

STARS NOTES

SCIENCE TEACHER ACCESS TO RESOURCES AT SOUTHWESTERN

STARS Summer Research Program 2012

Our SRP 2012 was a huge success! See what the Teachers had to say:

"IgE Cross-Linking Induces IL-1 β and IL-23 Secretion in Human Monocytes"



Lorene Sandifer
Seagoville High School

Hosted by:
Michelle Gill, M.D., Ph.D.
Pediatrics

"The STARS program has been an exciting and challenging experience. I believe the experience will most definitely help me to be a better teacher in the lab as well as the classroom. The program is such a blessing to science teachers and I wish it could expand to all areas of teaching, as it is truly an exciting, invigorating and productive 8 weeks. Thank you STARS!"

"Mammalian PEN-2 expression in the central nervous system"

Lisa O'Connor
Birdville Center of Technology &
Advanced Learning

Hosted by:
Weichun Lin, Ph.D.
Neuroscience



"A full summer in a research lab working on my own research project has been a life altering experience! The Lin Lab staff welcomed me and gave me opportunities to learn more than anyone would have thought possible in eight weeks. I get to take back to my classroom a new found confidence in technical skills and the ability to bridge TEKS to real world experiences for my students benefit. I am humbled to have worked here and hopeful that my research will in some small way contribute to an Alzheimer's disease cure. I'll be forever grateful to UT Southwestern STARS and the Lin Lab, especially my amazing mentor Yun Liu!"

"FLPO-Conditional Mutant Recombinase Gene"



Brook Varner
Woodrow Wilson High School

Hosted by:
Kent Hamra, M.D.
Pharmacology

"When my grandfather was going through chemotherapy seven years ago I promised him that I would complete a triathlon in his honor because if he had the courage to push his body as far as it could go, I wanted to just get a small glimpse of what he was experiencing. I had no idea that my triathlon would be one that tested my mental capabilities and strength. Just like a test of physical endurance the STARS triathlon gives teachers the opportunity to see what they are really made of by exposing them to the front line of medical research. We hear about new discoveries and read about them but to see them first hand is truly amazing.

Thank you to all the people in Dr. Hamra's lab that took the time and patience to teach me the mind-blowing science behind those discoveries. The lessons I learned will greatly benefit all my students. Also thank you very much to the STARS staff for supporting me along this life changing journey, I will always be grateful. And to John Long, former STARS participant, for teaching me everything he knows and helping me make my classroom one where students get the chance to push themselves and see what they truly can do."

STARS Notes

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CHASE

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"¹⁸F-Labeled Hydroxyquinoline: An Imaging Agent for Alzheimer's Plaques"



Nina Mai
H. Grady Spruce High School

Hosted by:
Padmaker Kulkarni, Ph.D.
Radiology

"I have learned a lot this summer. Everyday, there is a new lesson to learn. I would love to do it all over again."

"The effect of Exogenous Lactate Pool Size on Myocardial Metabolism of Pyruvate: A13C NMR Isotopomer Study"

Aaron Anderson
Alex W Spence Middle School

Hosted by:
Chalemchai Khemtong, Ph.D.
Advanced Imaging Research Center



"The STARS program has given me a fresher perspective on the teacher – learner relationship. Through out my eight weeks with STARS I had made many mistakes and had multiple failures but my mentor was able to take every one of those self perceived failures and twist them into a learning experience and a new direction for my research. I know that I can use that mentality with my students to help them love science more for the failures they will have than for their successes they think they should have."

"IL1-beta and Hyaluronan as Biomarkers of Bronchopulmonary Dysplasia in Preterm Infants"



Patricia Dailey
Sunset High School

Hosted by:
Rashmin Savani, M.D.
Pediatrics

"The STARS Summer Research Program (SRP) has done more to inspire me as a teacher, than any other program that I have attended. The program will challenge you to go beyond your level of comfort and to really delve into science. I feel that I am much more compelled to create even more exciting and challenging lessons for my students. I now have a greater appreciation for the dedication and hard work that goes into research. As a result of this experience, I am determined to better prepare and to encourage students to enter the health and science fields."

"Antibody genetics of myelin basic protein reactive B cells"

Bryan Bolster
Bryan Adams High School

Hosted by:
Nancy Monson, Ph.D.
Neurology & Neurotherapeutics



"This has been my second year to participate in the STARS summer research program. It has been an incredible experience. I was able to learn cutting-edge laboratory techniques. We are treated to talks from some of the most distinguished scientists including a Nobel Laureate. The STARS program affects the classroom at the most basal level, by increasing a teachers' ability in science. It allows us to be better informed about the scientific process and pass that learning on to our students. There is nothing better a teacher can do during the summer to improve."

"The development of mycobacterial strains expressing high levels of M. tuberculosis-encoded efflux pumps"



Scott Sharp
Bishop High School

Hosted by:
Nicolai van Oers, Ph.D.
Immunology

"UT Southwestern's STARS program is a summer internship that every teacher needs to look into. You partake in hands on research at a world-renown facility, collaborate with groundbreaking researchers, and re-install a zeal for science. You are brought back to the days of being a student and having to learn something and apply it, but that something in my case was the 'high level expression of Mtb-encoded efflux pumps on non-pathogenic strains of mycobacterium'. So, even though the task is challenging, it is an extraordinary way to go to the next level in your teaching."

“LDL and VLDL Uptake in Fibroblast Cells”

Marissa Church
Young Women's Leadership
Academy

Hosted by:
Peter Michaely, Ph.D.
Cell Biology



“Thanks to the STARS program I have developed a new appreciation for the learning that students participate in every day. The opportunity to questions, solve problems and create new skills gave me a new appreciation for the science I teach on a daily basis.”

“The Role of Adipocyte Size in Facial Aging”



Charise Romero
LG Pinkston High School

Hosted by:
Kathryn Davis, Ph.D
Plastic Surgery

“It has always been my dream to be apart of the ground breaking research at UT Southwestern Medical Center and the STARS Program has made my dream come true. For the past year I have anticipated working in the research lab; it's all I ever wanted to do and now that the end is near, I wish I could start the summer program over again. I received my degree in Biology 3 years ago but I lacked experience, so I did not qualify for jobs in research. Thanks to STARS, now I am.”

“LDL and VLDL Uptake in Fibroblast Cells”

Elliot Charles
Sunset High School

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



“The UT Southwestern STARS triathlon has been an outstanding and enlightening program. What other program allows you to work with and learn from some of the world's most wonderful and brilliant minds? I had the opportunity to pick the brain of a Nobel Prize and help contribute to world impacting research. How many people get to do that? I loved this experience. It sometimes challenged me beyond my comfort level; however I'm fortunate to have grown from this great opportunity. I now feel re-energized and inspired; I have so much more to offer my students thanks to the STARS program.”

“Enhancing the β -cell Mass Imaging Signal Readout By Multivalent Probe Design”



Brian Torres
South Garland High School

Hosted by:
Xiankai Sun, Ph.D.
Radiology

“When you feel that you have taken all the professional development classes to be a better teacher, join the STARS program. Especially, if you feel like a master teacher of the classroom, and once you have completed the program, come ask me if you feel the same way.”

STARS Summer Research Program 2012
For Students

Students Name	School	Host
Chandon Adger	W.T. White High School	Matthew Lewis, PhD
Jacqueline Ayala-Ibarra	Williams Preparatory	Aktar Ali, PhD
Daryl Barth	Booker T. Washington High School for the Performing and Visual Arts	Gomika Udugamasooriya, PhD
Sarah Baxter	J. J. Pearce High School	Vitaly Margulis, MD
Rebekah Bell	School for the Talented and Gifted	Christian Forst, PhD
Sheridan Cavalier	Booker T. Washington High School for the Performing and Visual Arts	Dwight German, PhD
Hirsh Elhence	Greenhill School	Yonas Getachew, MD
Rachael Essman	Thomas Jefferson High School	Yu-An Zhang, PhD
Edem Fagbolagun	Trinity High School	Dean Smith, MD, PhD
Zainab Fatima	School of Health Professions	Chandra Mohan, MD, PhD
Mike Garcia	School of Government, Law, & Law Enforcement	Tawanda Gumbo, MD
Pardis Ghamasae	North Hills Preparatory	Ganesh Raj, MD, PhD
Andres Hernandez	Peak Preparatory	Beverly Rothermel, PhD
Rachel Hodge	Plano Senior High School	Andrew Pieper, MD, PhD
John La	School of Science and Engineering Magnet	Chuo Chen, PhD
David Larson	Richland College	Orson Moe, MD
Daniel Larson	Richland College	Nikhil Munshi, MD, PhD
Caroline McLeod	Cambridge School of Dallas	Amal Dutta, MD, PhD
Katherine Mejia	Thomas Jefferson High School	Michi Umetani, PhD
Lisa Michaels	Shepton High School	Joe Takahashi, PhD
Simon Mogendi	Summit International Preparatory	Connie Hsia, MD
Taelor Oppliger	Newman Smith High school	Vishal Patel, MD
Maria Pacheco	North Side High School	Sherwood Brown, MD, PhD
Sydney Pedigo	Hillcrest High School	Benjamin F. Chong, MD
Lupita Rios	Bryan Adams High School	Genevieve Konopka, PhD
Josee Santiago	Woodrow Wilson High School	Xuewu Zhang, PhD
Brittany Stewart	Forney High School	Massimo Attanasio, MD
Betty Tong	Fossil Ridge High School	Deborah J. Clegg, PhD
Maria Torres	School for the Talented and Gifted	Michael Buszczak, PhD
Cynthia Torres	Thomas Jefferson High School	Joel Goodman, PhD
Stephen Tung	iSchool High (A Science, Technology, Engineering & Math Academy)	Shusheng Wang, PhD
Miguel Velasco	North Dallas High School	Tom Carroll, PhD

STARS Summer Research Program 2012
For Students—STARS Associates

Students Name	School	Host
Nikita Agarwal	The Hockaday School	Yumin Chook, Ph.D.
Christine Chen	The Hockaday School	Kathryn O'Donnell, Ph.D.
Kevin Chen	Jesuit College Preparatory School of Dallas	Benjamin P.C. Chen, Ph.D.
Cameron Kerl	Jesuit College Preparatory School of Dallas	Helmut Kramer, Ph.D.
Lee Kubicki	Highland Park High School	Nan Yan, Ph.D.
Geoffrey Smith	Bishop Lynch High School	Robin Hiesinger, Ph.D.
Madeline Smoot	Highland Park High School	Sandeep Burma, Ph.D.

STARS Upcoming Events

Science Symposia

Calendar of Events 2012 - 2013

Mini-Symposium: The Busy Nuclear Envelope
Monday, Sept. 10, 2012
9:30 - 4:00 p.m.
Lecture Hall, D1.502

Mini-Symposium: Fat: Is it Really Good For You?
Monday, Nov. 5, 2012
4:30 p.m. - 8:00 p.m.
Lecture Hall, D1.502

Mini-Symposium: Update on Cystic Fibrosis
Monday, Jan. 7, 2013
7:30 p.m. - 8:00 p.m.
Lecture Hall, D1.502

Special Symposium: Women In Science And Medicine
Saturday, Mar. 2, 2013
9:00 a.m. - 3:00 p.m.
Lecture Hall, D1.700
Please Invite 1-2 Female Students to Attend With You.

Basic Science Symposium: Brain Fitness & Brain Disorders
Saturday, Oct. 13, 2012
9:00 a.m. - 3:00 p.m.
Lecture Hall, D1.502
Please Invite 1-2 Students to Attend With You.

Teacher Inservice: Hands-On Biology: Making Learning Memorable!
Saturday, Dec. 1, 2012
9:00 a.m. - 3:00 p.m.
Meeting Room: D1.100, D1.106
Limited Enrollment!

Teacher Inservice: Classroom Teaching Tools & Resources
Saturday, Feb. 2, 2013
9:00 a.m. - 3:00 p.m.
Meeting Room: D1.200
Limited Enrollment!

Mini-Symposium: Searching for New Drugs
Monday, April 1, 2013
7:30 p.m. - 8:00 p.m.
Lecture Hall, D1.502

Other Important Dates
Friday, Dec. 14, 2012
Deadline to submit requests for Science Fair Judges
Friday, Feb. 1, 2013 @ 4 p.m.
Application deadline for the Summer Research Program
Monday, June 10, 2013
Summer Research Program begins
Friday, August 2, 2013
Summer Research Program ends

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 at Dallas
5323 Harry Hines Blvd, Dallas, TX 75390-9137
Voice: 214-648-9505 Fax: 214-648-9508

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



Exploring Post @ UT Southwestern



Upcoming Meetings:
6pm to 7:30pm
Monday-Oct. 22nd
Monday-Nov. 26th
Monday-Dec. 17th
Monday-Jan. 28th
Monday-Feb. 25th
Monday-Mar. 25th
Monday-April 22nd
Monday-May 20th



2012-2013 Exploring Post Leaders
 ☉ Daniel Larson, President
 ☉ Ariana Mendoza, Admin. VP
 ☉ Kelechi Efochie, Programs VP
 ☉ Imari Parham, 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

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Genetics
PCR & Gel Electrophoresis
Suturing Techniques

SCIENCE TRIATHLON

Supported by
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UT Southwestern is an equal opportunity institution.
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