



STEM Research Recognition

Central Bucks School District
Meeting of the Board of School Directors
June 14, 2022

2021-2022



Madeline Eid

Holicong MS

Carrie Bannon

How do note taking methods and materials affect memory retention?

DVSF Awards

Behavioral & Social Science-Honorable Mention, Middle School



Anushka Gattu

CB South HS

Mark Hayden

Evaluating Successful FDA Approved Compounds for Small Molecule Inhibitors of the SARS-CoV-2 Protease

DVSF Awards

Microbiology-2nd Place, Grade 12

PJAS State Meeting Awards

1st Award; Perfect Score

PJAS Directors Award for Biochemistry

Perseverance Award



Lucas Guernon

CB East HS

Mark Hayden

The Selective Killing Mechanism of Melittin Year 2

PJAS State Meeting Awards

1st Award; Perfect Score

Karl F. Oerlein Award



Avery Harris

Holicong MS

Carrie Bannon

Water Pollution Experiment

DVSF Awards

Biochemistry-3rd Place, Middle School



Katherine He

CB South HS

Mark Hayden

Developing a Transdermal Drug Delivery System for Brexpiprazole

DVSF Awards

Chemistry-Honorable Mention, Grade 11

Parenteral Drug Association

US Metric Association

PJAS State Meeting Awards

1st Award



Samantha Holmen

CB East HS

Mark Hayden

Small Molecule High Throughput Compound Screen Against HBV Pre RNA

DVSF Awards

Medicine & Health-Honorable Mention, Grade 11

PJAS State Meeting Awards

1st Award



Jasmin Kainth

CB East HS

Judy Elinow

How Should I Get My Vitamins?

DVSF Awards

Biochemistry-Honorable Mention, Grade 10



Srinithi Krishnamoorthy

CB South HS

Mark Hayden

Inducing the Selective Killing of HBV-Infected Cells by Integrant-Targeted Delivery of Proapoptotic BCL2 Genes

DVSF Awards

Biochemistry-Honorable Mention, Grade 12

Janssen Biotech Inc.,

Merck Science Achievement Award



Ethan Maher

CB West HS

Mark Hayden

Othello Robot for Remote Over-The-Board Play Prototype

DVSF Awards

Engineers' Club of Philadelphia



Mason Matich

CB East HS

Mark Hayden

DNA Data Storage for Deep Space Probes

DVSF Awards

Earth & Space Science-3rd Place, Grade 11

PJAS State Meeting Awards

2nd Award



Ganesh Palla

Lenape MS

Deborah Wysocki

How does the pH level of liquids affect microbial growth?

DVSF Awards

Microbiology-Honorable Mention, Middle School



Clare Rajapakse

CB East HS

Judy Elinow

Percent of Exposed Population Needed to Attain Herd Immunity

DVSF Awards

Mathematics-Honorable Mention, Grade 11



Ranjit Rajapakse

Holicong MS

Judy Elinow

What Methods Effectively Remove Contaminants from Water?

DVSF Awards

Chemistry-3rd Place, Grade 9

USDA Future Scientist Award

PJAS State Meeting Awards

1st Award



Alexander Robertson

CB East HS

Mark Hayden

Targeting of the STING Pathway for Cancer Immunotherapy

DVSF Awards

Biochemistry-2nd Place, Grade 11

PJAS State Meeting Awards

1st Award; Perfect Score



Harini Shankar

CB South HS

Mark Hayden

Effects of Vitamin D and Isolation on Fruit Fly Behavior

PJAS State Meeting Awards

1st Award; Perfect Score

PJAS Directors Award for Behavioral Science



Ethan Shlossberg

Holicong MS

Robert Meletti

Can a quail be identified by its egg pattern?

DVSF Awards

Zoology-2nd Place, Middle School



Jackson Stahl

CB East HS

Mark Hayden

Electrical Output of Geobacter Sulfurreducens Relative to Rate of Growth in the Presence of Reducible Oxides

DVSF Awards

Physics-3rd Place, Grade 11

PJAS State Meeting Awards

1st Award



Dhaval Tantry

CB East HS

Mark Hayden

Determining Most Effective Method of Inhibiting Breast Cancer Inducing Protein RAD52

DVSF Awards

Chemistry-2nd Place, Grade 11

PJAS State Meeting Awards

1st Award



Parth Vaidyanath

CB East HS

Mark Hayden

The Effect of Reverse Osmosis Filtration on PFAS Chemicals

DVSF Awards

Water Environment Association - New Jersey

PJAS State Meeting Awards

1st Award



Phoebe Vallapureddy

CB East HS

Mark Hayden

Targeted Production of Tartrolon from Shipworm Symbiont Teredinibacter turnerae

DVSF Awards

Microbiology-Honorable Mention, Grade 12

US Metric Association

PJAS State Meeting Awards

1st Award



Brooke Wassmann

CB West HS

Mark Hayden

Analyzing Trends of Different Effects of Tropical Cyclones in the Western Atlantic, U.S.

DVSF Awards

Earth & Space Science-Honorable Mention, Grade 11

American Meteorological Society

PJAS State Meeting Awards

1st Award

PAESTA Earth Science Award



Lance Xu

CB West HS

Mark Hayden

The Correlation of Different Demographics to the Effects of Different Types of Framing in Medical Contexts

DVSF Awards

Behavioral & Social Science-1st Place, Grade 11

PJAS State Meeting Awards

1st Award



Thanmayee Yalamanchi

CB South HS

Mark Hayden

The Neurogenomics of Incipient Speciation in Drosophila Melanogaster

DVSF Awards

Zoology-2nd Place, Grade 12



Jonathan Zhang

CB West HS

Mark Hayden

The Effects of Agricultural Chemical Runoff and Algal Blooms on the Corrosion of Steel in Lakes Over Time

DVSF Awards

Chemistry-3rd Place, Grade 11

USDA Future Scientist Award

PJAS State Meeting Awards

1st Award; Perfect Score



Maryam Abdel-Azim



Matthew Brownrigg



REGENERON

ISEF

A PROGRAM OF —————
SOCIETY FOR SCIENCE

ATLANTA | 2022



Matthew Brownrigg

CB East HS

Mark Hayden

*Enhancing Human Embryonic Kidney Cell Regeneration Through
Transducing Exogenous Ambystoma Mexicanum Pax-7 DNA*

DVSF Awards

Zoology-1st Place, Grade 12

PJAS State Meeting Awards

1st Award; Perfect Score

Outstanding Senior Award



Matthew Brownrigg

Regeneron ISEF Finalist

PJAS State Meeting Awards

1st Award; Perfect Score

Outstanding Senior Award



Maryam Abdel-Azim

CB East HS

Judy Elinow

Modeling quorum sensing cycles in Pseudomonas aeruginosa using longitudinal approaches by measuring gene expression

DVSF Awards

Microbiology-1st Place, Grade 10

USDA Future Scientist Award



Maryam Abdel-Azim

Regeneron ISEF Finalist

4th Place Award in Microbiology

