

## 2018 University Undergraduate Research and Arts Forum

### 1<sup>st</sup> Place Recipients

Category	Type	Section	Presenters	Title
Agriculture and Animal Science	Oral	1	Anna Bosgraaf	IS INCREASED AGGRESSIVE BEHAVIOR IN FINISHER PIGS POST-MIXING A RELIABLE PREDICTOR OF DECREASED LONG TERM PEN STABILITY?
Agriculture and Animal Science	Oral	2	Emmaline Gates	EFFECTS OF HOST SPECIES ON THE BIOTIC POTENTIAL OF THE ASIAN PARASITOID WASP, TRISSOLCUS JAPONICUS
Agriculture and Animal Science	Poster	1	Adam Constine	SHADING INFLUENCES COVER CROP AND WEED GROWTH AND PHOTOSYNTHESIS
Agriculture and Animal Science	Poster	2	Espoir Tuyisenge	COLLECTIVE ACTION AND COFFEE PRODUCTIVITY IN RWANDA'S SPECIALTY COFFEE SECTOR
Agriculture and Animal Science	Poster	3	William Yakah	ASSOCIATION OF WHOLE BLOOD FATTY ACIDS AND GROWTH IN GHANAIAN CHILDREN 2-6 YEARS OF AGE
Agriculture and Animal Science	Poster	4	Expery Omollo	NEMATODE QUANTIFICATION USING QPCR
Agriculture and Animal Science	Poster	5	Laura Ford	IDENTIFICATION AND EXPRESSION PROFILING OF NOVEL MICRORNAs IN PIG FETAL SKELETAL MUSCLE
Agriculture and Animal Science	Poster	6	Olivia Child	THE EFFECTS OF PORCINE ZONA PELLUCIDA CONTRACEPTIVE VACCINE ON EQUID UTERINE MORPHOLOGY
Anthropology	Oral	1	Funmi Odumosu	INSURANCE COMPANIES SETTING THE RULES FOR MEDICINE: A CLOSER LOOK AT THE POWER DYNAMICS BETWEEN PROVIDERS, PATIENTS, AND INSURERS IN A DIABETES CLINIC
Anthropology	Poster	1	Rebecca Albert	TEMPORAL ANALYSIS OF PLANT DIET AT THE CLOUDMAN SITE
Anthropology	Poster	2	Mary Corbitt	EXPLORING ASSOCIATIONS BETWEEN MATERNAL ANEMIA AND BREAST MILK MACRONUTRIENTS USING SAMPLES FROM ARIAL WOMEN IN NORTHERN KENYA
Biochemistry and Molecular Biology	Oral	1	Talha Ali, Anahita Saifollahi	STRUCTURE-FUNCTION RELATIONSHIPS OF CSPZ
Biochemistry and Molecular Biology	Poster	1	Madison Smith	Identifying Interacting Proteins of Shugoshin (Sgo1) During Mitosis in <i>Saccharomyces cerevisiae</i>

Biochemistry and Molecular Biology	Poster	2	David Nava	USE OF A POPULATION-GUIDED APPROACH TO IDENTIFY NOVEL GENETIC MODULATORS OF TCDD-INDUCED LIVER TOXICITY
Biochemistry and Molecular Biology	Poster	3	Jadan Norman	SWITCHING TO SUGARS: OPTIMIZING METAL CATALYZED PRETREATMENTS FOR SWITCHGRASS
Biochemistry and Molecular Biology	Poster	4	Elizabeth Lyons	INTERACTION OF PROTEINS INVOLVED IN THE SPORULATION OF BACILLUS SUBTILLIS: SPOIVFA AND BOFA
Biochemistry and Molecular Biology	Poster	5	Jordan Maust	EFFECT OF FIVE COMPOUNDS ON ADIPOCYTE DIFFERENTIATION IN AN IN VITRO MOUSE MODEL
Business	Oral	1	James Anders	EFFECTS OF NATURAL DISASTERS ON THE STOCK MARKET (OR LACK THEREOF)
Business	Oral	2	Taylor Kearly, Mackenzie Sappe, Natalie Villarreal	HOSPITALITY EMPLOYEE WELLNESS PROGRAMS
Business	Poster	1	Macklin Carron, Jamil Rehemtulla, Claire Wojan	BUYING MONEY TO MAKE MONEY: DOES IT WORK?
Business	Poster	2	Regin Horan	LONGITUDINAL SAFETY IMPROVEMENT IN THE MOTOR CARRIER INDUSTRY
Cell Biology, Genetics, and Genomics	Oral	1	Richard Kim, Ramya Erasala	EFFECTS OF COMBINATION ENDOCRINE TREATMENTS ON BREAST CANCER CELLS
Cell Biology, Genetics, and Genomics	Poster	1	Abigail Bryson	DIMENSIONS OF FUNGAL DIVERSITY: NON-ESSENTIAL ENDOBACTERIAL SYMBIONTS IMPART A FITNESS COST TO THEIR HOST
Cell Biology, Genetics, and Genomics	Poster	2	Hayden Stoub	AN IN VIVO MURINE MODEL OF MLK3 DEFICIENT METASTATIC BREAST CANCER
Cell Biology, Genetics, and Genomics	Poster	3	Eli Falk	VALIDATION OF FGF-INDEPENDENT CELL FATE MARKERS OF THE PRIMITIVE ENDODERM LINEAGE

Cell Biology, Genetics, and Genomics	Poster	4	Kelly Geith	INVESTIGATING THE MECHANISMS OF G-QUADRUPLEX LIGAND INDUCED DNA REPAIR
Cell Biology, Genetics, and Genomics	Poster	5	Brandon Llewellyn	THE EFFECTS OF AN MLK FAMILY INHIBITOR ON CELL PROLIFERATION AND MAPK PATHWAY SIGNAL INDUCTION IN LUNG SQUAMOUS CELL CARCINOMA
Communication Arts and Sciences	Poster	1	Jinghan Ni	AUTONOMOUS TAXI USER INTERFACE RESEARCH AND DESIGN
Communication Arts and Sciences	Poster	2	Jessica DeClercq	WEARABLE ACTIVITY TRACKERS AND OLDER ADULTS: THE SOCIAL EFFECT AND IMPORTANCE IN HEALTHCARE
Communication Arts and Sciences	Poster	3	Katie Whalen	EXPLORING THE LACK OF DIVERSITY IN THE FIELD OF COMMUNICATION SCIENCES AND DISORDERS
Communication Arts and Sciences	Poster	4	George McNeill	MEDIATING TREATMENT OF ACROPHOBIA WITH VIRTUAL REALITY: A CASE STUDY WITH "RICHIE'S PLANK EXPERIENCE" & IN-VIVO EXPOSURE THEORY.
Digital Media	Oral	1	Alexa Seeger	BIAS BUSTING MOTION GRAPHICS
Digital Media	Oral	2	Terrence Peugh, Alec Comes	STANDING UP
Education	Oral	1	Brittany Mankowski	EFFECTS OF DEMOGRAPHICS AND PRIOR EXPERIENCE ON SUCCESS IN AN INTRODUCTORY ANIMAL SCIENCE COURSE
Education	Poster	1	Tim Herd	CLOSING THE OPPORTUNITY GAPS FOR BLACK MALES IN K-12 EDUCATION
Education	Poster	2	Sydney Miller, Kelsey Johnson, Rachel Stadwick	THE RELATIONSHIP BETWEEN PRESCHOOL CHILDREN'S ORAL AND WRITTEN LANGUAGE ON A COMPOSITION TASK
Education	Poster	3	Margaret Jones	FEMALE FACULTY IN STEM AT MSU:DEPARTMENT FISHERIES AND WILDLIFE AT MSU COMPARED TO OTHER MIDWEST UNIVERSITIES
Education	Poster	4	Robert McKay	GETTING A CLUE (ABOUT CHEMISTRY) IN HIGH SCHOOL
Engineering, Computer Science, and Mathematics	Oral	1	Brianna Forsthoefel	DETECTING CARDIAC ARRHYTHMIA FROM ECG SIGNALS USING THE 0-1 TEST FOR CHAOS

Engineering, Computer Science, and Mathematics	Poster	1	Nathaniel Arnold	THREE-ARM POLY ( $\epsilon$ -CAPROLACTONE) POLYMERIZATION USING TWIN-SCREW EXTRUSION
Engineering, Computer Science, and Mathematics	Poster	2	Brandi Mazzella	A TWO-DIMENSIONAL MECHANICAL MODEL OF THE INDEX FINGER
Engineering, Computer Science, and Mathematics	Poster	3	Vasha Sedlacek	CELL/PARTICLE ISOLATION AND FILTRATION USING PASSIVE DEFORMABLE MICROFLUIDICS
Engineering, Computer Science, and Mathematics	Poster	4	Brad Luzenski	PLASMA ETCHING OF CARBON-BASED SUPERCAPACITORS
Engineering, Computer Science, and Mathematics	Poster	5	Orwell Madovi, Joshua Ward	ADDITIVE MANUFACTURING AND MOTORS
Engineering, Computer Science, and Mathematics	Poster	6	Stefanos Palestis	COMPARISON OF SPIKE SORTING STRATEGIES FOR NEURAL DATA ANALYSIS
Environmental Science and Natural Resources	Oral	1	Hannah Peplinski	COOKING PROPERTIES AND NUTRITIONAL EVALUATION IN A DIVERSE SET OF DRY BEANS ( <i>PHASEOLUS VULGARIS L.</i> ) COLLECTED FROM THE MARKETPLACES OF EAST AFRICA.
Environmental Science and Natural Resources	Poster	1	Andrew Kozel	STALKING THE CATALYST THROUGH THE COPPER AHP PRETREATMENT PROCESS FOR ETHANOL PRODUCTION
Environmental Science and Natural Resources	Poster	2	Abby Sulesky	SUPPLEMENTING MUNICIPAL WASTEWATER FOR SUSTAINABLE BIOFUEL PRODUCTION WITH CYANOBACTERIA

Environmental Science and Natural Resources	Poster	3	Benjamin McCarthy	KANSAS IRRIGATION: ENERGY CONSUMPTION OVER THE LAST 25 YEARS
Environmental Science and Natural Resources	Poster	4	David Chalmers	COMPARATIVE ANALYSIS OF HYPERALKALIPHILES FROM SERPENTINITE-INFLUENCED ENVIRONMENTS
Epidemiology and Public Health	Poster	1	Alexander Lafler	SOCIAL AND SPATIAL DISPARITIES OF ASTHMA IN MICHIGAN AND WISCONSIN
Epidemiology and Public Health	Poster	2	Hamza Kaakarli	EPIDEMIOLOGICAL EVIDENCE ON INCIDENCE OF OXYCONTIN® USE, 2004-2014
Food Science and Human Nutrition	Oral	1	Kristen Schmidt	PERSISTENCE OF THE TETB ANTIBIOTIC-RESISTANCE GENE IN THE FECAL MICROBIOTA OF PREGNANT WOMEN AND THEIR INFANTS.
Food Science and Human Nutrition	Poster	1	Anna Jursinic, Miya Hourani	DIETARY QUALITY OF FOODS AND BEVERAGES SERVED BY IN-HOME CHILD CARE PROVIDERS COMPARED TO THE 2015 DIETARY GUIDELINE RECOMMENDATIONS
Food Science and Human Nutrition	Poster	2	Kristen Gilley	DIETARY SUPPLEMENTATION WITH OMEGA-3 DOCOSAHEXAENOIC ACID AT PHYSIOLOGICALLY RELEVANT CONCENTRATIONS BLOCKS SILICA-INDUCED AUTOIMMUNE GENE EXPRESSION IN LUNGS OF LUPUS-PRONE FEMALE NZBWF1 MICE
Global and Area Studies	Oral	1	Madelyn Averill	RE-IMAGINING STRI SHAKTI: FEMALE LEADERSHIP IN A HINDU NATIONALIST DISCOURSE
History, Political Science, and Economics	Oral	1	Babs Hough	FACTORS ASSOCIATED WITH POLICY ADOPTION ACROSS US STATES
History, Political Science, and Economics	Oral	2	Jessica Alcaraz	MEASURING THE EFFECTS OF ETHNIC HATE RADIO ON VIOLENCE AND DISCRIMINATION IN KENYA

History, Political Science, and Economics	Poster	1	Nicole Jedding	AMERICA'S DRUG CRISES: TRANSITION FROM A CRIMINAL-JUSTICE MATTER TO A PUBLIC-SAFETY PROBLEM THROUGH RACIAL PERCEPTIONS
History, Political Science, and Economics	Poster	2	Dean Martin	MNRTF RECIPIENT STUDY
History, Political Science, and Economics	Poster	3	Garrett Jones	INTERNATIONAL ARCHIVES: THE CLASSICAL WORLD'S IMPACT ON THE FOUNDING FATHERS
Humanities and Performing Arts	Oral	1	Norrlyn-Michael Allen	CIVIC ENGAGEMENT
Humanities and Performing Arts	Oral	2	Ramon Wright	THE QUESTION OF AFRICAN AMERICAN PHILOSOPHY: RECOVERY AND CORRESPONDANCE
Humanities and Performing Arts	Poster	1	Juliette Givhan	THE ART OF INFERTILITY PROJECT
Integrative and Organismal Biology	Poster	1	Ashley O'Toole	MECHANISMS UNDERLYING VARIATION IN MATERNAL RANK INHERITANCE DURING DEVELOPMENT OF SPOTTED HYENAS CROCUTA CROCUTA
Integrative and Organismal Biology	Poster	2	Sarah Johanknecht	EFFECTS OF EVOLUTION ON DIVERSITY WITHIN BIOLOGICAL RESERVES
Integrative and Organismal Biology	Poster	3	Julie Javorka	PLAY PARTNER PREFERENCES IN SPOTTED HYENAS (CROCUTA CROCUTA)
Kinesiology	Oral	1	Lauren Jackson, Shelby Weaver	EXAMINING RELATIVE RISK AND CLINICAL INCIDENCE OF SPORT-RELATED CONCUSSIONS BETWEEN TWO ATHLETIC SEASONS
Kinesiology	Poster	1	Bradley Miller	COHERENCE BETWEEN BRAIN REGIONS IN A BIMANUAL INTERFERENCE TASK
Kinesiology	Poster	2	Aubrey Haughn	UNDERSTANDING HOW SYMBOLIC AND DIRECT CUING AFFECT INTERFERENCE IN A BIMANUAL REACHING TASK
Kinesiology	Poster	3	Brianne Rajala	SKILL BASED DIFFERENCES IN FUNDAMENTAL MOTOR SKILLS OF CHILDREN WITH AUTISM SPECTRUM DISORDER AND DOWN SYNDROME

Kinesiology	Poster	4	Jessica Kahn	DIFFERING RESPONSES TO GROSS MOTOR INTERVENTION OF TWO PRESCHOOLERS VARYING ON THE AUTISM SPECTRUM
Linguistics, Languages, and Speech	Oral	1	Melissa Kleinfeld, Lizzy Gifford	DOES LANGUAGE KNOWLEDGE HAVE AN EFFECT ON LISTENER'S QUALITY VOICE PERCEPTION?
Linguistics, Languages, and Speech	Poster	1	Jacob Nitzkin	F2 TRANSITION EXTENT DIFFERENCES IN CHILDREN WHO STUTTER AND FLUENT PEERS
Linguistics, Languages, and Speech	Poster	2	Rachel Stacey, Bobby Felster, Adam Smolinski	INCLUSIVE OR EXCLUSIVE: FACTORS THAT DETERMINE CHILDREN'S INTERPRETATION OF 'OR'
Microbiology, Immunology, and Infectious Disease	Oral	1	Nana Anti	USING FLUORESCENT REPORTER STRAINS TO DETERMINE IF ETHOXZOLAMIDE NEUTRALIZES THE PH OF THE MYCOBACTERIUM TUBERCULOSIS CELL ENVELOPE
Microbiology, Immunology, and Infectious Disease	Poster	1	Emily Juzwiak	ISOLATING MYCOBACTERIUM SMEGMATIS MUTANTS RESISTANT TO A NOVEL TUBERCULOSIS ANTIMICROBIAL
Microbiology, Immunology, and Infectious Disease	Poster	2	Mitchell Zachos	THE TREATMENT OF CHRONIC INFECTION USING HONEYBEE DERIVED MELITTIN
Microbiology, Immunology, and Infectious Disease	Poster	3	Ryan Griffin	NHERF1 IS A NEGATIVE REGULATOR OF INKT CELL CYTOKINE PRODUCTION AND CYTOTOXICITY
Microbiology, Immunology, and Infectious Disease	Poster	4	Julian Liber	USE OF HYPHAL IMAGE ANALYSIS AND MACHINE LEARNING TO CLASSIFY MUCOROMYCOTA SOIL FUNGAL ISOLATES
Microbiology, Immunology, and Infectious Disease	Poster	5	Keenan O'Dea	CHARACTERIZING INHIBITORY MECHANISMS OF LACTOBACILLUS MURINUS AGAINST CAMPYLOBACTER JEJUNI GROWTH
Microbiology, Immunology,	Poster	6	Ben Sims	COMBATTING DRUG RESISTANT ENTEROBACTER CLOACAE

and Infectious Disease				
Neuroscience	Poster	1	Sadhana Chinnusamy	UNDERSTANDING DEPRESSION: AN INVESTIGATION INTO THE EFFECTS OF $\Delta$ FOSB AFTER CHRONIC STRESS
Neuroscience	Poster	2	Aakash Dave	AMERICAN MEDICAL STUDENTS ATTITUDES' TOWARDS DIFFERENT MODALITIES OF NEUROENHANCEMENT
Neuroscience	Poster	3	Emily Steffke	ROLE OF SGK1 IN HIPPOCAMPAL DENDRITIC SPINE MORPHOLOGY AFTER CHRONIC COCAINE
Neuroscience	Poster	4	Ali Stark	DETERMINING WHETHER MORPHINE-INDUCED INCREASES IN VTA SGK1 S78 PHOSPHORYLATION ARE CELL TYPE SPECIFIC
Pharmacology and Toxicology	Poster	1	Brooke Brauer	METHYLMERCURY CAUSES INTRACELLULAR CALCIUM DYSREGULATION IN SPINAL CORD SLICES FROM SOD1G93A MICE THAT IS REDUCED BY RILUZOLE TREATMENT
Pharmacology and Toxicology	Poster	2	Amy Freeland	DOCOSAHEXAENOIC ACID CONSUMPTION BLOCKS SILICA-TRIGGERED AUTOIMMUNE RESPONSES IN THE KIDNEYS AND LUNGS OF LUPUS-PRONE MICE.
Physical Sciences	Oral	1	Michael Roosa	SIMULATING THE RESPONSE OF A NEW $\beta$ -DELAYED PROTON DETECTOR
Physical Sciences	Oral	2	Carolyn Francis	MELT GENERATION AND RESERVOIR CONTRIBUTIONS OF EAST AFRICAN RIFT BASALTIC ROCKS SPANNING THE PLIocene TO PRESENT
Physical Sciences	Poster	1	Shatha Alabbad	PERFORMANCE OF A CRYOGENIC TEMPERATURE SENSOR FOR A SINGLE ATOM MICROSCOPE
Physical Sciences	Poster	2	Daniel Oleynik	SITUATING DEBUGGING LITERATURE IN GROUP COMPUTATIONAL ENVIRONMENTS
Physical Sciences	Poster	3	Felix Ishimwe	SPATIAL VARIATION OF MORPHOLOGY AND GEOCHEMICAL COMPOSITION IN KARISIMBI LAVA FLOWS.
Physical Sciences	Poster	4	Don Nguyen	ANALYSIS OF NEUTRON CAPTURE REACTIONS TO UNDERSTAND NEUTRON STAR MERGERS
Physical Sciences	Poster	5	John Walch	HYDROGEN BONDING EFFECT ON ELECTROCATALYTIC UPGRADING OF LIGNIN MONOMERS TO BIOFUELS
Plant Sciences	Poster	1	Kasey Pham	A BIOINFORMATICS APPROACH TO FINDING FIRING GENES IN FUSARIUM
Plant Sciences	Poster	2	Aleksandar Bonev	CVNODULE: A TOOL FOR RAPID NODULE IDENTIFICATION
Psychology	Poster	1	Valerie Kemp	POLICE OFFICER TRAINING AND RACE BIAS IN WEAPON MISIDENTIFICATION



Psychology	Poster	2	Andrew Dumont, John Bigham, Kaitlin Lord, Emily Torossian	THE INFLUENCE OF LOSS AND GAIN ASSOCIATIONS ON ATTENTION
Psychology	Poster	3	Joshua Confer	FREE WILL AND PUNISHMENT
Psychology	Poster	4	Mitchell Isaacs, Jessica Fattal	PERSONALITY INFLUENCES ON REWARD-BASED DECISION-MAKING
Psychology	Poster	5	Ling Peng, Skylar DeWitt, Will Eckerle, Kalina Foster, Megan Wright	MINDFUL OF MISTAKES: PARSING THE POLYLITHIC NATURE OF MINDFULNESS IN RELATION TO ERROR MONITORING
Psychology	Poster	6	Madeline Bross, Virginia Smith	MITIGATING THE EFFECTS OF SLEEP DEPRIVATION ON PLACEKEEPING ABILITY WITH CAFFEINE
Social Science: General	Oral	1	Allison Pail	THE EFFECTIVENESS OF VARIOUS INTERVENTIONS IN ALTERING PERCEPTIONS OF REFUGEES
Social Science: General	Oral	2	Taylor Peterson	PROJECT HAMMOCK: MIXED-METHOD STUDY OF HAMMOCK USE ON MSU CAMPUS
Social Science: General	Poster	1	Emily Jenkins	POLICY CHANGES GUIDED BY STATE REPUBLICAN LEGISLATURES SINCE 1990
Social Science: General	Poster	2	Eleanor Rappolee	SOCIAL SEISMICITY: ASSESSING THE USE OF SOCIAL MEDIA DATA IN ANALYZING MICHIGAN EARTHQUAKES
Social Science: General	Poster	3	Emily Rusher, Angela Salerio	BOYS WILL BE BOYS AND GIRLS WILL BE EMOTIONAL: EARLY GENDER SOCIALIZATION THROUGH MENTAL STATE TALK
Social Science: General	Poster	4	Doris Olekanma	THE EFFECTS OF OBESITY ON FOOD-CUE TRIGGERED EATING IN THE ABSENCE OF HUNGER
Social Work	Poster	1	Myia Hall	MAKING THE FAMILY COURT SYSTEM EFFECTIVE FOR PARENTS WITH MENTAL ILLNESS: PARENTS' PERSPECTIVES
Social Work	Poster	2	Joseph Ingall	DETROIT TRANSPORTATION: A QUALITATIVE STUDY