

2012 Undergraduate Research Day Winners, April 13

Biology - cell, micro, genetics

#1. VPS1 LOCALIZES AT CELLULAR RECYCLING AND DEGRADATION CENTERS. Alexis Brummett, Hyeun Ahn, Jacob Hayden, Joshua Lukehart, and Chad Highfill, Biology. Faculty Advisor: Kyoungtae Kim.

#2. DUAL OREXIN RECEPTOR ANTAGONIST 10 REDUCES SENSITIZATION-ASSOCIATED CELLULAR MARKERS AND DIMINISHES THERMAL NOCICEPTIVE RESPONSE AFTER REM SLEEP DEPRIVATION Logan Sullivan, Kelly Crowe, Ryan Cady and Paul L. Durham, Biology. Faculty Advisor: Paul L. Durham.

Biology - ecology, wildlife, evolution

#1. HERITABILITY OF FLORAL TRAITS IN *RUELLIA HUMILIS*. LeAnn Hubbert, Joseph Michalski, Braden McCann; Biology. Faculty Advisor: John Heywood

#2. EVALUATING DIVERSITY, ABUNDANCE, AND TOXIN POTENTIAL OF ALGAE IN MISSOURI RESERVOIRS. Lauren Bansbach, Biology. Faculty Advisors: John Havel and Russell Rhodes.

Chemistry

#1 CHARACTERIZING HELICAL DISTORTIONS IN DNA WITH SINGLE-BASE LESIONS. Christopher M. Reynolds. Faculty Advisor: Gary Meints

#2 SYNTHESIS AND CHARACTERIZATION OF TWO SUBSTITUTED ACETONITRILES – PRECURSOR FOR CYANOXIMES THAT FORM LIGHT-INSENSITIVE AG(I) COMPLEXES. Courtney Riddles and Nikolay Gerasimchuk, Chemistry. Faculty Advisor: Nikolay Gerasimchuk

Engineering -

#1. DESIGN AND FABRICATION OF CIVIL ENGINEERING FLUME DEVICE MEASUREMENT SYSTEM. Nathan Jester, Jacob Fuchs, Jon Boessen, Vishal Ganda, Electrical Engineering. Faculty Advisor: Bob Egbert.

#2. PIPE MEASUREMENT SYSTEM FOR PRESSURE, FLOW, POWER AND EFFICIENCY IN PIPE NETWORK FOR WATER RESOURCES LABORATORY. Scott Austin, Zach Engleman, Seth Bade, Philip Hubbert, Electrical Engineering. Faculty Advisor: Robert Egbert.

Geography, Geology and Planning

#1. PHYSICAL DEFORMATION AND CHEMICAL ALTERATION IN PRECAMBRIAN BASEMENT GRANITE, SOUTHWESTERN MISSOURI. Ashley C. Dameron, Thomas G. Plymate, Geography, Geology and Planning. Faculty Advisor: Dr. Thomas Plymate

#2. COMPARISON OF RADON-222 CONCENTRATIONS IN HOUSES AND THE ROCKS-SOILS THEY ARE BUILT ON USING THE PRO-3 DIGITAL RADON DETECTOR Sara Cheek, David Brannan, Geography, Geology and Planning. Faculty Advisor: Erwin Mantei.

Mathematics

#1 **PROPERTIES OF FIRST-DEGREE SYSTEMS WITH COEFFICIENTS IN ARITHMETIC, POLYNOMIAL, AND GEOMETRIC SEQUENCE.** Gerhardt Hinkle, Central High School, Mathematics. Faculty Advisor: Les Reid.

Physics, Astronomy, and Materials Science

#1. **PULSED LASER SYNTHESIZED GOLD AND COBALT NANOPARTICLES FOR BIOMEDICAL APPLICATIONS** A. M. Shearin, H. Bhatta, A. Wanekaya, R. DeLong, P. K. Kahol, K. Ghosh, Physics, Astronomy and Materials Science. Faculty Advisor: Kartik Ghosh

#2. **METAL-METAL OXIDE NANOCOMPOSITE FOR SOLAR CELL APPLICATIONS.** H. Gemar, K. Ghosh, Physics, Astronomy and Materials Science. Faculty Advisor: Kartik Ghosh

2012 I-CHRIE Central Federation Hospitality Research Symposium Winners, April 13

Dean's Awards

GREEN HOTEL DESIGN: BENEFITS AND GREEN PERCEPTIONS OF "GREENING" LODGING OPERATIONS. Catherine Blankenship, Mallory Allgier, Adam Dwiggin, Matthew Evans, Evan Hardebeck, Kyle Herren. Faculty Advisor: Dan Crafts

HOTEL GENERAL MANAGERS' PERCEPTION OF GUEST SATISFACTION WITH ENVIRONMENTALLY FRIENDLY PRACTICES. Kyle Lamm, Kurt Huelsman, Mengshi Lu, Katy Kennedy, Elijah Joplin, Jenna Lacy. Faculty Advisor; Dan Crafts