

# STARS NOTES

SCIENCE TEACHER ACCESS TO RESOURCES AT SOUTHWESTERN

### Fall 2017 STARS Events

All STARS activities and events are offered free of charge to teachers and students in the state of Texas.

STARS SYMPOSIA consist of a series of lectures given by scientists and physicians currently doing research at UT Southwestern Medical Center and affiliated institutions. The science symposia and in-service sessions are excellent resources for teachers to learn about cutting-edge research in the biomedical sciences, to discover new classroom activities, and to obtain professional development credit at the same time. If you wish to attend any event, please pre-register by visiting our online registration page at www.utsouthwestern.edu/STARS/register

Mini-Symposium: Brain Patterning -

September 11, 2017

This month our symposium was based on brain patterning. We started with a presentation from Brad Pfeiffer, Ph.D., Assistant Professor in Neuroscience, titled, *The Spatial Memory System of the Brain – How Remembering Past Paths Helps Future Decision Making*. Todd Roberts, Ph.D., Assistant Professor, Neuroscience, gave a presentation titled, *What Songbirds Teach Us about Learning*. The symposium was closed by Joel Goodman, Ph.D., STARS Director.



Daphne Rickard, CTE Coordinator, Fort Worth ISD, and participating teachers, prepare food samples to test for GMO products during our STARS teacher inservice on December 9, 2017

#### Basic Science Symposium: The War Against Microbes -October 14, 2017

Our all-day October Symposium consisted of presentations and break-out sessions revolving around infectious diseases. The morning presentation session started with Michael Shiloh, M.D., Ph.D., Assistant Professor, Internal Medicine, Microbiology, giving an introduction to pathogens. Soon after, Robert Haley, M.D., Professor, Internal Medicine, presented *The Dallas West Nile Virus Epidemic*, followed by a presentation titled, *Chronic Viral Infections vs. Our Immune System* by Tiffany Reese, Ph.D., Assistant Professor, Immunology, Microbiology. David Greenberg, M.D., Associate Professor, Internal Medicine, Microbiology, gave the last morning presentation titled, *Antibiotic Resistance: The End of the Antibiotic Era?* Participants then headed to the afternoon break-out sessions that consisted of hands on activities on *Precautions in Handling Deadly Microbes* and *How Antibiotics Work*.

#### Mini-Symposium: Systems Biology

- November 7, 2017

This month our symposium was based on systems biology. Milo Lin, Ph.D., Assistant Professor, Green Center for Systems Biology, started our symposium with a presentation titled, Unravelling How Protein Aggregation Leads to Alzheimer's Disease. It was followed by a presentation titled, Solving the Mystery of Gastrulation, from Konstantin Doubrovinski, Ph.D., Assistant Professor, Green Center for Systems Biology.

#### Teacher In-service: Teaching Biotechnology– December 9, 2017

Our teacher in-service session was led by Daphne Rickard, CTE Coordinator, Fort Worth ISD, and Leigh Brown, Curriculum and Training Specialist, Bio-Rad Laboratories. Some of the activities included, extraction of DNA from food samples, electrophoresis of PCR products and tracking disease outbreak through ELISA. The in-service was closed by Joel Goodman, Ph.D., STARS Director.

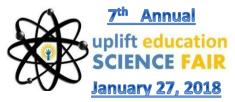
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Core funding for the STARS Program is provided by the State of Texas. Other funding is provided by the TWC.

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The 7<sup>th</sup> Annual Uplift Education District Science Fair was a success. The STARS program collaborated with Uplift Education and hosted their district science fair here at UT Southwestern Medical Center. There were 181 projects entered in the Primary, Middle and High school divisions and over 700 students, teachers, volunteers, and family members attended this seventh annual event. Break-out sessions were organized for the students to attend while the judges reviewed the projects. The different break-out sessions included My Story in Code, Straight from the Heart, We Call the Shots, Battle Bots, Helping Profession, and Suture Clinic.

### **STARS Award Winners:**

**Secondary** 

Middle School



High school division STARS award winners pictured with -(far left), Ruben Esquivel, VP for Community & Corporate Relations, Joel Goodman, Ph.D. (STARS Director), Anne Erikson (Uplift Education Senior Director of Teacher and Leader Effectiveness) and Lynn Tam, M.Ed. (STARS Assistant Director)



Primary Judging

**High School** 



High school division STARS award winners pictured with - (far left), Richard Harrison (Uplift Education Chief Academic Officer), Joel Goodman, Ph.D. (STARS Director) and Lynn Tam, M.Ed. (STARS Assistant Director)



Suture Breakout Session



The Dallas ISD Divisional Science Fair was held at the Kay Bailey Hutchison Convention Center with 162 projects entered in the Primary and Secondary divisions. Over 700 were in attendance which included students, teachers, and family members, making this year's science fair a huge success. Parents attended a UT Southwestern STARS sponsored parent education program while the students nervously waited for the conclusion of the judging and the announcement of the top winning projects. Students then gathered to see who were identified as top winners, as the top winners returned to their projects for pictures. All students were encouraged to attend a UT Southwestern STARS sponsored Student Education Program. To conclude the event, Joel Goodman, Ph.D., STARS Director, began the awards ceremony by giving the opening address to all of the students, teachers, and family members.



### STARS Award Winner:

 Shelly Goel, pictured left with STARS Program Director, Joel Goodman, Ph.D.

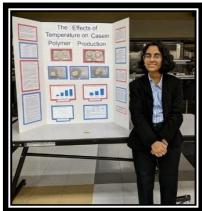
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The science fair was held at Irving High School. UT Southwestern Medical Center graduate students volunteered to mentor Irving ISD students before the science fair. UT Southwestern also provided 8 science fair judges to judge 70+ projects. Joel Goodman, Ph.D. (STARS Director) was in attendance along with 450+ students, teachers, volunteers and family members.

### STARS Award Winners pictured right:

Shanivi Srikonda

"The Effects of Temperature on Casein Polymer Production"





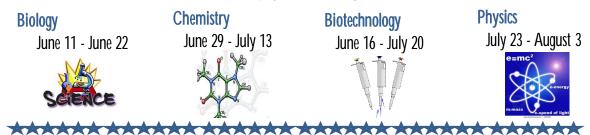
# STARS Upcoming and Future Events Summer 2018

### Summer Research Program for Teachers and Students June 4th thru July 27th

This summer, STARS will have 6 teachers and 50 students participate in the Summer Research Program. This eight-week program is designed to give teachers and students an opportunity to work side by side with a faculty host in a research laboratory. An important purpose of this program is to help teachers rekindle their love of science and encourage students in North Texas to pursue science-related fields. Teachers give poster presentations and develop classroom activities related to their research experience. Students give poster presentations and act as emissaries at their home school the following year by giving presentations outlining their research experiences. The summer experience will take place in biomedical research laboratories only and will not include any clinical or shadowing opportunities. Participation is limited by funding resources.

# 2018 STARS Science Camps

These are 2-week, non-residential summer camps where students learn concepts through handson labs, health careers information, project based challenges, and science lab tours.



### Science & Health Careers Exploring Post at UT Southwestern

The explorers (Post – high school students & Club – middle school students) meet monthly at UT – Southwestern Medical center in Rm D1.502 from 6pm to 7:30pm. Interested students may attend for free and yearly membership is \$34. Parents are always welcome!



2018 - 2019 Exploring Officers

### 2018-2019 Exploring Officers:

President: Kanika Kappalayil Admin. VP: Brooke Aly Programs VP: Priya Mandava Secretary: Shruti Bindingnavile

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	Mark Your
	Calendar!

Future Monday Dates:		
9/24/18	1/28/19	
10/22/18	2/25/19	
11/12/18	3/25/19	
12/10/18	4/22/19	

5/20/19

# STAFF

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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**

Biotechnology 101

### SUMMER SCIENCE CAMPS

Biology Chemistry Physics Biotechnology

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UT Southwestern is an equal opportunity institution. Core funding for the STARS program is provided by the state of Texas and other funding is provided by the TWC.