



Media Services
One University Blvd.
St. Louis, MO 63121
<http://www.umsl.edu/services/media/newsrel>

NEWS RELEASE

Aug. 20, 2009
FOR IMMEDIATE RELEASE
RH: 193

Contact: Ryan Heinz
Phone: 314-516-6690
E-mail: heinzry@umsl.edu

STARS participants receive research awards **Pfizer, LMI Aerospace/D3 Technologies honor students for excellence in research**

A summer of hard work has paid off for 24 aspiring scientists who spent several weeks conducting intensive research with St. Louis-area professionals and professors.

The students have been named winners of the Pfizer and LMI Aerospace/D3 Technologies Award for Excellence in Research. The award is presented to students who distinguished themselves during the 2009 Students and Teachers as Research Scientists program at the University of Missouri-St. Louis.

STARS introduces high school juniors and seniors to the various aspects of the scientific enterprise as practiced by scientists in academic, private or corporate research institutions. UMSL partners with the Donald Danforth Plant Science Center in Creve Coeur, Mo., Saint Louis University, Southern Illinois University Edwardsville and Washington University in St. Louis to provide research options for the participants.

This year, more than 70 students participated in the program. Fifty-three faculty members from the participating institutions and two scientists from the Danforth Center volunteered as mentors for STARS. Following weeks of research, the students submitted research papers for possible publication.

-MORE-

research award winners/ADD ONE

Senior scientists at Pfizer and LMI Aerospace/D3 Technologies reviewed the papers. Winning papers best exemplified the following qualities: difficulty and complexity of research; appropriateness of the research methodology; findings; quality of writing; and overall quality of the research process.

Below is a complete listing of winners and their projects from the 2009 STARS program. Also listed are the winner's school, his or her mentor, the mentor's university and the company awarding the student:

- **Roshan Babu**, Rivermont Collegiate in Bettendorf, Iowa, "Pore Forming Activity of Mutant Forms of Bax: Δ C19Bax (C62A, C126A)," Paul Schlesinger, WUSTL. (Pfizer)
- **Sneha Bagavandoss**, Marquette High School in Chesterfield, Mo., "Dopamine Modulates Neuronal Circuitry in the Stress Response through a D1 Dopamine Receptor," Wendi Neckameyer, SLU. (Pfizer)
- **Matt Benson**, Mascoutah (Illinois) High School, "Immobilizing Capacity of Bilirubin Oxidase in Nafion® Polymers in an Air Breathable Biocathode," Shelley Minter, SLU. (LMI/D3)
- **Audrey Dang**, Lindbergh High School in St. Louis County, "Optimizing a Laccase and Anthracene-Modified Chitosan Biocathode," Shelley Minter, SLU. (LMI/D3)
- **Luba Ezerskiy**, Parkway West High School in Ballwin, Mo., "Mechanism of Morphine Inhibition of Synapse Formation in Primary Astrocyte-Neuron Co-Cultures," Mariana Beltcheva, SLU. (Pfizer)
- **Zach Gornet**, Mary Institute and St. Louis Country Day School in Ladue, Mo., "Application of Structural and Chemical Properties of Triclinic and Hexagonal Birnessite Cat-Ion Exchange," Jeffrey Catalano, WUSTL. (LMI/D3)
- **Jodie Guller**, Parkway North High School in St. Louis County, "Impact of Caffeine on Brain Development in Preterm Infants," Amit Mathur and Terrie Inder, WUSTL. (Pfizer)
- **Gabby Inder**, Clayton (Missouri) High School, "The Significance of Genetic Mutations in the Tissue Nonspecific Alkaline Phosphatase (TNSALP) Gene in Hypophosphatasia Patients," Steven Mumm and Michael Whyte, WUSTL. (Pfizer)
- **Saya Jacob**, Ladue (Missouri) Horton Watkins High School, "Expression of a Putative Non-specific Phospholipase C in Arabidopsis (PLC514)," Xuemin (Sam) Wang, UMSL/Donald Danforth Plant Science Center. (Pfizer)
- **Rishub Keelara**, Mary Institute and St. Louis Country Day School in Ladue, Mo., "Pore Forming Activity of Mutant Forms of Bax: Full Length Wild Type Bax and Mutant C62A, C126A," Paul Schlesinger, WUSTL. (Pfizer)

-MORE-

research award winners/ADD TWO

- **John Lee**, Parkway Central High School in Chesterfield, Mo., “The Synthesis and Spectroscopy of Organocobalt Compounds,” John Bleeke, WUSTL. (LMI/D3)
- **Shamaita Majumdar**, John Burroughs School in Ladue, Mo., “Comparison of Adult and Neonate Response to Respiratory Syncytial Virus,” Laurie Shornick, SLU. (Pfizer)
- **Alex Markov**, Mary Institute and St. Louis Country Day School in Ladue, Mo., “PET 28A IPMDH-3 Structure and Function,” Joseph Jez, Donald Danforth Plant Science Center. (Pfizer)
- **Tony Melillo**, Saint Louis University High School, “Streamlining a C++ Program to Increase the Accuracy and Efficiency of Velocity-Map Imaging,” Richard Mabbs, WUSTL. (LMI/D3)
- **Ben Minden-Birkenmaier**, Saint Louis University High School, “Correlating the Behavior of Physical and Numerical Models of Structures,” Shirley Dyke, WUSTL. (LMI/D3)
- **Meredith Redick**, Clayton (Missouri) High School, “Intracavity Laser Absorption Spectroscopy of Transition Metal Diatomic Molecules: Electronic Transitions of Titanium Fluoride in the Near Infrared Spectral Region,” James O'Brien, UMSL; and Leah O'Brien, SIUE. (LMI/D3)
- **Amit Roy**, John Burroughs School in Ladue, Mo., “A Study of the Correlation Between Area-Level Characteristics and the Walkability of St. Louis,” Ross Brownson, WUSTL. (Pfizer)
- **Monica Sharma**, Eureka (Missouri) High School, “Association of Information from Heart Rate Patterns on Holter Recordings and Sudden Cardiac Death in the Elderly,” Phyllis Stein, WUSTL. (Pfizer)
- **Diane Shen**, Parkway South High School in Ballwin, Mo., “Determination of the Impact of Caffeine on Preterm Infants Through Diffusion-Tensor Imaging,” Amit Mathur and Terrie Inder, WUSTL. (Pfizer)
- **Ted Staley**, Mary Institute and St. Louis Country Day School in Ladue, Mo., “Electrochemical Oscillations of a Nickel Electrode,” Istvan Kiss, SLU. (LMI/D3)
- **Quin Thames**, Saint Louis University High School, “An Analysis of Dynamic Behavior in Physical and Numerical Models,” Shirley Dyke, WUSTL. (LMI/D3)
- **Sneha Viswanathan**, Clayton (Missouri) High School, “Enhancing Catalytic Activity of a Heat-Pressed Air-Breathable Bilirubin Oxidase Biocathode,” Shelley Minter, SLU. (Pfizer)
- **Casie Wang**, Marquette High School in Chesterfield, Mo., “Design and Validation of Radiolabeled and Fluorescent Peptides as Probes of Mitochondrial Membrane Potential,” Vijay Sharma, WUSTL. (Pfizer)
- **Marta Wells**, Lafayette High School in Wildwood, Mo., “Nanoporous Gold as a Support for Competitive Immunoassays in Prostate Cancer Diagnosis Using UV-Visible Spectrophotometry,” Keith Stine, UMSL. (LMI/D3)

Call Ken Mares at 314-516-6155 for more information about the STARS program.