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

Mrigayu Ghosh  
Uplift North Hills Preparatory  
Mentor: Helmut Kramer, Ph.D.  
The Pathophysiology of Cardiovascular Diseases

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: Asaihamby Aroumougame, Ph.D.  
The Link between PGC1β 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
Detecting Transducer Failures Early in Ultrasound Phantom Images

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

New Methods for Predicting Protein-Protein Interactions

The Role of ZNF692 in Ribosomal Biogenesis in Colorectal Cancer

Role of GPR92 in Various Developmental Stages of Pancreatic Islets

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


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

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

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 PreDiagnoitic 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