participation in the STARS Summer Research Program cannot be measured with words alone. For it has provided me with a greater foundation and understanding of the scientific research process. As a second year participant, the evidence can be seen not only in the delivery and the quality of my inquiry labs, but also in student product and achievement that we have attained. I am continually impressed with the professionalism, and support and encouragement that I have received from the STARS program, and my mentors, that have enabled me to reach new heights as a science educator. For these reasons, I am forever grateful to the faculty and staff of STARS, to the research labs who have opened their doors, and the University for making opportunities like this possible.”

“Pioglitazone Does Not Augment Total Antioxidant Capacity in Zucker Diabetic Fatty Rat Lung”

William Kuilan  
Lassiter Early College High School  
Hosted by:  
Connie Hsia, M.D.  
Internal Medicine

“STARS is one of the best things to happen to science education in Texas.”
“Identification of Metabolites in Human Glioblastoma Cells”

Jennifer Long  
W.T. White High School

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

“Professionally, I was challenged even though it was second summer in the lab, having to be a student again, starting with very little knowledge, and at times feeling like I lacked some basic skills. This humbling experience will serve as a way to connect to my students better when they struggle to understand and embrace scientific content, as well as flounder with seemingly elementary lab skills. Personally, it affirmed my love of science and understanding how things work. This experience was enlightening as I learned about a lot of cutting edge research being done and new ways of analyzing things. In all the discoveries being made, there is a lot that scientists still don’t know and can’t fully explain. It’s comforting that no one has all the answers and I can use that to push my students to be better thinkers and problem-solvers.”

“Regulation of Visceral Adipose Tissue Development”

Monica Oliver, M.S. Ed.  
W.E. Greiner Middle School  
Exploratory Arts Academy

Hosted by:  
Rana Gupta, Ph.D.  
Internal Medicine

“Each summer I set out to find new and inventive strategies to enhance my personal growth that strengthens my professional growth. UT Southwestern STARS program has far exceeded my quest for growth this summer. I feel that I have become a part of a process bigger than I could have imagined. My assigned lab was like a family. Regularly lab members collaborate, contributing thoughts or ideas to solve the overarching lab focus without judgment or criticism. If you were an outsider walking into a lab discussion, you would not be able to identify the hierarchy. They are all genuinely learning from one another. Within this dynamic group of people, I felt safe to ask questions without fear of judgment if I were to make a mistake. I would like to thank each of them for their patience and assistance in making my experience memorable. From this summer forward, I take with me knowledge coupled with experiences I have gained this summer. Thank you UT Southwestern STARS Program, and Gupta lab for affording me with this opportunity. I realize you had many candidates to choose from, thank you for allowing me to be one of the chosen few.”
“Does PLC-β3 Dimerization Contribute to the Catalytic Activation of PLC-β3 by $G_{αq}$?”

Bree Penninger
John Paul II High School

Hosted by:
Elliott M. Ross, Ph.D.
Pharmacology

“The STARS Summer Research Program has given me an opportunity to experience first-hand the upper-level application of basic knowledge and techniques that I work hard to bring to the classroom. This experience has provided a broadening of my own personal knowledge and given me perspective to be able to take my students' learning to the next level. Being able to work alongside researchers in the Pharmacology department has also given me a glimpse into the life of a researcher, and I will be able to bring this back to my students as well. I'm so grateful for this opportunity and honored to have been chosen to participate!”

“Cell Cycle Regulated Function of WRN Syndrome Protein in Response to DNA Damage”

Shannon Snell
John Tyler High School

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

“One of the most important things I impress upon my students is that learning does not end with high school or even post-secondary education. Learning is a lifelong journey and it is important to take advantage of every opportunity you get to grow or learn something new. STARS has been just that for me. My research in the radiation oncology lab this summer has been a much needed reminder of my love for science and the reason I became a science teacher. I am excited to apply what I have learned in my research this summer in my classroom, and hopefully teach students to love science as much as I do.”
Cassandra Cartmill, a science educator with 12+ years of teaching experience, was the Master Teacher for the two 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 were 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 workshops:

- Katrina Barry  
  Hillcrest High School
- Pamela G. Bissic  
  L G Pinkston High School
- Kamilah Crouch  
  Skyline High School
- Mario Dupree  
  W H Adamson High School
- Debonie Enge  
  Emmett J Conrad High School
- Sisi Huang  
  Thomas Jefferson High School
- Phillip Keller  
  Trinidad Garza Early College at Mountain View
- Jeremy McLin  
  Hillcrest High School
- Don Porter  
  School Community Guidance Center
- Vickie Reed  
  Irma Rangel Young Women’s Leadership School
- Courtney White  
  Skyline High School
<table>
<thead>
<tr>
<th>Name</th>
<th>School</th>
<th>Host</th>
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<tbody>
<tr>
<td>Bethanie Abram</td>
<td>Irving High School</td>
<td>Daniel Siegwart, Ph.D.</td>
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<tr>
<td>Priyanka Agrawal</td>
<td>Greenhill School</td>
<td>Xuelian Luo, Ph.D.</td>
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<tr>
<td>Hope Anderson</td>
<td>Marcus High School</td>
<td>Li Liu, Ph.D.</td>
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<tr>
<td>Jonathan Avendano</td>
<td>Gunter High School</td>
<td>Charlie Khemtong, Ph.D.</td>
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<tr>
<td>Denver Baumgartner</td>
<td>JJ Pearce High School</td>
<td>Ming Chang Hu, M.D., Ph.D.</td>
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<tr>
<td>Benjamin Bich</td>
<td>Timberview High School</td>
<td>William Holland, Ph.D.</td>
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<td>Aiden Blinn</td>
<td>St. Mark’s School of Texas</td>
<td>Zhao Wang, Ph.D.</td>
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<td>Giovanny Camarena</td>
<td>South Grand Prairie High School</td>
<td>Helmut Kramer, Ph.D.</td>
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<td>Joe Carver</td>
<td>Jesuit Preparatory School of Dallas</td>
<td>Pin Xu, Ph.D.</td>
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<td>Shreeya Chodavadia</td>
<td>Plano East Senior High School</td>
<td>Ganesh Raj, M.D., Ph.D.</td>
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<td>Emily Chung</td>
<td>Independence High School</td>
<td>Pradeep P.A. Mannen, M.D.</td>
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<tr>
<td>Shivani Daftary</td>
<td>Greenhill School</td>
<td>Sherwood Brown, M.D., Ph.D.</td>
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<td>Lizette Delbosque</td>
<td>North Mesquite High School</td>
<td>Mike Henne, Ph.D.</td>
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<tr>
<td>Yosi Fetahi</td>
<td>Science and Engineering Magnet</td>
<td>Genevieve Konopka, Ph.D.</td>
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<tr>
<td>Marco Flores</td>
<td>School of Health Professions</td>
<td>Craig Powell, M.D., Ph.D.</td>
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<td>Samuel Gagnon-Hartman</td>
<td>Wylie High School</td>
<td>Raksha Jain, M.D.</td>
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<td>Miranda Gavitt</td>
<td>Richardson High School</td>
<td>Yunsun Nam, Ph.D.</td>
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<td>Jordan Hill</td>
<td>James Martin High School</td>
<td>Ram Mani, Ph.D.</td>
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<td>Wendy Ho</td>
<td>The Hockaday School</td>
<td>Xiankai Sun, Ph.D.</td>
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<tr>
<td>Neha Kapoor</td>
<td>The Hockaday School</td>
<td>Rajiv Chopra, Ph.D.</td>
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<td>Marium Khan</td>
<td>North Hills Preparatory</td>
<td>Laura Banaszynski, Ph.D.</td>
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<td>Steven Kim</td>
<td>Coppell High School</td>
<td>Russell Dubose-Boyd, Ph.D.</td>
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<td>Aracely Lomeli</td>
<td>W.H. Adamson High School</td>
<td>Maralice Conacci Sorrell, Ph.D.</td>
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<td>Afza Mohammed</td>
<td>Jack E. Singley Academy</td>
<td>Julian Meeks, Ph.D.</td>
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<td>Alejandra Nava-Garcia</td>
<td>Science and Engineering Magnet</td>
<td>Melanie H. Cobb, Ph.D.</td>
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<tr>
<td>Yaqueline Ozuna</td>
<td>Irving High School</td>
<td>Vitaly Marguils, M.D.</td>
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<td>Rahul Pentaparthi</td>
<td>Plano West Senior High School</td>
<td>Ryan Hibbs, Ph.D.</td>
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<tr>
<td>Ciana Perez</td>
<td>Skyline High School</td>
<td>Linda Baker, M.D.</td>
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<tr>
<td>Nidhi Prakuzhy</td>
<td>Lovejoy High School</td>
<td>Peter Tsai, M.D., Ph.D.</td>
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<tr>
<td>Daniel Ramirez</td>
<td>North Mesquite High School</td>
<td>Dominika Borek, Ph.D.</td>
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<tr>
<td>Michelle Ramirez</td>
<td>Irma Lerma Rangel YWLS</td>
<td>Ivan Dorso, Ph.D.</td>
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<tr>
<td>Abraham Rangel</td>
<td>Trini Early College High School</td>
<td>Bruce Beutler, M.D.</td>
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<tr>
<td>Anthony Rivera</td>
<td>JBS Law Magnet</td>
<td>Wei Xu, Ph.D.</td>
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<tr>
<td>Erik Sanchez-Perez</td>
<td>Jesuit College Preparatory School of Dallas</td>
<td>Kim Orth, Ph.D.</td>
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<tr>
<td>David Saunders</td>
<td>Cedar Hill High School</td>
<td>Philip Shaul, M.D.</td>
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<tr>
<td>Noah Sherer</td>
<td>Jesuit College Preparatory School of Dallas</td>
<td>Zerrin Yetkin, M.D.</td>
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<tr>
<td>Aviral Soman</td>
<td>Talented and Gifted Magnet School</td>
<td>Joel Goodman, Ph.D.</td>
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<tr>
<td>Maggie Stein</td>
<td>The Hockaday School</td>
<td>Maria Chahrour, Ph.D.</td>
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<tr>
<td>Julia Stone</td>
<td>Wylie High School</td>
<td>Jennifer Kohler, Ph.D.</td>
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<tr>
<td>Abeer Tijani</td>
<td>MacArthur High School</td>
<td>Rajiv Chopra, Ph.D.</td>
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<tr>
<td>Megan Ungerman</td>
<td>Highland Park High School</td>
<td>James Brugarolas, M.D., Ph.D.</td>
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<tr>
<td>Ileana Valdez</td>
<td>Talented and Gifted Magnet School</td>
<td>Todd Roberts, Ph.D.</td>
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<tr>
<td>Melodie Vuong</td>
<td>Newman Smith High School</td>
<td>Matthew Lewis, Ph.D.</td>
</tr>
<tr>
<td>Lisl Wangermann</td>
<td>Booker T. Washington HSPVA</td>
<td>Joachim Herz, M.D.</td>
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2016 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 30-35 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 research labs.

Biology Teachers
- Aaron Anderson
  Spence Middle School
- Ramin Baranpourian
  Creekview High School
- Megan Dion
  Uplift Infinity Preparatory
- Nancy Dunning
  Townview Health
- Brandon Morales
  A. Maceo Smith High School
- Hannah Nayakanti
  Imagine Intl. Academy
- Breen Rashid
  Lake Dallas High School
- Marcia Singh
  McKinney Alternative
- Lindsey Nayakanti
  Harmony School of Business

Chemistry Teachers
- Laurie Bailey
  Texas College Preparatory
- Tracy Bruce
  Grand Prairie Collegiate Institute
- Maysaa Enaya
  McMillen High School
- Denisha Foster
  Texas Success Academy
- Genia Harris
  Angleton High School
- Heather Lentz
  Imagine Intl. Academy
- Breen Rashid
  Lake Dallas High School
- Marcia Singh
  McKinney Alternative

Physics Teachers
- Robert Boehler
  Aledo High School
- Catalina Boudreaux
  Garza Early College
- Brian Ellis
  W.T. White
- Susan Erwin
  Miller Grove High School
- Jacqueline Felan
  Lewisville High School
- Denisha Foster
  Texas Success Academy
- Robert Franklin
  Western Hills High School
- Sammy Grimes
  Patton Academic Center
- Cheryl Smith
  Bryan Adams High School

2016 Biology Workshop Teachers
2016 Chemistry Workshop Teachers
2016 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 2016 - 2017

**Mini-Symposium: The Sequencing Revolution**
Monday, Sept. 12, 2016
5:30 - 8:30 p.m.
Lecture Hall, D1.302

**Mini-Symposium: Stem Cells and Regenerative Medicine**
Monday, Nov. 7, 2016
5:30 p.m. - 8:30 p.m.
Lecture Hall, D1.302

**Special Symposium: WISMAC**
Saturday, Feb. 25, 2017
9:00 a.m. - 5:00 p.m.
Lecture Hall, D1.600
Please invite female students to attend with you.

**Exploring Post @ UT Southwestern 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

**Mini-Symposium: Mitochondria: Way Beyond a Powerhouse**
Monday, Jan. 9, 2017
5:30 p.m. - 8:30 p.m.
Lecture Hall, D1.302

**Special Symposium: RNA Does More Than You Think**
Monday, April 3, 2017
2:30 p.m. - 5:00 p.m.
Lecture Hall, D1.302

**Other Important Dates**
Friday, Dec. 2, 2016
Deadline to submit requests for Science Fair Judges
Wednesday, Feb. 1, 2017 by 11:59 p.m.
Application deadline for the Summer Research Program

Friday, July 28, 2017
Summer Research Program ends

**Register For Exploring Post@explorer@UTSouthwestern.edu**

Exploring Post @ UT Southwestern

Upcoming Meetings:
6pm to 7:30pm
Monday-Sept. 19th
Monday-Oct. 24th
Monday-Nov. 14th
Monday-Dec. 12th
Monday-Jan. 23rd
Monday-Feb. 20th
Monday-Mar. 27th
Monday-April 24th
Monday-May 22nd

**2016-2017 Exploring Post Officers**

- Sasha Thomas, President
- Maya Reddi, Admin. VP
- Varshini Suresh, Programs VP
- Dharshini Suresh, Secretary

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

Science Teacher Access to Resources at Southwestern
The University of Texas Southwestern Medical Center
Voice: 214-648-9305 Fax: 214-648-9308
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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 Chemistry: Making Learning Memorable
Flies as a Model System

SCIENCE CAMPS
Biology
Chemistry
Physics

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UT Southwestern is an equal opportunity institution.
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Visit our web site at www.utsouthwestern.edu/stars