

Undergraduate Research Day – 2015

The 6th Annual CNAS Undergraduate Research Day was held on Friday, April 24. There were 45 poster presentations in a variety of categories. Pictures and abstracts of all presentations will soon be posted at <http://science.missouristate.edu/Undergraduate-Research-Day.htm> The following CNAS Faculty mentored the student projects this year:

- Damon Bassett (GGP)
- Dan Beckman (BIO)
- Rohit Dua (EGR)
- Paul Durham (BIO)
- Bob Egbert (EGR)
- Kevin Evans (GGP)
- Janice Greene (BIO)
- Melida Gutierrez (GGP)
- Kyoungtae Kim (BIO)
- Laszlo Kovacs (BIO)
- Alicia Mathis (BIO)
- Judy Meyer (GGP)
- Gary Michelfelder (GGP)
- Bob Patterson (PAMS)
- Bob Pavlowsky (GGP)
- Jorge Rebaza (MTH)
- Emmett Redd (PAMS)
- Les Reid (MTH)
- Lynn Robbins (BIO)
- Paul Schweiger (BIO)
- Matt Siebert (CHM)
- Alan Schick (CHM)
- Yingcai Su (MTH)
- Alexander Wait (BIO)
- Adam Wanekaya (CHM)

Biology: Ecology, Conservation and Wildlife

1st Place: Dana Green

SEASONAL SEX RATIO VARIATION OF GRAY BATS (MYOTIS GRISESCENS) NEAR A HIBERNACULUM IN SOUTHWEST MISSOURI

Faculty Advisor: Lynn Robbins

2nd Place: Kendell Loyd

USE OF VISUAL AND CHEMICAL CUES DURING PREDATOR DETECTION IN THE RAINBOW DARTER, ETHEOSTOMA CAERULEUM

Faculty Advisor: Alicia Mathis

Biology: Cellular, Microbiology and Genetics

1st Place: Justin Conover and Chelsea Campbell

PHENOTYPING A SEGREGANT MAPPING POPULATION OF VITIS PIASEZKII X VITIS VINIFERA HYBRIDS FOR QUANTITATIVE TRAIT LOCI ANALYSIS FOR RESISTANCE TO PLASMOPARA VITCOLA

Faculty Advisor: Laszlo Kovacs

2nd Place: Shelby Harris

EVALUATION OF COMMERCIAL SILVER-IMPREGNATED DRESSINGS TO INHIBIT GROWTH OF SILVER-RESISTANT BACTERIA ISOLATED FROM PATIENTS AT A LEVEL I TRAUMA CENTER

Faculty Advisor: Rhy Norton and Paul Durham

Chemistry

1st Place: Adam Kirkpatrick

ROTENOID BIOSYNTHESIS: COMPUTATIONAL ANALYSIS OF COMPETING IONIC AND RADICAL PATHWAYS FOR CYCLIZATION

Faculty Advisor: Matt Siebert

2nd Place: Hillary Mitchell

INKJET-PRINTED MULTI SENSOR ARRAYS ON FLEXIBLE SUBSTRATES

Faculty Advisor: Adam Wanekaya

Engineering

1st Place: Shane Jestus and Bryan Viles

OPERATING A 3 PHASE INDUCTION MOTOR FROM A SINGLE PHASE SUPPLY

Faculty Advisor: Robert Egbert

2nd Place: Tyler Harris, Daniel Hill, Jesse Sherman

DC TO AC SOURCE CONVERSION

Faculty Advisor: Robert Egbert and Rohit Dua

Geography, Geology and Planning

1st Place: Jameelah Rodriguez

GEOCHEMICAL STUDY OF Al, Cd, Pb, AND Zn FOUND IN CREEK SEDIMENT IN AURORA MISSOURI

Faculty advisor: Melida Gutierrez

2nd Place: Erica Gerweck

DESCRIPTION AND PRELIMINARY INTERPRETATION OF THE PRAIRIE CREEK DIATREME CRATER OF DIAMOND STATE PARK, ARKANSAS: A RE-EVALUATION OF THE VOLCANIC HISTORY FROM CORE ANALYSIS

Faculty Advisor: Gary Michelfelder

Mathematics

1st Place: Aaron Ogle

COUNTING PERFECT MATCHINGS IN GRAPHS

Faculty Advisor: Les Reid

2nd Place: Meagan Leppien and Mena Whalen

DYNAMICS AND BIFURCATIONS OF A CHOLERA EPIDEMIOLOGY MODEL

Faculty Advisor: Jorge Rebaza

Graduate Interdisciplinary Forum

Forty graduate students from CNAS presented their results at the Graduate College Interdisciplinary Forum. All abstracts are posted at <http://graduate.missouristate.edu/currentstudents/IDF.htm> The following CNAS Faculty mentored student projects this year:

- Chris Barnhart (BIO)
- Dan Beckman (BIO)
- Gautam Bhattacharyya (CHM)
- Paul Durham (BIO)
- Katie Fichter (CHM)
- Nick Gerasimchuk (CHM)
- Kartik Ghosh (PAMS)
- Doug Gouzie (GGP)
- Janice Greene (BIO)
- Melida Gutierrez (GGP)
- John Havel (BIO)
- Reza Herati (CHM)
- Kyoungtae Kim (BIO)
- Day Ligon (BIO)
- Alicia Mathis (BIO)
- Bob Mayanovic (PAMS)
- Gary Michelfelder (GGP)
- Kevin Mickus (GGP)
- Bob Pavlowsky (GGP)
- Mark Richter (CHM)
- Alan Schick (CHM)
- Paul Schweiger (BIO)
- Matt Siebert (CHM)
- Erich Steinle (CHM)

Oral Presentation Awards to CNAS Students

Adrienne Gemberling - Biology

Interactions among Invasive Species in Lakes: A Mesocosm Experiment

Faculty Advisor – John Havel

Alicia Kane - Chemistry

Erbium (III) Tetraphenylporphyrin-Based Ion Selective Electrodes

Faculty Advisor – Erich Steinle

Jay Krystyniak - Biology

Ranavirus Surveillance in a Turtle Community Following Population Declines

Faculty Advisors – Day Ligon and Paul Schweiger

Poster Presentation Awards to CNAS Students

Shiva Kumar Goud Gadila - Biology

Yeast Dynamin and Clathrin Interaction

Faculty Advisor – Kyoungtae Kim

Matthew Ellis - Chemistry

Gd-Doped Inp/Zns Quantum Dots for Theranostic Applications

Faculty Advisor – Katy Fichter

Nicholas Mundt - Chemistry

Design and Development of Quantum Dot Probes with Exceptionally High Fidelity for Single-Molecule Imaging

Faculty Advisor – Katy Fichter

Other Awards to CNAS Students and Faculty

Outstanding TA – Justin Drane (GGP)

Outstanding Graduate Mentor – Dr. Kyoungtae Kim (BIO)

Outstanding Thesis Advisor Awards – Dr. Kartik Ghosh (PAMS) and Dr. Erich Steinle (CHM)