# THE 65th ANNUAL OZARKS SCIENCE & ENGINEERING FAIR

HAMMONS STUDENT CENTER MISSOURI STATE UNIVERSITY

March 28 through March 30, 2023

## **2023 WINNERS**



Missouri State University - College of Natural & Applied Sciences
Missouri State University Foundation
Associated Electric Cooperative, Inc.
Schneider Foundation
Cheryl & Rodney Wrinkle



#### **MASTER OF CEREMONIES**

MICHELLE NORGREN
EXECUTIVE DIRECTOR
OZARKS SCIENCE & ENGINEERING FAIR

DR. TAMERA JAHNKE, DEAN
COLLEGE OF NATURAL AND APPLIED SCIENCES
MISSOURI STATE UNIVERSITY
PRESENTER OF AWARDS



#### STEERING COMMITTEE MEMBERS

EXECUTIVE DIRECTOR:
DISPLAY & SAFETY:
ELEMENTARY FAIR:
PLACEMENT AWARDS:
SPECIAL AWARDS:
VOLUNTEERS:
MARKETING:
SCIENCE DAY:

MICHELLE NORGREN
CHRIS REEVES
KERI FRANKLIN
SAMANTHA COOPER
DENISE VINTON
JENNIFER COTNER JONES
RYNE EMERICK
MICHELLE NORGREN



#### SCIENTIFIC REVIEW COMMITTEE

DR. TOM TOMASI, CHAIR
DR. MIRZA BABUR, MICROBIOLOGY
BRIAN HIGH, CHEMISTRY
DR. CARLY YADON, HUMAN BEHAVIOR
DR. MICHAEL PFANDER, DVM, NONHUMAN VERTEBRATES



#### **SENIOR DIVISION GRAND PRIZE WINNERS & ALTERNATES**

(Grand Prize Awards Sponsored by: Cheryl and Rodney Wrinkle, Schneider Foundation & Associated Electric Cooperative, Inc. - includes plaques & trip to the Intel International Science & Engineering Fair for the Grand Prize Winners.)

**GRAND PRIZE** Nicole Westhusing

Novel Application of Oidiodendron Truncatum

to Inhibit Growth of Pseudogymnoascus

**Destructans** 

Camdenton High School

Andrew Fecteau

**GRAND PRIZE** MingJun Feng

Solve Deblurring and Super Resolution in Los-

dose Compute Tomography via One Novel

Neural Network
Nixa High School
Christina Shepherd

<u>1st ALTERNATE</u> Ayden Meckley

Continuation of Study: Surveying Feminine

Hygiene Products for Per- and Poly- fluoroalkyl Compounds Utilizing Particle Induced Gamma Ray Emissions Spectroscopy (PIGE) Coupled

with Supplementary Analytical Testing

Methods

Camdenton High School

Andrew Fecteau

**2nd ALTERNATE** Carter Smith

Year Two of an Ongoing Study on the

Utilization of Biomimetic Designs to Engineer a More Efficient Surgical Laparoscopic Grasper

Camdenton High School

Andrew Fecteau

#### **JUNIOR DIVISION GRAND PRIZE WINNERS**

(Plaque to each Junior Grand Prize Winner & Teacher)

**GRAND PRIZE** 

**Zain Rehman** 

Modeling mRNA and sRNA Interactions
Scholars at Central
Denise Vinton

# THE 2023 JUNIOR DIVISION



# PLACEMENT AWARD WINNERS!

#### **Behavioral and Social Sciences**

First Place

Addison Handley Camdenton Middle School

Second Place

Carson Rockwood, Max Rost Marshfield R-1

**Third Place** 

Aubrey Huffman Marshfield R-1

**Honorable Mention** 

Karleigh Engelhardt, Aubrey Foraker Marshfield R-1

**Biochemistry** 

First Place

Gracie Ulam Camdenton Middle School

Second Place

Kennedy Equibel Camdenton Middle School

**Honorable Mention** 

Hannah Palubicki, Teaghan Young Marshfield R-1

**Botany** 

First Place

lan Johnson Camdenton Middle School

Second Place

Baely Hansen Camdenton Middle School

Third Place

Andy Jin Scholars at Central

**Honorable Mention** 

Wyatt Wagler Scholars at Central

#### Chemistry

First Place

Nathan Ostergaard

Scholars at Central

**Second Place** 

Jasmine Cody

Marshfield R-1

Third Place

Harriet Lemmon

Scholars at Central

**Honorable Mention** 

Ridhima Suthar

Scholars at Central

**Computer Science** 

First Place

Ginny Paudert, Kahlen Tillman

Gloria Deo Academy

Second Place

Matt Kelley

Camdenton Middle School

**Honorable Mention** 

Natalie Breshears, Elianna Cardoza

Marshfield R-1

**Engineering** 

First Place

**Chase Benedick** 

Camdenton Middle School

**Second Place** 

Connor Hannigan

Camdenton Middle School

Third Place

Abbie Grier, Jenna Waller

Marshfield R-1

**Honorable Mention** 

Kielee Williams

Norwood R-1

#### **Environmental Sciences**

First Place

Sania Rehman

Scholars at Central

**Second Place** 

Adelaide Longpine

Phelps Center for Gifted Education

**Third Place** 

**Desmond Simmons** 

Scholars at Central

**Honorable Mention** 

**Maddox Sublette** 

Camdenton Middle School

#### **Medicine and Health Sciences**

First Place

Zain Rehman

Scholars at Central

**Second Place** 

Hayden Hilton, Anthony Macrelli

Marshfield R-1

Third Place

Addie Smith

Norwood R-1

**Honorable Mention** 

Drae Bradshaw

Norwood R-1

Microbiology

Third Place

Lindsleigh Todd

Norwood R-1

#### **Physics and Astronomy**

First Place

Andrew Davidson Scholars at Central

**Second Place** 

Rex Rodholm Scholars at Central

**Third Place** 

Adalia Ligon Scholars at Central

**Honorable Mention** 

Easton Curley, Trenton Rosenthal Marshfield R-1

Zoology

First Place

Milagro Krenzel Camdenton Middle School

**Second Place** 

Mayci Calhoun Norwood R-1

**Third Place** 

Cloe Bradshaw, MacieMae Pridemore Norwood R-1

# THE 2023 SENIOR DIVISION



# PLACEMENT AWARD WINNERS!

#### **Behavioral and Social Sciences**

First Place

Jenna Kelley Hartville High School

**Second Place** 

Josie Wieczorek Hartville High School

**Third Place** 

Ella Boyer Hartville High School

**Biochemistry** 

First Place

Ayden Meckley Camdenton High School

Second Place

Rileigh Sinning Hartville High School

**Botany** 

Second Place

Torri Smith Lebanon High School

Chemistry

First Place

Michael Owen Lebanon High School

**Second Place** 

Ryan Criger, Ember Dawani, Marrin McKoy Reeds Spring High School

**Third Place** 

Joclyn Collier, Madeline Peck, Azazel Riley Reeds Spring High School

#### **Computer Science**

First Place

Christopher Wadley Lebanon High School

**Second Place** 

Nathan Wu Greenwood Lab School

**Third Place** 

Connor Starkey Camdenton High School

**Engineering** 

**First Place** 

Angel Salinas Camdenton High School

**Second Place** 

Gavyn Quade Camdenton High School

Third Place

Owen Howser Camdenton High School

**Honorable Mention** 

Archer McDaris Hartville High School

**Environmental Sciences** 

First Place

Nicole Westhusing Camdenton High School

Second Place

Rainier Sode Lebanon High School

Third Place

Maya Elliott Lebanon High School

Honorable Mention

Bobbee Carlile, Landon Irvin, Joel Keithley Reeds Spring High School

#### **Medicine and Health Sciences**

First Place

Carter Smith Camdenton High School

**Second Place** 

MingJun Feng Nixa High School

Third Place

Shelby Halstead Lebanon High School

**Honorable Mention** 

Alaina Semsch Lebanon High School

Microbiology

First Place

Layla Strickland Camdenton High School

**Third Place** 

Carter Chaffin Lebanon High School

**Physics and Astronomy** 

First Place

Keith Bass Camdenton High School

Zoology

First Place

Sadie Rinck Lebanon High School

**Second Place** 

Sady Petty Hartville High School

**Honorable Mention** 

Reinah Coryell Hartville High School

# THE 2023 JUNIOR & SENIOR DIVISION



# SPECIAL AWARD WINNERS!

ACS Chemistry Award-Junior Division

Nathan Ostergaard What is the Effect of Time on Limes' Nutrients and

Acidity?

Scholars at Central

ACS Chemistry Award-Senior Division

Michael Owen The Production of Ethanol using Dispoable Wipes via

Gylcolosis and Fermentation.

Lebanon High School

American Psychological Association

Jenna Kelley The Effects of Food Dye on the Behavior of the

Drosophila Melanogaster

Hartville High School

American Society of Mammalogists-Junior Division

MacieMae Pridemore

What is the effect of brushing a horse on heart rate

Norwood R-1

American Society of Mammalogists-Senior Division

Nicole Westhusing

Novel Application of Oidiodendron Truncatum to Inhibit

Camdenton High School

Growth of Pseudogymnoascus Destructans

Association for Women Geoscientists

Maya Elliott

A Ball-milled Biochar Alginate Filter: A Novel Approach to

Water Quality

Lebanon High School

DoD STEM Leadership Prize

Zain Rehman

Modeling mRNA and sRNA interactions

Scholars at Central

Grand Award - 1st Alt

Ayden Meckley

Continuation of Study:Surveying Feminine Hygiene Products for Per- and Polyfluoroalkyl Compounds Utilizing Particle Induced Gamma Ray Emissions Spectroscopy (PIGE) coupled with Supplementary Analytical Testing

Methods

Camdenton High School

Grand Award - 2nd Alt

Carter Smith

Year Two of an Ongoing study on the Utilization of Biomimetic Designs to Engineer a More Efficient Surgical

Laparoscopic Grasper

Camdenton High School

Zain Rehman	Modeling mRNA and sRNA interactions	Scholars at Central
Grand Award - Sr		
Nicole Westhusing	Novel Application of Oidiodendron Truncatum to Inhibit	Camdenton High School
MingJun Feng	Growth of Pseudogymnoascus Destructans Solve Deblurring and Super Resolution in Low-dose	Nixa High School
Alligour r eng	ComputeTomography via One Novel Neural Network	
Greater Ozark Audu	bon Society-Conservation Award	
Sania Rehman	Modeling Continuous Water Quality in Real-Time with IoT and an Arduinos	Scholars at Central
Lemelson Early Inve	entor Prize	
Colten Reed	Self Watering Plant System	Marshfield R-1
Matthew Bratton	Self Watering Plant System	Marshfield R-1
Lisa Reece Memoria	I Award-Junior Division	
Jathin Bande	The Combined Effect of Temperature and Salt on	Scholars at Central
	Preventing Spoilage	
Lisa Reece Memoria	l Award-Senior Division	
Ayden Meckley	Continuation of Study:Surveying Feminine Hygiene	Camdenton High School
	Products for Per- and Polyfluoroalkyl Compounds Utilizing Particle Induced Gamma Ray Emissions Spectroscopy	
	(PIGE) coupled with Supplementary Analytical Testing Methods	
Lou and Nadine Mo	ore Memorial Award	
Brianna Cheuk	The Affect of Fonts on Readability	Scholars at Central
Miles V. Barnhart E	xcellence in Science and Engineering Award	
Nicole Westhusing	Novel Application of Oidiodendron Truncatum to Inhibit	Camdenton High Schoo
MingJun Feng	Growth of Pseudogymnoascus Destructans Solve Deblurring and Super Resolution in Low-dose	Nixa High Schoo
, inigodir i eng	ComputeTomography via One Novel Neural Network	
Missouri Departmer	nt of Conservation-Senior Division	
Angel Salinas	Mitigating varroa mite infestations in apis populations by	Camdenton High Schoo
, qui valii iuv	· · · · · · · · · · · · · · · · · · ·	9.7° h.₩)

#### Missouri State University Scholarship

Jenna Kelley	The Effects of Food Dye on the Behavior of the	Hartville High School
Ayden Meckley	Drosophila Melanogaster	Consideration 18 at Calcast
Ayuen Meckley	Continuation of Study:Surveying Feminine Hygiene	Camdenton High School
	Products for Per- and Polyfluoroalkyl Compounds Utilizing	
	Particle Induced Gamma Ray Emissions Spectroscopy	
	(PIGE) coupled with Supplementary Analytical Testing Methods	
Michael Owen		
Michael Owen	The Production of Ethanol using Dispoable Wipes via	Lebanon High School
Chuistauch au Madlas	Gylcolosis and Fermentation.	
Christopher Wadley	Customizable Video Gesture Recognition Interface for	Lebanon High School
	Smartphone using MediaPipe I lands and Active Machine	
	Learning Algorithms	
Angel Salinas	Mitigating varroa mite infestations in apis populations by	Camdenton High School
	increasing hygienic activity in an autonomous approach.	
Nicole Westhusing	Novel Application of Oidiodendron Truncatum to Inhibit	Camdenton High School
	Growth of Pseudogymnoascus Destructans	
Carter Smith	Year Two of an Ongoing study on the Utilization of	Camdenton High School
	Biomimetic Designs to Engineer a More Efficient Surgical	
	Laparoscopic Grasper	
Layla Strickland	Application of Potassium Bicarbonate and Hydrogen	Camdenton High School
	Peroxide for use Against the Protozoan Parasite	*
	Ophryocystis elektroscirrha	
Keith Bass	A Study on the Qualifications of Ultraviolet (UV) Light	Camdenton High School
	Resistant Polycarbonate Plastics for Potential Applications	— heteries = injury per established with an an an of the state of the
	in Nuanced Space Suit Components	

#### MSU CNAS Grand Prize Award-Junior Division

Sadie Rinck

Ian Johnson

Zain Rehman	Modeling mRNA and sRNA interactions	Scholars at Central

#### MSU CNAS Grand Prize Award-Senior Division

Nicole Westhusing	Novel Application of Oidiodendron Truncatum to Inhibit	Camdenton High School
	Growth of Pseudogymnoascus Destructans	
MingJun Feng	Solve Deblurring and Super Resolution in Low-dose	Nixa High School

ComputeTomography via One Novel Neural Network

Treatment of Bacterial Gill Disease in Oncorhynchus

mykiss Through the Usage of Far-UVC Light

#### MSU Dept of Biology Category Awards

Flash Plants

Ian Johnson	Flash Plants	Camdenton Middle School
Sania Rehman	Modeling Continuous Water Quality in Real-Time with IoT	Scholars at Central
	and an Arduinos	
Addie Smith	pH vs Covid Tests	Norwood R-1
Lindsleigh Todd	The relationship between lemon rind and the amount of	Norwood R-1
	bacteria found	
Milagro Krenzel	Shady's in Shambles!	Camdenton Middle School
Torri Smith	Slowing the Onset of Botrytis Fruit Rot in Store-Bought	Lebanon High School
	Strawberries: An Investigation of Fungicide Treatments	

Lebanon High School

Nicole Westhusing Novel Application of Oidiodendron Truncatum to Inhibit

Growth of Pseudogymnoascus Destructans

MingJun Feng Solve Deblurring and Super Resolution in Low-dose

ComputeTomography via One Novel Neural Network

Layla Strickland Application of Potassium Bicarbonate and Hydrogen

Peroxide for use Against the Protozoan Parasite

Ophryocystis elektroscirrha

Sadie Rinck Treatment of Bacterial Gill Disease in Oncorhynchus

mykiss Through the Usage of Far-UVC Light

Camdenton High School

Nixa High School

Camdenton High School

Lebanon High School

#### MSU Dept. of Biology Work Study Award

Nicole Westhusing Novel Application of Oidiodendron Truncatum to Inhibit

Growth of Pseudogymnoascus Destructans

Camdenton High School

#### NASA Earth System Science Award

Rainier Sode The Impact of LED Lights on the Active Motion of Blattella

germanica

Lebanon High School

#### National Geographic Society That's Geography! Award

Azazel Riley

Madeline Peck

Bagdad battery Bagdad battery

Joclyn Collier

Bagdad battery

Reeds Spring High School Reeds Spring High School Reeds Spring High School

#### NOAA Taking the Pulse of the Planet Award

Maya Elliott

A Ball-milled Biochar Alginate Filter: A Novel Approach to

Water Quality

Lebanon High School

#### Office of Naval Research-Junior Division

Zain Rehman

Modeling mRNA and sRNA interactions

Addison Handley

Light Pollution: A Solution

Chase Benedick

Clingy Cleats

Scholars at Central Camdenton Middle School Camdenton Middle School

#### Office of Naval Research-Senior Division

Layla Strickland

Application of Potassium Bicarbonate and Hydrogen

Peroxide for use Against the Protozoan Parasite

Ophryocystis elektroscirrha

Carter Smith

Year Two of an Ongoing study on the Utilization of

Biomimetic Designs to Engineer a More Efficient Surgical

Laparoscopic Grasper

Camdenton High School

Camdenton High School

#### Regeneron Biomedical Science Award

Ayden Meckley

Continuation of Study:Surveying Feminine Hygiene Products for Per- and Polyfluoroalkyl Compounds Utilizing Particle Induced Gamma Ray Emissions Spectroscopy (PIGE) coupled with Supplementary Analytical Testing

Methods

Camdenton High School

#### Ricoh Sustainable Development Award

Layla Strickland

Application of Potassium Bicarbonate and Hydrogen Peroxide for use Against the Protozoan Parasite

Ophryocystis elektroscirrha

Camdenton High School

#### Schneider Award - Junior Division

Zain Rehman

Modeling mRNA and sRNA interactions

Ian Johnson

**Hash Plants** 

Nathan Ostergaard

What is the Effect of Time on Limes' Nutrients and

Acidity?

Chase Benedick

Clingy Cleats

Sania Rehman

Modeling Continuous Water Quality in Real-Time with IoT

and an Arduinos

Camdenton Middle School Scholars at Central

Scholars at Central

Camdenton Middle School

Scholars at Central

Nixa High School

Camdenton High School

Camdenton High School

#### Schneider Award - Senior Division

MingJun Feng

Solve Deblurring and Super Resolution in Low-dose

ComputeTomography via One Novel Neural Network

Layla Strickland

Application of Potassium Bicarbonate and Hydrogen

Peroxide for use Against the Protozoan Parasite

Ophryocystis elektroscirrha

Ayden Meckley

Continuation of Study:Surveying Feminine Hygiene Products for Per- and Polyfluoroalkyl Compounds Utilizing Particle Induced Gamma Ray Emissions Spectroscopy (PIGE) coupled with Supplementary Analytical Testing

Methods

Keith Bass

A Study on the Qualifications of Ultraviolet (UV) Light Resistant Polycarbonate Plastics for Potential Applications

in Nuanced Space Suit Components

Nicole Westhusing

Novel Application of Oidiodendron Truncatum to Inhibit

Growth of Pseudogymnoascus Destructans

Camdenton High School

Camdenton High School

#### Smith Glynn Callaway Foundation-Junior Division

Addison Handley

Light Pollution: A Solution

Gracie Ulam Zain Rehman To Feed Or Not to Feed Your Lawn Modeling mRNA and sRNA interactions

Nathan Ostergaard

What is the Effect of Time on Limes' Nutrients and

Acidity?

Camdenton Middle School Camdenton Middle School Scholars at Central Scholars at Central

#### Smith Glynn Callaway Foundation-Senior Division

Jenna Kelley

The Effects of Food Dye on the Behavior of the

Drosophila Melanogaster

Hartville High School

Ayden Meckley Continuation of Study:Surveying Feminine Hygiene

Products for Per- and Polyfluoroalkyl Compounds Utilizing
Particle Induced Gamma Ray Emissions Spectroscopy

(PIGE) coupled with Supplementary Analytical Testing

Methods

Carter Smith Year Two of an Ongoing study on the Utilization of

Biomimetic Designs to Engineer a More Efficient Surgical

Laparoscopic Grasper

Layla Strickland Application of Potassium Bicarbonate and Hydrogen

Peroxide for use Against the Protozoan Parasite

Ophryocystis elektroscirrha

Camdenton High School

Camdenton High School

Camdenton High School

#### Society for In Vitro Biology

Carter Chaffin Stability of Polyethylene terephthalate as a Nutrient

Source for Saccharomyces cerevisiae: Investigating its

Effect on Yeast Growth and Development

Lebanon High School

#### Stan Howell Memorial Award

Torri Smith Slowing the Onset of Botrytis Fruit Rot in Store-Bought

Strawberries: An Investigation of Fungicide Treatments

Ian Johnson Flash

Flash Plants

Camdenton Middle School

Camdenton Middle School

Camdenton Middle School.

Camdenton Middle School

Camdenton Middle School

Scholars at Central

Gloria Deo Academy

Gloria Deo Academy

Scholars at Central

Scholars at Central

Scholars at Central

Lebanon High School

#### Thermo Fisher Scientific Junior Innovators Challenge

Addison Handley

Light Pollution: A Solution

Gracie Ulam Ian Johnson To Feed Or Not to Feed Your Lawn

Nathan Ostergaard

Flash Plants

Nathan Ostergaard

What is the Effect of Time on Limes' Nutrients and

Acidity?

Kahlen Tillman Ginny Paudert Pitch Perfect Pitch Perfect

Chase Benedick

Clingy Cleats

Sania Rehman

Modeling Continuous Water Quality in Real-Time with IoT

and an Arduinos

Zain Rehman

Modeling mRNA and sRNA interactions

Andrew Davidson

Title Hurlin Murlin (Creative title) Decreasing Radius

Linear Nodes vs. Constant radius linear nodes. Which is

more efficient? (Non-creative title)

Milagro Krenzel

Shady's in Shambles!

Camdenton Middle School

#### U.S. Agency for International Development (USAID)

Ayden Meckley Continuation of Study:Surveying Feminine Hygiene

Products for Per- and Polyfluoroalkyl Compounds Utilizing Particle Induced Gamma Ray Emissions Spectroscopy (PIGE) coupled with Supplementary Analytical Testing

Methods

Camdenton High School

#### U.S. Metric Association

Jackson Stange

Cooking Cheaply with the Sun!

Scholars at Central

Women in Science-Senior Division

Maya Elliott	A Ball-milled Biochar Alginate Filter: A Novel Approach to Water Quality	Lebanon High School
United States Air Ford	e	
Kahlen Tillman	Pitch Perfect	Gloria Deo Academy
Ginny Paudert	Pitch Perfect	Gloria Deo Academy
Christopher Wadley	Customizable Video Gesture Recognition Interface for Smartphone using MediaPipe Hands and Active Machine Learning Algorithms	Lebanon High School
Nathan Wu	Using AI to analyze Life Expectancy in the U.S.	Greenwood Lab School
Connor Starkey	Developing a Web Communication Debris Evasion System for CubeSats	Camdenton High School
Winners' Luncheon		
Jenna Kelley	The Effects of Food Dye on the Behavior of the	Hartville High School
,	Drosophila Melanogaster	,
Ayden Meckley	Continuation of Study:Surveying Feminine Hygiene Products for Per- and Polyfluoroalkyl Compounds Utilizing	Camdenton High Schoo
	Particle Induced Gamma Ray Emissions Spectroscopy	
	(PIGE) coupled with Supplementary Analytical Testing	
	Methods	
Michael Owen	The Production of Ethanol using Dispoable Wipes via Gylcolosis and Fermentation.	Lebanon High School
Christopher Wadley	Customizable Video Gesture Recognition Interface for Smartphone using MediaPipe Hands and Active Machine	Lebanon High School
Annal Calinas	Learning Algorithms	Comdonton High School
Angel Salinas	Mitigating varroa mite infestations in apis populations by increasing hygienic activity in an autonomous approach.	Camdenton High School
Nicole Westhusing	Novel Application of Oidiodendron Truncatum to Inhibit	Camdenton High School
vicole vvestilusing	Growth of Pseudogymnoascus Destructans	camacitor right beneat
Carter Smith	Year Two of an Ongoing study on the Utilization of	Camdenton High School
	Biomimetic Designs to Engineer a More Efficient Surgical	weekstaan water and the state of the state o
	Laparoscopic Grasper	
Layla Strickland	Application of Potassium Bicarbonate and Hydrogen	Camdenton High School
	Peroxide for use Against the Protozoan Parasite	
	Ophryocystis elektroscirrha	
Keith Bass	A Study on the Qualifications of Ultraviolet (UV) Light	Camdenton High School
	Resistant Polycarbonate Plastics for Potential Applications	
- 11 - 51 - 1	in Nuanced Space Suit Components	Laborate Balance
Sadie Rinck	Treatment of Bacterial Gill Disease in Oncorhynchus mykiss Through the Usage of Far-UVC Light	Lebanon High School
Woman in Science 1.	niar Division	
Women in Science-Ju	HIOL DIVISION	

Layla Strickland

Application of Potassium Bicarbonate and Hydrogen Peroxide for use Against the Protozoan Parasite

Ophryocystis elektroscirrha

Camdenton High School

#### Yale Science and Engineering Association

Carter Smith

Year Two of an Ongoing study on the Utilization of Biomimetic Designs to Engineer a More Efficient Surgical

Laparoscopic Grasper

Camdenton High School

#### TEACHER AWARDS

### THE ROBERT W. PLASTER MEMORIAL EXCELLENCE IN TEACHING AWARD

\$1,000 Cash Award and a certificate to the Teacher with the most Placement Awards in the Senior Division

Andrew Fecteau Camdenton High Ryne Emerick Lebanon High School

### THE MARY JEAN PLASTER MEMORIAL EXCELLENCE IN TEACHING AWARD

\$1,000 Cash Award and a certificate to the Teacher with the Most Placement Awards in the Junior Division

> Denise Vinton Central Scholars

# THE REGIONAL FAIR DIRECTOR EMERITUS SYLVIA SPEAR MEMORIAL AWARD

\$25 Cash and a certificate to a First Time Teacher

> Jennifer Cramer Stoutland Schools

### THE JAMES K. TICE MEMORIAL TEACHER AWARD

This award of \$250 cash and a certificate has been established in memory of James K. Tice, whose constant support and encouragement of Missouri's teachers and students changed so many lives.

Mr. Tice served for many years as a teacher, principal and superintendent of K-12 schools. Even after he retired from public education, Mr. Tice continued his tireless dedication to improving educational opportunities for everyone. He was devoted to creating learning communities, by integrating current and emerging technologies into the classroom.

Mr. Tice was our coach, teacher, mentor, surrogate parent, and friend. He never failed to say "I appreciate you". It is our hope that the recipient of this award also hears "We appreciate you".

The recipient of this year's award is:

Amy Larrington
Camdenton Middle School

# THE LAWRENCE E. BANKS, JR., MEMORIAL TECHNOLOGY FOR TEACHERS AWARD

This award of \$250 cash and a certificate has been established in memory of Lawrence E. Banks, Jr., the former Dean of the Missouri State University College of Natural and Applied Sciences and a long-time friend and supporter of the Fair.

Dr. Banks was dedicated to education in the state of Missouri and was a strong proponent of innovative educational projects at the K-12 level as well as higher education. In 2000, he received the Science Teachers of Missouri Distinguished Service Award in recognition of his tireless support and commitment to science education.

In memory of Dr. Banks' enthusiasm and interest in technology, the recipient of this award is encouraged to integrate technology in their classroom.

The recipient of this year's award is:

Richard White Reeds Spring High School

### OZARKS SCIENCE & ENGINEERING FAIR JUNIOR DIVISION TEACHER AWARDS

This Certificate is awarded to the teachers of the Junior Division First Place Category winners. The recipients of the Junior Division Teacher Awards for 2023 are:

> Denise Vinton Central Scholars

Aaron Tillman Marshfield R-1

Amy Larrington Camdenton Middle

Tim Mulford Camdenton Middle

### OZARKS SCIENCE & ENGINEERING FAIR SENIOR DIVISION TEACHER AWARDS

This Certificate is awarded to the teachers of the Senior Division First Place Category winners. The recipients of the Senior Division Teacher Awards for 2023 are:

> Tabitha Shaver Hartville High

Ryne Emerick Lebanon High

Andrew Fecteau Camdenton High

# OZARKS SCIENCE & ENGINEERING FAIR JUNIOR DIVISION GRAND PRIZE TEACHER AWARD

This award of a plaque is awarded to the teacher of the Junior Division Grand Prize student project. The recipient of the OSEF Foundation Junior Division Grand Prize Teacher Award for 2023 is:

Denise Vinton Scholars at Central

# OZARKS SCIENCE & ENGINEERING FAIR SENIOR DIVISION GRAND PRIZE ALTERNATES TEACHER AWARD

This award of a certificate is awarded to the teacher(s) of the Senior Division Grand Prize Alternates student projects. The recipients of the OSEF Foundation Senior Division Grand Prize Alternates Teacher Award for 2023 is:

Andrew Fecteau Camdenton High

#### OZARKS SCIENCE & ENGINEERING FAIR SENIOR DIVISION GRAND PRIZE TEACHER AWARD

This award of a plaque is awarded to the teacher(s) of the Senior Division Grand Prize student projects. The recipients of the OSEF Foundation Senior Division Grand Prize Teacher Award for 2023 is:

Ryne Emerick Lebanon High

Christina Shepherd Nixa High