



March 31, 2022

Today, as we honor the accomplishments of all the extremely bright, talented students who months or even years ago started researching some basic questions about this great universe of ours, we also honor the process of discovery –this process we call science.

At Beal Bank, our strong commitment to science led us to begin sponsoring the Dallas Regional Science and Engineering Fair, first by funding prizes and trips, and now for over ten years as sole title sponsor. The foundation of this commitment is our belief that the next generation of scientists, with the proper nurturing and encouragement, will ultimately answer those many unanswered questions, and in doing so push the science and research envelope to the edge and beyond.

Young people are fueled by a free thinkine fue fue funopnn oe-1.139nosT 0 Tw 2T 0l-1.6 (c)-3.3

# Thank You to Our Fair Supporters



Beal Bank is the title sponsor of the Beal Bank Dallas Regional Science and Engineering Fair. The bank is pleased to reward the work of these bright students through

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## About the Dallas Regional Science & Engineering Fair

Started in 1957, the Dallas Regional Science & Engineering Fair is a volunteer non-profit affiliated to the International Science & Engineering Fair (ISEF), the world's largest pre-college science competition.

## The 2022 Judging

This year, approximately 200 local scientists and engineers volunteered to judge at the Regional Fair. Judges assess students' projects based on creative ability, scientific thought, engineering goals, skill, thoroughness, clarity, and other criteria.

## Beal Bank Prizes

Student projects are judged over two rounds in different science categories in junior and senior divisions based on specific ISEF criteria. I I-0.004 Tw (')-6 ( p)-2.1 (12 0 0 Tc 0 )-3 ( en)- ter -4 (

Beal Bank Grand Prize Junior

Life Science

Charvi Vohra , Anika Upadhyayula &  
Anika Krishnamoorthy - Grand Prize  
Winner

Coppell Middle North , Coppell ISD

H2Dome: Air to Water Collection System

Ellie Chong - Grand Prize Runner Up

Highland Park Middle School, Highland Park ISD

Novel In Vivo, Non -Invasive Method of Measuring Choroidal  
Thickness, a Potentially Critical Factor in Determining Blood  
Flow to the Retina and Blindness

Physical Science

Jay Stahler- Grand Prize Winner

Frankford Middle School , Plano ISD

Where Can I Get the Best Gas for My Dirtbike?

Paige Elder & Kambree Garza - Grand Prize  
Runner Up

Blue Ridge Middle School, Blue Ridge ISD

What Brand of Popcorn Pops the Best?





Luciano Lopez    Beal Bank Third Prize  
School For The Talented & Gifted In Pleasant Grove | Dallas ISD

Sharika Mandyam    Beal Bank Fourth Prize  
Hockaday | Private

## Biomedical and Health Sciences

Ellie Chong    Grand Prize Runner Up & Beal Bank First Prize  
The Cooper Institute Exercise/Health/Nutrition,    2nd Place  
Highland Park Middle School | Highland Park ISD

Nikila Swaminathan    Beal Bank Second Prize  
Ereckson Middle School | Allen ISD

|



Charvi Neelegowda    Beal Bank Second Prize  
Rice Middle School | Plano ISD

## Energy: Sustainable Materials and Design

Arya Gurumukhi Beal Bank First Prize  
Otto Middle School | Plano ISD

Rayyan Yaqoob Beal Bank Second Prize  
Brighter Horizons Ms | Parochial

Aditi Srivastava Beal Bank Third Prize  
Robinson Middle School | Plano ISD

## Engineering Technology: Statics & Dynamics

Ishveer Randhawa Beal Bank First Prize  
Murphy Middle School | Plano ISD

GautamEsvar Manikandan Beal Bank Second Prize  
Imagine International | Charter

Sanjay Jaishankar Beal Bank Second Prize  
Imagine International | Charter

Aarya Mani Beal Bank Second Prize  
Imagine International | Charter

Cooper Cornell Beal Bank Third Prize  
Society of American Military Engineers Best Engineering Project  
Murphy Middle School | Plano ISD

Anusha Nigam Beal Bank Fourth Prize  
Lawler Middle School | Frisco ISD

## Environmental Engineering

Charvi Vohra Grand Prize & Beal Bank First Prize  
Coppell Middle North | Coppell ISD

Anika Upadhyayula    Grand Prize & Beal Bank First Prize  
Coppell Middle North | Coppell ISD

Anika Krishnamoorthy    Grand Prize & Beal Bank First Prize  
Coppell Middle North | Coppell ISD

Archika Shukla Beal Bank Second Prize  
Bowman Middle School | Plano ISD

Nicole Dsilva    Beal Bank Third Prize  
Vandeventer Middle School | Frisco ISD

Thrayi Thimmancherla    Beal Bank Third Prize  
Vandeventer Middle School | Frisco ISD

Leon Cox    Beal Bank Fourth Prize  
Hendrick Middle School | Plano ISD

## Materials Science

Abhinav Civi    Beal Bank First Prize  
Rice Middle School | Plano ISD

Aika Saadiq    Beal Bank Second Prize  
Wilson Middle School | Plano ISD

Craig Benson Beal Bank Third Prize  
Haggard Middle School | Plano ISD

Kelly Harr Beal Bank Fourth Prize  
Murphy Middle School | Plano ISD

## Mathematics & Systems Software

Vanessa Rayo    Beal Bank First Prize  
Carpenter Middle School | Plano ISD

Anika Gopal Beal Bank Second Prize  
Renner Middle School | Plano ISD

Neo Ch eshkov -Drandov

Directed Energy Professional Society 1st Place  
Renner Middle School | Plano ISD

Alexander Stegall

Directed Energy Professional Society 3rd Place  
Harmony School Of Innovation, Dallas Ms | Charter

Om Joshi

National Space Society of North Texas Space Exploration Scholarship 3rd Place  
Vandeventer Middle School | Frisco ISD

Kairav Banerjee

National Space Society of North Texas Space Exploration Scholarship 3rd Place  
Vandeventer Middle School | Frisco ISD

## Plant Sciences

Isabella Anderson Beal Bank First Prize

Frankford Middle School | Plano ISD

Hafsa Ahmed Beal Bank Second Prize

Qalam Collegiate Academy | Parochial

Rithika Alluri Beal Bank Third Prize

Lawler Middle School | Frisco ISD

Ameenah Memon Beal Bank Third Prize

Lawler Middle School | Frisco ISD

Sofyan Memon Beal Bank Third Prize

Lawler Middle School | Frisco ISD

Chloe Jones Beal Bank Fourth Prize

National Space Society of North Texas Space Exploration Scholarship 2nd Place  
Frankford Middle School | Plano ISD



## Robotics & Intelligent Machines

### Dhroov Bharatia Beal Bank First Prize

Texas Instruments Best electronics or computing project | Collins Leadership Association Outstanding Communications Project 2nd Place  
Wilson Middle School | Plano ISD

### Isabelle Hou Beal Bank Second Prize

Texas Instruments Best electronics or computing project  
Schimelpfenig Middle School | Plano ISD

### Shreelakshya Reddi Beal Bank Third Prize

Lawler Middle School | Frisco ISD

### Rahul Senthil Kumar Ketharidevi Beal Bank Fourth Prize

Vandeventer Middle School | Frisco ISD

### Marion Wright

Texas Instruments Best electronics or computing project  
Otto Middle School | Plano ISD

### Marisa Galu

Texas Instruments Best electronics or computing project  
Otto Middle School | Plano ISD

### Shriya N adagouda

Acoustical Society of America Outstanding Acoustic Project  
Lawler Middle School | Frisco ISD

### Aanyani

Acoustical Society of America Outstanding Acoustic Project  
Lawler Middle School | Frisco ISD

### Mah

Acoustical Society of America Outstanding Acoustic Project  
Lawler Middle School | Frisco ID

# Translation Medical Science

Kaitlyn Fan    Beal Bank First Prize

Collins Leadership Association Outstanding Communications Project 3rd Place

Rice Middle School | Plano ISD



Beal Bank Grand Prize Senior

Life Science

Rithvik Ganesh- Grand Prize Winner

Plano West Senior High School, Plano ISD

Tackling Tau: Experimental Characterization of Inhibitors of the  
MSUT-2 Protein for the Treatment of Neurodegenerative  
Diseases

Vivek Kogilathota - Grand Prize Runner  
Up

Reedy High School, Frisco ISD

iPonder: A Multimodal and Anonymous Approach to Remote  
Teen -n-4.7 (i)-8.2 (s)-1.9 7i>BDC /TT0

Congratulations to the DRSEF students who  
qualified for Regeneron ISEF 2022

Harshal Bharatia

Plano Senior High School | Plano ISD

Shriya Bhat

Plano East Senior High School | Plano ISD

Sreya Das

Liberty High School | Frisco ISD

Rithvik Ganesh

Plano West Senior High School | Plano ISD

Sarang Goel

Coppell High School | Coppell ISD

## Animal Sciences

Henry Rutnam Beal Bank First Prize

Jasper High School | Plano ISD

Vyshnavi Poruri Beal Bank Second Prize

Plano East Senior High School | Plano ISD

Anika Mootha Beal Bank Third Prize

Greenhill School | Private

## Behavioral and Social Sciences

Vivek Kogilathota Grand Prize Runner Up & Beal Bank First Prize

American Psychological Association Achievement in Research in Psychological Science

Reedy High School | Frisco ISD

Andy Qin Beal Bank Second Prize

Jasper High School | Plano ISD

Sidhya Peddinti Beal Bank Third Prize

Plano East Senior High School | Plano ISD

Mithun Mahesh Beal Bank Fourth Prize

Centennial High School | Frisco ISD

## Biochemistry & Cellular and MolecBP.001 Tc >BD( )Tj 0.0 (io)-olog.

Anjali Iyer    Beal Bank Third Prize  
Southwest Medical Foundation Thomas & Libby Mat hai Scholarship for Women in  
STEM  
Plano Senior High School | Plano ISD

## Biomedical and Health Sciences

Meklit Demile    Beal Bank First Prize  
Lowery Freshmen Center | Allen ISD

Imad Ahmed    Beal Bank Second Prize  
Harmony School Of Innovation Dallas | Charter

Arwa Ahmed Beal Bank Second Prize  
Harmony School Of Innovation Dallas | Charter

Jordy Lopez    Beal Bank Second Prize  
Harmony School Of Innovation Dallas | Charter

Shaarvi Vancha    Beal Bank Third Prize  
Jasper High School | Plano ISD

Jason Xu    Beal Bank Fourth Prize  
The Cooper Institute Exercise/Health/Nutrition 3rd Place  
Plano West Senior High School | Plano ISD

Manshi Swain  
U.S. Stockholm Junior Water Prize Award for Excellence in a Water-Related Project  
Reedy High School | Frisco ISD

Michelle Yang  
The Cooper Institute Exercise/Health/Nutrition 1st Place  
Reedy High School | Frisco ISD

Catalina Zuo  
The Cooper Institute Exercise/Health/Nutrition 1st Place  
Reedy High School | Frisco ISD

Riona Scaria

The Cooper Institute Exercise/Health/Nutrition 2nd Place  
Coppell High School | Coppell ISD

Alanna Pol yak

Dallas County Medical Society Foundation First Prize  
Jasper High School | Plano ISD

Raghav Ramki

Southwest Medical Foundation Kathryn and Ashley H. Priddy Award  
Plano East Senior High School | Plano ISD

## Biomedical Engineering

Siri Peddinti Beal Bank First Prize

Plano East Senior High School | Plano ISD

Emmanuel Tawiah Beal Bank Second Prize

Plano East Senior High School | Plano ISD

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# Computational Biology and Bioinformatics

Rithvik Ganesh    Grand Prize & Beal Bank First Prize  
Plano West Senior High School | Plano ISD

Devika Sunil    Beal Bank Second Prize  
Plano Senior High School | Plano ISD

Aithreya Thoppay

**Jack Curtis**

North Texas Chapter of the Texas Master Naturalist | WEAT / TAWWA 2nd Place  
Bishop Lynch High | Parochial

**Satvika Nadella**

WEAT / TAWWA 1st Place | Terracon Environmental Excellence Award 3rd Place  
Lowery Freshmen Center | Allen ISD

**Ashley Morrison**

Texas Instruments Best electronics or computing project  
Islamic School Of Irving | Parochial

Aaron Liu

Directed Energy Professional Society 2nd Place  
St. Mark's School Of Texas | Private

## Energy: Sustainable Materials and Design

Nimra Fatima Beal Bank First Prize

Iqa Quranic Senior | Parochial

Mukund Ra machandran Beal Bank Second Prize

Plano West Senior High School | Plano ISD

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# Environmental Engineering

Jana Pulak    Beal Bank First Prize

Ricoh Ricoh Sustainable Development Award | U.S. Agency for International  
Development Science Champion Award | National Geographic That's Geography! -  
Cultivating Empathy for the Earth Award  
Richardson High School | Richardson ISD

Anusri Chinni    Beal Bank Second Prize

American Meteorology Society Outstanding Achievement in Atmospheric Science  
Up |



# Microbiology

Shriya Bhat Beal Bank First Prize

Yale Science & Engineering Association, Inc Most Outstanding 11th Grade Exhibit  
Plano East Senior High School | Plano ISD

Vy Nguyen Beal Bank Second Prize

Williams High School | Plano ISD



Krishna Shah

McKinney Amateur Radio Club, Inc. 1st Place

Lowery Freshmen Center | Allen ISD  
1000

Isha Agrawal

Terracon Engineering Excellence Award 1st Place

Jasper High School | Plano ISD

1001

## Systems Software

Navya Ramakrishnan      Grand Prize & Beal Bank First Prize

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Aditya Chebrolu    Beal Bank Third Prize  
Independence High School| Frisco ISD

Evelyn Ding  
Dallas County Medical Society Foundation Second Prize  
Jasper High School| Plano ISD

## 2022 Special Award Donors

Students receive a

## 2022 Teacher Awards

Each day, great science teachers guide, encourage, and motivate students. Teachers impress curiosity in their students, which enables growth and learning. Over 100 teachers enter their students in the Regional Fair.

The Science Fair Teacher Award Committee is recognizing 3 teachers in each division for their dedication and commitment to students. These top teachers were selected by the number, performance, and success rate of their students at the fair.

Southern Methodist University and the DRSEF are proud to honor these teachers.



is proud to salute all participants in the  
65<sup>th</sup> Annual Dallas Regional Science  
and Engineering Fair.

At Beal Bank we strongly believe that the next generation of scientists will answer long-unanswered questions and produce unprecedented breakthroughs to benefit humankind. Through the Science Fair, we encourage all young scientists to learn to think for themselves, to develop and test their own ideas and, most importantly, to keep asking questions.

