



Office of
UNDERGRADUATE RESEARCH
THE UNIVERSITY OF UTAH

2022 Undergraduate Research Symposium

**TUESDAY, APRIL 5, 2022
9:00AM - 2:30PM
OLPIN UNION BLDG.
UNIVERSITY OF UTAH**



2022 UNDERGRADUATE RESEARCH SYMPOSIUM

Tuesday, April 5, 2022
9:00AM – 2:30PM
Olpin Union
University of Utah

We are grateful for the generous support of:



We would like to acknowledge the Office of the President, the Office of the Senior Vice President for Academic Affairs, and the Office of the Vice President for Research.

Finally, we would like to extend our utmost pride and congratulations to the students, graduate students, and faculty mentors without whose efforts and dedication this event would not be possible.

THANK YOU, DONORS!

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2022 UNDERGRADUATE RESEARCH SYMPOSIUM PROGRAM SCHEDULE

NOTE: All student presenters MUST check-in

SESSION I 9:00 – 10:30AM

8:30AM

Check-in

Union Corridor

8:45 – 9:00AM

Poster Setup

Main Ballroom

9:00 – 10:30AM

Poster Session I

Main Ballroom

9:00 – 10:30AM

Oral Session I

(Room 312 and Parlor A)

SESSION II 10:45 – 12:15PM

10:15AM

Check-in

Union Corridor

10:30 – 10:45AM

Poster Setup

Main Ballroom

10:45 – 12:15PM

Poster Session II

Main Ballroom

10:45 – 12:15PM

Oral Session II

(Room 312 and Parlor A)

SESSION III 1:00 – 2:30PM

12:30PM

Check-in

Union Corridor

12:45 – 1:00PM

Poster Setup

Main Ballroom

1:00 – 2:30PM

Poster Session III

Main Ballroom

2022 UNDERGRADUATE RESEARCH SYMPOSIUM SCHEDULE OF PRESENTATIONS

ORAL SESSION I 9:00 – 10:30AM

ROOM 312

Moderator: **Yang Bai** (College of Health)

- 9:00am **Katee Perez** (Amy Lenz)
Department of Bioengineering
*Conventional CT versus Weightbearing CT Imaging
Techniques: A Cadaveric Evaluation*
- 9:20am **Andrew Payne** (Yang Bai)
Department of Health, Kinesiology, and Recreation
*The validation of activity monitors designed for children in
estimating step counting*
- 9:40am **Zak Wankier** (Sarina Sinclair)
Department of Orthopaedics
*Use Of Computer Tomography Imaging To Observe
Increased Distal-End Cortical Bone Around A
Percutaneous Osseointegrated Implant*
- 10:00am **Job Huxford** (Marco Bortolato)
Department of Pharmacology and Toxicology
*Validation of CELSR3 HZ: A Mouse Model of Tic
Disorders*

PARLOR A

Moderator: **Andrey Rogachev** (Mathematics)

- 9:00am **Steven Marz** (Andrey Rogachev)
Department of Physics & Astronomy
Optoadmittance spectroscopy
- 9:20am **Ava Peitz** (Ming Hammond)
Department of Chemistry
New Techniques for the Fluorescence Quantitation of cGAMP Expression
- 9:40am **Emily Yang** (Ryan Steele)
Department of Chemistry
Quantum Chemistry Simulations on the Structure and Vibrational Signatures of Tropine
- 10:00am **Zoe Philippides** (Tabitha Benney)
Department of Political Science
Environmental Policy On The Wasatch Front From A Coupled-Human And Natural Systems Perspective

ORAL SESSION II
10:45AM – 12:15PM

Room 312

Moderator: **Rebecca Utz** (Health, Society & Policy)

10:45am **Shane Denherder** (Elisabeth Conradt)
Department of Psychology
*Physiological Responses to an Online Infant Cry Stimulus
task in Expectant Mothers*

11:05am **Anna Henderson** (Maureen Mathison)
Department of Writing & Rhetoric Studies
*The rhetoric of thrifting: From Goodwill to DePop, from
charity to trend*

11:25am **Madeleine Sorenson** (Rebecca Utz)
Department of Sociology
*Family Caretakers: The Socio-Emotional Impacts of Caring
for Loved Ones at the End-of-Life*

PARLOR A

Moderator: **Wesley Hamilton** (Datathon4Justice)

10:55am **Team B:** Emily Erickson

11:05am **Team C:** Lauren Mickelson, Nathan Hansen, Ian Wixom, Brianna Mendoza

11:15am **Team D:** Sarthak Tiwari, Justin Kelleher

11:25am **Team E:** Muskan Walia, Harrison Webb, Mick Wagner, Shaylie Platten, Teric Abunuwara

POSTER SESSION I
9:00 – 10:30AM

MAIN BALLROOM

- Poster 1:** **Comstock** (Brian Snapp)
Department of Art & Art History
A Balmy Elsewhere: Manifesto for Restorative Materialism
- Poster 2:** **Elisa Diaz** (CoCo James)
LEAP
Experiencing the US Food System: A Peruvian Mother
- Poster 3:** **Sarah Orozco** (Veronica Valdez)
Department of Education, Culture & Society
Perspectives over time: How teacher's beliefs and practices change during ESL teacher Preparation
- Poster 4:** **Briggs Miller** (William Brazelton)
Department of Biological Sciences
The Lost City Hydrothermal Field: Microbial Diversity and Clues Into the Emergence of Life on Earth
- Poster 5:** **Jake Lowe** (William Brazelton)
Department of Biological Sciences
Metagenomic exploration of chemoautotrophs in the Lost City hydrothermal ecosystem
- Poster 6:**
- Poster 7:** **Lauren Harvey** (Thomas Michael Swensen)
Division of Ethnic Studies
Termination Policy and the Historicizing of Indigenous Peoples
- Poster 8:** **Frances Lucas** (Annie Fukushima)
Department of Ethnic Studies
Domestic Violence in the Latinx community

- Poster 9:** **Drew Becker** (Jennifer Weidhaas)
Department of Civil and Environmental Engineering
*Escherichia Coli Coliform Analysis Using Microbial Source
Tracking in Emigration Creek*
- Poster 10:** **Samuel Campbell** (Tamara Bidone)
Department of Bioengineering
*Using the molecular clutch model to understand the regulatory role
of the extracellular matrix's mechanical and microstructural
properties on cell migration*
- Poster 11:** **Clara Coffey** (Dr. Jessica Kramer)
Department of Bioengineering
*Synthesis and characterization of clickable polyproline-based
materials*
- Poster 12:** **Aidan Copinga** (Alan Kuntz)
School of Computing
Gradient-free optimization of tendon continuum robot design
- Poster 13:** **Nichols Crawford Taylor** (Tucker Hermans)
School of Computing
Precondition Checking Methods and Comparison
- Poster 14:** **Alyssa Harpring** (Thomas Zangle)
Department of Chemical Engineering
*Comparing Particle Image Velocimetry to Standard Particle
Tracking Velocimetry for Organelle Tracking*
- Poster 15:** **Erick Lawrence** (Huiwen Ji)
Department of Materials Science and Engineering
Practical Design of Ultrathick Ni-Rich Li-ion Cathodes
- Poster 16:** **Miranda Nicholson** (Amy Lenz)
Department of Bioengineering
*Observations of Ankle Osteoarthritis Severity Quantified by 3D
Modeling*
- Poster 17:** **Lizzie Pinegar** (Kody Powell)
Department of Chemical Engineering
*Economic and Environmental Analysis of Biogas from Foodwaste
and the Subsequent Energy Pathways*

- Poster 18:** **Andy Simonson** (Kody Powell)
Department of Chemical Engineering
Optimizing Energy Storage Systems Using Reinforcement Learning
- Poster 19:** **Sabrina Su** (Jay Kim)
Department of Mechanical Engineering
Integration of a Pneumatically Actuated Micropump with In Vitro Trabecular Meshwork Cell Culture
- Poster 20:** **Elizabeth Su** (Brittany Coats)
Department of Mechanical Engineering
Predicting Corneal Injury Development Post-blast Trauma Using a Convolutional Neural Network
- Poster 21:** **Sarthak Tiwari** (Brian Cottle)
Department of Bioengineering
Using Machine learning approaches to understand the capabilities of Light Scattering Spectroscopy
- Poster 22:** **Elizabeth Winterholler** (Taylor Sparks)
Department of Materials Science and Engineering
Ceramic Characterization for Electrosurgical Devices
- Poster 23:**
- Poster 24:** **Cole Eggers** (Yang Bai)
Department of Health, Kinesiology, and Recreation
A Brief Intervention to Improve Student Well-Being
- Poster 25:** **Michael Maio** (Tanya Halliday)
Department of Health, Kinesiology, and Recreation
A Literature Review and Determination of Best Recruitment Practices
- Poster 26:** **Emi Wickens** (Anne Kirby)
Department of Occupational and Recreational Therapies
Family Caregivers: A qualitative study of the similarities and differences among a variety of caregiver experiences
- Poster 27:** **James Conger** (Jerry Root)
Department of World Languages & Cultures
Literal vs. Cultural Translation

- Poster 28:** **Katie Luong** (Nora Wood)
LEAP
RECOVER: COVID-19 Study
- Poster 29:** **Alexandra Call** (Rod Stewart)
Department of Oncological Sciences
*The role of the *snai1b* in neural crest cell (NCC) development*
- Poster 30:** **Britney Chen** (Yan-ting Shiu)
Department of Internal Medicine
Nitric Oxide Gel Improves AV Fistula Maturation
- Poster 31:** **Ashley Covington** (Moriel Zelikowsky)
Department of Neurobiology & Anatomy
The Effects of Social Isolation on Mouse Behaviors and USVs
- Poster 32:** **Juli Kim** (Kristi Warren)
Department of Internal Medicine
Estrogen suppresses IL-33 dependent NF- κ B expression in mouse lung ILC2
- Poster 33:** **Grace Liu** (Ramkiran Gouripeddi)
Department of Biomedical Informatics
Using Machine Learning to Analyze the Effects of Air Quality and Meteorological Exposures on Mortality
- Poster 34:** **Raina Miller** (Moriel Zelikowsky)
Department of Neurobiology & Anatomy
The Role of the Ventral Hippocampus in Trauma-Induced Aggression and Enhanced Fear
- Poster 35:** **Alan Prasad** (Donna Cross)
Department of Radiology & Imaging Sciences
The use of neuroimaging to improve global health
- Poster 36:** **Stella Santa Ana** (Moriel Zelikowsky)
Department of Neurobiology & Anatomy
The effects of social isolation throughout adolescence, adulthood, and old age

- Poster 37:** **Mary Schaelling** (Mahesh B. Chandrasekharan)
 Department of Radiation Oncology and HCI
Development of a System to Study Ubiquitination, a Path Maker to Life and Death of Proteins
- Poster 38:** **Magaly Sencion** (Lara Brewer)
 Department of Anesthesiology
Opioid-Induced Respiratory Depression
- Poster 39:** **Sam Bagge** (Brenda Bowen)
 Department of Geology and Geophysics
Evaluation of Biomediated Fractionation of ¹³C and ¹⁸O Isotopes: Aquatic Gastropod Physiology and Mineralogy
- Poster 40:** **Mallory Scofield** (Cari Johnson)
 Department of Geology and Geophysics
Examining Volcanic Lithic Fragments along a Tributary of the Beaver River, Utah
- Poster 41:** **Kari Stoddard** (Lisa Taylor-Swanson)
 College of Nursing
Racially and Ethnically Diverse Midlife Women's Health Needs and Symptom Experience During the Menopausal Transition
- Poster 42:** **Elise-Marie Vandamme** (Marco Bortolato)
 Department of Pharmacology and Toxicology
The role of dehydroepiandrosterone in the pathophysiology of Tourette Syndrome: Preclinical studies
- Poster 43:** **Gareema Dhiman** (Eric Jorgensen)
 Department of Biological Sciences
Surveillants: A Lysosome of the Synapse
- Poster 44:** **Hannah Doherty** (Margaret Doolin)
 Department of Biological Sciences
Investigating the impacts of gut microbiome diversity on parasitic infections
- Poster 45:** **Clista Galecki** (Joel Harris)
 Department of Chemistry
Characterizing Anti-DNP Association with DNP Ligands Immobilized at Supported Lipid Bilayer Interfaces

- Poster 46:** **Rachel Jones** (Julie Hollien)
Department of Biological Sciences
Role of p62 in the degradation of the mutant Huntingtin protein
- Poster 47:** **Brad Nelson** (Talia Karasov)
Department of Biological Sciences
Effects of Brassicaceae and Solanaceae Plant Extracts on In Vitro Growth of Various Pseudomonas Strains
- Poster 48:** **Aric Potter** (Joel Harris)
Department of Chemistry
Confocal Raman Microscopy Investigation of Long-Chain Alcohol Monolayers on n-Alkyl-Chain Functionalized Silica Surfaces
- Poster 49:** **Alice Snelling** (Aaron Puri)
Department of Chemistry
Identification of Methylotroph Quorum Sensing Signals Using n Inverse Stable Isotopic Labeling Approach
- Poster 50:** **Bassel Tekarli** (Michael McIntosh)
Department of Chemistry
Ligands Targeting $\alpha 10$ Receptors To Inhibit Neoropathic Pain
- Poster 51:** **Muskan Walia** (Frederick R. Adler)
Department of Mathematics
What's the Price of Mistakes? Balancing False Negatives and False Positives in COVID-19 Tests
- Poster 52:** **Maren Curtis** (Lori Kowaleski-Jones)
Department of Family & Consumer Studies
The Efficacy of "Soft-Touch" Earned Income Tax Credit (EITC) Outreach
- Poster 53:** **Bryce Fairbanks** (Thomas Maloney)
Department of Economics
Economies of Utah V Texas: What Can We Learn From Each Other
- Poster 54:** **Isabelle Fernandez** (Shane Macfarlan)
Department of Anthropology
The Impacts of Marriage and Reproduction on Female Longevity

- Poster 55:** **Saey Kamtekar** (Akiko Kamimura)
Department of Sociology
Exportation and Domestic Distribution in Top COVID Vaccine Producing Countries
- Poster 56:** **Rose McLaughlin** (Lee Raby)
Department of Psychology
Examining the Association Between Depressive Symptoms and Adoption-Related Stress Among Adoptive Parents
- Poster 57:** **Sammy Paredes** (Stefania Wilks)
Department of Anthropology
Taphonomy of archaeological starch residues in open-air settings
- Poster 58:** **Jessica Schmidt** (Lori Kowaleski-Jones)
Department of Family & Consumer Studies
Believing the Messenger: The Influence of Trust on the Likelihood of Low-Income Clients Accepting Tax Support Services in the United States - a Scoping Review
- Poster 59:** **Anahi Yerman** (Shane Macfarlan)
Department of Anthropology
Cross-National Analysis of Gender Inequality and Marriage age Dynamics
- Poster 60:** **Sam Nelson** (Jill Shea)
Department of Surgery
Bioresorbable conduits for the treatment of peripheral nerve injury
- Poster 61:** **Dallen Calder** (Stavros Drakos)
Department of Internal Medicine
Adipocyte Enhancer Binding Protein 1 (AEBP1) as a potential target to combat myocardial fibrosis
- Poster 62:** **Maddy Gahan** (Andrea Brunelle)
Department of Geography
Reconstructing Fire and Vegetation History of a Site in Southern Utah
- Poster 62:** **Natasha Pagel-Aprill** (Andrea Brunelle)
Department of Geography
Reconstructing Fire and Vegetation History of a Site in Southern Utah

- Poster 63:** **Chloe Bokinskie** (Jennifer Watt)
Department of Anthropology
A Record of Pollen and Charcoal for Mill Lake, Idaho
- Poster 63:** **Jackie Gomez** (Jennifer Watt)
Department of Geography
*Historical record of mountain pine beetles using pollen, charcoal,
and archive records in the sawtooth national area*
- Poster 64:** **Kathryn Black** (Rhonda Nelson)
Department of Occupational and Recreation Therapies
*Virtual Reality Interventions for College Student with Anxiety:
Possibilities for RT*
- Poster 64:** **Shane Brooks** (Rhonda Nelson)
Department of Occupational and Recreation Therapies
*Virtual Reality Interventions for College Students with Anxiety:
Possibilities for RT*
- Poster 64:** **Whit Richey** (Rhonda Nelson)
Department of Occupational and Recreation Therapies
*Virtual Reality Interventions for College Students with Anxiety:
Possibilities for RT*

POSTER SESSION II
10:45AM – 12:15PM

MAIN BALLROOM

- Poster 1:** **Amanda Edwards** (Scott Schaefer)
Department of Finance
Teaching Strategies: Are decoding or vocabulary exercises more effective for teaching 4th grade literacy?
- Poster 2:** **Moala Solomone - Hala'eua** (Annie Fukushima)
Division of Ethnic Studies
Oral Histories of Pacific Islander in Utah : Rape culture and Sexual Violence
- Poster 3:** **Sophia Boehler** (Melodie Weller)
School of Dentistry
Characterization of the microbiota in salivary glands in relation to Sjogren's Syndrome
- Poster 4:** **Callie Avondet** (Jason Taylor)
Department of Educational Leadership & Policy
Funding Community College Child Care Services: How The Child Care Access Means Parents In School (Ccampis) Funding Influences Institutional Policy And Practice
- Poster 5:** **Kaylon Draney** (Jeffrey Bates)
Department of Materials Science and Engineering
Synthesis and Characterization of Materials Properties of a Biological Superabsorbent Polymer for Single-Use Consumer Product Applications
- Poster 6:** **Dillon Fehlau** (Tao Gao)
Department of Chemical Engineering
Study of Magnesium Redox Flow Batteries
- Poster 7:** **Al Ingold** (Alessandra Angelucci)
Department of Bioengineering
Excitation Pattern of Utah Optrode Array

- Poster 8:** **Anika Isom** (Ben Christensen)
Department of Bioengineering
Amniotic Fluid Treatment for Vocal Fold Injury in a Rabbit Model
- Poster 9:** **Madeline Jensen** (Jennifer Follstad Shah)
Environmental & Sustainability Studies / Geography
Controls on Microbial Diversity in Storm Water Green Infrastructure
- Poster 10:** **Angelica Madsen** (Jeffrey Bates)
Department of Materials Science and Engineering
Hydrogel-Based Dehydration Sensor Adhesive
- Poster 11:** **Cameron Mercer** (Bruce Gale)
Department of Mechanical Engineering
Rapid Fabrication of a Dynamic 3D Printed Alveolar Microphysiological System That Incorporates an Extracellular Matrix-Based Membrane
- Poster 12:** **Alex Stevens** (Lucas Timmins)
Department of Bioengineering
Establishing a Procedure for Detecting Damaged Collagen in Vascular Tissue
- Poster 13:** **Tyler Ho** (Peter Fino)
Department of Health, Kinesiology, and Recreation
Reference Frame Affects the Values of Step Length, Step Width, and Margin of Stability During Turning Gait
- Poster 14:** **Linnea Horvath** (Jessica King)
Department of Health, Kinesiology, and Recreation
Defining the Association Between a Voluntary Use of Fitbits and Self-Reported Physical Activity Volumes
- Poster 15:** **Brianna Ingersoll** (Jesse Christensen)
Department of Physical Therapy and Athletic Training
Biomechanics and Strength Outcome Comparison Between Supervised and Unsupervised Physical Therapy After Total Knee Arthroplasty: A Retrospective Study
- Poster 16:** **Kayla Rebentisch** (Jessica King)
Department of Health, Kinesiology, and Recreation
Hashtag Popularity: A Comparison and Content Analysis of E-cigarette, Cigarette, Cigar, and Cannabis Posts on Instagram

- Poster 17:** **Jessica Repman Johnson** (Jay Jordan)
Department of Writing & Rhetoric Studies
Deaf Writing
- Poster 18:** **Awais Ahmad** (Owen Chan)
Department of Internal Medicine
The Effect of Norepinephrine on Glutamate
- Poster 19:** **Jocelyn Bowman** (Andrew Anderson)
Department of Orthopaedics
Baseline Hip Motion During a Squat Jump in Division I Athletes
- Poster 20:** **Elon Darthard** (Dr. Melissa Cortez)
Department of Neurology
Development Of A Novel Protocol Using The Intuitive Colorimeter To Test The Effects Of Color On Photophobia
- Poster 21:** **Clara Lindley** (Jennifer Ose)
Population Health Sciences, HCI
Associations between inflammation and angiogenesis biomarkers and cancer-related distress: results from the ColoCare Study
- Poster 22:** **Rayne Robinson** (Natalie Tedford)
Department of Pediatrics
Understanding Unmet Social Need in Utah's Pediatric Population: How Can Social Needs Be Addressed in Patient Populations?
- Poster 23:** **Jada Kali P. Stelmach** (Hilary Coon)
Department of Psychiatry
Characterizing the Effects of Mitochondrial DNA in Suicide Deaths
- Poster 24:** **Kathy Wright** (Melissa Cortez)
Department of Neurology
Facial Feedback and Affective Dysfunction
- Poster 25:** **Kitsel Lusted** (Michael Free)
Department of Metallurgical Engineering
Temperature Dependence of Acidithiobacillus Ferroxidans during Biooxidation of Coal-Based Resources
- Poster 26:** **Alejandra Tellez-Montenegro** (Ana Sanchez-Birkhead)
College of Nursing
Breast Cancer in Hispanic Women

- Poster 27:** **Angela Deng** (David Krizaj)
 Department of Ophthalmology / Visual Sciences
Effects of various drugs on TRPV4 and Pizo-1 channels in primary Trabecular meshwork cells
- Poster 28:** **Michelle Le** (Karen Wilcox)
 Department of Pharmacology and Toxicology
Seizure onset and offset dynamics in a temporal lobe epilepsy mouse model over 90-days
- Poster 29:** **Drue Domagala** (Jon Rainier)
 Department of Chemistry
Synthesis of PROTACs to Inhibit Toll-Like Receptors
- Poster 30:** **Anna Jacobsen** (Sarah Franklin)
 Department of Chemistry
Elucidating the function and presence of a novel epigenetic modification
- Poster 31:** **Abigail Peterson** (Saveez Saffarian)
 Department of Physics & Astronomy
Optimization of Preparatory Steps for Deep Sequencing of HIV
- Poster 32:** **Olivia Pratt** (Talia Karasov)
 Department of Biological Sciences
Effect of Secondary Metabolite Production on Pathogenicity in Pseudomonas syringae
- Poster 33:** **Ella Spurlock** (Luisa Whittaker-Brooks)
 Department of Chemistry
Magnetic Character of Fe(II) Doped Cu-Benzenehexathiol Thin Films
- Poster 34:** **Harini Srinivasan** (Martin Horvath)
 Department of Biological Sciences
Molecular Drug Docking And Biochemical Performance Of Adenine Specific Glycosylase Enzyme Muty In The Presence Of 8-Oxo-7,8-Dihydroguanine (Og) Nucleotide
- Poster 35:** **André Watson** (Sarah Bush)
 Department of Biological Sciences
Effects of Sex and Location on Parasite Intensity in Eastern Deer Mice

- Poster 36:** **Jim Faulkner** (Kristina Rand)
Department of Psychology
Effects Of Working Memory On Perception Of Space And Time
- Poster 37:** **Lauren Gleave** (Akiko Kamimura)
Department of Sociology
Basis for a Study on Sexual Health, Perceptions, and Behaviors as they Pertain to Religion in Utah
- Poster 38:** **Matthew Gordon** (Ivan Mendieta-Munoz)
Department of Economics
Nowcasting Regional GDP in Utah Using Dynamic Factor Models
- Poster 39:** **Josh Marchant** (Elisabeth Conradt)
Department of Psychology
Influence of Chaotic Home Environments and Maternal Emotion Dysregulation on Infant Respiratory Sinus Arrhythmia
- Poster 40:** **Maren Moffatt** (Tyler Faith)
Department of Anthropology
Evaluating environmental factors of the MSA-LSA transition in East Africa
- Poster 41:** **Alli Hoffman** (William Brazelton)
Department of Biological Sciences
Metabolic strategies of Potential Acetogens at the Lost City Hydrothermal Field
- Poster 42:** **Annie Sánchez** (Guangzhen Wu)
Department of Sociology
The Effects of Recreational Marijuana Legalization on Sex Offenses in Alaska, Colorado, Oregon, and Washington state
- Poster 43:** **Chris Schulz** (Amy McDonnell)
Department of Psychology
Virtual Environments Effect on Reward Positivity
- Poster 44:** **Kalista Vordos** (Carina Pals)
Department of Psychology
Investigating the Difference in Listening Effort between American and Korean Listeners for American Accented English

Poster 45: **Morrison Donovan** (Sarah Canham)
College of Social Work
*Mobility Consequences of Decentralization Homeless Services and
Shelters in Salt Lake County*

Poster 46: **Emi Wilson** (Jeanine Stefanucci)
Department of Psychology
*Evaluating The Efficacy Of Simulated Augmented Reality Cueing
In Virtual Reality*

POSTER SESSION III
1:00 – 2:30PM

MAIN BALLROOM

- Poster 1:** **Emma Miller** (CoCo James)
LEAP
How to Survive While Locked Inside a Burning Planet
- Poster 2:** **Cloe Butler** (Ana Antunes)
Division of Gender Studies
*Beyond the Birds & the Bees: Providing Comprehensive Sexuality
Education to Youth of Immigrant and Refugee Backgrounds*
- Poster 3:** **Mara Magistad** (Daniel Clifton)
School of Dance
*Developing Effective Personal Training Programs for Contemporary
Dancers*
- Poster 4:** **Lexie Bingman** (Sarah Hinnners)
Department of City & Metropolitan Planning
Changes in Bee Biodiversity at the Landscape Lab
- Poster 5:** **Izzy Fuller** (Sarah Hinnners)
Department of City & Metropolitan Planning
*"Landscape Lab" Green Infrastructure Impact On Runoff Efficiency
And Stormwater Hydrograph Character In Red Butte Creek*
- Poster 6:** **David Onwukeme** (Milad Mozari)
Department of Multi-Disciplinary Design
BioVariable Fonts
- Poster 7:** **Derek Anderson** (Sujee Jeyapalina)
Department of Bioengineering
*Limiting Biofilm formation on Orthopedic Implants with Metal-
Doped Fluorapatite*

- Poster 8:** **Sophia Blankevoort** (Amanda Wood)
 Department of Bioengineering
Optimization of Sialyltransferase Purification
- Poster 9:** **Lexi DeFord** (Eric Pardyjak)
 Department of Mechanical Engineering
Development of a Low-Cost Aspirated Temperature Measurement Radiation Shield
- Poster 10:** **Tyler Endow** (Bruce Gale)
 Department of Mechanical Engineering
biomedical microfluidics
- Poster 11:** **Adam Ford** (David Grainger)
 Department of Bioengineering
in-vitro chondrogenic capacity classification of juvenile chondrocyte donors
- Poster 12:** **Cleo Hancock** (Swomitra Mohanty)
 Department of Chemical Engineering
Improvements in Cyclic Voltammetry for Tuberculosis Diagnosis
- Poster 13:** **Colin Hinchman** (Eugene Kwan)
 Department of Bioengineering
4D Flow Characteristics of Left Atrial Blood Flow in Atrial Fibrillation
- Poster 14:** **Mason Jacketta** (Taylor Sparks)
 Department of Materials Science and Engineering
Carbon Fiber Defect Detection
- Poster 15:** **Clara Kramer** (Jeff Bates)
 Department of Materials Science and Engineering
Material Characterization of Nordic Ski Wax
- Poster 16:** **Aidan Lethaby** (Jacob George)
 Department of Bioengineering
Improvement and Functional Validation of a Low-cost Control System for Dexterous Bionic Arms and Adaptive Sports Equipment
- Poster 17:** **Vista Marston** (Thomas Henderson)
 School of Computing
Lane-Based Large-Scale UAS Traffic Management

- Poster 18:** **Abbie Saccomanno** (Andrea Corbin)
Department of Bioengineering
Analysis of Gene Expression and Alternative Splicing of TRPC1 in Hypertrophic Cardiac Myocytes
- Poster 19:** **Sydney Larsen** (Anandh Velayutham)
Department of Nutrition and Integrative Physiology
Short-term Supplementation with Dietary Blueberries Increases Commensal Gut Microbes in Diabetic Mice
- Poster 20:** **Evan Oro** (Jesse Christensen)
Department of Physical Therapy and Athletic Training
The Validity of the OneStep Smartphone Application Under Various Gait Conditions in Healthy Adults
- Poster 21:** **Crystal Ortiz** (Samantha Gustafson)
Department of Communication Sciences and Disorders
Test Re-test Reliability and the Effect of Task Instructions on Listening Effort When Using a Verbal Response Time Paradigm
- Poster 22:** **Ethan Stanley** (Jesse Christensen)
Department of Physical Therapy & Athletic Training
The Reliability of the OneStep Smartphone Application Under Various Gait Conditions in Healthy Adults
- Poster 23:** **Kristin Thompson** (Skyler Jennings)
Department of Communication Sciences and Disorders
Encoding of Dynamic Pitch by the Human Auditory Nerve
- Poster 24:** **Tabitha Whitmore** (Skyler Jennings)
Department of Communication Sciences and Disorders
Simultaneous measurement of human auditory nerve and brainstem potentials: effects of upward spread of excitation
- Poster 25:** **Cinthya Pacheco** (Amandine Chaix)
Department of Nutrition and Integrative Physiology
Hindlimb Unloading and High-Fat Diet in Mice
- Poster 26:** **Natasha Pagel-Aprill** (Nadja Durbach)
Department of History
'Epistolary Quackery:' 19th Century Cholera Discourses and Medical Professionalization

- Poster 27:** **Will Shadley** (Carlos Santana)
Department of Philosophy
Inconsistent Values Between the Utah Wildlife Action Plan and the Endangered Species Act
- Poster 28:** **Kara Andersen** (KC Brennan)
Department of Neurobiology
Neural Circuits for Pain: C2 Dorsal Root Ganglion Role in Migraine Attacks
- Poster 29:** **Shelly Baltazar** (Yan-Ting Shiu)
Department of Internal Medicine
Inter-User Variability of Computational Fluid Dynamics in Human Arteriovenous Fistulas
- Poster 30:** **Taylor Cly** (Michelle Schober)
Department of Pediatrics
Using Rat Brain Histology to Assess Inflammation after Experimental Traumatic brain Injury in Rat Pups
- Poster 31:** **Jasmine Jacobo** (Nora Wood)
LEAP
Reducing the Burden of Depression by Prediction Treatment Response from Neuro-Motor Function
- Poster 32:** **Alifia Jakamartana** (Jessica Brown)
Department of Pathology
*Identifying the molecular mechanisms of desipramine and phenylbutyric acid in *Cryptococcus neoformans**
- Poster 33:** **Jake Jones** (Candace Floyd)
Department of Physical Medicine & Rehabilitation
Comparative neuroanatomy of swine, rodent, cat and human descending motor tracts using in spinal cord injury regeneration and repair
- Poster 34:** **Kasper Koblanski** (Amnon Schlegel)
Department of Internal Medicine
Liver FOXN3 Increases Pancreatic α -Cell Mass Without Altering Hepatic Amino Acid Utilization
- Poster 35:**

- Poster 36:** **Spencer Moore** (Sujee Jeyapalina)
 Department of Surgery
Analysis of titanium dental implants to determine factors contributing to failure
- Poster 37:** **Natalie Morgan** (Ellen Beswick)
 Department of Internal Medicine
Checkpoint Molecules in Inflammatory Bowel Disease Tissues May Indicate Differences in Immune Responses Between Crohn's Disease and Ulcerative Colitis
- Poster 38:** **Isaac Nelson** (Benjamin Myers)
 Department of Ontological Sciences
A PKA-inhibitor motif within Smoothed controls Hedgehog signal transduction
- Poster 39:** **Emily Nuibe** (Candace Reno)
 Department of Internal Medicine
Norepinephrine as a Cause of Hypoglycemia-Induced Cardiac Arrhythmias
- Poster 40:** **Gio Robles** (Matt Thiese)
 Department of Family & Preventative Medicine
Prevalence of Diabetes in Shoulder Pain Patients
- Poster 41:** **Daisy Xiong** (Lubdha Shah)
 Department of Radiology & Imaging Sciences
Investigating the impact of fat infiltration on clinical outcomes for patients undergoing radiofrequency ablation
- Poster 43:** **Stephanie Brock** (Brenda Bowen)
 Department of Geology and Geophysics
Distribution and Characteristics of Microbes in Halite at the Bonneville Salt Flats
- Poster 44:** **Sarah Smart** (Peter Lippert)
 Department of Geology and Geophysics
Can a Geochemical Analysis of Magmatic Rocks Show how the Mongol-Okhotsk Ocean closed?
- Poster 45:** **Jenna Young** (Krista Carlson)
 Department of Metallurgical Engineering
Determining the suitability of calcium phosphate glass frit and microspheres for use as a material for dental pulp therapy

- Poster 46:** **Kimberly Ponce Gonzalez** (Katherine Supiano)
 College of Nursing
Nursing Home Administrators Perceptions of the emotional care needs of Dementia Family Care Partners
- Poster 47:** **Spencer Carstens** (Shreya Goel)
 Department of Pharmaceutics & Pharmaceutical Chemistry
Evolution of the Metastatic Tumor Microenvironment Through High Resolution Microscopy
- Poster 48:** **Isaac Cao** (Joel Harris)
 Department of Chemistry
Confocal Raman Microscopy Investigations of Metal-ion Complexation to Ligands Immobilized on Porous Silica Surfaces
- Poster 49:** **Mary Fairbanks** (Martin Horvath)
 Department of Biological Sciences
Examining Impact of FDA Approved Drugs on DNA Repair Enzymes
- Poster 50:** **Cannon Fehrenbach** (Talia Karasov)
 Department of Biological Sciences
Examining the Relationship Between Plants, Bacteria, and Climate Change
- Poster 51:** **Yung-Chi Lan** (Markus Babst)
 Department of Biological Sciences
The Role of Slm1 in Mitochondrial Function
- Poster 52:** **Raquel Perry** (Amandine Chaix)
 Department of Biological Sciences
Metabolism and the Circadian Clock
- Poster 53:** **Sarita Som** (Talia Karasov)
 Department of Biological Sciences
The Genetic Specificity Underlying Bacteriophage Infection of Pseudomonas Host Cells
- Poster 54:** **Kaylara Benfield** (Juliet Carlisle)
 Department of Political Science
Place Attachment, Climate Change, and Threat Perceptions of Utah Wilderness

- Poster 55:** **Karen Bennett** (Jack Silcox)
Department of Psychology
The effects of driving on false hearing and cognitive load
- Poster 56:** **Alex Brill** (Shannon Boomgarden)
Department of Anthropology
Fremont Corn: Research on Prehistoric Water Availability
- Poster 57:** **Kendal Chatard** (Tim Webster)
Department of Anthropology
Orangutan Genetic Load: The Effects of Population Size and Sex
- Poster 58:** **Aidyn Eldredge** (Timothy Webster)
Department of Anthropology
Genomic Insights Into Cytokine Tissue Specificity Among Primates
- Poster 59:** **Aaron Gold** (Tyler Faith)
Department of Anthropology
Is There an Environmental Signal for Howiesons Poort Lithic Technology? An Analysis of Zooarchaeological Data from South Africa
- Poster 60:** **Kayleigh Kirkpatrick** (Kaedan O'Brien)
Department of Anthropology
"Evaluating the Faunal Remains of Owl Cave, a Quaternary Fossil Site in the Uinta Mountains"
- Poster 61:** **Augusto Lopez** (Akiko Kamimura)
Department of Sociology
Mental Health of Hospice Care Volunteers amid the COVID-19 Pandemic
- Poster 62:** **Rene Valles** (Nora Wood)
LEAP
Social Motivation of mice following chronic social isolation
- Poster 63:** **Haley Webber** (Michael Himle)
Department of Psychology
Barriers Associated with Receiving Behavioral Therapy for Tic Disorders

- Poster 64:** **Angie Zheng** (Ella Myers)
Department of Political Science
The Hobbesian Assumptions behind Mearsheimer's Theory of Offensive Realism and Hegemonic Powers.
- Poster 65:** **Mariah Montoya** (Annie Fukushima)
Division of Ethnic Studies
Impact of Sexual Assault Response on Victim's willingness to cooperate
- Poster 66:** **Melika Moeinvaziri** (Akiko Kamimura)
Department of Sociology
Mental Health Among Uninsured Primary Care Patients During the COVID-19 Pandemic
- Poster 66:** **Emily Nevarez** (Akiko Kamimura)
Department of Sociology
Mental Health among uninsured primary care patients during the COVID-19 pandemic

