

STARS Virtual Summer Research Program for Students 2021

The 2021 STARS Summer Research Program for Students included 41 students from Dallas-Fort Worth and surrounding areas. This 8-week program gave students an opportunity to virtually work side-by-side with a faculty host. It consisted of activities, seminars, and an individualized research project that contributed to the advancement of science. The students were able to showcase and share these advancements during the virtual end-of-program scientific poster session.



Adetoye Adebayo
Grand Prairie Collegiate
Institute
Mentor: [Kevin Williams, Ph.D.](#)
Balance in the Melanocortin Circuit



Shree Allada
The Hockaday School
Mentor: [You Zhang, Ph.D.](#)
Real-time Cone-Beam CT Estimation Using a Single X-Ray Projection: Model Generalizability and Robustness Study



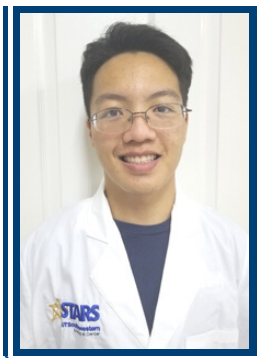
Soli Ateefa
Young Women's Leadership Academy at Bill Arnold
Mentor: [Sujir Pritha Nayak, M.D.](#)
Relationship of Urinary Sodium Concentrations and Growth in Infants with Ostomies Secondary to Intestinal Surgery



Sifallah Bouyadjera
Billy Ryan High School
Mentor: [Benjamin Chen, Ph.D.](#)
To study the role of DNA-dependent Protein Kinase Catalytic Subunit in Mitochondrial-Endoplasmic Reticulum Contact



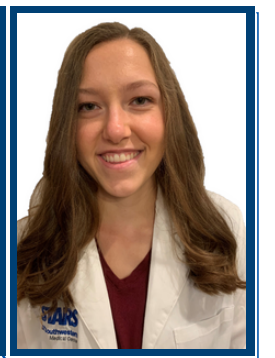
Gissell Chapa
School of Health Professions at Townview
Mentor: [Joel Goodman, Ph.D.](#)
Navigating the Seipin Database and Building a Plasmid to Visualize Seipin, SEI1/YLR404W, in Certain Yeast Strains



Christopher Dao
James Martin High School
Mentor: [Chen Liu, Ph.D.](#)
The Atypical Antipsychotic Tisperidone Targets Hypothalamic Melanocortin 4 Receptors to Cause Weight Gain



Natalie Druffner
John Paul II High School
Mentor: [Sherwood Brown, M.D., Ph.D.](#)
IQ in High School and as a Predictor of Alcohol Consumption in Middle Age and Late Life



Ella Dzialowski
Greenhill School
Mentor: [Danielle Robertson, O.D., Ph.D.](#)
A Tale of Two Contacts: Effects of Daily Disposable Contact Lenses on Ocular Surface Biology and Comfort



Belal Elsiey

Uplift Williams Prep

Mentor: [Guanghua Xiao, Ph.D.](#)

Predicting Overall Survival for Patients with Prostate Cancer



Viviana Esquivel

Ursuline Academy of Dallas

Mentor: [Zhao Wang, Ph.D.](#)

The Pathophysiology of Cardiovascular Diseases



Rithvik Ganesh

Plano West Senior High School

Mentor: [Genevieve Konopka, Ph.D.](#)

Identification and Neurological Disease Relevance of Human Accelerated Regions in the Developing and Adult Human Brain

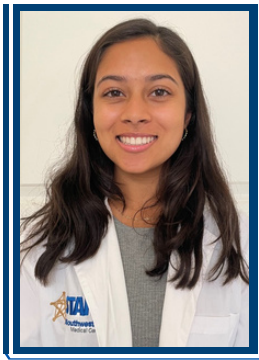


Mrigayu Ghosh

Uplift North Hills Preparatory

Mentor: [Helmut Kramer, Ph.D.](#)

The Allnighter Mutation Decreases Count While Increasing Area of Axonal Autophagosomes and Mitochondria Under Continuous Light



Jothi Gupta

Greenhill School

Mentor: [Jing Cao, Ph.D.](#)

Screening for Hemoglobinopathy Using Capillary Electrophoresis in Adult Population



Biyanka Hati

Liberty High School

Mentor: [Fernando U. Kay, M.D.](#)

Integration of Artificial Intelligence to Perform Supervised Lung and Tracheobronchial Segmentation



Rikhil Kalidindi

Flower Mound High School

Mentor: [Kendra Frederick, Ph.D.](#)

Comparing Different Fibril Forms of the Yeast Prion Protein Using NMR Chemical Shift Data



Modupe Karimi

Lakeview Centennial High School

Mentor: [Tamia Harris-Tryon, M.D., Ph.D.](#)

Effect of Androgens on the Growth of Staphylococcus Aureus: A Potential Pathogen in Atopic Dermatitis



Anekah Kelley

New Tech High @ Coppell

Mentor: [Ralph](#)

[DeBerardinis, M.D., Ph.D.](#)

Homozygous Mutation of TRPM6 Causes Early-onset Primary Hypomagnesemia and Secondary Hypocalcemia Presenting in Children



Ruth Kinyua

West Mesquite High School

Mentor: [Asaithamby Aroumougame, Ph.D.](#)

The Link between PGC1B Mediating Mitochondrial Biogenesis and Abnormalities in Cellular Phenotype Werner Syndrome Human Fibroblasts



Thu Le

School of Science and Engineering at Townview

Mentor: [Yee Seng Ng, M.D.](#)

Deep Convolutional Neural Networks for Detection of Enteric Tubes and Central Lines on Radiographs



Maria Marga Lee

Trinity Valley School

Mentor: [Miriam Osterfield, Ph.D.](#)

Using Matrix Deformations to Assess Basal Forces in Drosophila Melanogaster Dorsal Appendage Formation

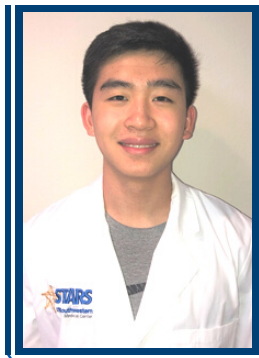


Anna Leo

Uplift North Hills
Preparatory

Mentor: [Maralice Conacci
Sorrell, Ph.D.](#)

*The Role of ZNF692 in Ribosomal
Biogenesis in Colorectal Cancer*

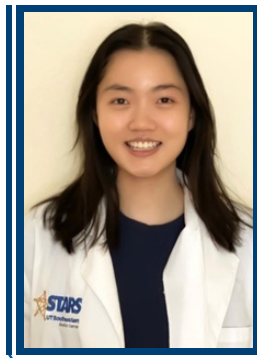


Justin Li

Highland Park High School

Mentor: [Melanie Cobb,
Ph.D.](#)

*New Methods for Predicting
Protein-Protein Interactions*

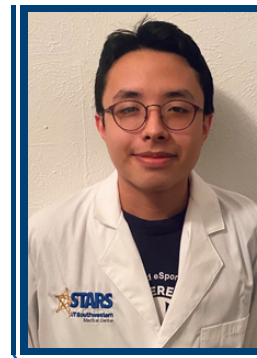


Cassie Liu

The Hockaday School

Mentor: [Sreekanth
Cheruku, M.D.](#)

*The Effects of Palliative Care
on Cardiopulmonary
Resuscitation in Hospitalized
Patients with COVID-19*



Axel Livias

Skyline High School

Mentor: [Jacqueline
Gallet, Ph.D.](#)

*Detecting Transducer Failures
Early in Ultrasound Phantom
Images*



Ethan Lotan

Westlake Academy

Mentor: [Genevieve
Konopka, Ph.D.](#)

*FoxP1's Role in Neuronal
Differentiation within the
Developing Mouse Brain*

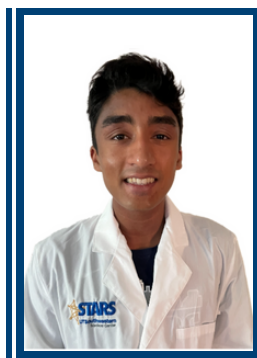


Isabella Malick

Coppell High School

Mentor: [Jim Collins, Ph.D.](#)

*Understanding Praziquantel
Resistance in Juvenile
Schistosomes at the Cellular
Level*



Noah Mathai

Plano West Senior High

Mentor: [Ivan D'Orso, Ph.D.](#)

*HIV-1 Latency and Reactivation
regulated by Ubiquitination of
H2B by KAP1-MAGE Ligase
Complex*



Angela Morka

Lake Ridge High School

Mentor: [Dayoung Oh, Ph.D.](#)

*Role of GPR92 in Various
Developmental Stages of
Pancreatic Islets*



Tanaz Muhamed

Plano East Senior High School

Mentor: [Kikelomo Babata,
M.D.](#)

*Systematic Review of the Safety of
Breastfeeding Practices and the Risk
of Transmission of COVID-19 to
Neonates*

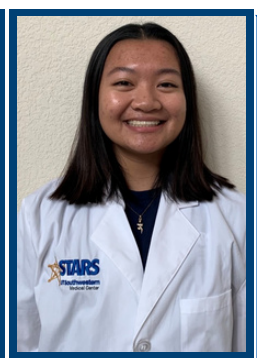


Pranav Mukund

Greenhill School

Mentor: [Prasanna Alluri,
M.D., Ph.D.](#)

*Overcoming CDK4/6 Inhibitor
Resistance in Hormone
Receptor-Positive Breast
Cancer*



Alina Nguyen

Wylie High School

Mentor: [Alice Ann
Holland, Ph.D., ABPP](#)

*Effects of Sleep, Fatigue, and
Screen Time on Attentional
Functioning in Pediatric Cancer
Survivors*



Danh Nguyen

Sachse High School

Mentor: [Rami Hallac, Ph.D.](#)

*Deciphering Visual Attention of
Craniofacial Differences Using
EyeTracking Technology*



Akash Pagadala

Jesuit College Preparatory
School

Mentor: [Matteo Ligorio,
M.D., Ph.D.](#)

*Pancreatic Ductal Adenocarcinoma
Remains Undetectable in
PreDiagnostic CT Imaging within
Months of Diagnosis*



Alma Perez

Waxahachie Global High School

Mentor: [Ram Madabhushi,
Ph.D.](#)

*Determining the Biological Processes
and Molecular Functions of Motifs that
Bind the CCCTC-Binding Factor in
Neurons*



Yee Hong Pua

Lebanon Trail High
School

Mentor: [Ping Mu, Ph.D.](#)

*Deciphering Role of Giant
Axonal Neuropathy (GAN)
Gene in Prostate Cancer*

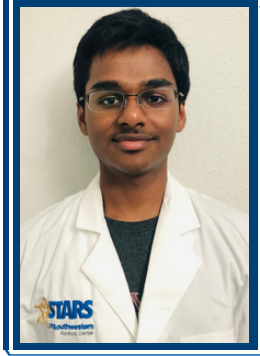


Tom Punnen

Liberty High School

Mentor: [Joseph
Takahashi, Ph.D.](#)

*A Redesigned PCR Genotyping
Mechanism for the Mus
musculus Per1 Gene*

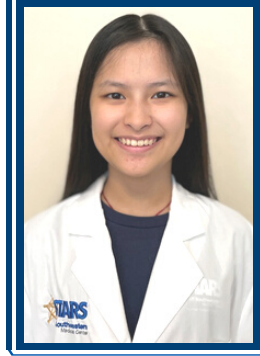


Sampath Rapuri

St. Mark's School of Texas

Mentor: [Oganes Ashikyan,
M.D.](#)

*An Automated Solution to
Decrease the Number of
Radiographs with Mislabeled
Laterality*



Aurora Tong

Grapevine High School

Mentor: [Dominika Borek, Ph.D.](#)

*Structural Analysis of RuvB from
Coxiella burnetii*



Victoria Valdez

School for the Talented
and Gifted at Townview

Mentor: [Kim Reynolds,
Ph.D.](#)

*Automating Statistical
Coupling Analysis and Testing
Scalability to Determine, What
is LOV?*

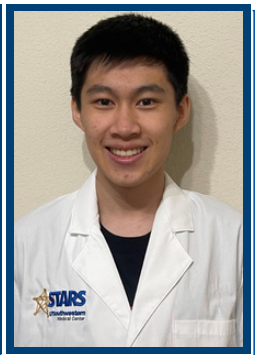


Gabriella Williams

Wylie High School

Mentor: [Daisuke Hattori,
Ph.D.](#)

*Analysis of Synaptic Connections
in the Olfactory Center of
Drosophila*



Derek Zhang

Jesuit College Preparatory
School of Dallas

Mentor: [Christoph U.
Lehmann, M.D.](#)

*Optimizing Sepsis Clinical
Decision Support to Reduce Alert
Fatigue*