

## **Undergraduate Research Symposium Program**

**Saturday, April 23, 2016**

**University of Kansas, Kansas Union**

**12:45 – 1:20 Presenter registration (sign-in & name tags) – 5<sup>th</sup> Floor Lobby**

**1:30 – 2:50 Opening Session – Woodruff Auditorium**

**Welcome:** John Augusto, Center for Undergraduate Research

**Opening Remarks:** Chancellor Bernadette Gray-Little

**Presentation:** ACE Talk Awards

### **ACE Talks:**

**1:50: Jesse Burbank**, Space, Sex, and Race: Public Space as the Setting of Social Conflict in the Desegregation of K.C.'s Swope Park Pool, 1951-1955, mentored by Sheyda Jahanbani

**2:10: Joshua Marple**, An Alternative Eye Tracking System, mentored by Jonathan Brumberg

**2:30: Jennifer Stern**, Recurrent Evolution of Venomous Spines in Cartilaginous Fishes, mentored by Leo Smith

**3:00-4:00 General Session 2**

### **Undergraduate Student Panel: "Getting Started in Research"**

**Woodruff Auditorium**

### **Oral Presentations – Sessions 2A-2H:**

#### **Session 2A: Alderson Auditorium (4<sup>th</sup> Floor)**

**3:00: Nicole Humphrey**, Local Government and Social Equity: The Role of Chief Administrative Officers, mentored by Shannon Portillo

**3:15: Jordan Jerkovich**, The Road to a Sustainable Future: Renewable Energy in Kansas, mentored by Paul Stock & Ward Lyles

**3:30: Abigail Schletzbaum**, A Critical Analysis of NGO Operations in Post-Earthquake Nepal, mentored by Brian Lagotte & Kala Stroup

### **Session 2B: Big 12 Room (5<sup>th</sup> Floor)**

**3:00: Shawn Daubert**, An application of social network analysis, mentored by Michael Vitevitch

**3:15: Cornelius Baker**, Racially and Ethnically Minoritized Groups and Their Perception of Mental Illness, mentored by Stephen Ilardi

**3:30: Yee Ming Khaw**, Familiarity and Affiliation with Anglo Names Affect Purchase Decisions of Chinese Food, mentored by Monica Biernat

### **Session 2C: Centennial Room (6<sup>th</sup> Floor)**

**3:00: Patrick Connelly**, How Mimetic Expressions in Japanese are Comprehended by Adult Native Speakers, mentored by Utako Minai & Alison Gabriele

**3:15: John-Patrick Doherty**, The Left Periphery of Ibibio, mentored by Andrew McKenzie

**3:30: Katherin Morales**, Effects of Early Life Stress on Adult Neuronal Morphology, mentored by Cara Wellman

**3:45: Hannah Morrow**, The Effects of Motor Engagement on Semantic Retrieval for Flexible Object Use, mentored by Evangelia Chrysikou

### **Session 2D: English Room (6<sup>th</sup> Floor)**

**3:00: Vincent Fiorentino**, Detection of Amino Acid Neurotransmitters in *C. elegans* via Capillary Electrophoresis, mentored by Susan Lunte

**3:15: Ricardo Gonzalez**, Detection of Peroxynitrite in Macrophage cells using HKGreen-4 and Microchip electrophoresis with laser induced fluorescence, mentored by Susan Lunte

**3:30: Elise Gao**, The Synthesis of Electrophilic Sultams as Potential Modifiers of HuR-mRNA Binding, mentored by Paul Hanson

**3:45: Alex Kong**, Establishing Kinetic Profiles and Degradation Pathways for the Tetracycline Destructases, mentored by Tim Wencewicz

### **Session 2E: Divine Nine Room (6<sup>th</sup> Floor)**

**3:00: Raul Flores**, Synergistic mixed solvent effects on the conversion of fructose to 5-hydroxymethylfurfural for bio-fuel applications, mentored by Aaron Scurto

**3:15: Dina Lyne**, Calcium-Based Microspheres Containing PLGA for Sintering into 3D Scaffolds, mentored by Michael Detamore

**3:30: Craig Vandervelden**, Using Modeling to Reduce the Time Required for Immunostaining Cells Encapsulated in Hydrogels, mentored by Stevin Gehrke

## **Session 2F: Pine Room (6<sup>th</sup> Floor)**

**3:00: Sarah Anderson**, Response of Periodical Cicadas to a Fragmented Landscape, mentored by Robert Hagen

**3:15: Kristen Manion**, Diversity of fungi on grasshoppers in urban and rural environments is similar in species richness and community structure, mentored by Benjamin Sikes

**3:30: Christian Schillo**, Whitetail Deer Populations at the University of Kansas Field Station, mentored by Robert Hagen & Lloyd Fox

## **Session 2G: Jayhawk Room (5<sup>th</sup> Floor)**

**3:00: Andrew Hoxey**, Variation in Channel Steepness as Evidence for Uplift in the Western Nepal Himalaya, mentored by Michael Taylor

**3:15: Bryce Tappan**, Gold(I) Complexes of Azulenylthiolates: Molecular and Electronic Structures, Photoluminescence, and Reactivity Profiles, mentored by Mikhail Barybin

**3:30: Addison Schile**, On the Breakdown of Linear Response: An Investigation of the Dipole Flip Model Through the Lens of Gaussian Statistics, mentored by Ward Thompson

## **Session 2H: Malott Room (6<sup>th</sup> Floor)**

**3:00: Emily Donovan**, Be Cool: A Short Story Collection, mentored by Tom Lorenz & Adam Desnoyers

**3:15: Heidi Johnson**, In Pursuit of Happiness, mentored by Meg Jamieson & Madison Davis Lacy

**3:30: Samuel Powell**, Smother, mentored by Meg Jamieson & Madison Davis Lacy

## **Poster Presentations:**

### **Session 2I: Kansas Room (6<sup>th</sup> floor)**

**Sydney Bolin (#1)**, Microplastic Ingestion in Aquatic Invertebrates, A Method for Detection, mentored by James Thorp

**Matthew Herndon and Caelan Graham (#2)**, Atmospheric [CO<sub>2</sub>] affects resource allocation and growth in *Nicotiana tabacum*, mentored by Joy Ward

**John Kelsh (#3)**, Probing the Senescence Associated Secretory Phenotype (SASP) in human follicular fluid: A potential marker of reproductive aging, mentored by Francesca Duncan

**Claire Tracy (#4)**, Identification of Unknown Tadpoles from the Philippines, mentored by Rafe Brown

**Asma Mukadam, Matt Hentges, Emma Overstreet, & Breanna Hoffman (#5)**, Pollen foraging of Kansas Native Bees, *C. inaequalis*, mentored by Deborah Smith

**Madison Cline, Camille Claro, & Aletha Loeb, (#6)**, Co-culture of bacterial hosts *Rhodococcus erythropolis* and *Gordonia terrae* for bacteriophage isolation, mentored by Robert Ward

**Aidan Dmitriev (#7)**, Characterization of the Lipooligosaccharide Transport System of *Chlamydia trachomatis*, mentored by Scott Hefty

**Mason Marshall (#8)**, Corticotropin-releasing hormone receptor 1 mediates the interaction between low monoamine oxidase A activity and early stress in aggression, mentored by Marco Bortalato

**Justin Massey (#9)**, Guilt by Association: Protein-Protein Interaction Screens in *Chlamydia trachomatis*, mentored by Scott Hefty

**Justin Mehojah (#10)**, Ewsa inhibits TP53-mutation dependent tumorigenesis in zebrafish, mentored by Mizuki Azuma

**Daniel Pham (#11)**, Studying Musashi-1 Function in Human Cancer Cells, mentored by Liang Xu

**Miki Teferra (#12)**, Mitochondrial genome sequence variation, mutation accumulation, heteroplasmy, and haplogroups associated with Alzheimer's Disease, mentored by Eli Michaelis

**Kayla Wilson (#13)**, Control of tissue specific growth in the larval trachea of *Drosophila melanogaster*, mentored by Robert Ward

**Julia Santos (#14)**, Design, synthesis, and cytotoxicity study of short peptide analogues of anticancer agent cemadotin, mentored by Blake Peterson

**Monica Ketchum (#15)**, Head Group Modifies the Extent of Surface Activity of Lipid Mixtures Interacting with the Synthetic Lung Surfactant Protein MiniB, mentored by Prajna Dhar

**Sofia de la O (#16)**, Active microrheology to detect changes in viscoelasticity due to palladin-actin binding, mentored by Prajna Dhar

**Kristina Hansen (#17)**, Model of Lateral Jetting Stimulation - A Reservoir Simulation Study Under Varying Reservoir Conditions, mentored by Reza Barati

**Matt Hartenstein (#18)**, Analysis of an Artificial Bee Colony Algorithm Through Constrained Optimization of the Knapsack Problem, mentored by Kyle Camarda

**Helena Salt (#19)**, Development of mechanically-tunable gelatin-alginate hydrogels to promote stem cell osteogenic differentiation, mentored by Arghya Paul

**Kevin Tenny & Vikram Lakhanpal (#20)**, Process for Electro-Depositing Cobalt onto Carbon Substrates for Carbon Nanotube Growth for PEM Fuel Cells, mentored by Trung Van Nguyen

**Aaron Hess (#21)**, Geologic Mapping and Geochemical Analysis of the Chimney Rock Fault and associated fault zone mineralization, Capitol Reef National Park, Utah, mentored by Diane Kamola

**Robert Marshall (#22)**, Sea Level Rise and Guam: The U.S. Military's 'Unsinkable' Aircraft Carrier, mentored by Jay Johnson & Cornelis Van Der Veen

**Emily Smith (#23)**, The search for electroweak production of a new vector-like quark T, decaying to a top quark and Higgs boson, mentored by Phil Baringer & Alice Bean

**Emmaline Lorenzo (#24)**, Non-Resonant Two-Photon Excitation of p-Hydroxyphenacyl Diethyl Phosphate, mentored by Christopher Elles

**Nicholas Martinez (#25)**, Generation and Crystallization of Human Cytochrome P450 Enzymes Involved in Cancer Therapeutic Activation, mentored by Emily Scott

**4:00-4:30 – Break**

**Join us in the 4th floor lobby for snacks with your friends, mentors, and family.**

**4:30-5:30 - General Session 3**

**Undergraduate Student Panel: “Getting Started in Research”  
Woodruff Auditorium**

**Oral Presentations – Sessions 3A-3H:**

**Session 3A: Alderson Auditorium (4<sup>th</sup> Floor)**

**4:30: Jerusha McFarland-Pitney**, The Iraqis of Lawrence: Identifying factors of Iraqi immigration to Lawrence, Kansas through interviews, mentored by Brian Lagotte & Beverly Mack

**4:45: Hannah Stevens, Quinton Buckhold, Erin Funk, and Philip Kaul**, Effects of Pullout Interventions on Beginning Band Students’ Range, Embouchure Development, Breath Support, and Articulation: A Multiple Baseline Study, mentored by Martin Bergee

**5:00: Ashlie Koehn**, Testing the Porter Hypothesis in Transition Economies, mentored by Dietrich Earnhart

**Session 3B: Big 12 Room (5<sup>th</sup> Floor)**

**4:30: Jeffery Durbin**, Are We Our Brains? The Effects of Meta-Scientific Beliefs in Responsibility Assessments, mentored by Christopher Ramey

**4:45: Joshua Mendoza**, Making Music Speak: Simulated Cochlear Implant sounds and the Speech-to-Song Illusion, mentored by Michael Vitevitch

**5:00: Madeleine Wilmsen**, The influence of the number of syllables in a word on the speech-to-song illusion, mentored by Michael Vitevitch

**Session 3C: Centennial Room (6<sup>th</sup> Floor)**

**4:30: Luanne Hale**, Delayed Reward Value in Animal Models of Obesity, mentored by David Jarmolowicz

**4:45: Sarah Cole**, Attachment security and glucose: Can relationships increase our energy?, mentored by Omri Gillath

**5:00: Will Fleming**, Delay Discounting on the Miskitu Coast, mentored by David Jarmolowicz & Laura Herlihy

**5:15: Jacob Chamberlin**, High School Athletes' Perceptions of the Motivational Climate in Their Off-Season Training Programs, mentored by Mary Fry

### **Session 3D: English Room (6<sup>th</sup> Floor)**

**4:30: Mackenzie Bloom**, Quantifying Stem Cell Number in Mouse Colon Tissue, mentored by Kristi Neufeld

**4:45: Jeremy Lippman**, Influence of Childhood Obesity on Motor Unit Behavior of the Plantar Flexors, mentored by Trent Herda

**5:00: Jessica van Loben Sels**, The N Terminus of the HSV-1 E3 Ubiquitin Ligase ICP0 Stimulates Viral Replication and Gene Expression in Cells Exposed to Interferon- $\beta$ , mentored by David Davido

**5:15: Mason Wilkinson**, Characterization of the Interaction of Yersinia Type III Secretion System Chaperone LcrG to Tip Protein LcrV, mentored by Roberto De Guzman

### **Session 3F: Pine Room (6<sup>th</sup> Floor)**

**4:30: Eric Becker**, Canthariphilous Insects in Kansas and Costa Rica, mentored by Caroline Chaboo

**4:45: Mackenzie Johnson**, Clonal interference: the effect of detrimental mutations and finite genome size on the rate of evolution, mentored by Maria Orive

**5:00: Matthew Gibson**, Connecting the Breeding System to Mating Patterns in Macaronesian *Tolpis* Using Next-Generation Genomics, mentored by Mark Mort

**5:15: Rachel Prather**, Social abilities of *C. familiaris* and the related capacity for interspecies bonding, mentored by Jennifer Gleason

### **Session 3G: Jayhawk Room (5<sup>th</sup> Floor)**

**4:30: Alec Knutsen and Jonathan Bush**, The Discrete-Time Kalman Filter and Its Applications, mentored by Bozena Pasik-Duncan

**4:45: Eilish Gibson**, Nuclear Interactions in the CMS Detector, mentored by Phil Baringer

**5:00: Christopher Rooney**, Motions of the Universe: The Velocity Correlation Function, mentored by Hume Feldman

### **Session 3H: Malott Room (6<sup>th</sup> Floor)**

**4:30: Megan Fox**, The Third Murderer Mystery: An Editorial Genealogy, mentored by Jonathan Lamb

**4:45: Madeline Hoffman**, A Fine Frenzy: Youtube, Art Culture, and Intellectual Property Law, mentored by Jonathan Lamb

**5:00: Trent Sanders**, Our "Life of": A Literacy Autobiography, mentored by Phillip Drake

## Poster Presentations:

### Session 3I: Kansas Room (6<sup>th</sup> floor)

**Aaron Anderson (#1)**, Development of the Adult Caregiver Sensory Profile, mentored by Winnie Dunn & Evan Dean

**Aly Bauer (#2)**, Self-Determination Study, mentored by Susan Palmer

**Ashley Bennett & Cassidy Nelson (#3)**, Introducing Empathy via Self-Other Overlap to Encourage Pro-Environmental Action, mentored by Rachel McDonald

**Cassidy Nelson (#4)**, Effects of Moderate and High Intensity Exercise on Positive and Negative Affect, mentored by Stephen Ilardi

**Karthik Bonam, Crystal Dawson, Sarah Eckstein, & Hayley Hume (#5)**, Investigating the Effects of Video Games on Attention, mentored by Evangelia Chrysikou

**Hannah Boyd (#6)**, Collective Memory of 9/11- Part 2, mentored by Glenn Adams

**Halle Nick (#7)**, The influence of word overlap on the speech-to-song illusion, mentored by Michael Vitevitch

**Abigail Hartzell (#8)**, Sound Localization in Reverberant and Noisy Settings, mentored by Kostas Kokkinakis

**Shaina Stasi (#9)**, Effect of Glottal Source Characteristics on Speech Perception, mentored by Jon Brumberg

**Alyssa Ott, Jamie Venzian, Shelbi Polasik, & Rebecca Kurtz (#10)**, They did what? A Systematic Review of Music Intervention Reporting in Healthcare Research, mentored by Deanna Hanson-Abromeit

**Dustin Brockert (#11)**, Attachment Style, Sexual Strategies, and Love Songs, mentored by Omri Gillath

**Keonya Jackson (#12)**, Tongue Twisters in Arabic speakers learning English as a second language, mentored by Joan Sereno & Michael Vitevitch

**Emily Campbell (#13)**, Mood and Food: The Relationship Between Affect and Food Consumption in Adolescents, mentored by Christopher Cushing

**Quinton Cheney (#14)**, Examining The Effects of Positive and Negative Priming on the Desirability of Marriage for Young, Never-Married Women and Men, mentored by Nyla Branscombe

**Austin Flohrschutz (#15)**, The Effects of Andodal Transcranial Direct Current Stimulation Over Prefrontal Cortex on a Flexible Object Use Task, mentored by Evangelia Chrysikou

**Alexandra Fowler (#16)**, Examining the Impact of Mood on Executive Function Using a Novel Measure of Emotion Regulation Flexibility, mentored by Evangelia Chrysikou

**Karynn Glover (#17)**, Helping WIN (Women's Intersport Network of Kansas City) Provide a Winning Environment for Girls in their Summer Sport Camps, mentored by Mary Fry

**Terrence Harris (#18)**, Race, Poverty, and the Legitimacy of 'Stop-and-Frisk', mentored by Chris Crandall

**Scott Curry (#19)**, Effects of Probabilistic Arrangements of Varied Incentive Magnitudes on Task Performance in a Simulated Work Setting, mentored by Florence DiGennaro Reed

**Riley Hess (#20)**, Understanding what Black Men Want in a Chronic Disease Self-Management Program, mentored by Tamara Baker

**Amy Ink (#21)**, Examining the Role of Income on the Association Between Chronic Illness and HRQOL in Youth, mentored by Christopher Cushing

**Yee Ming Khaw, Emily Yoder, Amanda Gerber, & Cory Sessum (#22)**, Effects of Facial Expression Regulation on Physiological Responses, mentored by Evangelia Chrysikou

**Dongyu Li (#23)**, Mother or Spouse? Filial Piety, Romance, and the Meaning of Love, mentored by Glenn Adams

**Austen McGuire (#24)**, The Utility of Attachment Priming as an Intervention Among Youth with Traumatic Experiences, mentored by Omri Gillath & Yo Jackson

**Baylee Owen (#25)**, The Association Between Adolescent Aggression, Drug Use, and the Role of Family Cohesion, mentored by Christopher Cushing

**Shelby Rowley (#26)**, Subjective Informant Reports On Cognitive Decline In Older Adult Multiple Sclerosis Patients, mentored by Michael Vitevitch

**Austin Svancara (#27)**, Distracted Driving Habits Among Self-Reported ADHD Groups, mentored by Ruth Ann Atchley & Paul Atchley

**Hunter Tate (#28)**, Outcomes of Adopting Anglo Names among Chinese Students in the U.S., mentored by Monica Biernat

**Nadia Vossoughi (#29)**, Racial Prejudice in Age Perception of Black Adolescent Girls, mentored by Chris Crandall

**Elizabeth Waldberg (#30)**, The Effect of American Responsibility for Global Warming on Willingness to Act, mentored by Rachel McDonald

**Cece Wolfner & Rucha Kandlur (#31)**, Depression and Dieting, mentored by Nancy Hamilton

**Liran Ziegelman (#32)**, Cognitive Control in Preadolescent Children With Risk Factors for Metabolic Syndrome: A Longitudinal Examination and Reanalysis, mentored by Joseph Donnelly

**Aadil Khan (#33)**, Social Dominance Hierarchy and Social Stress: The Role of Collective Self-Esteem in BMI and Waist-to-Hip Ratio of Female College Freshmen, mentored by Nancy Hamilton

**Drew Belanger (#34)**, Bullying Intervention and Prevention, mentored by Anne Williford

**Jonathan Dudrey (#35)**, Studying the effects of the Digital Divide both at home and abroad, mentored by Yvonne Chen

**Marah Schlingensiepen (#36)**, Prisoners' Perceptions of Justice, mentored by Shannon Portillo

**Paige Englert (#37)**, Kansas City Hopewell Scraper Study, mentored by Jack Hofman

**Dory Tuininga, Jacob Goering, Dustin Patterson, & Cale Johnson (#38)**, Are You Safe Here? Spatial Perceptions of Safety at KU, mentored by Jay Johnson & Kees Van Der Veen



**Taylor Ivey, Eric Lord, Jordan Lienemann, Lyndsey Varella, & Abbey Whisler (#39), A Heated Debate? Assessing KU Student Perspectives on Climate Change, mentored by Jay Johnson & Kees van der Veen**

**Xingzhe Tao (#40), Culture and Architecture in UAE, mentored by Nilou Vikil**

**5:30 – Symposium Banquet, Ballroom**

*For all student presenters, their mentors, and their guests. RSVP requested.*

**Welcome:** John Augusto, Center for Undergraduate Research

**Presentation of Awards:**

K. Barbara Schowen Undergraduate Research Mentor Award (faculty)  
Undergraduate Research Mentor Award (academic staff/graduate students)  
Outstanding Presentation Awards (students)