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FOR IMMEDIATE RELEASE

Emmett High School and TVMSC projects earn top honors at third annual Western Idaho Science & Engineering Fair

BOISE, Idaho (March 20, 2019) — Judges at the 2019 Western Idaho Science & Engineering Fair declared projects from Emmett High School and Treasure Valley Mathematics and Science Center the Best of Fair award winners and one from Nampa High School as the Fair Runner Up. They were among 84 projects presented by 108 students from seven Treasure Valley schools at the third annual event, which the Idaho STEM Action Center staged March 15 at Boise State University.

Best of Fair winners

Emmett High School student Lukas Keller's "Testing 'Meat-Free' Chicken Nuggets for Gamma Globulin" earned one of two Best of Fair awards, as well as the Best in Category award in Physical Sciences and a Category Gold award.

"Bacteriophage Isolation and Identification of Antibacterial Properties" submitted by Melina Mohammadi from Treasure Valley Mathematics and Science Center in Boise garnered the other Best of Fair award. In addition, she earned a Best in Category in Animal, Biomedical, and Microbiological Sciences and a Category Gold award, as well as several special awards, including the First Place Idaho Academy of Science & Engineering Award, an Office of Naval Research Award, the Society for In Vitro Biology Award, and the U.S. Metric Association Award.

On top of serious bragging rights, the two students and their mentors earned all-expense-paid trips to Phoenix to compete in the Intel International Science and Engineering Fair May 12-17.

Fair Runner Up

Meanwhile, Nampa High School's Kimberly Barron and Jacob Kratz earned Fair Runner Up for their project titled "Utilization Seebeck Generators in Prosthetic Limb." The duo also earned a Best in Category in Engineering, Math, and Computer Science and a Category Gold award.

Barron, Kratz, and their mentors also earned all-expense-paid trips to attend the Intel International Science and Engineering Fair in Phoenix May 12-17 as observers. The STEM Action Center sends observers to the Intel ISEF so they can apply what they learned at the event to their Idaho Science & Engineering Fair entries the following year, as well as share their insights with fellow students.

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Five strands, many awards

Students in ninth through 12th grades throughout Western Idaho were eligible to submit entries in five categories: Animal, Biomedical, and Microbiological Sciences; Behavioral and Social Sciences; Earth, Environmental, and Plant Sciences; Engineering, Mathematics, and Computer Science; and Physical Sciences. The remaining Best in Category projects included:

- "Applying Rare Emotions to A.I." submitted by Kuna High School's Hayden Kash and Morgan Ridlon earned the Best in Category award in Behavioral and Social Sciences and a Category Gold award.
- "Effects of Seed Germination and Growth Rate in Mammalian Decomposition" submitted by Emmett High School's Nicole Stafford earned the Best in Category award in Earth, Environmental and Plant Sciences and a Category Gold award.

Judges honored 15 more projects with Category Gold awards: "Bacterial Resistance to Ampicillin Over Generations," an Animal, Biomedical, and Microbiological Sciences entry by Emmett High School's Alysa Churchfield; "Decomposition of Grass Clippings," an Animal, Biomedical, and Microbiological Sciences entry by Emmett High School's William Farrell; "How Will Ginger, Oregano, and Echinacea Effect E-coli for Medical Purposes," an Animal, Biomedical, and Microbiological Sciences entry by Emmett High School's Bryce Youngstrom; "Counseling Conflict," a Behavioral and Social Sciences entry by Vision Charter School's Paige Anderson and Seanna McDougall; "The Effects of Different Essential Oils on the Behavior of Havanese While Grooming," a Behavioral and Social Sciences entry by Vision Charter School's Brianna Young; "Understory Plant Diversity Under Different Percentages of Canopy Cover," an Earth, Environmental and Plant Sciences entry by Krista Hamel from Sage International School of Boise; "The Effect of Macrofauna on Plant Growth Compared to Fertilizer," an Earth, Environmental and Plant Sciences entry by Oliver MacDonald from Sage International School of Boise; "The Amount of DNA in Fresh Vs. Frozen Strawberries," an Earth, Environmental and Plant Sciences entry by Emmett High School's Lea Portmann; "Nuclear Fusion Reactor Model," an Engineering, Math, and Computer Science entry by Kuna High School's Nathan Bennee, Sarah Miller-Burgess, and Tanner Moss; "Fitbit for Dogs," an Engineering, Math, and Computer Science entry by Vision Charter School's Destiny Christoffersen and Jazmin Macias; "How Do Render Settings Affect Render Times," an Engineering, Math, and Computer Science entry by Ty McFarland-Smith from Sage International School of Boise; "Designing a Water Sample Collecting Mechanism Remotely Controllable From a Drone," an Engineering, Math, and Computer Science entry by Nicolas Medapalli and Jimin Ryu from Treasure Valley Mathematics and Science Center in Boise; "Optimal Altitude and Velocity for Gas Dispersion," a Physical Sciences entry by Emmett High School's Ian Hefley; "Jolly Ranchers are Gross (But Helpful in Understanding the Basic Properties of Invertase," a Physical Sciences entry by Alex Pape from Sage International School of Boise; and "Magnetic Repulsion Powered Transportation," a Physical Sciences entry by Devi Turner from Sage International School of Boise.

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The STEM Action Center also presented 34 projects with Category Silver awards and an additional 23 special awards from the American Meteorological Society, American Psychological Association, ASM Materials Education Foundation, Association for Women Geoscientists, Genius Olympiad, the Idaho Academy of Science and Engineering, Intel, Mu Alpha Theta, NASA, the National Oceanic and Atmospheric Administration, the Office of Naval Research, Ricoh, the Stockholm International Water Institute, the U.S. Air Force, the U.S. Metric Association, and Yale Science and Engineering Association.

A group of local experts from an array of STEM-related fields served as judges.

One of three regional fairs

WISEF is one of three regional science fairs the STEM Action Center stages statewide each spring. The Coeur d'Alene Resort hosted the Northern Idaho Science & Engineering Fair March 1, and Idaho State University hosted the Eastern Idaho Science & Engineering Fair in Pocatello March 8. The Best of Fair winners from those events and select observers will join the top WISEF prizewinners at the international science fair courtesy of the STEM Action Center.

Ensuring economic prosperity

According to STEM Action Center executive director Dr. Angela Hemingway, competitions like the Idaho Science & Engineering Fairs are important to the state's future, because they offer students opportunities to engage in original research projects aligned with their interests and meet and learn with other motivated students in their area.

"Our Western Idaho fair continues to grow significantly, from 41 projects in 2016, our inaugural year, to 84 this year," Dr. Hemingway said. "Moreover, the quality of the research is impressive and the work our students are doing is competitive at the international level. The technical skills gained from participating in our Idaho Science & Engineering Fairs, as well as the ability to communicate results, think deeply and critically about issues, and solve real-world problems, will serve these students well as they transition into the workforce."

Hemingway said the Idaho Department of Labor predicts upwards of 100,000 STEM jobs will exist in Idaho by 2024. She said these jobs will represent $6.5 billion in personal income and almost $350 million in tax revenue if Idaho's workforce is poised to fill them.

About the Idaho STEM Action Center

The Idaho STEM Action Center was created in 2015 because Idaho citizens are not entering the STEM pipeline fast enough to meet current and future Idaho workforce needs. Its goals are to coordinate and facilitate implementation of science, technology, engineering, and math programs, align education and workforce needs, and increase awareness of STEM learning and careers throughout Idaho. The organization is working with industry, government, educators, and students to develop new resources and support high-quality teacher professional-development opportunities to foster a STEM-educated workforce that ensures Idaho's continued economic prosperity. Visit STEM.Idaho.gov for more information.

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