The OU Honors College would like to thank all the presenters, faculty sponsors, moderators, judges, and staff who helped make the 31st annual Undergraduate Research Day a huge success.

Special congratulations go out to students who won Grand Prizes, Distinguished Presenter Awards, and Honorable Mention Awards, along with their faculty sponsors in each of the award-granting sessions:

**BIOLOGICAL SCIENCES**

**Grand Prize Winners**
Emily Huff with Prof. Ari Berkowitz, "Effects of Serotonin on spinally-Generated Motor Patterns in Turtles"
Albert Musaelian with Prof. Douglas Gaffin, "Computational Exploration of the Feasibility of the Navigation-By-Scene-Familiarity Hypothesis."

**Distinguished Presenter Awards**
Garrett Eakers with Prof. David Hambright, "A Molecular-Genetic Approach to Enumerating Cyanobacteria"
Lisa Ratliff with Prof. Hayley Lanier, "Establishing a Historical foundation for White Nose Syndrome in the Tri Colored Bat Species of Oklahoma"

**Honorable Mention Awards**
Sara Kelley with Prof. Douglas Gaffin, "Do Inhibitory Neurons Function as Governors in Scorpion Peg sensilla?"
Emily Eix with Prof. Paul Lawson, "Comparison of Lactic Acid Bacteria Diversity in Cow Milk from Mongolia, Switzerland and Austria"

**BIOCHEMISTRY**

**Grand Prize Winner**
Gianni Manginelli with Prof. Anthony Burgett, "Synthesis of OSW-1 Mimetics for the Development of ORP4 Precision Therapeutic Drugs"

**Distinguished Presenter Award**
Michaela Murphy with Prof. Robert Chichewicz, "Bioactive Natural Products Analysis in Complex Microbial Environment-Arrayed Fungi Co-fermentation"

**Honorable Mention Award**
Matthew Baier with Prof. Hibah Awwad, "Elevated Histamine and Histamine-3 Receptor Expression Following Traumatic Brain Injury in Rats"

**ENGINEERING/GEOLOGY/METEOROLOGY/COMPUTER SCIENCE/MATH/PHYSICS/ARCHITECTURE**

**Phi Kappa Phi Grand Prize Winner**
Rahmat Ashari with Prof. Ahmad Ghassemi, “The Study of Subsurface Fractures: Stress Shadow, Fracture Spacing and Pressure in Multistage Fracturing”

**Grand Prize Winner**
Rachel Penner with Prof. Yingtao Liu, “Fabricating Shape Memory Composites for Solar Sails”

**Distinguished Presenter Awards**
Andrew Calder with Prof. Shima Mohebbi, “Trust Layer as a Connected Autonomous Vehicle Security Component”
Alexander Pham with Prof. Hjalti Sigmarsson, “Continuously Tunable Substrate Integrated Waveguide Bandpass Filter Actuated by Liquid Metal”

**Honorable Mention Awards**
Thomas Cain with Prof. Scott Harvey, “Modeling, Characterizing, and Testing a Simple Negative Stiffness Device to Achieve Apparent Weakening”
Alan Lee with Prof. S. Lakshmivarahan, “Topology and Models of Complex Networks”

**BIOMEDICAL ENGINEERING**

**Grand Prize Winners**
Osamah Mian with Prof. Michael Detamore, "Collagen I and Hyaluronic Acid-Based Bioinks to Produce Corneal Stromal-Like Constructs"
Colton Ross with Prof. Chung-Hao Lee, "An Investigation of the Contributions of the Porcine Atrioventricular Heart Valve Leaflet Microstructure to Organ-Level Mechanical Behaviors:

**Distinguished Presenter Awards**
Paige Welch and Prof. Rong Z. Gan, "3-D Finite Element Model of the Chinchilla Ear for Modeling Sound Transmission from Ear Canal to Cochlea"
Yung Te Tsai with Prof. Chung-Hao Lee, "Application of Artificial Neural Networks to Determine the Relationship Between the Atrioventricular Heart Valve Leaflet's Mechanics and Microstructure"

**Honorable Mention Awards**
Cortland Johns with Prof. Chung-Hao Lee, "Data-Driven Computational Modeling of Heart Valve Function"
Katherine Haddad with Prof. Handan Acar, “Internalization of Folate Receptor Targeting Nanoparticles into Ovarian Cancer Cell Lines"
Emily Thomas with Prof. Michael Detamore, “2D NMR Spectroscopy for Quantification of Peptide Conjugation in Biomaterials Designed to Facilitate Neuron Regeneration”

**HUMANITIES/PSYCHOLOGY/SOCIAL SCIENCES/ANTHROPOLOGY/HEALTH & EXERCISE SCIENCES**

**Grand Prize Winners**
Ananya Bhaktaram with Prof. Abhishek Ghosh Moulick, "Residential Segregation: A Story of Health Inadequacies"
Ian Miller with Prof. Thomas Fenn, "The Archaeological Site of Marandet, Niger, and Its Role in Ancient Trans-Saharan Trade Networks"

**Distinguished Presenter Awards**
Cynthia Belardo with Prof. Janet Allen, "Menstrual Cups for Women's Empowerment in Lucknow, India"
Jaycie Thaemert with Prof. Misha Klein, "Fake Accounts and Real Identities: An Ethnographic Approach to Finstas"

**Honorable Mention Awards**
Jonathan Gogolakis with Prof. Mauricio Carvallo, "The Role of Perceived Received Affection on Job Self Efficacy"
Ella Parsons with Prof. Tassie K. Hirschfeld, "New Delhi's Toxic Air Pollution in Context; Development, Urbanization and Public Health"

**LANGUAGES AND LITERATURE**
**Phi Beta Kappa Grand Prize Winner**
Katy Felkner with Prof. Samuel J. Huskey, "Servius: An Object-Oriented Approach"

**Distinguished Presenter Award**
Jonathan Walls with Prof. Emily Johnson, "Translating the Unknown: Soviet Studies of Pamir Languages"

**Honorable Mention Award**
Aaron Brown with Prof. Emily Johnson, "Koryo-Saram: Of Both Worlds"