

STARS NOTES

SCIENCE TEACHER ACCESS TO RESOURCES AT SOUTHWESTERN

Fall 2015 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: Parasites:

What Parasites Can Teach Us - September 14, 2015

This month our symposium was based on parasites. We started with a talk from James Collins, Ph.D., Assistant Professor in Pharmacology, titled *It's No Fluke! Using Planarians to Guide Our Understanding of Schistosomes*. Michael Reese, Ph.D., Assistant Professor in Pharmacology, gave a presentation on *Evolutionary Arms Races Produce Unusual Weapons (or) How I learned to Stop Worrying and Love a Pseudokinase*. The symposium was closed by Joel Goodman, Ph.D., STARS Director.



Pictured from Left to Right: Steven A. Farber, Ph.D., Latoya Smith, Joel Goodman, Ph.D. (STARS Director)

Basic Science Symposium: Neuroscience

October 10, 2015

Our all-day October Symposium consisted of presentations and break-out sessions revolving around neuroscience. The morning presentation session started with Jose Rizo-Rey, Ph.D., Professor in Biophysics, presenting on *How Neurons Communicate at Synapses*. Soon after, Lenora Volk, Ph.D., Associate Professor in Neuroscience, discussed *Stability in an Unstable World: Synaptic Plasticity and Memory* followed by a presentation on *Why Do Our Brains Fall Apart In Neurodegenerative Diseases?* by Marc Diamond, M.D., Director, Center for Alzheimer's and Neurodegenerative Diseases. Ann Stowe, Ph.D., Assistant Professor in Neurology, gave the last morning presentation on *How We Use Animal Studies to Understand Recovery from Brain Injury*. Participants then headed to the afternoon break-out sessions that consisted of behavioral testing and anatomy.

Mini-Symposium: TOR, Superhero of Metabolism—

November 2, 2015

This month our symposium was based on TOR (Target of Rapamycin). Melanie Cobb, Ph.D., Professor in Pharmacology, started our symposium with a presentation on *How Cells Detect Nutrients and Respond Accordingly*. It was followed by *Targeting Renal Cancer at UT Southwestern Kidney Cancer Program* from James Brugarolas, M.D., Ph.D., Associate Professor in Pharmacology, to end our session.

Teacher In-service: Zebrafish Workshop –

December 12, 2015

Our teacher in-service session was led by Steven A. Farber, Ph.D., Professor at the Department of Embryology at Carnegie Institution for Science, Vinita Hajeri, Ph.D., Professor Department of Science and Math Education at UT Dallas, and Melodi Tastemel, graduate student at the Department of Genetics Development and Disease at UT Southwestern Medical Center. They let the teachers observe zebrafish behavior and taught them how to differentiate between male and female zebrafish. The teachers also learned how to set up mating and harvesting environments to learn about embryo and larvae development.

STARS Notes

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5th Annual
uplift education
SCIENCE FAIR
January 16, 2016

The 5th Annual Uplift Education District Science Fair was a success as UT Southwestern Medical Center STARS program collaborated with Uplift Education and hosted their district science fair here at UT Southwestern Medical Center. There were 163 projects entered in the Primary, Middle and High school divisions and over 800 students, teachers, volunteers, and family members attended this fifth annual event. Break-out sessions were organized for the students to attend while the judges reviewed the projects. The different break-out sessions included, *Intro to Graphic Design*, *Kick It! Moving With Our LIMBS*, and *Battle Bots*.

STARS Award Winners:

Primary

Khushi Chauk (Uplift North Hills) and Bennett Ylanan (Uplift Summit)

Secondary

Akil Manivannan (Uplift North Hills)

High School

Sohan Gade and Aftab Shaik (Uplift North Hills)



High School Division Stars Award Winners:

Sohan Gade (pictured right) and Aftab Shaik



Break-out Session: Battle Bots



Pictured left to right: Karla Sanchez, Adriana Ventura (STARS Physics Camp Alumni), and Stuart Ravnik, Ph.D. (STARS Associate Director)



The Dallas ISD Divisional Science Fair was held at UT Southwestern Medical Center's Gooch Auditorium. With 260 projects entered in the Primary and Secondary divisions and close to 840 in attendance which included students, teachers, and family members, this year's science fair was 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:

- ❖ Caleb Smith, pictured right with STARS Program Director, Joel Goodman, Ph.D.



Student shows parent and a UT Southwestern volunteer his project



Overview of students' projects



**2016 Biomedical Sciences Academy
Science Fair**
January 7, 2016

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 13 science fair judges to judge 57 projects. Stuart Ravnik, Ph.D. (STARS Associate Director) and Lynn Tam (STARS Manager) were in attendance along with 250+ students, teachers, and family members.

STARS Award Winner:

- Karen Andrade

Pictured from Left to Right: Stuart Ravnik, Ph.D. (STARS Associate Director) Karen Andrade (winner), and Lynn Tam (STARS Manager).



STARS Upcoming and Future Events

Summer 2016



Summer Research Program for Teachers and Students

June 6th thru July 29th

This summer, STARS will have 8 teachers and 44 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.

STARS Science Camps

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

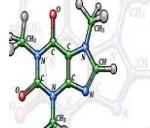
Biology

June 13 - June 24



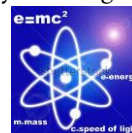
Chemistry

July 1 - July 15



Physics

July 25 - August 5



Science & Health Careers Exploring Post at UT Southwestern

The explorers 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 \$20. Parents are always welcome!



2016 - 2017 Exploring Officers

2016-2017 Exploring Officers:

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

Future Monday Dates:

9/19/16	1/23/17
10/24/16	2/20/17
11/14/16	3/20/17
12/12/16	4/24/17

5/22/17

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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

Flies as a Model System – December

Hands-on Chemistry: Making learning

Memorable! – February

SUMMER SCIENCE CAMPS

Biology

Chemistry

Physics

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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.

Visit our web site at www.utsouthwestern.edu/stars