
Isabella Parks.....Botany

Chattanooga School for the Arts and Sciences
"The Genetic Variation of Flowers"

Sara McKay.....Anatomy and Physiology

Cleveland High School, Cleveland
"Investigation of Further Application of Dolphin,
Delphinus, Thunniform Swimming Style onto Human
Underwater Dolphin Kick"

Sam DeCoster.....Computer Science

Montgomery Bell Academy, Nashville
"Optimizing Robotic Movement with Genetic
Algorithms"

Bridget Orr.....Chemistry

Pope John Paul II High School, Hendersonville
"Artificial Saliva's Ability to Buffer NaOH"

Kevin Cheng.....Biology

University School of Jackson, Jackson
"Combinations of Phloroglucinol, Kaempferol, 3,5-
Dimethoxyphenol, and 1,3,5-Trimethoxybenzene as
Novel Treatment for Non-Hodgkin Lymphoma"

Madalyn Dye.....Biology

Pope John Paul II High School, Hendersonville
"Determination of Lactic Acid Concentration
Using Absorbance in Iron(III) Chloride Solution"

**Raegan Van Wirt, Alexa Nolan, Madeleine Enos
& Jacob Reed.....Biology**

Fred J. Page High School, Franklin
"Changes in the Proteomes of Cold Sensitive and
Heat Sensitive *Schizosaccharomyces pombe*
Mutants After Placed Under Environmental Stresses"

**Lucia Berkey, Hannah Hitchcock &
Anissa Jayathilake.....Ecology**

School for Science and Math at Vanderbilt, Nashville
"Seasonal Variation in the Invertebrate Community
of Richland Creek"

Joseph Watson.....Ecology

Cleveland High School, Cleveland
"Soil Organism Biodiversity Near a Human-
Altered Stream Ecosystem"

Nethmi Hewavithana.....Biology

Hillsboro High School, Nashville
"Determine How the Leaf Cells Change with
Leaf Development"

Vy Le.....Biology

Hillsboro High School, Nashville
"Evaluating the Behavioral and
Reproductive Effects of Imidacloprid on *C.
elegans*"

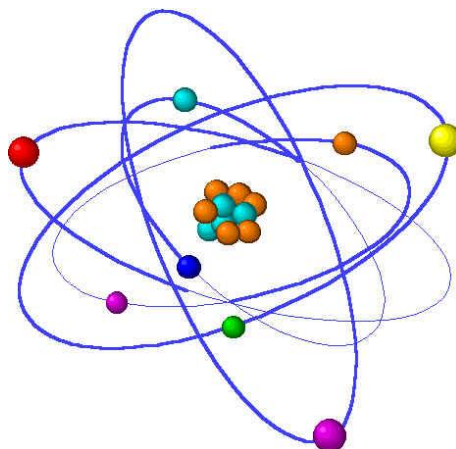
Anthony Potchernikov.....Molecular Biology

Hillsboro High School, Nashville
"Developing a Fluorescence-Based Model to
Investigate Trimer Protein Interactions"

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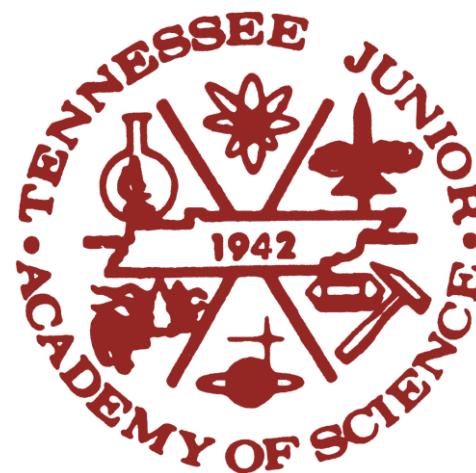
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Tennessee



TENNESSEE JUNIOR ACADEMY OF SCIENCE

ANNUAL MEETING



BELMONT UNIVERSITY

Nashville, Tennessee

Friday, April 26th 2019

Sponsored by the
Tennessee Academy of Science

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JUDGES

- Dr. M. Gore Ervin** Middle Tennessee State University
- Dr. Joel Harp**Vanderbilt University
- Dr. Albert Arul**Vanderbilt University

PROGRAM

Friday, April 26th, 2019

- 9:00 - 9:30 am.....Registration
- 9:30 - 9:40 am.....Welcome
- 9:40 - 12 noonPaper Presentations
- 12:00 noon - 1:00 pm.....Lunch
- 1:00 pm - 4:00 pm.....Paper Presentations
- 4:00 pm.....Adjournment

TENNESSEE
JUNIOR ACADEMY OF SCIENCE

Papers to be Presented

Student's Name, Research Classification,
School, City, and Title of Paper

Aman Gupta Pokal.....Biology

Fred J. Page High School, Franklin
"Light and Carbon Dioxide Affecting the Growth and
Bioluminescence of *Pyrocystis fusiformis*"

Nicholas Hinson.....Biology

Christ Presbyterian Academy, Nashville
"The Effects of Varying Caffeine Concentrations on
the Mass and pH of *Lumbricus terrestris*"

**Dzifa Dumenyo, Andrew Pelham, Alyxis Smith
& Katherine Wright**.....Engineering

School for Science and Math at Vanderbilt, Nashville
"Design and Prototype of a Hybrid Barrel-Panel Solar
Oven for Implementation in Kenya"

Zachary Nelson.....Engineering

Montgomery Bell Academy, Nashville
"3D-Printed Prosthetics in High Load-Bearing
Circumstances"

**Felix Bean, Gabriella Ess, Jason Hoang &
Neeraj Namburu**.....Astronomy

School for Science and Math at Vanderbilt, Nashville
"Implication of Possible Orphan Flares Through Flaring
States in the OIR Ranges of Fermi-Bright Blazars"

Rebecca Firth & Aidan Henopp.....Astronomy

Sullivan South High School, Kingsport
"A Search for Exoplanets in NGC 2355"

John Lazenby.....Environmental Engineering

Chattanooga School for the Arts and Sciences
"Calculating the pH of Streams Damaged by Acid
Mine Drainage for Extended Periods of Time"

Dawit Girma, Aakash Sivakumar & Lucas Yarnes
.....Engineering

School for Science and Math at Vanderbilt, Nashville
"Construction of an Automated Brine Shrimp Hatchery"

Katerina Johnson.....Environmental Management

Sullivan South High School, Kingsport
"Terraforming Mars"

Srikrishna Dasari.....Climatology

White Station High School, Memphis
"Using Foraminifera Shell Analysis to Correct Climate
Reconstruction Methods"

Andrew Campbell, Joshua Floyd & Logan Rash
.....Chemistry

Greenfield High School, Greenfield
"Testing for Correlation Between Disease
Diagnosis Rates and Heavy Metal Concentrations
in Tap Water Sources from Weakley County"

Samaya Baljepally.....Mathematics

Bearden High School, Knoxville
"Mathematic Model to Predict Mortality from Early
Onset Pneumonia in Acute Myocardial Infarction"

Lunch Break!
