

Undergraduate Research Symposium

2019 Event Program

SCIENCES

SOCIAL SCIENCES

ARTS

HUMANITIES



UNIVERSITY OF
OREGON

Undergraduate Research Symposium

Table of Contents

Letter from Division of Undergraduate Education and Student Success.....	3
Presentation Awards.....	4
Agenda.....	9
Acknowledgments.....	10
Presenter Statistics and Funding Sources.....	16
Concurrent Sessions Schedule.....	25
Poster Presenters Lists.....	37
EMU Ballroom Poster Location Diagram.....	43
EMU Venue Maps.....	44
Presenter Names List.....	46
Faculty Mentor Names List.....	51
Presentation Abstracts.....	54

May 16, 2019

High Impact Practices

The experts in Higher Education studies will tell you that undergraduate research in its many forms is a “high impact practice”: it offers a dramatic opportunity for student engagement and success. We couldn’t agree more. Those of us involved in this Symposium have seen at close range those amazing “aha” moments when a student realizes that she has uncovered something on the very front lines, at the very growing edge, of human culture and knowledge. Whether these contributions take place in a lab, in the archives, with a museum installation, in a dance studio, at a drafting table, at an easel, on the stage, or even in the streets: we know that undergraduate innovation transforms undergraduate lives.

But we also know that these opportunities are crucial not only for the individuals involved, but for the very institution of Higher Ed itself. The impact of these “high impact practices” reaches us all. When we nurture and celebrate individual creativity at the baccalaureate level, we nourish the very heart of our university’s research mission, and its core principle of public service. We affirm the ways in which wisdom develops within community, and we recognize the inextricable link between teaching, with its transmission of knowledge to new generations—and research, with its creation of new knowledge among classmates and peers, teachers and students.

Congratulations to all the student participants and faculty mentors who have made this event happen! Best wishes, from your fans and supporters in Undergraduate Education and Student Success, the McNair Scholars Program, the Robert D. Clark Honors College, University Housing, the University Libraries, the Division of Equity and Inclusion, and the Office for Research and Innovation.



Josh Snodgrass

Co-Chair, Undergraduate Research
Symposium Planning Committee



Kevin Hatfield

Co-Chair, Undergraduate Research
Symposium Planning Committee

2019 Undergraduate Research Symposium Presentation Awards

The awards given out at the Undergraduate Research Symposium recognize students who have an exceptional poster, oral presentation, or creative work. Award specifics below.

Biology Poster Award

The Biology Department will offer one \$300 award, and two \$100 awards for posters with honorable mentions, in the fields of biology and marine biology. Judging will be performed by senior level graduate students. This award is sponsored by the University of Oregon Biology Department.

Sponsor: Department of Biology

Eligibility & Conditions:

- A current UO Biology or Marine Biology major working in any science lab at the University of Oregon.
- An undergraduate student (*from any major*) who is doing work in a lab run by a [biology department faculty member](#).
- The recipients must be accepted to and present at the **2019 UO Undergraduate Research Symposium**.
- The poster must be delivered to EMU no later than 7:30pm on Wednesday, May 15 to be eligible for judging.

Center for Environmental Futures Award

The award recognizes oral and poster presentations involving research in the field of environmental humanities, which contextualizes and complements environmental science and policy by pursuing research on narrative, critical thinking, history, cultural analysis, aesthetics, and ethics of diverse environmental topics and issues, such as land use, animals, resource allocation, agriculture, species conservation, climate change, water, and other related issues. Research in environmental justice is also an integral part of the environmental humanities at the UO.

Three \$500 awards will be given.

Sponsor: Center for Environmental Futures

Eligibility & Conditions:

- Open to current UO students from all academic disciplines and majors.

- Must be accepted to present at the 2019 UO Undergraduate Research Symposium.
- Oral presenters must submit a 2 to 3 minute "elevator pitch" (mini-TedTalk) video, summarizing the key points of their oral presentation by May 8.
- The video can be recorded on a mobile device. No additional video recording equipment is required. Additional instructions will be provided via a Presenter Confirmation Survey.
- Submitted posters will be evaluated by CEF judges on May 16.
- The Center for Environmental Futures will review the videos and decide on the winner prior to the Symposium date.
- The award will be provided in the form of a scholarship to the student's billing account.

Data Stories Presentation Award

The Data Stories Presentation Award recognizes a data story presented at the Undergraduate Research Symposium. The Grand Prize recipient (1) will receive an award with a value of \$300.00 and two (2) honorable mention recipients will each receive \$100.00 awards.

Sponsor: UO Libraries / Data Services

Eligibility & Conditions:

- The recipients must be accepted to and present in the Data Stories format at the 2019 UO Undergraduate Research Symposium.
- Open to all majors.
- The award may be used to support the student's pursuit of research or continued research methods or data education or training.
- Judging will be performed by a cross-functional team comprised of members of the UO Libraries Data Services Department, and Graduate Students and Faculty from multiple disciplines across the university community.

Division of Undergraduate Education and Student Success – Oral Presentation Award

The award recognizes undergraduate students who are delivering an oral presentation at the symposium, and judging is based on the evaluation of a three-minute video "elevator pitch" that is submitted, for this award consideration, by the presenter. The award has a value of \$500 and must be used to attend an academic conference within one year of receiving the award. A graduating Senior is eligible to receive the award as a scholarship. The [Center for Undergraduate Research and Engagement](#) (CURE) will assist the recipient with identifying a conference and preparing their application and presentation.

Sponsor: Division of Undergraduate Studies

Eligibility & Conditions:

- Open to UO students (*only*) from all academic disciplines.
- Must be accepted to present *orally* at the **2019 UO Undergraduate Research Symposium**.
- The oral presenter must submit a 2 to 3 minute "elevator pitch" (mini-TedTalk) video, summarizing the key points of their oral presentation.
 - The video can be recorded on a mobile device. No additional video recording equipment is required.
- The Undergraduate Research Symposium committee will review the videos and decide on the winner prior to the Symposium date.
- The award will be provided in the form of a scholarship to the student's billing account.
- The finalist will be acknowledged at the Undergraduate Research Symposium Reception on May 16

Those students indicating interest below for this award, will receive a follow-up email with detailed instructions and the deadline for submitting the video presentation.

Food Studies Award

The Food Studies Award recognizes oral presentations or posters focused on a topic in the broad, interdisciplinary field of food studies and characterized by excellence in research and clarity of delivery. One \$300 award and one \$100 award for honorable mention will be awarded. This award is sponsored by the Food Studies Program and the Division of Undergraduate Studies.

Sponsor: Food Studies Program and Division of Undergraduate Studies

Eligibility & Conditions:

- Open to students from all academic disciplines.
- Must be accepted to present at the 2019 UO Undergraduate Research Symposium.
- The poster must be delivered to the designated poster drop-off location at the EMU, no later than 7:30 pm on Wednesday, May 15 to be eligible for judging.

International Studies Department, Global Studies Award

The International Studies Department Award recognizes oral presentations or posters focused on an international or intercultural topic and characterized by excellence in research and clarity of delivery. One \$300 award and two \$100 awards for honorable mention will be awarded. **Sponsor:** International Studies Department

Eligibility & Conditions

- Open to current UO students from all academic disciplines.
- Must be accepted to present at the **2019 UO Undergraduate Research Symposium**.
- The poster must be delivered to the designated poster drop-off location at teh EMU, no later than 7:30 pm on Wednesday, May 15 to be eligible for judging.

Museum of Natural and Cultural History Undergraduate Research Poster Award

The award recognizes a project involving museum collections and/or research projects. The award has a value of \$300 and may be taken in cash or used to cover fees and travel costs associated with the presentation of student work at disciplinary or national conferences or symposiums. Judging will be performed by the UO Museum of Natural and Cultural History staff.

Sponsor: UO Museum of Natural & Cultural History **Eligibility & Conditions:**

- Open to current UO students from all academic disciplines.
- Must be accepted to present at the 2019 UO Undergraduate Research Symposium.
- The poster must be delivered to the designated poster drop-off location at the EMU, no later than 7:30 pm on Wednesday, May 15 to be eligible for judging.

Residence Hall Association (RHA) First-Year Student Presenter Award

The Residence Hall Association (RHA) award recognizes presentations of any format and in all disciplines by first-year students. This award is sponsored by the University of Oregon Residence Hall Association.

1. A single \$500 award will be given to the best individual presentation, and may be used to attend an academic conference or visit a graduate school prior to the recipient's graduation.
2. One \$500 award will be given to the best group presentation (e.g. ARC or FIG) and may be used for a group-related professional development or academic activity (e.g. travel to Pine Mountain Observatory).

Sponsor: Residence Hall Association

Eligibility & Conditions:

- Open to current first-year (first-time, full-time) UO students from all academic disciplines.
- Must be accepted to present at the **2019 UO Undergraduate Research Symposium**.
- The poster must be delivered to the designated poster drop-off location at teh EMU, no later than 7:30 pm on Wednesday, May 15 to be eligible for judging.

UROP Poster Award

The award recognizes undergraduate poster presentations characterized by excellence in research and in clarity of design and presentation. The award has a value of \$500 and must be used to attend an academic conference within one year of receiving the award.

Sponsor: Undergraduate Research Opportunities Program, Office for Research and Innovation

Eligibility & Conditions:

- Open to students from all academic disciplines.
- Must be accepted to present at the 2019 UO Undergraduate Research Symposium.
- Must be returning to the UO the following academic year.
- The award may only be used to assist with attendance to present research at a local, regional, or national conference within one year of award announcement.
- The award may be used to pay for travel, conference registration and/or accommodations.
- Must deliver poster to EMU by 7:30pm on Wednesday, May 15 for judging.

2019 Symposium Agenda

Tuesday, May 14

6:00 - 7:00pm [Keynote Address, Tahirih Motazedian](#) (Straub Hall 156)

Wednesday, May 15

5:00-7:30pm Poster Drop-Off (EMU Ballroom Lobby)

Thursday, May 16

9:00am Registration/Check-in begins (EMU Ballroom Lobby)

9:00am-4:45pm Poster Judging (EMU Ballroom – only open to staff and judges)

10:00am-11:30am Concurrent Oral and Creative Works Session 1

11:45am-1:15pm Concurrent Oral and Creative Works Session 2

1:30pm-3:00pm Concurrent Oral and Creative Works Session 3

3:15pm-4:45pm Concurrent Oral and Creative Works Session 4

Lane Community College Transfer Student Panel Discussion (Swindells)

5:00pm-5:30pm Reception. Welcome from Undergraduate Research Symposium Co-Chairs Kevin Hatfield and Josh Snodgrass; Remarks from Jayanth R. Banavar, Provost and Senior Vice President and Mike Pluth, Associate Vice President for Research and Innovation; Student Keynote by Alli Dona, Biological Anthropology and Molecular Biology Major; and Presentation of Faculty Mentor Awards (Redwood Auditorium)

5:30pm-7:30pm Catered Poster Session (Ballroom and Gumwood Room)

Concurrent Oral and Creative Works Session 5

Notes: Oral, Creative Work, and ARC/FIG Sessions will be held in the following EMU spaces: Swindells, Cedar, Spruce, Crater Lake North & South Maple, Oak, Coquille, Miller, Diamond Lake, and Redwood Auditorium. Sessions will also be held in the Science Library Visualization Lab.

Undergraduate Research Symposium 2019 Acknowledgments

Sponsors

Division of Undergraduate Education and Student Success (Doneka Scott)
University Housing (Michael Griffel)
Robert D. Clark Honors College (Gabe Paquette)
Office of the Vice President for Research and Innovation (David Conover)
UO Libraries (Adriene Lim)

Undergraduate Research Symposium Planning Committee

Kevin Hatfield (Co-Chair), Director of Academic Residential & Research Initiatives, Division of Undergraduate Education and Student Success/Residence Life; Faculty, History

Josh Snodgrass (Co-Chair), Associate Vice Provost for Undergraduate Education and Student Success; Director, Center for Undergraduate Research and Engagement; Professor, Anthropology

Emily Atkinson, Academic & Career Advisor, School of Journalism and Communication

Rachel Bash, Pathway Oregon Advisor

Hannah Bishop, Postdoctoral Researcher, University of Oregon Institute of Neuroscience

Jacy Berg, College Events Coordinator, Robert D. Clark Honors College

Jonathan Cain, Head, Data Services, UO Libraries

Dr. Danley, *Director, TRIO McNair Scholars Program*

Christabelle Drago, Undergraduate Research Engagement Coordinator, Center for Undergraduate Research and Engagement; Doctoral Student, Department of Counseling Psychology and Human Services

Barbara Jenkins, Coordinator, UO Libraries Outreach & Special Programs Psychology, Religious Studies & Judaic Studies Librarian

Rebecca Linder, Associate Dean, Robert D. Clark Honors College

Lanch McCormick, Director of Student Engagement, Center for Undergraduate Research and Engagement

Karl Reasoner, Program Manager, Undergraduate Research Opportunity Program
Research and Innovation

Mckenzie Winders, Operation Manager, Student Orientation Programs, Division of Student
Services and Enrollment Management

Jessica Winders, Academic Initiatives Program Coordinator, Residence Life

Shelise Zumwalt, Student Community Coordinator, Robert D. Clark Honors College

Undergraduate Student Members:

Alli Dona, Director, Associated Students for Undergraduate Research and Engagement
(ASURE)

Kyley Brewer, Student Assistant, Academic Residential and Research Initiatives; ASURE
Member

Jordyn Mascarenas-Wells, Incoming Director, Associated Students of Undergraduate
Research and Engagement (ASURE)

Claren Walker, Associate Director, Associated Students for Undergraduate Research and
Engagement (ASURE)

Momo-Wilms Crowe, Coordinator, Associated Students for Undergraduate Research and
Engagement (ASURE)

Shuxi Wu, Coordinator, Incoming Associate Director, Associated Students for Undergraduate
Research and Engagement

Symposium Planning Committee Partners

Lauren Alejo, Student Assistant, Residence Life

Leah Andrews, Director of Marketing and Communications, University Housing

Joe Black, Carpenter, University Housing

Rylee Kahan, CURE Student Team Member

Ward Biaggne, Videographer, UO Libraries

Lynette Boone, Videographer, UO Libraries

Jeremiah Bridges, Director, Tutoring and Academic Engagement Center

Tori Byington, Assistant Dean, UO Graduate School

Kimberly Lamke Calderón, Communications Director, Student Success & Experience

Matt Chambers, Writing Learning Specialist, Tutoring and Academic Engagement Center

Matt Cooper, Assistant Director of Communications, University Communications

Anthony Dillard, Student Assistant, Residence Life

Grace Godfrey, Catering Manager

Michaela Hager, Event Production Coordinator, Scheduling and Event Services, Division of Student Life

Maya Lazaro, Program Coordinator, OR Media, School of Journalism and Communication

Allen Hall Media Team: Emily Harris, Elliot Hodgin, Devon Houston, Paula Mason, Junior Ramirez, Lindsey Reed, Emily Scarvie, Delaney Young

Danny Lu, Student Assistant, Residence Life

Jen McNutt-Bloom, Events Coordinator, UO Graduate School

Rebecca Mellnik, Scheduling Coordinator, Scheduling and Event Services. Division of Student Life

Colin Miller, Design and Publications Lead, University Housing

Laurie Notaro, Director of Communications, Robert D. Clark Honors College

Sean Sharp, IT Manager; Director COD Output Room, College of Design

Brian Trapp, Director, The Kidd Workshops; Career Instructor, Creative Writing Program

Dean Walton, Lorry Lokey Science & Technology Outreach Librarian

Laurie Woodward, Director, EMU

Lane Community College Partners

Lisa Bohannon, Student Adviser, TRiO STEM

Jennifer Frei, Associate Vice President, Academic and Student Affairs

Stacey Kiser, Biology Instructor, Science Division

Ce Rosenow, Instructor, Department of Writing & Literature; Faculty Coordinator, Lane Honors Program

Paul Ruscher, Dean, Science Division; Director, Lane GLOBE Program

Undergraduate Symposium Abstract Review Committee

Allison Taylor-Adams, PhD Student, Linguistics

Christina Cendejas, Graduate Student, Counseling Psychology and Human Services

Jayne Cole, PhD Student, Art History

Huda Felimban, PhD Candidate, College of Education, Special Education & Clinical Services

Tom Fischer, MA Student, Asian Studies

David Furjanic, Graduate Employee, Family and Human Services

Fanny Gaede, Head Digital Scholarship Services, UO Libraries

Rachel Guldin, Graduate Employee, School of Journalism and Communication

Dayna Hansberger, Graduate Student, International Studies

Holli Kubly, Web Services Librarian, UO Libraries

JP Lempke, Graduate Employee, Music

Chandler Lester, PhD Student, Economics

Mary Marchetti, Doctoral Student, Counseling Psychology

Lindsey Nichols, Graduate Student, Counseling Psychology and Human Services

Jill Potratz, PhD Student, Linguistics

Lindsey Romero, Doctoral Student, Counseling Psychology and Human Services

Kaitlyn Roy, Graduate Student, Special Education and Clinical Services

Maria Schweer-Collins, Graduate Student, Prevention Science

Emily Walden, Doctoral Candidate, School Psychology,

Lue Williams, Doctoral Student, Counseling Psychology and Human Services

Oral and Creative Work Panel Moderators

Spencer Atkinson, Community Director, Residence Life

Curtis Austin, Professor, History; Faculty Director, Umoja Black Scholars ARC

Aryn Bartley, Faculty, Department of Writing and Literature, Lane Community College

Hannah Bishop, Postdoctoral Researcher, University of Oregon Institute of Neuroscience

Peg Boulay, Co-Director of the Environmental Leadership Program and Senior Instructor of Environmental Studies; Faculty Director, Environmental Leaders ARC

Crystal Brown, PhD Candidate, Political Science

Charlie Butler, Instructor, School of Journalism and Communication; Faculty Director, Media and Social Action ARC

Anna Cahn, Doctoral Student, Prevention Science Institute

Jonathan Cain, Head, Data Services, UO Libraries

Mark Carey, Professor of History, Robert D. Clark Honors College

Kathie Carpenter, Department Head, Associate Professor, Department of International Studies

Alicia DeLouize, PhD Student, Anthropology

Christabelle Dragoo, Undergraduate Research Engagement Coordinator, Center for Undergraduate Research and Engagement; Doctoral Student, Department of Counseling Psychology and Human Services

ned erilus, Community Director, Residence Life

Scott Fisher, Astron Lecturer and Outreach Coordinator, Physics

Scott Fitzpatrick, Professor of Archaeology; Associate Director, Museum of Natural & Cultural History

Elizabeth Glenn, Graduate Student, School Psychology

Lauren Goss, Accessioning and Processing Archivist, UO Libraries

Jeanne Nagayama Hall, Senior Instructor I; Educational Foundations Undergraduate Field Experience Coordinator, Education Studies

Carolyn Hernandez, M.A. Candidate, History of Art and Architecture

Helen Jenne, Graduate Employee, Mathematics

Parichehr Kazemi, Doctoral Student, Political Science

Maya Lazaro, Program Coordinator, OR Media, School of Journalism and Communication

Majd Mariam, PhD Candidate, School of Journalism and Communication

Michelle Mauricci, M.S. Student and Research Assistant, Prevention Science

Ian McNeely, Department Head, German and Scandinavian; Professor, History

Kiana Nadonza, PhD Student, Anthropology; Women's, Gender and Sexuality Studies; Asian Studies

Peter O'Day, Associate Professor, Biology

Dorothee Ostmeier, Professor, German and Scandinavian

Melina Pastos, Academic Advisor, Undergraduate Education and Student Success

Mike Peixoto, Undergraduate Coordinator, Economics and Sociology

Paul Peppis, Professor, English; Director, Oregon Humanities Center

Natascha Reich, PhD Candidate, School of Music and Dance

Gordon Sayre, Professor, English

Jackson Smith, President, Residence Hall Association

Hiroe Sorter, Student Success Program Manager, Undergraduate Education and Student Success

Heather Terral, GE, Family and Human Services

Brian Trapp, Director, The Kidd Workshops; Career Instructor, Creative Writing Program

Julie Voelker-Morris, Senior Instructor II, School of Planning, Public Policy and Management; Director, Common Reading Program

Larissa Williams, Research Assistant, Prevention Science

Stephen Wooten, Associate Professor, International Studies

Kaitli Yeomans, GE, German and Scandinavian

Undergraduate Research Symposium Volunteers

Dana Glasscock, Office Assistant, Undergraduate Education and Student Success

Julie Staggs, GE, Education

Sara Bowman, Executive Assistant to the Director of Residence Life & Educational Initiatives, Residence Life

Undergraduate Symposium 2019 Presenter Statistics

The Undergraduate Research Symposium debuted in 2011 with 69 presenters and 40 faculty mentors spanning 20 majors and four colleges, and in its ninth year has grown to 513 presenters and 290 faculty mentors spanning 75 majors, 21 minor programs, 33 minors, and eight colleges. Over the past nine years the Symposium has hosted nearly 2100 student presenters.

Presenter Profile:

Total presentations:	323
Total presenters:	513 (344 presenters and 169 co-presenters)
Total faculty mentors:	290

All Colleges: Major and Minor Programs Represented:

Colleges:	8
Majors:	75
Minor Programs:	21
Minors:	33

Institutional Profile:

UO – FTFT Students	419 (82%)
UO – Transfer Students	61 (12%)
UO – International Students	13 (2%)
Lane Community College Students:	20 (4%)

Class Standing:

First-Year Students (0-44.99 credits):	76 (15%)
Sophomores (45-89.99 credits):	85 (16%)
Juniors (90-134.99 credits):	60 (12%)
Seniors (≥135 credits):	292 (57%)

Research Type:

Multi-term projects:	232 (72%)
Single-term projects:	85 (26%)
Study abroad/international projects:	6 (2%)

Presentation Type:

Poster:	186 (58%)
Oral:	127 (39%)
Data Stories:	
Creative Works:	4 (1.5%)
Academic Residential Communities	6 (1.5%)

Research Area:

Natural/Physical Sciences:	144 (46%)
Social Science projects:	123 (40%)
Humanities projects:	37 (12%)
Fine/performance arts projects:	4 (1%)
Design:	2 (1%)

Major and Minor Programs Represented by College:

College of Arts and Sciences (46)

Biology: 57
Psychology: 44
Human Physiology: 35
Environmental Studies: 30
Environmental Science: 26
Political Science: 24
Anthropology: 20
Exploring: 18
Mathematics: 15
Pre-International Studies 14
International Studies: 13
Sociology: 13
English: 12
Computer and Information Science: 11
Physics: 11
Biochemistry: 10
Spanish: 10
General Science: 7
History: 7
Chemistry: 6
Chinese: 6
Theater Arts: 6
Comparative Literature: 5
Ethnic Studies: 5
French: 5
Japanese: 5
Linguistics: 5
Mathematics & Computer Science: 1
Earth Sciences: 4
Economics: 4
General Social Science: 4
Marine Biology: 4
Romance Languages: 4
Asian Studies: 3
Classics: 3
Geography: 3
Philosophy: 3
Cinema Studies: 2
Humanities: 2
Russian, East European and Eurasian Studies: 2
Geological Sciences: 1
German: 1
Medieval Studies: 1
Religious Studies: 1
Spatial Data Science and Technology: 1
Women's, Gender, and Sexuality Studies: 1

Minor Programs: (17)

Global Health: 13
Creative Writing: 8
Food Studies: 6
Ethics: 5
Disability Studies: 4
Latin American Studies: 1
Comics and Cartoon Studies: 2
Computer and Information Technology: 2
European Studies: 2
Middle East-North African Studies: 2
African Studies: 1
Arabic Studies: 1
Digital Humanities: 1
Native American Studies: 1
Queer Studies: 1
Scandinavian: 1
Writing, Public Speaking, and Critical Reasoning: 1

Minors: (25)

Chemistry: 48
Anthropology: 16
Spanish: 13
Biology: 11
Psychology: 7
Earth Sciences: 6
English: 5
Political Science: 5
Sociology: 4
Environmental Studies: 3
Theater Arts: 3
Women's and Gender Studies: 3
French: 2
Korean: 2
Mathematics: 2
Philosophy: 2
Biochemistry: 1
Chinese: 1
Comparative Literature: 1
Computer & Information Science: 1
Economics: 1
Ethnic Studies: 1
Geography: 1
Italian: 1
Japanese: 1

Robert D. Clark Honors College: (101)

College of Education (5)

Communication Disorders and Sciences: 6
Educational Foundations: 5
Pre-Family and Human Services: 3
Family Human Services: 1
Pre-Education: 1

Minor Programs: (1)

Special Education: 8

College of Design (8)

Architecture: 3
Art: 3
Art & Technology: 1
Art History: 1
Interior Architecture: 1
Landscape Architecture: 1
Planning Public Policy and Management: 1
Product Design: 1

Minor Programs: (2)

Multimedia: 3
Nonprofit Administration: 1

Minors: (5)

Art: 5
Architecture: 3
Planning Public Policy and Management: 3
Landscape Architecture: 2
Art History 1

School of Music and Dance (5)

Music: 3
Music Performance: 2
Dance: 1
Music Composition: 1
Music Education: 1

Minor Programs: (1)

Audio Production: 1

Minors: (2)

Dance: 1
Music: 1

School of Journalism and Communication (6)

Journalism: Advertising: 25
Journalism: 15

Pre-Journalism: 8
 Journalism: Public Relations: 6
 Journalism: Media Studies: 2
 Pre-Journalism: Advertising: 1

Lundquist College of Business (4)

Pre-Business Administration: 8
 Business Administration: 4
 Business: 1
 Business Administration: Operations and Business Analytics: 1

Minors: (1)

Business Administration: 13

School of Law (1)

Minors: (1)

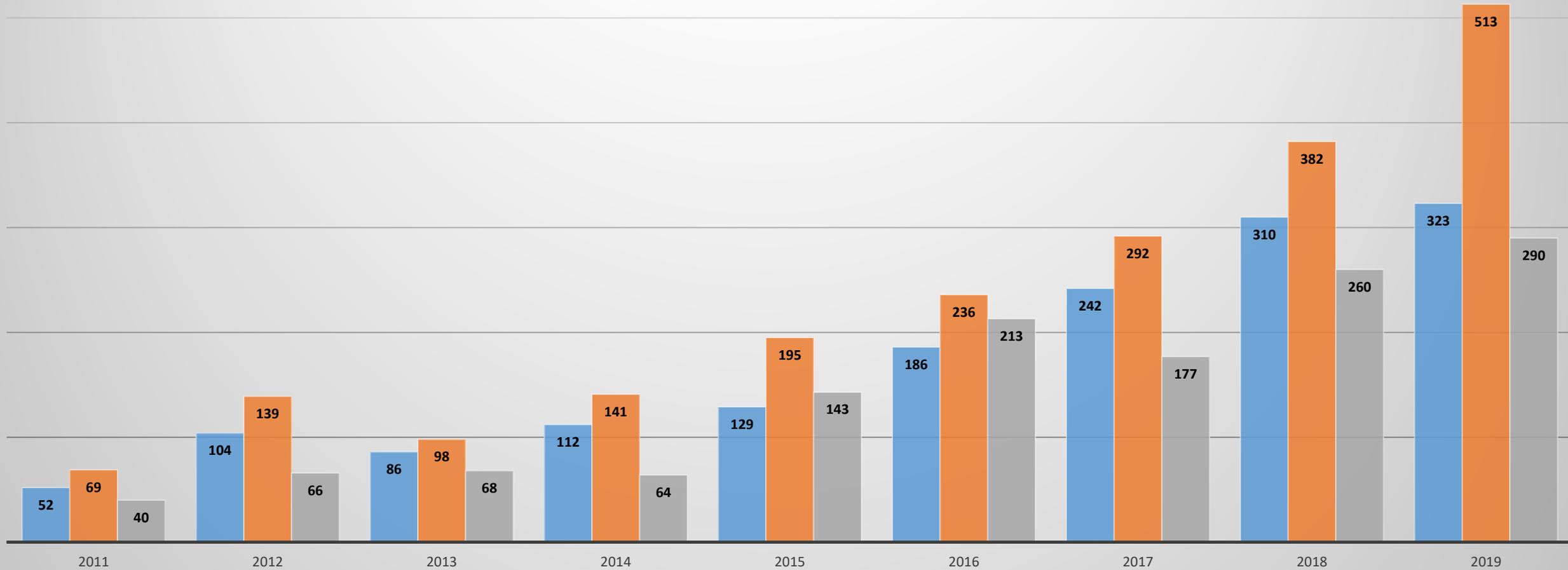
Legal Studies: 21

Sponsored /Funded Research Sources	Total
African Studies Departmental Grant	1
American College of Sports Medicine Student Research Award	1
Benjamin A. Gilman Scholarship	1
Carol Carver Pay it Forward Thesis Research Grant	1
Center for the Study of Women in Society Faculty Research Grant	2
Center of Multicultural Academic Excellence (CMAE) Ssummer Study Award	1
CURE Summer Undergraduate Research Fellowship (SURF)	6
David Krinsley Memorial Award	1
Emeritus Faculty Tribute Fund	1
Environmental Studies SEED Grant	1
Eunice Kennedy Shriver National Institute of Child Health & Human Development	2
Ford Family Foundation Scholarship	3
Global Oregon International Research Grant	2
Howard Hughes Medical Institute	1
Humanities Undergraduate Research Fellowship	6
Khalid M. Al Suhaimi and Jane L. Goodwin Endowed Scholarship for Study Abroad	1
Lane Community College Science Division	2
Lewis Family Endowment - Lewis Center for Neuroimaging	1
March of Dimes	1
Mary G. Alden Scholarship	2
McCaslin Family Political Science Scholarship	1
National Institute of Drug Abuse Summer Research Internship Program	2
National Institute of General Medical Sciences	1
National Institute on Aging	1
National Institute on Deafness and Other Communication Disorder	1
National Institutes of Health (NIH) Grant	10
National Science Foundation - Office of Polar Programs	1

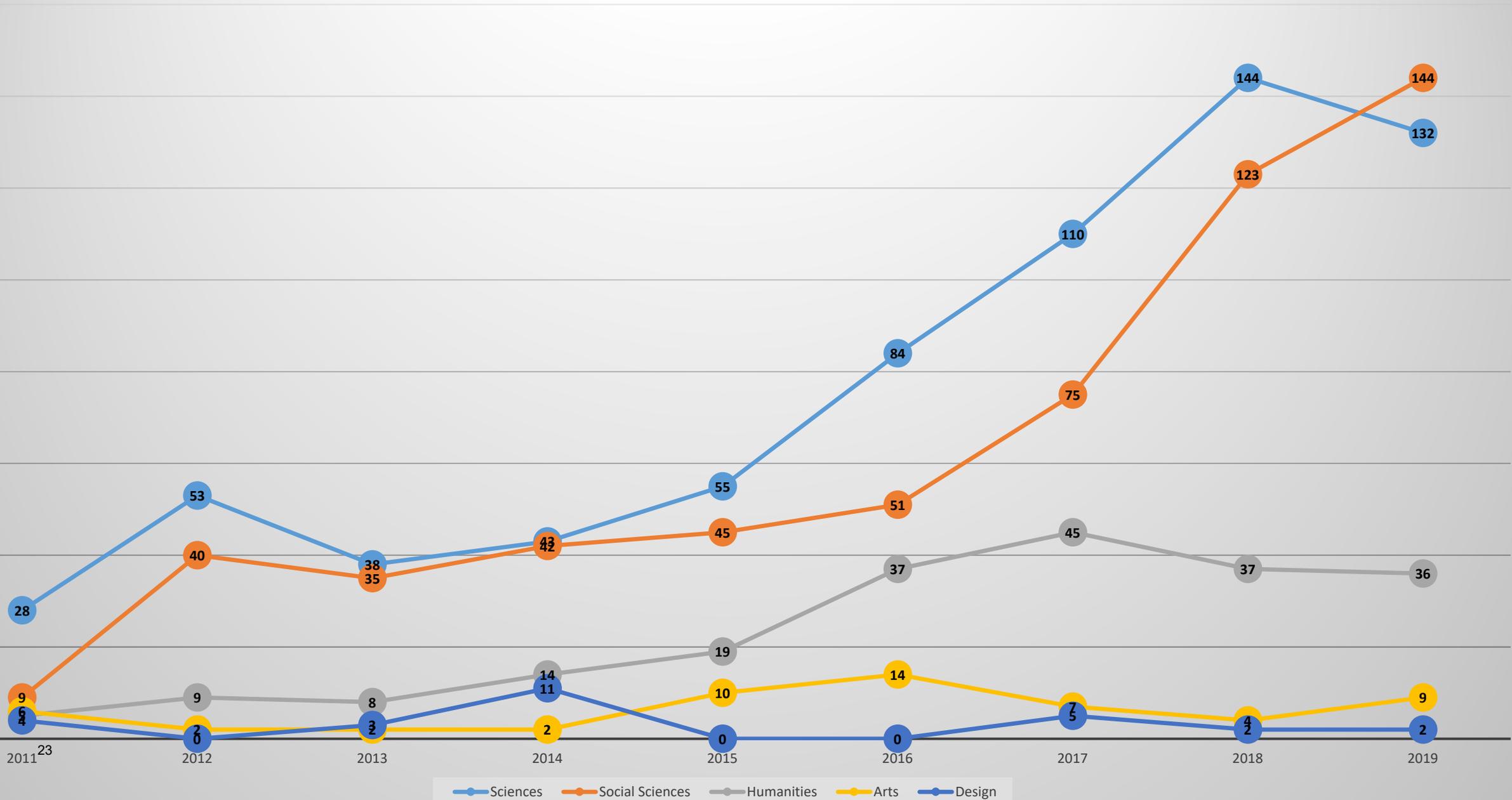
National Science Foundation - Research Experiences for Undergraduates	4
OHSU Knight Cancer Research Center	1
Oregon Medical Research Foundation	1
Oregon Space Grant Consortium	1
Oregon Undergraduate Researchers in SPUR (OURS) Research Fellowship	2
P-Chem Undergraduate Fellowship	1
Peter O'Day Fellowship for Undergraduate Research in the Biological Sciences	3
Phil & Penny Knight Campus Scholarship	5
Pongracz Scholarship	1
Presidential Undergraduate Research Scholars Program	6
Robert D. Clark Honors College Extraordinary Expenses Thesis Grant	4
Robert D. Clark Honors College Study Abroad Thesis Research Grant	1
Ronald E. McNair Scholars Program	16
Ronald E. McNair Scholars Program Summer Research Stipend	4
Roundhouse Foundation	1
Rutherford Middle East Initiative Travel Grant	1
Searle Scholars Program	1
Shephard Family Scholarship for Study Abroad	1
SIT Study Abroad Scholarship	1
Smith Family Study Abroad Scholarship	1
Summer Undergraduate Program in Engineering Research at Berkeley (SUPERB) Program	1
Tallwood Design Institute Discovery Project Grant	1
TAURUS Scholars Program	1
Thomas Mattson Scholarship	1
Translation Project Award via Global Studies Institute - Oregon Center for Translation Studies.	1
UnderGrEBES Research Award	2
United States Department of Energy	1
UO Department of Anthropology	2
UO Department of Biology	1
UO Libuda Lab	1
UO Summer Program for Undergraduate Research in Life Sciences (SPUR)	4
UROP Mini-Grant	13
Vice President for Research and Innovation (VPRI) Undergraduate Fellowship	14
Walter Youngquist Award	1

Undergraduate Research Symposium

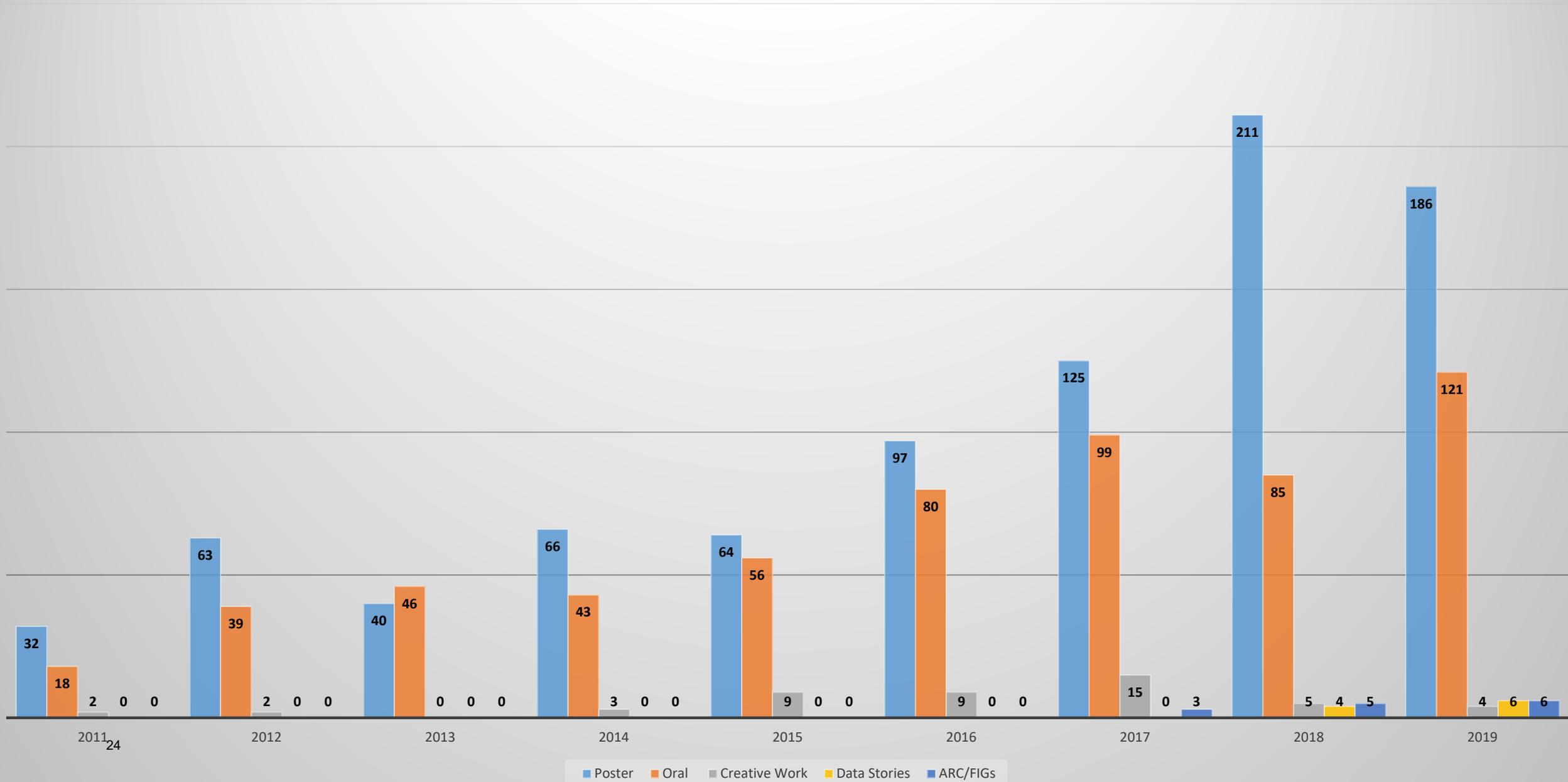
Total Presentations, Presenters, and Faculty Mentors, 2011-2019



Undergraduate Research Symposium Total Presentations by Divisional Area 2011-2019



Undergraduate Research Symposium Total Presentation Types, 2011-2019



2019 Undergraduate Research Symposium

Oral Presentations, Creative Works, Data Stories, and ARC Sessions Schedule

Thursday, May 16, 2019



Concurrent Oral Session 1 – 10:00-11:30 a.m.

HUMANITIES UNDERGRADUATE RESEARCH FELLOWSHIPS (HURF) - **SWINDELLS ROOM**: SESSION 1SW

- Anika Nykanen** Literary Racialization: The Function of Children in Southern Gothic Literature
- Scott Zeigler** Antagonistic River: Reading nature through Ken Kesey's *Sometimes a Great Notion*
- Cydney Davenport** Dialect Variation in English: An Investigation into the Disappearing Word Effect
- Violet Fox** Negotiating Freedoms: Women Experiencing Homelessness in Eugene, OR
- Alice Harding** Migration and ideas of the foreign in the Bronze Age Near East
- Allene Shaw** The Role of Intonation in Japanese Politeness
- Kendra Siebert** The Unofficial Story and the People Who Paint It: An Investigation of Urban Artists' Mobilizing Power in Oaxaca and Mexico City
- Deforest Wihtol** Caliban Yisrael: Constructing Caliban as the Jewish "Other" In Shakespeare's *The Tempest*
- MODERATOR:** **Paul Peppis**

PUBLIC HEALTH: PERSPECTIVES ON ACTION, PREVENTION, AND SUPPORT - **CEDAR ROOM**: SESSION 1C

- Elise Kronquist** The Effect Of Pyridoxamine On Ages And Aortic Wall Structure
- Hadi Barry** Assessing the Public Health Response to the 2014 Ebola Outbreak in Guinea
- Abby Hyland** Social Smoking & Its Patterns in Relation to Intention to Quit Smoking

Eleanor Rochester “I Don’t Have Deaths on my Conscience”: Perspectives of Intravenous Drug Users on a Peer-Delivered Naloxone Program in Eugene, Oregon

MODERATOR: Anna Cahn

WORKING IN THE MARGINS: BORDERS, BODIES, AND EXPERIENCES – **SPRUCE ROOM: SESSION 1S**

Quinne Hauth The Political Process of Integrating Immigrants into the German Economy

Samantha Sidline Embodied Experiences: The Health Implications of Transnationality and Undocumented Migration among Latin Americans

Rhys Hawes Sex Work in the Margins: How Intersectional Stigma Affects Queer Sex Worker’s Access to Intracommunity Support Networks

Ashley Kim How Marginalized Communities Have Been Affected by the Me Too Movement

Cassidy Kenney Investigating Human Rights and Peace Studies in the Western Balkans

Co-Presenter: Meredith Gusky, Rhiannon Newhouse, Emily Hunt, Heloise Gayet

MODERATOR: Kaitlin Yeomans

BRIDGES TO EXPRESSION: POLITICS, POETICS, AND VISUAL CULTURE - **MAPLE ROOM: SESSION 1M**

Sarah Hovet “Bannabees,” Bananas, and Sweet Potatoes: Claude McKay’s Songs of Jamaica and Traditional Jamaican Foodways as a Nationalist Expression

Dakota Kelsey Refinement of Poetics

Mary Green Ken Kaneki Outside of the Panels: Manga as a Bridge into the Hyperreal

Sarah Faulkner Violence to Women in Superhero Comics

Ana Daza The Rise of Reggaeton: How Whiteness Exploited the Genre into the Mainstream

MODERATOR: Kiana Nadonza

MICROBIAL ECOLOGY- **OAK ROOM: SESSION 1O**

Danielia Lewis Determining Growth and Development in *Wyeomyia Smithii* Mosquitoes Using Fluctuating Temperatures

Sky Ramirez Doble Tropical Land Use Change Effect on Soil Microbial Function

Eden Brush Host-microbe Evolutionary Antagonism in Primates: HopQ's Role as a Bacterial Adhesin Targeting CEACAM1

Dylan Martins Examining Pairwise and Multi-Species Interactions in Larval Zebrafish

MODERATOR: Peter O’Day

**KIDD CREATIVE WRITING WORKSHOPS: LINE OF INQUIRY (LOI) PANEL 1 – DIAMOND LAKE ROOM:
SESSION 1DL**

- Rory Allen** Who is Speaking: Fictive De-Construction and the Second Person in Italo Cavino's *If on a Winter's Night a Traveler*
- Jess Thompson** Defamiliarizing the Horror Genre
- Andrew Tesoriero**
Revealing the Reveal: How and Why Authors Build to and Execute Plot Twist
- MODERATOR: Brian Trapp**

Concurrent Oral Session 2 – 11:45-1:15 p.m.

**MIND MATTERS: THE DIAGNOSIS AND TREATMENT OF MENTAL ILLNESS – SWINDELLS ROOM:
SESSION 2SW**

- Gabriella Farland** Morningside Hospital: A Historical Case Study for the Diagnosis and Treatment of Depression in Mid-Century American Psychiatry
- Rachel McGill** Analyzing Treatment of Schizophrenic Patients within Morningside Hospital from 1955-1958
- Megan Olivera** Systematic Review of Mental Illness Measures and Diagnosis in the United States
- Faith Collins** The Effect of Delta Frequency Music on Insomniac Sleep Onset Latency
- Shane Cooney** Overwhelmed and Undermined: The Use of Psychoactive Substances and the Problem of Meaninglessness
- MODERATOR: Michelle Mauricci**

COMPUTER AND INFORMATION SCIENCE AND PHYSICS – CEDAR ROOM: SESSION 2C

- Christopher Misa** MACE: Improving Measurement Accuracy in Containers Through Trace-based Network Stack Latency Monitoring
- Franklin Smith** Automating Dev Ops with Docker Application Technology Shell Scripts
- Adrian Gutierrez** Edge detection and Deep Learning Algorithm Performance Studies for the ATLAS Trigger System
- Joseph Yaconelli** Low Level Control of a Quadrotor with Deep Model-Based Reinforcement learning
- MODERATOR: Helen Jenne**

IDENTITY, PLACE, AND RITUAL: STUDIES IN ANCIENT HISTORY – **SPRUCE ROOM: SESSION 2S**

Dimitra Fellman Race, Ethnicity, and Jewish Identity in the Ancient Mediterranean

Emily Feicht Water and Architecture: The Integration of the Binary

James Andersen A Toast From the High Seat-The Feast in the Viking Age

MODERATOR: **Carolyn Hernandez**

REALITY, RISK, AND RESTORATION: STUDIES IN ECOLOGY – **MAPLE ROOM: SESSION 2M**

Emil Sadofsky The Effects Of Restoration Fill Elevation On Carbon Accumulation In Pacific Northwest Estuaries

Laura Queen Future Flood Risk in the Columbia River Basin under Climate Change

Richelle Ann Cabatic

Quantifying upper layer ocean dynamics using iceberg GPS Tracking

MODERATOR: **Lauren Goss**

REPRESENTATION, POSSIBILITY, AND POWER IN THE MEDIA – **OAK ROOM: SESSION 2O**

Jillian Niedermeyer Setting the Agenda and Framing International News at the Headline Level

Elle Rogers Why Can't We Be Friends?: Masculinity in the TV Sitcom "Friends"

Corinne Togia Women Ball Too: Changing the Culture around Women in Sports and Defining Women Excellence

Sierra Webster Long-form, Journalistic Coverage of the Seattle Storm through Agenda-Setting and News-Makers Frameworks

Olivia Dozois Asexual Representation on Television and its Effects on Public Knowledge

MODERATOR: **Majd Mariam**

ENVIRONMENTAL LEADERSHIP PROGRAM – **CRATER LAKE NORTH ROOM: SESSION 2CLN**

Marissa Lane- Masee

ELP 2019 Riparian Restoration: Pollinator, Stream Temperature, Photopoint, and Aquatic Invertebrate Monitoring

Co-Presenters: **Joe Dahlke, Katie Fischer, Michaela Fishback, Steven Pearlman**

Kelly Shull Landscape scale forest health assessment in Hendricks Park, Eugene, Oregon

Co-Presenters: Owen Collins, Jackson Dailey, Betsy Finn, Ben King, Haley Nicholson, Sky Ramirez-Doble, Nick Richardson, Haley Santos, Kiana Seto

Marinn Longenecker

Oregon White Oak (*Quercus garryana*) Habitat Monitoring and Management: Proposal for Thurston Hills Natural Area (THNA) Environmental Education: Restoring A Sense of Place

Co-Presenters: Kristi Thompson, Nick Pierson, Sakina Shahid, Jane Yeoman, Seth Arbogast, David Josi, Sarah Cudworth, Marie Moore, Marina Harrington

MODERATOR: Peg Boulay

DATA STORIES PANEL 1 – CRATER LAKE SOUTH ROOM: SESSION 2CLS

Jack Kapustka

Karishma Shah

Nolan Rudolph

Jacie Shenone

MODERATORS: Jonathan Cain and Christabelle Dragoo

MEDIA AND SOCIAL ACTION ACADEMIC RESIDENTIAL COMMUNITY (ARC) – COQUILLE: SESSION 2CQ

Jaden Gill The Media and Social Action ARC: Amplifying The Voices of Those Who May Not Have One and Advocating For Progressive Social Change In Our Community and the World

Co-Presenters: Jasmine Lewin, Grace Murray, Emma Alsept-Ellis, Lexy Jones

MODERATOR: Charlie Butler

CREATIVE WORK – REDWOOD AUDITORIUM: SESSION 2RA

Malysa Robles The Exploration of Translating Abstract Artistic Mediums: Non-Verbal Expression and Communication

MODERATOR: Natascha Reich

PINE MOUNTAIN OBSERVATORY RESEARCH PROJECT – PRICE SCIENCE COMMONS VISUALIZATION

LAB: SESSION 2PSC

Connecting Students to the Universe through Research and Outreach at Pine Mountain Observatory

Co-Presenters: Maggie Thompson, Odelia Hartl, Nicole Ringsdorf

MODERATOR: Scott Fisher

**KIDD CREATIVE WRITING WORKSHOPS: LINE OF INQUIRY (LOI) PANEL 2 – DIAMOND LAKE ROOM:
SESSION 2DL**

Kaya Noteboom Auto-Fiction: Better Fiction Through Non-Fiction

Madeline Walters Empathy in Fiction as Shown Through the Second Person Point-of-View

Lida Ford Non-Western Epiphanies

Julia Mueller Sexual Trauma, Representation, and Ambiguity

MODERATOR: Brian Trapp

Concurrent Oral Session 3 – 1:30-3:00 p.m.

**THE CHOICES WE MAKE, THE SYSTEMS WE CREATE: ECONOMICS, JUSTICE + SOCIETY – SWINDELLS
ROOM: SESSION 3SW**

Simon Narode A Critique of Hume's Compatibilist Philosophy: The Challenge of Reconciling Free Will and Causality

Adriane Hershey A Social and Psychological Analysis of Fatal Police Violence

Frankie Leonard Success in a Neoliberal, Capitalistic Society

Zoe Wassman American, Societal Structures Inhibiting Empathy for Criminals

Michael Monterey Abstract: The Economics of Corruption vs. Economic Justice

MODERATOR: Mike Peixoto

**CREATING KNOWLEDGE THROUGH COMMUNICATION: SOCIAL STANDARDS, TEAMWORK, AND
PERFORMANCE – CEDAR ROOM: SESSION 3C**

Taylor Kissinger Generation Z's Hidden Social Media Rule Book: Adolescents Collectively Created A Set Of Social Standards To Abide By Online. If They Do Not Play By the Rules, Real Consequences Ensur

Aaron MacArthur Referential communication task in a naturalistic setting

Alexander Pulaski Knowledge Transfer and Performance in Differently Structured Teams

MODERATOR: Crystal Brown

SEEKING NEW PHYSICS – **SPRUCE ROOM**: SESSION 3S

Madelyn Scott Correction of Evolving Background in Single-Shot Transient Absorption Measurements

Adrian Gordon Semiconductor-Electrocatalyst Interfaces on Photoanodes Designed for Photoelectrochemical Cells

Joey Carlson Optimization of Silicon Detector for the International Linear Collider through Reconstructing of Higgs to Two Tau Decay Chanel

Davis Austin Resolution Optimization of the Silicon Detector in the International Linear Collider: Seeking New Physics with the Higgs Boson

MODERATOR: Parichehr Kazemi

DNA – **MAPLE ROOM**: SESSION 3M

Anna Horacek Mechanisms of Sister chromatid Repair during meiotic double-strand DNA Break Repair

Alina Salagean SMC-5/6 E3 SUMO ligase subunit NSE-2 is required for robust repair of meiotic DNA double-strand breaks

Fountane Chan Piwi-piRNA pathway protein PRG-1 Represses in Temperature-induced DNA Damage in spermatocytes

Dan Tudorica Chemoreceptor Zinc-Binding Protein Domains Sense Hypochlorous Acid

Corinne Toghiani Effects of Alisertib in Acute Lymphoblastic Leukemia NSG Mouse Models

MODERATOR: Larissa Williams

WOMEN ON THE EDGE: FEMINISMS, TRANSLATIONS, AND MONSTROSITIES – **OAK ROOM**: SESSION 3O

Elmira Louie A Woman's Voice: Methods and Obstacles of Feminist Translation in Persian, Spanish, and Turkish Poetry

Abigail Kellems The Life of the Composer Francesca Caccini and How It Reflects the Music and Culture of the Baroque Period

Bethan Tyler Reconceptualizing Feminist Utopias: Marge Piercy's *Woman on the Edge of Time* and Margaret Drabble's *The Millstone*

Corinne Brubaker "The Harbinger of Category Crisis": Understanding Representations of Monstrosity in Mary Shelley's *Frankenstein*

Alyssa Pete “Swim the Warm Waters of Sins of the Flesh”: Deviant Gender and Sexuality in *Frankenstein* and *The Rocky Horror Picture Show*

MODERATOR: Julie Voelker-Morris

DATA STORIES PANEL 2 – CRATER LAKE SOUTH ROOM: SESSION 3CLS

Allysia Rainey

Ash Martins

Peyton Hines-Norwood (Umoja ARC)

Ben King

Zora Rose

Sierra Connolly

MODERATORS: Jonathan Cain and Christabelle Dragoo

EQUITY AND INCLUSION IN EDUCATION: CULTIVATING SPACE FOR ALL – REDWOOD AUDITORIUM: SESSION 3RA

Hannah Solheim Admissions without Acquittal: The Effect of “Ban the Box” on College Admissions

Imani Dorsey Continuing the Fight for Freedom: Black College Students Conceptions of Liberation

Anna-Magdalena Wilms-Crowe

Challenges to Democratic Inclusion and Contestation Of Space: Contemporary Student Activists In Transforming South Africa

Sydney Retamar Infrastructural Inhibitors: The Social and Educational Barriers for Individuals with Mobility Impacting Disabilities on the University of Oregon Campus

Nitan Avivi How We Think About Math

MODERATOR: Melina Pastos

GEMINI/HUBBLE SPACE TELESCOPE GALAXY CLUSTER PROJECT – PRICE SCIENCE COMMONS VISUALIZATION LAB: SESSION 3PSC

Live videoconferences with UO’s GCP collaborators including the leader of the project, Dr. Inger Jorgensen of the Gemini Observatory and UO’s main international collaborator, Dr. Ricardo Demarco, the Head of the Astrophysics Department at the University of Concepcion in Chile

MODERATOR: Scott Fisher

**KIDD CREATIVE WRITING WORKSHOPS: CREATIVE READINGS PANEL 1 – DIAMOND LAKE ROOM:
SESSION 3DL**

Lisa Kwan Variations on Affection

Kaya Noteboon On Being Full

Kaity Olsen Dishes

MODERATOR: Brian Trapp

**LANE COMMUNITY COLLEGE COMMUNITY RESEARCH PRESENTATIONS PANEL 1– COQUILLE ROOM:
SESSION 3CQ**

Najla Almammari Autism and Autistic People

Hung Nguyen Is Badminton a Sport for Americans?

Ivo Decarlis A Silent, Under-recognized Disease: Celiac Disease's Social and Psychological Impacts

Onsarigo Matara New ESL Academic Challenges In Eugene Oregon

MODERATOR: ned erilus

**LANE COMMUNITY COLLEGE COMMUNITY RESEARCH PRESENTATIONS PANEL 2 – MILLER ROOM:
SESSION 3MI**

Min Kim Expensive sneakers

Bayan Almakay Employees at Amazon

Sara Baptista Keeping the Titans on Track (Women Basketball Players of Lane Community College)

Komron Rasulov Restaurants Service and Customers Care

Tulku Sangye Tenzin Behavior of Human Beings and their Effect on Global Warming

MODERATOR: Spencer Atkinson

Concurrent Oral Session 4 – 3:15-4:45 p.m.

**PANEL DISCUSSION: GETTING INVOLVED IN RESEARCH AS A TRANSFER STUDENT – SWINDELLS
ROOM: SESSION 4SW**

Panelists: Aaron MacArthur, Maria Dresser, Morgan Bunch, Zora Rose, Dr. Josh Snodgrass

MODERATOR: Hannah Bishop

CLASSROOMS AS COLLABORATIONS: WORKING TOGETHER TO TEACH, LEARN, AND CREATE MEANING – CEDAR ROOM: SESSION 4C

- Eleanor Williams** Environmental Education: Restoring a Sense of Place
- Co-Presenters:** **Brittany Calabria, Chloe Johnson, Hannah Schmidt, Cameron Wallenfels, Savannah Winchell**
- Michelle Lo** Student or Teacher? A Look at How Students Facilitate Public Sensemaking during Collaborative Group Work
- Cheyenne Collins** Starting a Taphonomic Research Facility in the Willamette Valley of Oregon: A Joint Project between Lane Community College (LCC) and the University of Oregon (UO)
- Isabelle Cullen** A Look at Post-Secondary Education Support for Students with Autism Spectrum Disorders (ASD)
- Thea Bergen** Canopy Connections: Artist Activists
- Co-Presenters:** **Makayla Dempsey, Hannah Gruen, Carly Henry, Kelsey Hunter, Cassidy Kroon, MacKenzie Myers, EJ Del Rosario, Melissa Teter**
- MODERATOR:** **Elizabeth Glenn**

BODIES, REST, AND MOTION: STUDIES IN PHYSIOLOGY – **SPRUCE ROOM: SESSION 4S**

- Chaucie Edwards** Exercise-induced Elevations in Skeletal Muscle Histamine Contributes to Increased Post-Exercise Capillary Permeability
- Frankie Lewis** Rationalizing the Ratio Difference: Analysis of Molecular Factors Related to Primate Skeletal Muscle Fiber Type
- Lilly Carroll** Intestinal Phenotypes of Zebrafish Enteric Nervous System Double Mutants
- MODERATOR:** **Heather Terral**

CONNECTED TO CHINA – **MAPLE ROOM: SESSION 4M**

- Laurelei Singsank** From Massacre to Genocide: Redefining the Sook Ching
- Ana Garibay Mares** Belt and Road Initiative: The Sino-Samoa Pact
- Zoe Haakenstad** Visualizing the Politics of Family: The Role of Propaganda Posters in China's One-Child Policy
- Di Li** The Crisis of Ableism in China
- MODERATOR:** **Hiroe Sorter**

MULTICULTURAL SCHOLARS ACADEMIC RESIDENTIAL COMMUNITY – OAK ROOM: SESSION 4O

Cultural Assets and Advocacy through Identity Poems and Artistic Expression

Co-Presenters: Bethany Chan, Tatyana Gomez, Baylee Harding, Zaida Hatfield, Ryan Hoang, Jessie Janae, Jack Lien, Isaac Luten, Jennifer Mendez, Diana Morales, Wendy Palafox-Arceo, Hans Prieto, Kathleen Rodriguez Perez, Kissy Sendrijas, Xaria Siplin, Lidija Sovulj, Joselyn Tellez Cardenas, and Kim Truong

MODERATOR: Jeanne Hall

PHYSIOLOGY – COQUILLE ROOM: SESSION 4CQ

Antonio Munoz Odor Concentration Change Sensing in Mice

Ryan Leriche Effect of inter-stimulus interval duration and predictability on sensorimotor beta

Cameron Colbert Hemodynamics of Post-Exercise and Post-Passive Heat Stress Recovery

MODERATOR: Alicia DeLouize

PINE MOUNTAIN OBSERVATORY RESEARCH PROJECT – PRICE SCIENCE COMMONS VISUALIZATION LAB: SESSION 4PSC

Connecting Students to the Universe through Research and Outreach at Pine Mountain Observatory

Co-Presenters: Maggie Thompson, Odelia Hartl, Nicole Ringsdorf

MODERATOR: Scott Fisher

KIDD CREATIVE WRITING WORKSHOPS: CREATIVE READINGS PANEL 2 – DIAMOND LAKE ROOM: SESSION 4DL

Sarah Weishaupt The Hollows of the Heart

Andrew Tesoriero Greener Fields

Dakota Kelsey Poems

MODERATOR: Brian Trapp

Creative Works and Academic Residential Communities Session 5 – 5:30-7:30 p.m.

CREATIVE WORK: ECOPOETRY AND US – EMU BALLROOM STAGE: SESSION 5BR

Adie Fecker Eco-poetry and Us

Co-Presenters: Hailey O’Donnell, Nolan Kriska

CREATIVE WORK: REACTING TO THE PAST PERFORMANCE – OAK ROOM: SESSION 5O

“Come One. Come All” Introduction to the “Reacting to the Past Course” Greenwich Village 1913 (HIST 411)

Co-Presenters: Kaitlyn Champoux, Veronica Jones, Paige Kosa, Hunter Moen, Gwynyth Pass, Maddie Pellman, Camille Titus, Tabitha Todd

MODERATOR: Ian McNeely & Dorothee Ostmeier

ACADEMIC RESIDENTIAL COMMUNITY: UMOJA BLACK SCHOLARS – MAPLE ROOM: SESSION 5M

How Do Images Presented In the Media Affect Black Mental Health and Self Perception

Co-Presenters: Jared Giles, Blayne Goring, Halston Harper, Peyton Hines-Norwood, Samson Johnson, Tamara Jordan, Semeredin Kundin, Kiasa Lane, Miles Lawson, Ellis Mimms, Okeoma Okoro, Philicia Robinson, Le’Asia Smith, Ashley Terrell, Miracle Trice, Adryana White, Bailey Adams

MODERATOR: Curtis Austin

CREATIVE WORK: ALLEN HALL MEDIA – EMU LOBBY: SESSION 5EL

Co-Presenters:

MODERATOR: Maya Lazaro

During Poster Session in Ballroom: CREATING A THEATER LOBBY EXPERIENCE – Ballroom: SESSION 5B

Rachel Cooper On Oranges: Creating a Theater Lobby Experience Using Dramaturgical Principles

Co-Presenters: Rachel Cooper, Max Daniels, Alexander Fix, Brian Janisch, Cassidy Malick, Giulia Sala, Zoe Wassman

MODERATOR: Aryn Bartley

**Undergraduate Research Symposium
2019 Poster Presenters by Presenter Last Name**

Last Name	First Name	Co-Presenters	Poster Number
Abele	Alex	Robert Wyrick	178
Adams	Emma		137
Adams	Andrew	Jenna Bell, Siena Bowen, Julia Matthews	171
Adler	Melissa		136
Allen	Aurora		135
Almond	Abigail		134
Alvy	Macias-Gonzalez		87
Andrade	Giselle	Carlos McCarter, Sierra Connolly	139
Baach	Elizabeth		1
Bailey	Konrad		29
Baker	Renee	Michaela Amamilo	182
Bange	Sophie		125
Barajas	Ana Cecelia		160
Barney	Megan		78
Basham	Zachary		3
Battan	Sierra		76
Bermudez-Eredia	Sofia		124
Berry	Paula		15
Bisted	Casey		60
Blackburn	Sara		120
Blacklock	Paige		115
Blaschka	Alexis	Gabby George	166
Bloom	Mariah		107
Blythe	Evie	Molly Armstrong, Sophie Bailey, Cayenne Peel	167
Buechler	Jack	Hayden Stotts	172
Bunch	Morgan		113
Cameron	Zoe		133
Cao	Wenjia		132
Capelle	David		148
Chan	Fountane		47
Charles	Paulino		84
Cole	Jazmin		92
Collins	Cheyenne		153
Connor	Patrick		16
Cooke	Samuel		77
Cooper	Rachel	Max Daniels, Alexander Fix, Brian Janisch, Cassidy Malick, Giulia Sala, Zoe Wassman	85-86
Dang	Anson		67
Davis	Kylie		100
Deardorff	George	Bryson Ramona	44
Dona	Allison		162
Donaghue	Kymmi		101
Dorrell	Genevieve		45
Ede	Frederick		46
Edgar	Madison		106
Ekstrom	Tj		6
Enayati	Ravahn		13
Fajardo	Patrick		17
Falconer	Brittany		65
Fecker	Adeline		75
Feinberg	Troi		130
Feingold	Cailan		63
Fischer	Katie		33
Fisher	Delaney		147
Floyd-Preston	Alice	Jay Lopez, Zach Colligan, Jordan Hankins	173
Ford	Lida		102
Francis	John		37
French	Lilly		103
Fuentez	Alyssa		69
Garcia	Lauren	Jaidan McLean	183
Garmon	Elise		144
George	Gillian	Vanessa Zumudio	140
Giersch	Lydia	Imani Wolery, Brittany Jeffery, Sera Kaplow, Graciela Rodriguez	168
Gomez	Enrique		52

Guerricabeitia	Lisa		105
Hauth	Carson		154
Haynes	Kate		98
Heierle	Jessica	Nora Kearns	38
Henderson	Hannah		79
Hernandez	Ramon		184
Hicks	Joan		82
Horacek	Anna		68
Hoslett	Allison		71
Huddleston	Christa		152
Huffman	Anabelle		174
Hyland	Abby		164
Iriawan	Kevin		185
Irvine	Nikki		186
Iwashita	Takako		128
Jansky	Alexandra		163
Johnston	Rachel		117
Jones	Ellie		55
Jones	Kate		83
Jones	Kate		88
Kaltenbach	Courtney	Alli Eroh, Stella Augustine, Caitlyn Mccall, Racheal Maloney, Maggie Craven	175
Kendrick	Brianna		66
Kendrick	Rennie		119
Kennelly	Ellyn		142
Kizziar	Ethan		48
Klausen	Grant		43
Klepp	Mason		187
Kloft	Hannah		91
Koch	Haley		138
Kondo	Kelly	Bella Conferti, Yuhui Li, Yuwei Shi, Tyler White	99
Krakov	Morgan		112
Kraschel	Emily	Enrique Menjivez	188
Kruse	Hannah		40
Kruss	Tova		5
Kundin	Semeredin	Ellis Mimms, Okeoma Okoro, Samson Johnson, Halston Harper, Miracle Trice	Maple Room
Kunimune	Jena		93
Kwan	Lisa		26
Lancaster	Ruben		10
Lancaster	Brittani	Britta Bauer, Ramsey Sullivan, Annika Minges,	156
Lane	Connor		58
Ligon	Cristoff	Gavin Bradley	176
Lutz	Rachel		14
Ma	Emily		53
Marx-Albuquerque	Leandro		28
Mascarenas-Wells	Jordyn		36
McCann	Clare		150
McKay	Hannah	Isabel Rivera	90
Melendy	Shawn		7
Menashe	Nadav		20
Minns	Hanna		41
Mirbod	Emily	Sophie Hansen, Desiree Whitney, Madisen Campbell, Tom Tandberg	169
Mitchell	Quinn		116
Moore	Bryanna		155
Moreno Perez	Renata		118
Mostales	Joshua		34
Muchow	Francesca	Katee Kuhlman, Bronwyn Lord	189
Nelson	Jennifer		24
Nguyen	Minh		22
Niebergall	Emily		54
Obermeyer	Ryan		8
O'Neill	Jessica		94
Pandit	Rima		12
Paros	Bryanna		64
Pearman	Joshua		96
Penkauskas	Calvin		61
Pennel	Makenna		25
Petruccione	Erin	Temerity Bauer	49
Pickerel	Molly		21

Pons	Christine		151
Putnam	Claire	Bridget Johns, Amanda Henney, Myrriah Jones,	190
Pyles	Cora		57
Quiroz	Itzel	Michelle Scalise Sugiyama	39
Rehmann	Clara	Joe Dahlke	59
Ricci	Giovanni	Ian Dolbec, Isaac Jodel, Grace Gibbs, Hannah Lake, Enam Bustami	170
Rice	Haley	Faryn Dahlen, Victoria Dang, Cindy Le, Yalin Li, Jack Lien, Tawny Nguyen, Hanson Pham	42
Ringsdorf	Nicole		18
Ritchie	Lily		104
Rivera	Andrea	Laura Ho	180
Robinett	Helen	Emma Synder	191
Rose	Zora		2
Roth	Franziska	Sterling Baraquio, Emily Gonzalez	141
Samples	Jessica	Lucille Shadburne, Emma Meese	192
Sandhu	Vikram		4
Saper	Shelby		122
Saravis	Arden		159
Sayegh	Ryan		9
Sepulveda	Ari		158
Shannon	Lucas	Zachary Gee	193
Shreeve	Caitlin	Nichole Biggs	62
Silver	Michael		110
Smith	Alexander		73
Smits	Joseph		35
Soper	Elizabeth		143
Soriano	Kendall	Sarah Brown	31
Southworth	Brianna		80
Sridhar	Nisha	Camille Sullivan	114
Strand	Eric		51
Suwanapornchai	Jia	Hanna Drake	181
Swift	Josephine		95
Szczepanski	Nicole		19
Tadepalli	Sravya		126
Thomet	Kayla		32
Thompson	Alexandra		72
Thorp	Amber	Anneliese Merrigan	179
Tran	Tuong Vy		131
Trempey	Kieleey		30
Trujillo	Elisa		56
Van Rysselberghe	Marie		108
VanCleave	Trace	Grace Floyd	129
Veirs	Michael		23
Verhoeven	Nathalie		81
Waldron	Ally		161
Walker	Claren		149
Wheary	Lillian	Sam Kirby, Nick Belair	27
Wilcox	Joy		97
Williams	Dylan		146
Wilson	Mathieu		109
Wimberly	Ally		70
Wind	Alexander	San Ahlquist, Whitney Oliva	74
Wonderly	Erick		50
Yamada	Nozomi	Alexandra Urrutia, Riley Roefaro,	177
Zhang	Min		111
Zhang	Shan	Kyla Martindale, Hana Nguyen	121
Zhou	Shijing	Kylie Rothhouse	123
Zuel	Brandon	Rachael Dahlen, Sean Galka	157

Color Legend	
Sciences	
Social Sciences & Humanities	
Social Activism ARC	
Environmental Leaders ARC	
Global Engagement ARC	
Umoja Black Scholars ARC	

**Undergraduate Research Symposium
2019 Poster Presenters by Poster Numbers**

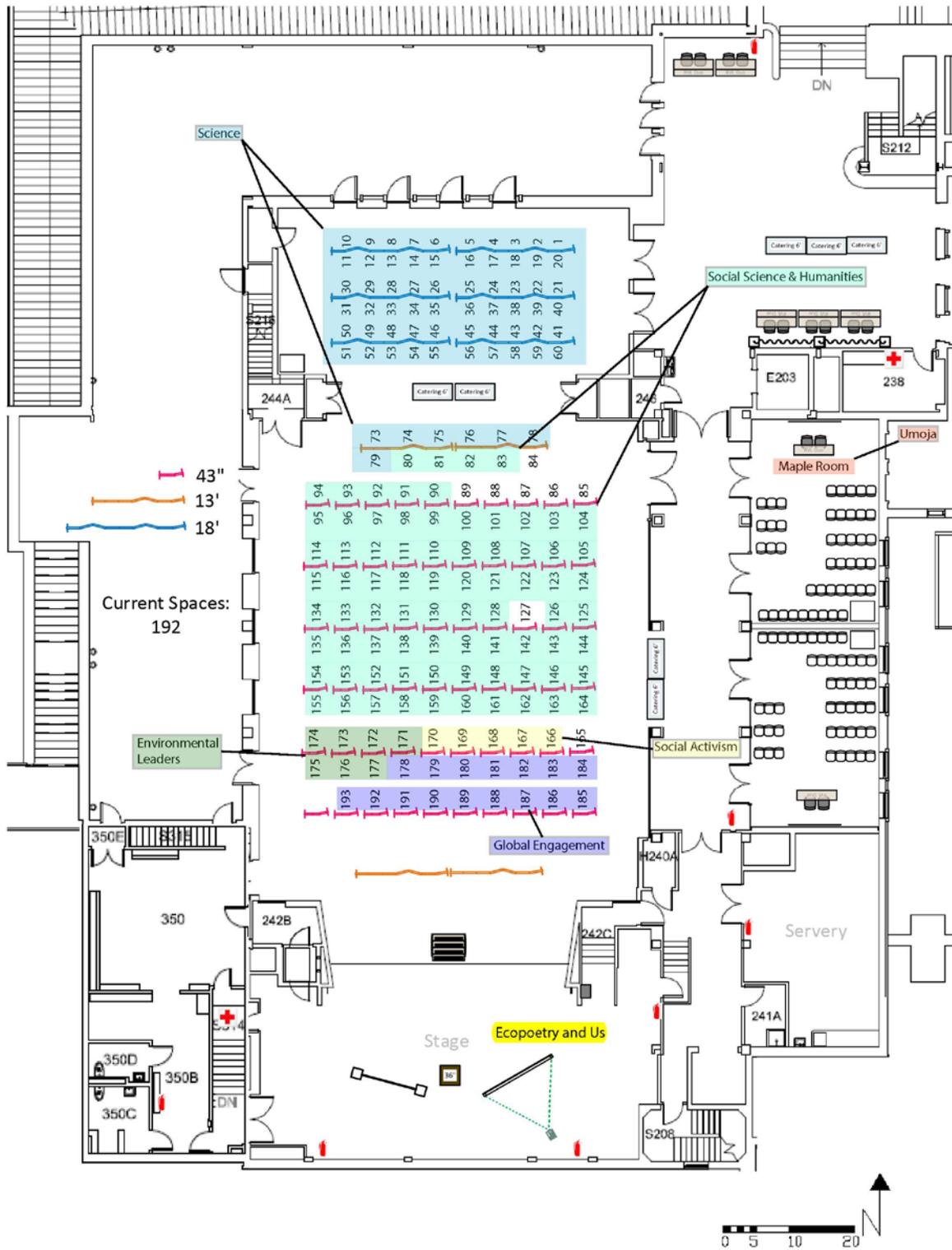
Last Name	First Name	Co-Presenters	Poster Number
Baach	Elizabeth		1
Rose	Zora		2
Basham	Zachary		3
Sandhu	Vikram		4
Kruss	Tova		5
Ekstrom	Tj		6
Melendy	Shawn		7
Obermeyer	Ryan		8
Sayegh	Ryan		9
Lancaster	Ruben		10
Pandit	Rima		12
Enayati	Ravahn		13
Lutz	Rachel		14
Berry	Paula		15
Connor	Patrick		16
Fajardo	Patrick		17
Ringsdorf	Nicole		18
Szczepanski	Nicole		19
Menashe	Nadav		20
Pickerel	Molly		21
Nguyen	Minh		22
Veirs	Michael		23
Nelson	Jennifer		24
Pennel	Makenna		25
Kwan	Lisa		26
Wheary	Lillian	Sam Kirby, Nick Belair	27
Marx-Albuquerque	Leandro		28
Bailey	Konrad		29
Trempey	Kieleey		30
Soriano	Kendall	Sarah Brown	31
Thomet	Kayla		32
Fischer	Katie		33
Mostales	Joshua		34
Smits	Joseph		35
Mascarenas-Wells	Jordyn		36
Francis	John		37
Heierle	Jessica	Nora Kearns	38
Quiroz	Itzel	Michelle Scalise Sugiyama	39
Kruse	Hannah		40
Minns	Hanna		41
Rice	Haley	Faryn Dahlen, Victoria Dang, Cindy Le, Yalin Li, Jack Lien, Tawny Nguyen, Hanson Pham	42
Klausen	Grant		43
Deardorff	George	Bryson Ramona	44
Dorrell	Genevieve		45
Ede	Frederick		46
Chan	Fountane		47
Kizziar	Ethan		48
Petruccione	Erin	Temerity Bauer	49
Wonderly	Erick		50
Strand	Eric		51
Gomez	Enrique		52
Ma	Emily		53
Niebergall	Emily		54
Jones	Ellie		55
Trujillo	Elisa		56
Pyles	Cora		57
Lane	Connor		58
Rehmann	Clara	Joe Dahlke	59
Bisted	Casey		60
Penkauskas	Calvin		61
Shreeve	Caitlin	Nichole Biggs	62
Feingold	Cailan		63
Paros	Brynna		64

Falconer	Brittany		65
Kendrick	Brianna		66
Dang	Anson		67
Horacek	Anna		68
Fuentez	Alyssa		69
Wimberly	Ally		70
Hoslett	Allison		71
Thompson	Alexandra		72
Smith	Alexander		73
Wind	Alexander	San Ahlquist, Whitney Oliva	74
Fecker	Adeline		75
Battan	Sierra		76
Cooke	Samuel		77
Barney	Megan		78
Henderson	Hannah		79
Southworth	Brianna		80
Verhoeven	Nathalie		81
Hicks	Joan		82
Jones	Kate		83
Charles	Paulino		84
Cooper	Rachel	Max Daniels, Alexander Fix, Brian Janisch, Cassidy Malick, Giulia Sala, Zoe Wassman	85-86
Alvy	Macias-Gonzalez		87
Jones	Kate		88
McKay	Hannah	Isabel Rivera	90
Kloft	Hannah		91
Cole	Jazmin		92
Kunimune	Jena		93
O'Neill	Jessica		94
Swift	Josephine		95
Pearman	Joshua		96
Wilcox	Joy		97
Haynes	Kate		98
Kondo	Kelly	Bella Conferti, Yuhui Li, Yuwei Shi, Tyler White	99
Davis	Kylie		100
Donaghue	Kymmi		101
Ford	Lida		102
French	Lilly		103
Ritchie	Lily		104
Guerricabeitia	Lisa		105
Edgar	Madison		106
Bloom	Mariah		107
Van Rysselberghe	Marie		108
Wilson	Mathieu		109
Silver	Michael		110
Zhang	Min		111
Krakow	Morgan		112
Bunch	Morgan		113
Sridhar	Nisha	Camille Sullivan	114
Blacklock	Paige		115
Mitchell	Quinn		116
Johnston	Rachel		117
Moreno Perez	Renata		118
Kendrick	Rennie		119
Blackburn	Sara		120
Zhang	Shan	Kyla Martindale, Hana Nguyen	121
Saper	Shelby		122
Zhou	Shijing	Kylie Rothhouse	123
Bermudez-Eredia	Sofia		124
Bange	Sophie		125
Tadepalli	Sravya		126
Iwashita	Takako		128
VanCleave	Trace	Grace Floyd	129
Feinberg	Troi		130
Tran	Tuong Vy		131
Cao	Wenjia		132
Cameron	Zoe		133
Almond	Abigayle		134
Allen	Aurora		135

Adler	Melissa		136
Adams	Emma		137
Koch	Haley		138
Andrade	Giselle	Carlos McCarter, Sierra Connolly	139
George	Gillian	Vanessa Zumudio	140
Roth	Franziska	Sterling Baraquio, Emily Gonzalez	141
Kennelly	Ellyn		142
Soper	Elizabeth		143
Garmon	Elise		144
Williams	Dylan		146
Fisher	Delaney		147
Capelle	David		148
Walker	Claren		149
McCann	Clare		150
Pons	Christine		151
Huddleston	Christa		152
Collins	Cheyenne		153
Hauth	Carson		154
Moore	Bryanna		155
Lancaster	Brittani	Britta Bauer, Ramsey Sullivan, Annika Minges,	156
Zuel	Brandon	Rachael Dahlen, Sean Galka	157
Sepulveda	Ari		158
Saravis	Arden		159
Barajas	Ana Cecelia		160
Waldron	Ally		161
Dona	Allison		162
Jansky	Alexandra		163
Hyland	Abby		164
Blaschka	Alexis	Gabby George	166
Blythe	Evie	Molly Armstrong, Sophie Bailey, Cayenne Peel	167
Giersch	Lydia	Imani Wolery, Brittany Jeffery, Sera Kaplow, Graciela Rodriquez	168
Mirbod	Emily	Sophie Hansen, Desiree Whitney, Madisen Campbell, Tom Tandberg	169
Ricci	Giovanni	Ian Dolbec, Isaac Jodel, Grace Gibbs, Hannah Lake, Enam Bustami	170
Adams	Andrew	Jenna Bell, Siena Bowen, Julia Matthews	171
Buechler	Jack	Hayden Stotts	172
Floyd-Preston	Alice	Jay Lopez, Zach Colligan, Jordan Hankins	173
Huffman	Anabelle		174
Kaltenbach	Courtney	Alli Eroh, Stella Augustine, Caitlyn Mccall, Racheal Maloney, Maggie Craven	175
Ligon	Cristoff	Gavin Bradley	176
Yamada	Nozomi	Alexandra Urrutia, Riley Roefaro,	177
Abele	Alex	Robert Wyrick	178
Thorp	Amber	Anneliese Merrigan	179
Rivera	Andrea	Laura Ho	180
Suwatanapornchai	Jia	Hanna Drake	181
Baker	Renee	Michaela Amamilo	182
Garcia	Lauren	Jaidan McLean	183
Hernandez	Ramon		184
Iriawan	Kevin		185
Irvine	Nikki		186
Klepp	Mason		187
Kraschel	Emily	Enrique Menjivez	188
Muchow	Francesca	Katee Kuhlman, Bronwyn Lord	189
Putnam	Claire	Bridget Johns, Amanda Henney, Myrriah Jones,	190
Robinett	Helen	Emma Synder	191
Samples	Jessica	Lucille Shadburne, Emma Meese	192
Shannon	Lucas	Zachary Gee	193
Kundin	Semeredin	Ellis Mimms, Okeoma Okoro, Samson Johnson, Halston Harper, Miracle Trice	Maple Room

Color Legend
Sciences
Social Sciences & Humanities
Social Activism ARC
Environmental Leaders ARC
Global Engagement ARC
Umoja Black Scholars ARC

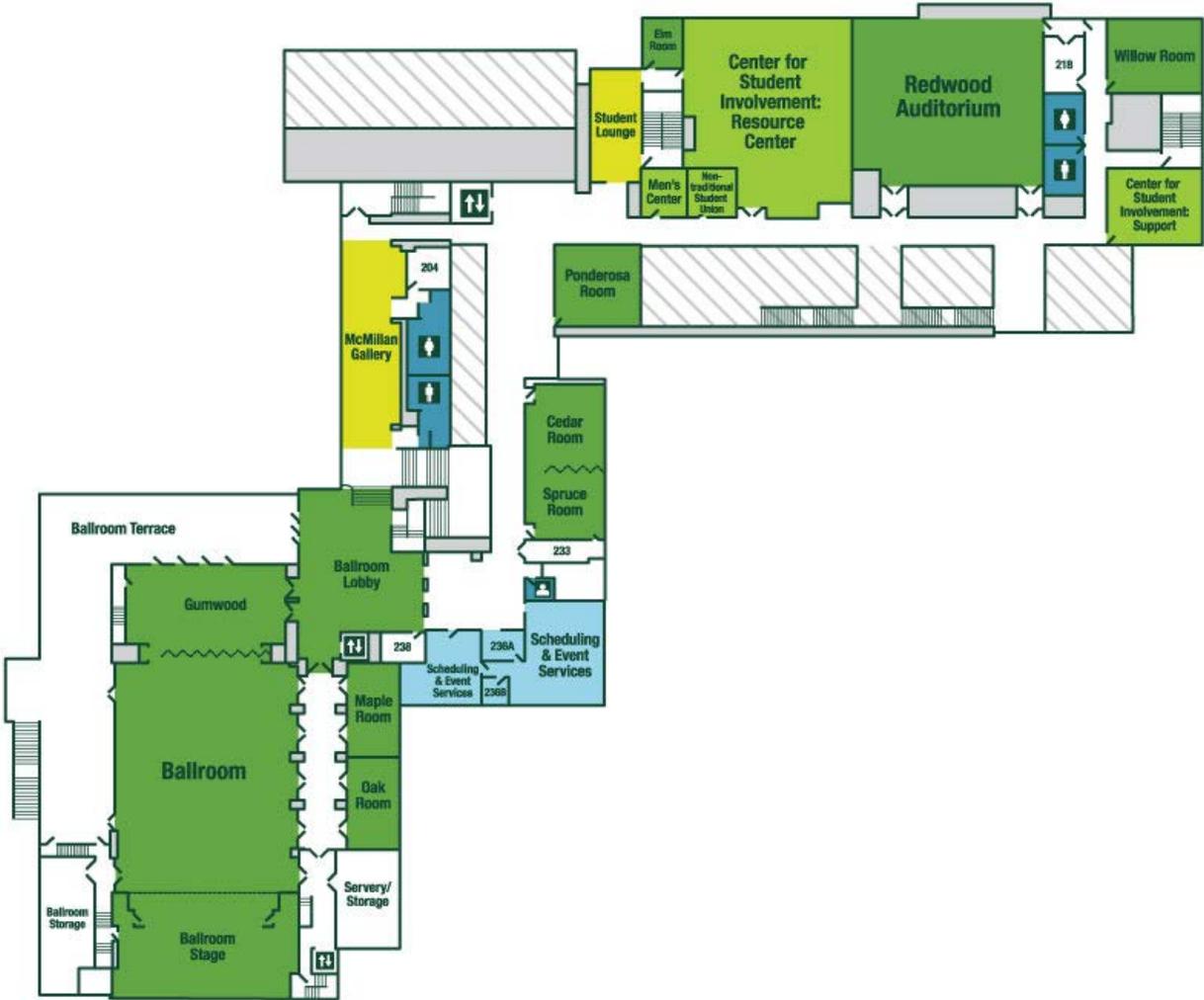
Undergraduate Research Symposium 2019 Venue Maps—EMU Ballroom



Undergraduate Research Symposium 2019 Venue Maps—EMU Level 1



Undergraduate Research Symposium 2019 Venue Maps—EMU Level 2



Undergraduate Research Symposium - 2019 Presenters

Alex	Abele	Wenjia	Cao
Emma	Adams	David	Capelle
Andrew	Adams	Joey	Carlson
Bailey	Adams	Lilly	Carroll
Melissa	Adler	Mahalha	Chalulu
Sam	Ahlquist	Kaitlyn	Champoux
Enam	Albustami	Fountane	Chan
Rory	Allen	Bethany	Chan
Bayan	Almakay	Cam	Colbert
Najla	Almammari	Jazmin	Cole
Abbie	Almond	Zach	Colligan
Emma	Alsept-Ellis	Cheyenne	Collins
Michaela	Amamilo	Owen	Collins
James	Andersen	Faith	Collins
Giselle	Andrade	Isabella	Conferti
Seth	Arbogast	Sierra	Connolly
Molly	Armstrong	PJ	Connor
Stella	Augustine	Sam	Cooke
Davis	Austin	Shane	Cooney
Nitan	Avivi	Rachael	Cooper
Elizabeth	Baach	Maggie	Craven
Konrad	Bailey	Momo	Crowe
Sophie	Bailey	Sarah	Cudworth
Renee	Baker	Isabelle	Cullen
Sophie	Bange	Jo	Cunningham
Cecelia	Barajas	Rachael	Dahlen
Sterling	Baraquio	Faryn	Dahlen
Megan	Barney	Joe	Dahlke
Hadi	Barry	Jackson	Dailey
Zack	Basham	Anson	Dang
Sierra	Battan	Victoria	Dang
Britta	Bauer	Max	Daniels
Temerity	Bauer	Cydnie	Davenport
Nicholas	Belair	Kylie	Davis
Jenna	Bell	Ana	Daza
Thea	Bergen	George	Deardorff
Sofia	Bermudez-Eredia	Ivo	Decarlis
Paula	Berry	EJ	Del Rosario
Nichole	Biggs	McCall	Delaney
Casey	Bisted	Makayla	Dempsey
Robin	Black	Ian	Dolbec
Jordan	Blackburn	Allison	Dona
Paige	Blacklock	Kymmi	Donaghue
Alexis	Blaschka	Genevieve	Dorrell
Mariah	Bloom	Imani	Dorsey
Evie	Blythe	Hannah	Drake
Siena	Bowen	Ricky	Ede
Gavin	Bradley	Madison	Edgar
Sarah	Brown	Chaucie	Edwards
Corinne	Brubaker	Tj	Ekstrom
Eden	Brush	Ravahn	Enayati
Jack	Buechler	Alli	Eroh
Morgan	Bunch	Patrick	Fajardo
Richelle	Cabatic	Brittany	Falconer
Brittany	Calabria	Gabby	Farland
Zoe	Cameron	Sarah	Faulkner
Madisen	Campbell	Adeline	Fecker
Malaya	Cansdale	Emily	Feicht

Troi	Feinberg	Joan	Hicks
Cailan	Feingold	Peyton	Hines-Norwood
Dimitra	Fellman	Laura	Ho
Betsy	Finn	Ryan	Hoang
Katie	Fischer	Anna	Horacek
Michaela	Fishback	Allison	Hoslett
Delaney	Fisher	Sarah	Hovet
Alexander	Fix	Christa	Huddleston
Grace	Floyd	Anabelle	Huffman
Lida	Ford	Emily	Hunt
Violet	Fox	Kelsey	Hunter
John	Francis	Abby	Hyland
Sara	Freitas Da Luz Baptista	Kevin	Iriawan
Lilly	French	Nikki	Irvine
Alyssa	Fuentez	Takako	Iwashita
Sean	Galka	Brian	Janisch
Lauren	Garcia	Alexandra	Jansky
Ana	Garibay Mares	Brittany	Jeffery
Ellie	Garmon	Janae	Jessie
Sydney	Gastman	Isaac	Jodel
Heloise	Gayet	Bridget	Johns
Zachary	Gee	Chloe	Johnson
Gillian	George	Samson	Johnson
Gabrielle	George	Rachel	Johnston
Grace	Gibbs	Ellie	Jones
Lydia	Giersch	Myrriah	Jones
Jared	Giles	Veronica	Jones
Jaden	Gill	Lexy	Jones
Tatyana	Gomez	Kate	Jones
Enrique	Gomez Gomez	Kate	Jones
Emily	Gonzalez	Tamara	Jordan
Adrian	Gordon	David	Josi
Blayne	Goring	Courtney	Kaltenbach
Mary	Green	Sera	Kaplow
Hannah	Gruen	Jack	Kapustka
Lisa	Guerricabeitia	Nora	Kearns
Meredith	Gusky	Abigail	Kellems
Adrian	Gutierrez	Dakota	Kelsey
Zoe	Haakenstad	Brianna	Kendrick
Nicole	Hand	Rennie	Kendrick
Jordan	Hankins	Ellyn	Kennelly
Kieran	Hanks	Cassidy	Kenney
Sophie	Hansen	Ashley	Kim
Tia	Harakey	Min	Kim
Alice	Harding	Benjamin	King
Baylee	Harding	Sam	Kirby
Halston	Harper	Taylor	Kissinger
Marina	Harrington	Ethan	Kizziar
Odelia	Hartl	Grant	Klausen
Zaida	Hatfield	Mason	Klepp
Carson	Hauth	Hannah	Kloft
Quinne	Hauth	Haley	Koch
Rhys	Hawes	Kelly	Kondo
Kate	Haynes	Paige	Kosa
Jessica	Heierle	Morgan	Krakow
Amanda	Henney	Emily	Kraschel
Carly	Henry	Nolan	Kriska
Ramon	Hernandez	Elise	Kronquist
Adriane	Hershey	Cassidy	Kroon
Thomas	Hesser	Hannah	Kruse

Tova	Kruss	Chris	Misa
Katee	Kuhlman	Quinn	Mitchell
Semeredin	Kundin	Hunter	Moen
Jena	Kunimune	Bry	Moore
Lisa	Kwan	Marie	Moore
Hannah	Lake	Diana	Morales
Brittani	Lancaster	Renata	Moreno Perez
Ruben	Lancaster	Isabel	Mosley
Connor	Lane	Josh	Mostales
Kiasia	Lane	Francesca	Muchow
Marissa	Lane-Massee	Julia	Mueller
First Name	Last Name	Tony	Munoz
Miles	Lawson	Grace	Murray
Cindy	Le	Mackenzie	Myers
Frankie	Leonard	Simon	Narode
Ryan	Leriche	Donovan	Neal
Danielia	Lewis	Jennifer	Nelson
Frankie	Lewis	Rhiannon	Newhouse
Yuhui	Li	Hana	Nguyen
Di	Li	Tawny	Nguyen
Yalin	Li	Minh	Nguyen
Jack	Lien	Hung	Nguyen
Cristoff	Ligon	Anna	Nichols
Michelle	Lo	Haley	Nicholson
Marinn	Longenecker	Emily	Niebergall
Cameron	Lopez	Jillian	Niedermeyer
David	Lopez-Aparicio	Kaya	Noteboom
Bronwyn	Lord	Anika	Nykanen
Elmira	Louie	Ryan	Obermeyer
Michael	Lucas Moneterly	Hailey	O'Donnell
Isaac	Luten	Okeoma	Okoro
Rachel	Lutz	Whitney	Oliva
Emily	Ma	Megan	Olivera
Aaron	MacArthur	Kaity	Olsen
Alvy	Macias-Gonzalez	Jessica	O'Neill
Cassidy	Malick	Wendy	Palafox-Arceo
Rachael	Maloney	Rima	Pandit
Kyla	Martindale	Brynna	Paros
Dylan	Martins	Gwynnyth	Pass
Ash	Martins	Elliana	Pastrano
Leandro	Marx-Albuquerque	Stevie	Pearlman
Jordyn	Mascarenas-Wells	Josh	Pearman
Onsarigo	Matara	Cayenne	Peel
Julia	Matthews	Maddie	Pellman
Caitlyn	McCall	Calvin	Penkauskas
Clare	McCann	Makenna	Pennel
Carlos	McCarter	Alyssa	Pete
Rachel	McGill	Erin	Petruccione
Hannah	McKay	Hanson	Pham
Jaidan	McLean	Molly	Pickerel
Lauren	Medley	Nick	Pierson
Emma	Meese	Mike	Platis
Shawn	Melendy	Christine	Pons
Nadav	Menashe	Alice	Preston
Enrique	Menjivar	Hans	Prieto
Anneliese	Merrigan	David	Pulaski
Ellis	Mimms	Claire	Putnam
Annika	Minges	Cora	Pyles
Hanna	Minns	Laura	Queen
Emily	Mirbod	Itzel	Quiroz

Allysia	Rainey	Emma	Snyder
Sky	Ramirez-Doble	Hannah	Solheim
Komron	Rasulov	Elizabeth	Soper
Clara	Rehmann	Kendall	Soriano
Sydney	Retamar	Bri	Southworth
Bryson Tyler	Ricamona	Lidija	Sovulj
Giovanni	Ricci	Nisha	Sridhar
Haley	Rice	Hayden	Stotts
Nick	Richardson	Eric	Strand
Nicole	Ringsdorf	Ramsey	Sullivan
Lily	Ritchie	Camille	Sullivan
Isabel	Rivera	Jia	Suwatanapornchai
Andrea	Rivera	Josephine	Swift
Helen	Robinett	Nikki	Szczepanski
Philicia	Robinson	Sravya	Tadepalli
Malysa	Robles	Tom	Tandberg
Eleanor	Rochester	Joselyne	Tellez Cardenas
Graciela	Rodriguez	Ashley	Terrell
Kathleen	Rodriguez Perez	Andrew	Tesoriero
Riley	Roefaro	Melissa	Teter
Elle	Rogers	Kayla	Thomet
Deforest	Rolnick-Wihtol	Allie	Thompson
Zora	Rose	Maggie	Thompson
Franziska	Roth	Kristi	Thompson
Kylie	Rothhouse	Jess	Thompson
Nolan	Rudolph	Amber	Thorp
Emil	Sadofsky	Camille	Titus
Giulia	Sala	Tabitha	Todd
Alina	Salagean	Corinne	Togiai
Jessica	Samples	Vy	Tran
Vikram	Sandhu	Kielely	Trempey
Tulku	Sangye Tenzin	Miracle	Trice-Barber
Haley	Santos	Elisa	Trujillo
Shelby	Saper	Kim	Truong
Arden	Saravis	Dan	Tudorica
Ryan	Sayegh	Bethan	Tyler
Jaycie	Schenone	Alexandra	Urrutia
Hannah	Schmidt	Marie	Van Rysselberghe
Allison	Schukis	Trace	VanCleave
Madi	Scott	Michael	Veirs
Kissy	Sendrijas	Niko	Verhoeven
Ari	Sepulveda	Ally	Waldron
Kiana	Seto	Claren	Walker
Lucille	Shadburne	Cameron	Wallenfels
Karishma	Shah	Madeline	Walters
Sakina	Shahid	Zoe	Wassman
Lucas	Shannon	Sierra	Webster
Ally	Shaw	Sarah	Weishaupt
Yuwei	Shi	Lilli	Wheary
Caitlin	Shreeve	Tyler	White
Kelly	Shull	Adryana	White
Samantha	Sidline	Desiree	Whitney
Kendra	Siebert	Joy	Wilcox
Lauralei	Singsank	Dylan	Williams
Xaria	Siplin	Eleanor	Williams
Genevieve	Slaton	Mathieu	Wilson
Franklin	Smith	Ally	Wimberly
Alex	Smith	Savannah	Winchell
Le'Asia	Smith	Alex	Wind
Joey	Smits	Imani	Wolery

Erick	Wonderly
Robert	Wyrick
Joseph	Yaconelli
Nozomi	Yamada
Jane	Yeoman
Vanessa	Zamudio
Scott	Zeigler
Min	Zhang
Shan	Zhang
Vanessa	Zhen
Shijing	Zhou
Brandon	Zuel

Undergraduate Research Symposium - 2019 Faculty Mentors

Jesse	Abdenour	Caitlin	Fausey
Jennifer	Ablow	Scott	Fisher
Michael	Allan	Doug	Foote
Jeremy	Anderson	Michael	Francisco
Curtis	Austin	David	Garcia
Melissa	Baese-Berk	Kylen	Gartland
Dare	Baldwin	Thomas	Giachetti
Stephen	Banse	Lindsay	Glugatch
Matt	Barber	Noah	Glusman
Jason	Barkeloo	Mauricio	Gomez Lopez
Joshua	Barker	Melissa	Graboyes
Tyson	Barker	Ian	Greenhouse
Aryn	Bartley	Claire	Guidinger
Emily	Beck	Karen	Guillemin
Dr. Elliot	Berkman	Gantt	Gurley
Mark	Blaine	Hanna	Gustaffsson
Laura	Boddington	Mike	Hahn
Shannon	Boettcher	Michael	Haley
Angela	Bogart-Montieth	Lauren	Hallett
Peg	Boulay	John	Halliwill
Caitlin	Bowman	Kristi	Hamilton
William	Bradshaw	Ben	Hansen
Alejandro	Brambila	Kate	Harmon
Colin	Brand	Michael	Harms
James	Brau	Mike	Harms
Yvonne	Braun	Austin	Harvey
Steven	Brence	Diane	Hawley
Scott	Bridgham	Ralph	Heidl
Elizabeth	Budd	Mark	Hennion
Charlie	Butler	Eliza	Hernández
Cori C.	Cahoon	Byron	Hetrick
Bill	Chang	Alexana	Hickmott
Alina	Chen	Janine	Hicks
Hank	Childs	Cybele	Higgins
Li-Shan	Chou	Jonathan	Hill
Dani	Cosme	Beth	Hjelm
Cory	Costello	Sara	Hodges
Jane	Cramer	Samantha	Hopkins
William	Cresko	Bradley	Hughes
Jessica M.	Cronce	Jenefer	Husman
Pat	Curtin	James	Hutchison
Lauren	Cyck	Jim	Hutchison
Nicole	Dahmen	Kaori	Idemaru
Nicole	Dahmen	Dr. Jim	Imamura
Lynette	Danley	Lee	Imonen
Robert	Davis	Santiago	Jaramillo
Evan	Day	Ramesh	Jasti
Stephanie	De Anda	William	Johnson
Laurie	de González	Angela	Joya
Alicia	DeLouize	Andy	Karduna
Kathryn	Denning	Lamia	Karim
Thomas	Desvignes	Katja	Kasimatis
Christabelle	Dragoo	Nichole	Kelly
Michael	Dreiling	Katherine	Kelp-Stebbins
Hans	Dreyer	Atsushi	Kikumoto
Ramakrishnan	Durairajan	Charles	Kimmel
Kelly	Edwards	James	Kiser
Judith	Eisen	Brian	Klopotek
Troy	Elias	Tawney	Knecht
Matthew	Ely	Nicole	Kurhanewicz
Clare	Evans	Alison	Kwok
Dylan	Farnsworth	Shawn	Lampkins

Abagael	Lasseigne	Caitlin	Plowman
Melissa	Latham	Kenyon	Plummer
Maya	Lazaro	Michael	Pluth
Pearl	Lee	Matt	Polizzotto
Stephanie	LeMenager	Nick	Ponvert
Carolyn	Levinn	Mike	Posner
Jennifer	Lewis	John	Postlethwait
Diana	Libuda	Jill	Potratz
Ryan	Light	Jim	Prell
Linda	Long	Laura	Pulido
Caroline	Lundquist	Elizabeth	Raisanen
Katie	Lynch	Judith	Raiskin
Ed	Madison	Michael	Rea
Larissa	Maier	Melissa	Redford
Stephanie	Majewski	Mark	Reed
Andrew	Marcus	Casey	Reid
Dave	Markowitz	Tera	Reid-Olds
David	Markowitz	Marike	Reimer
Michelle	Massaquoi	Kiya	Riverman
Robert	Mauro	Aaron	Rizutto
Ulrich	Mayr	Cathy	Robinson
Lindsey	Mazurek	Stephen	Rodgers
David	McCormick	Richard	Rosencrance
Carrie	McCurdy	Jennifer	Ruef
Katelyn	McDonough	Cheyney	Ryan
Pat	McDowell	Jonathan	Saunders
Dr. Allison	McGuffie	Gordon	Sayre
Krista	McGuire	Michelle	Scalise Sugiyama
Laura Lee	McIntyre	Kristin	Schild
Jeanne	McLaughlin	Emily	Scott
Jeff	Measelle	Kristen	Seaman
Diego	Melgar	Margaret	Sereno
Marcela	Mendoza	Autum	Shafer
Angie	Michaiei	Alan	Shanks
Leah	Middlebrook	Kim	Sheehan
Adam	Miller	Lori	Shontz
Christopher	Minson	Samantha	Shune
Megan	Moerdyk-Schauwecker	Avinash	Singh
Anneliese	Morrison	Matt	Smear
Deborah	Morrison	Matt	Smear
Kylie	Mosbacher	Hollie	Smith
Melissa	Moss	Josh	Snodgrass
Barbara	Mossberg	Gretchen	Soderlund
Phil	Mote	Kate	Spitzley
Dean	Mundy	Sanjay	Srivastava
Lisa	Munger	Suzie	Stadelman
Bess	Myers	Kryn	Stankunas
Kate	Myers	Sarah	Stednitz
Donovan	Neal	Paul	Steffan
Julianne	Newton	Kirstin	Sterner
Cris	Niell	Janelle	Stevenson
Matthew	Norton	Scott	Stewart
Caoimhin	OFearghail	Sarah	Stoeckl
Stephanie	Ostresh	Matt	Streisfeld
Michael	Pangburn	Lawrence	Sugiyama
Craig	Parsons	Elinor	Sullivan
Raghuveer	Parthasarathy	David	Sutherland
CJ	Pascoe	David	Sutherland
Arden	Perkins	Nicole	Swann
Josh	Peterson	Alexandra	Tallafuss
Patrick	Phillips	Tze-Yin	Teo
Will	Pitt	Debra	Thompson

Dan	Tichenor
Avinnash	Tiwari
Erik	Toraason
Brian	Trapp
Don	Tucker
Corbett	Upton
Bharat	Venkat
Frank	Vignola
Erin	Vogel
Matthias	Vogel
Peter	von Hippel
Tuong	Vu
Ashley	Walker
Kate	Walsh
Phil	Washbourne
James	Watkins
Jo	Weaver
Michael	Wehr
Netanel	Weinstein
Mark	Whalan
Chris	White
Frances	White
Julia	Widom
Timothy	Williams
Jesse	Wilson
Kelly	Wilson
Malcolm	Wilson
Cathy	Wong
Mary	Wood
Sara	Worl
Yuan	Xu
Yizhao	Yang
Kristin	Yarris
Craig	Young
Dasa	Zeithamova-Demircan
Anne	Zemper
Annie	Zemper

Undergraduate Research Symposium Presentation Abstracts

ALEX ABELE

Co Presenter(s): Robert Wyrick

POSTER 178

Title: Digital Piracy in Cuba

Abstract:

Vox, a famous youtuber that is very trustworthy and credible, made a youtube video called “This is Cuba's Netflix, Hulu, and Spotify – all without the internet”. It was uploaded onto youtube for public consumption, however, it is a factual short documentary. It showed how a group of individuals were able to create a source of entertainment in all of Cuba for very low prices. Content is illegally downloaded in the United States, and illegally distributed and sold in Cuba to digitally bypass the Cuban media blockade. This video was what inspired this project. The topic of digital piracy is one that is frowned upon, but there is never a conversation between the pirates and non-pirates. The aim of this is to explore both the positive and negative externalities to digital pirating in Cuba. It is quite prevalent that digital piracy bares legal and economic issues, while for some, it is their livelihood. In Cuba, where the internet is incredibly limited, less than 5 percent of Cubans have access to the internet, we will see why digital pirating is widely used.. Digital piracy is an international issue, other countries, such as Brazil, Mexico, and Columbia will be added for comparisons, piracy laws and what measures these countries have taken to counter piracy.

The implications of this project are little, however, knowledge of global situations is always good. Our goal is that people leave with a deeper understanding of different countries internet situations and the ultimate effects to piracy.

ANDREW ADAMS

Co Presenter(s): Jenna Bell, Siena Bowen, Julia Matthews

POSTER 171

Title: Introducing Eco-Friendly Dining: Reusable Dishware & Composters

Faculty Mentor(s): Sarah Stoeckl

Abstract:

Due to local landscape company Rexus limiting the type of waste that will be accepted starting in July, University Dining is attempting to switch to more reusable zero-waste options for students. Our project will be research-based, aiming to provide University of Oregon Housing & Dining staff with detailed options for future campus sustainability. Specifically, we will be looking at the possibility of reusable dishware and eating utensils for non-buffet style dining halls, as well as exploring new incentives for students to return said ware to cut production costs of buying more dishware. Researching anaerobic composters to rapidly consume food waste would allow their future installation into future residence hall/dining hall renovations, preserving a more environmentally friendly waste disposal option for students. Installing new composting technology on campus would prevent us from relying on outside companies and allow us to maintain an independent system to benefit the sustainability of our school. After concluding our findings, we will present them to the relevant departments of the University of Oregon. We will also utilize posters and social media to spread awareness and promote changes to composting.

The compostable material that has always been exported must be redirected to somewhere, and the landfill is not a sustainable option. Our plan will reduce the total amount of waste being created, limit contamination within recycling bins, and contribute to long-term campus sustainability.

EMMA ADAMS

POSTER 137

Title: Problematic Policing? A Comprehensive Study of Police Training Methods Within the State of Oregon

Faculty Mentor(s): Matthew Norton

Abstract:

As the issue of police violence has evolved to become a mainstream topic of concern for the American people with the rise of technology and social media, there is a consistent gap between leading causes of the use of excessive force employed by American police officers, and effects seen and felt by the general public. Existing research fails to explore how this problem has festered into an increasingly relevant social issue, through a lack of exploration in police training methods. Using qualitative methods, this research explores the relationship between police training methods within the state of Oregon, at both the state and local level, and police to community relations within multiple cities. Through an interview process, this research suggests progressive practices employed by Oregon police departments, including additional training methods surrounding implicit bias, create an alternative and idealistic platform to base American policing training procedures around across the United States. As individual interviews suggest, police officers within the state of Oregon believe inclusive and modernized training procedures are necessary to combat the negative image of the police as an institution within the United States, in both opening conversation around community diversity, and in turn fostering improved community relationships between the police and the cities they serve. Taking into consideration the implementation of the President's Task Force on 21st Century Policing Report within Oregon police departments, this research is significant as it provides a comprehensive study of multiple police departments as individual and autonomous units within the institution of the American police, and suggests a sense of accountability and advancement felt within an institution that has notoriously lacked both in current research.

MELISSA ADLER

POSTER 136

Title: The Effect of Emotion on Associative Memory: Anger versus Fear

Faculty Mentor(s): Dasa Zeithamova & Caitlin Bowman

Abstract:

Studies show that emotion enhances memory for individual items but weakens memory for associations between items. One explanation for this associative memory impairment is that emotional stimuli capture attention, causing enhanced encoding of the emotional item but reduced encoding of the surrounding environment. This hypothesis generates the prediction that emotional information always impairs associative memory. Alternatively, it may be that

emotion orients attention towards threats in the environment. For example, seeing an angry face constitutes a direct threat, potentially capturing attention and reducing memory for associated information. In contrast, seeing a fearful face indicates a threat elsewhere in the environment, potentially enhancing encoding of associated information. In the present study, I tested whether perception of anger and fear have different effects on memory for associated information. I hypothesized that associative memory would be worse for all emotional faces, both angry and fearful ones, compared to neutral faces. I also predicted that associative memory would be better for fearful faces than angry faces. To test these hypotheses, subjects studied sets of three images, consisting of two objects and a face with either a neutral, angry, or fearful expression. Subjects were later tested on their memory for the associations between the three items. Supporting our first hypothesis, memory for both angry and fearful associations was worse than memory for neutral associations. Contrary to our second hypothesis, there were no differences in memory for angry versus fearful associations. Thus, emotional information itself seems to capture attention, weakening memory for related information.

AURORA ALLEN

POSTER 135

Title: Girlhood and the Strange: Representing the Feminine Subject in Stranger Things

Faculty Mentor(s): Bess Myers

Abstract:

The 'feminine subject' in literature is in itself a paradox. When gender is constructed within a patriarchal culture, 'man' is written whole and absolute, and 'woman' is written as not. The very construct of 'woman' is defined as 'other than man' and as somehow lacking or lesser. This makes representing genuine depictions of girls and women in the literature difficult. How does one navigate creating a character who, before she is even written, is already marked by her 'girl-ness?' Through the work of feminist philosophers Luce Irigaray and Simone de Beauvoir and through parallel analysis of Nnedi Okorafor's Young Adult Fiction; I explore how the representation of a fantastic young girl undergoing 'girlhood' in Netflix's Original TV show Stranger Things is able to subvert this paradox of the 'feminine subject.' My work explores how a piece of literature may reveal and reject the oppressive order in this way.

RORY ALLEN

ORAL SESSION 1 DL

Title: Who is Speaking: Fictive De-Construction and the Second Person in Italo Cavino's If on a Winter's Night a Traveler

Faculty Mentor(s): Mark Hennion

Abstract:

When writing a story, an author usually tries to erase all trace that the world and characters have been constructed so the reader seamlessly slips into the fictional realm without being reminded that a writer exists and is directing the story from behind the curtain. However, second person narration has the potential to disrupt this dynamic. My essay argues that the second person narrative style as utilized by Italo Calvino's metafictional novella, *If On a Winter's Night a*

Traveler, redefines the fictional space that the protagonist and narrator inhabit. This, in turn, forces the reader to confront the roles of the author and narrator and exposes the construction of 'story-telling' in both the fictional and real realities.

BAYAN ALMAKAY

ORAL SESSION 3 MI

Title: Employees at Amazon

Faculty Mentor(s): Cybele Higgins

Abstract:

Employees at Amazon have benefits but also face issues with being overworked. These problems can affect their health. This employment situation needs to be fixed in order to have a better future because the employees are core of the company. The presenter conducted qualitative research about the work conditions of Amazon employees. She used secondary research about the known problems Amazon workers have experienced at multiple facilities as well as primary research through contextualized interviews and participant observation with individuals who have worked for companies with a relationship with Amazon. Preliminary research suggests the pace of work, amount of work, and lack of concern for employees results in low morale and high employee turnover. The results of this research have implications not only for people who currently work for or are considering working for Amazon but also for the working conditions of the growing contingent and gig economy workers.

NAJLA ALMAMMARI

ORAL SESSION 3 CQ

Title: Autism and Autistic people

Faculty Mentor(s): Casey Reid & Cybele Higgins

Abstract:

Autism is a disorder that is usually observed on the child at an early age, affecting its development and its various developmental aspects. Its development is abnormal, it shows an imbalance in its social interaction, and it is characterized by repetition of certain behavioral patterns and weak verbal and nonverbal communication with others. The autism spectrum disorder is divided according to severity of the symptoms to severe, moderate and mild, and its developmental disability. Many scientists believe that autism disorder has no treatment but its symptoms improve greatly, especially in moderate and light conditions with behavioral intervention programs and behavior modification programs that are characterized by not only does it reduce or stop unwanted behavior but it is used in teaching the autistic child a lot of behavioral skills. One of the most important treatments for autistic patients is the participation of the family in cooperation with the center in all stages of the intervention (diagnosis, treatment, and evaluation). The more the family cooperates with the educational therapeutic team to implement the therapeutic and educational plans, the better the results will be.

ABIGAYLE ALMOND

POSTER 134

Title: Mothering in the Blogosphere: Mommy Blogs and the Reinforcement of Social Hierarchies

Faculty Mentor(s): CJ Pascoe

Abstract:

It is hard to go far on the internet today without stumbling upon a mommy blog. While many of the larger blogs avoid substantial personal content in favor for the commodification of this platform, many smaller mommy blogs offer a tightly woven community and support system for mothers to discuss personal life events, or larger societal occurrences with similar, like-minded mothers from across the globe. This research asks: In what ways do mommy bloggers produce, publish, and engage in discussions regarding social hierarchies of race, class, and gender through their blogs? In a qualitative content analysis of 30 popular English speaking mommy blogs, the ways in which social hierarchies of race, class, and gender are preserved were examined and explored. The majority of mothers on this platform present their families as the white, upper-middle class, and heterosexual norm, while actively avoiding discussions of politics, current events, or conversations of equality and fairness. While research has been done into what mommy bloggers get out of their experience in the blogosphere, or 'mamasphere,' and the ways in which the bloggers and readers interact with each other, what has yet to be explored are the ways in which these social hierarchies are maintained and reinforced through the mamasphere making this research important to understanding mothering and parenting in the digital age.

JAMES ANDERSEN

ORAL SESSION 2 S

Title: A Toast From the High Seat-The Feast in the Viking Age

Faculty Mentor(s): Gantt Gurley

Abstract:

The purpose of this project is to examine feasting's place in Viking Age Scandinavia as the primary cultural event, around which the entire society revolved. The feast has not been addressed properly in past scholarship, which has overlooked its' significance as a mutable event used to commemorate a vast array of cultural and political events throughout Viking Age society. There has not yet been a proper study of feasting and its' importance in the Viking Age; such a work is of vital importance to understanding this period and its cultures. Via reexamination of the historical sources (primarily the Icelandic sagas), and archaeological evidence, the practices and purposes of feasts in this culture will be explored. The feast in this period was integral to the proper functioning of society, and fits into a longer chronology of feasting practices (both before and after) which must be considered to provide a full context and understand how the Viking Age feast was unique. Research thus far has provided substantial support for this hypothesis, and hopefully will encourage further research and cooperation among scholars of the period.

GISELLE ANDRADE

Co Presenter(s): Carlos McCarter, Sierra Connolly

POSTER 139

Title: 16 Characters for Change: Colin Kaepernick and the #BlackLivesMatter Movement

Faculty Mentor(s): Dave Markowitz

Abstract:

A lack of political activism among African American athletes over the past two decades has drawn widespread criticism. Critics posit that the modern-era African American athletes' accumulation of wealth has influenced the de-politicization of sports. Our study directly tests the applicability of this narrative. We used the Twitter patterns of former National Football League quarterback Colin Kaepernick, as a case study to understand the Black Lives Matter social movement. We posed the following research question: Were Kaepernick's political tweets about #BlackLivesMatter more influential than his non-political tweets? To evaluate this question, we created a dictionary of words that contained political speech as reflected by Kaepernick's Twitter feed. We then used the automated text analysis program, Linguistic Inquiry and Word Count, to count the rate of political speech in Kaepernick's tweets that were scraped computationally in the computing environment, RStudio. Regression tests analyzed the relationship between Kaepernick's political speech and engagements, defined as the rate of favorites and retweets per tweet. We found political speech did not affect the level of engagement of favorites ($p = .65$). However, the rate of political speech was related to the number of retweets per tweet ($p = .056$), and for each percent increase in political speech, Kaepernick's tweets received nearly 130 fewer retweets. We believe that these data suggest retweets are a more critical degree of expression than favorites.

DAVIS AUSTIN

ORAL SESSION 3 S

Title: Resolution Optimization of the Silicon Detector in the International Linear Collider:

Seeking New Physics with the Higgs Boson.

Faculty Mentor(s): James Brau & Jason Barkeloo

Abstract:

As it stands for particle physics today our best understanding of how fundamental particles and forces interact is theorized by the Standard Model. Trying to understand some of the failings of the Standard Model is the goal of the International Linear Collider (ILC) and other colliders around the globe. Discerning the properties of the Higgs Boson is an important step towards the goal of an updated Standard Model. Ideally we wish to do this as clearly and as cost effectively as possible. Based around the specifications outlined in the ILC Technical Design Report (TDR)(arXiv:1306.6327 [physics.acc-ph], 2013.) and simulations of high energy electrons in an Electromagnetic (EM) Calorimeter, built from tungsten and silicon detectors, we have compared simulations of many possible configurations for the EM Calorimeter. These include variable depth and sampling frequency. Based on many different EM Calorimeter configurations, we have learned that the resolution of better than two per cent at 100 Giga-electronvolts (GeV) can be achieved with significant cost savings relative to the TDR design. From this research we have a

better understanding on the design optimization of the EM Calorimeter for the ILC and possibly future similar linear colliders.

NITAN AVIVI

ORAL SESSION 3 RA

Title: How We Think About Math

Faculty Mentor(s): Mauricio Gomez Lopez

Abstract:

Going into college I didn't know what I wanted to study. I decided to take an introduction to proof class my freshman year and I loved it. The way we think when doing math is fascinating to me. Math makes up rules and follows them to see what conclusions they yield. The amazing thing is that those conclusions end up being useful. Continuing to explore the knowledge we can find fascinates me.

A common complaint about math is that ideas like imaginary numbers are useless, as well as just boring. Those complaints often come from a failure in how we teach math. Math is not about numbers. Math is about how to pursue truth. It teaches us to be honest about our assumptions and their implications. I hope to help change that perspective by becoming a math professor, educating people about math while explaining its beauty and further researching it.

ELIZABETH BAACH

POSTER 1

Title: Nitrogen Composition in Native and Invasive Plants in Relation to Ant Mounds in Serpentine Grasslands

Faculty Mentor(s): Lauren Hallett & Eliza Hernández

Abstract:

The project I will continue to work on addresses the question, 'is there a significant difference in nitrogen composition of plants on and off ant mounds in a low nutrition environment, serpentine grasslands?'. This research is significant in two ways: First, it furthers previous works that investigate the relationship between subsurface dwelling animals and the nutrient availability for the plants that grow on the mounds they create. While there has been significant research looking at these relationships, there is less on analyzing elemental plant composition as I propose here. Second, my research will be contributing to the academic understanding of ecology by looking at serpentine grasslands in a new way. These serpentine grasslands receive a lot of attention from academic researchers as the soil in the area has low quantities of essential nutrients, phosphorus and nitrogen, and high levels of toxic heavy metals; this specific soil composition only allows specialized plant species to survive. These plants dominated these grasslands, however, recent research has shown that human activity has increased nitrogen deposition, allowing invasives to begin establishing and outcompeting the native flora. The way I will be furthering this well established understanding of these grasslands will be through the examination of nitrogen content of both native and nonnative grasses and forbs that could be gaining nitrogen naturally or through nutrient upwelling caused by ants. Looking at previous research, my experimental design and considering nitrogen deposition, I expect to find that

there will be higher nitrogen composition in invasive plants when comparing native to nonnative status plants. I also believe that plants situated on ant mounds will have higher nitrogen composition than those away from the mounds, this because non-native plants have been shown to outcompete native species in high nitrogen conditions and because ants bring up previously unavailable nutrients to plants.

KONRAD BAILEY

POSTER 29

Title: Neural and behavioral assays for studying predictive coding in the mouse brain

Faculty Mentor(s): Santiago Jaramillo

Abstract:

'Controlled hallucination' is a term that has been used to describe the process of interpreting sensory information according to the theory of predictive coding. This theory posits that the brain's mechanisms for interpreting sensory information function by generating predictions about the external world and comparing these predictions to sensory signals. The objective of my study in the Jaramillo lab is to identify neuronal mechanisms for how the brain generates predictions about patterns of sounds. The resulting data will aid the process of testing the validity of the theory of predictive coding. In order to achieve an in-depth analysis of neuronal mechanisms for generating predictions the study requires a level of experimental access only available with animal test subjects. We use mice because of the range of available tools for monitoring and manipulating neural activity in this species. We trained a cohort of mice in a reward-driven behavioral task that required the animals to make predictions about incoming sounds. Our preliminary data suggests we were successful in training the mice to detect when a predicted pattern had been altered. Electrophysiological experiments will then be used to evaluate the neural basis of generating these predictions. Specifically, I will record the activity of auditory cortical neurons to evaluate how the sound patterns are represented when they're expected vs. unexpected. The data we gather will help to either support or oppose the theory that we live in, as psychologist Chris Frith put it, 'a fantasy that coincides with reality'.

RENEE BAKER

Co Presenter(s): Michaella Amamilo

POSTER 182

Title: Chinese New Year Traditions and their Importance Today

Faculty Mentor(s): Matthias Vogel

Abstract:

Unlike many countries around the world, China celebrates the new year based on the lunar cycle. (Chinese New Year usually falls in late-January to early-February.) This project will explore the origin of the Chinese Zodiac signs or shi er sheng xiao "(十二生肖)," and raise awareness on other Chinese cultural traditions people of importance still today. As we discuss each animal and their significance, we will also draw parallels to how they relate and tie into current Chinese culture. Our project will trace how legends and mythology have transitioned into fixed cultural

traditions. We want to explore the origin of elements like lucky red envelopes (红包), the cleaning of homes to banish evil spirits, Chinese cuisine and other rituals that are said to bring good fortune to the participants. The goal is to investigate where Chinese New Year's traditions originated from and how they still play into Chinese culture as well as the Chinese economy.

SARA BAPTISTA

ORAL SESSION 3 MI

Title: Keeping the Titans on Track (Women Basketball Players of Lane Community College)

Faculty Mentor(s): Cybele Higgins & Casey Reid

Abstract:

The importance of attention to nutrition in handling pressures safely is critical for high performance in sports. Achieving great performance is what any athlete wants; however, what is necessary is to understand their weaknesses. Based on interviews with a female basketball athlete, a coach, and an athletic trainer, combined with online research and two surveys, the presenter identified three key problems for female basketball athletes: injury, pressure, and lack of audience. In this presentation, the implications of these problems for student-athletes and recommendations for addressing these issues are discussed.

ANA CECELIA BARAJAS

POSTER 160

Title: Perceptions of Regional Languages in Northern Italy by Italian Youth

Faculty Mentor(s): Robert Davis

Abstract:

My research presents an evaluation of the perceptions and usage of north Italian regional languages in the sociopolitical context and in the domain of social media to depict their societal significance in modern-day Italy. Audio data was collected from interviews with young adult (ages 18-28 years old, "Millennials") speakers of Piedmontese, Lombard, Venetian, and Friulian examine the relationship between the participant and the regional language, in other words, what it signifies to them (personal perception). My research also briefly covers legislation aimed at preserving regional languages, thus demonstrating recent city, national, and international efforts.

MEGAN BARNEY

POSTER 78

Title: Understanding the mechanisms of gp32 filament assembly and sliding on ssDNA templates of known length and polarity

Faculty Mentor(s): Andrew Marcus

Abstract:

DNA replication is a core biological process that rapidly occurs in both eukaryotic and prokaryotic cells with extreme precision. Gene product 32 (gp32) is a ssDNA binding protein that is important

in the T4 bacteriophage DNA replication complex. gp32 is known to bind cooperatively spanning 7 nucleotides of ssDNA. Not only is it known to bind, but it has the ability to unbind from regions of exposed ssDNA during DNA synthesis. This thesis reports microsecond single-molecule FRET (smFRET) measurements on Cy3/Cy5-labeled primer-template (p/t) DNA constructs with and without an addition of 0.5 μ M gp32. The measurements obtained report the distance between the chromophores that are used to label the ends of 14 and 15 nucleotide segments of ssDNA attached to a p/t DNA construct. These distance measurements can track the conformational changes seen between protein bound vs. unbound states on the microsecond time scale. To analyze the data, a multipoint time correlation function analysis is utilized in order to compare the revealed kinetics of the possible conformational adaptation experienced by the ssDNA of interest. The results of our analysis demonstrate that both length and polarity of the ssDNA influence the way in which gp32 interacts with the ssDNA. Therefore, this SSB is likely to play a critical role at the replication fork during DNA synthesis.

HADI BARRY

ORAL SESSION 1 C

Title: Assessing the Public Health Response to the 2014 Ebola Outbreak in Guinea

Faculty Mentor(s): Jo Weaver

Abstract:

Global health interventions are influenced by various external factors and politics that determine the level of attention and funding that is given to public health crises that yield long term implications for people and countries affected. The 2014 Ebola outbreak in West Africa was a public health emergency of international concern that prompted the creation of the first UN emergency health mission and a massive scale public health response to contain the virus that had spread across three West African nations and was rapidly spreading to more developed countries such as the United States prompting global concern. The initial response to the outbreak was slow and insufficient and significantly exacerbated by the weak health infrastructure in Guinea that was significantly under-equipped to deal with the unfamiliar disease. This delayed response and lack of attention to the outbreak contributed to the spread of Ebola cases outside of West Africa bringing to attention this pattern of globalisation of disease that is of global concern and required global cooperation and multilateral organisation in order to adequately address. The rapid shift in funding and expansion of humanitarian and political actors responding to the outbreak in Guinea, Sierra Leone and Liberia significantly influenced the local response and public perceptions about Ebola which had both positive and negative implications in regards to the efficacy of the public health response.

Word Count: 225

ZACHARY BASHAM

POSTER 3

Title: Influence of Misfolded Proteins on the Growth Pathway in Budding Yeast

Faculty Mentor(s): David Garcia

Abstract:

Prions are misfolded proteins that have developed a negative connotation due to their involvement in many degenerative diseases. However, some prions have been found in yeast that result in benefits for the cell. This experiment focused on a specific prion that gives rise to larger cells with increased replication rate. We hypothesized that the prion must be interacting with a pathway that regulates the maturation of the cell. To determine the cause of this phenotype, we grew cells in the presence of rapamycin, an inhibitor of the TOR (Target of Rapamycin) complex which regulates the growth of cells by modifying proteins. By recording the absorbance of cell cultures with and without the prion, we were able to determine the growth rate and support the claim that the misfolded protein is influencing TOR because they showed resistance to the drug. The next step is to determine what is being affected in the complex to provide this result. Understanding how prions work on a molecular level may reveal new cell functions not possible by genetics alone.

SIERRA BATTAN

POSTER 76

Title: Orthogonal Structure on a Tripod

Faculty Mentor(s): Yuan Xu

Abstract:

This thesis establishes an orthogonal basis that accurately represents the structure of polynomials on any three-dimensional tripod. I define, restrict, and describe the contents of an inner product space for a corresponding orthogonal tripod. Then I explicitly construct a basis of the inner product space and study its transformation to an orthogonal basis, using many different algorithmic methods of increasing efficiency. Ultimately, my thesis extends the forefront of mathematical research in the numerical field and helps create a structure with which mathematicians can manipulate currently unmanageable monster polynomials that live in the three-dimensional world.

THEA BERGEN

Co Presenter(s): Makayla Dempsey, Hannah Gruen, Carly Henry, Kelsey Hunter, Cassidy Kroon, Mackenzie Myers, EJ Del Rosario, Melissa Teter,

ORAL SESSION 4 C

Title: Canopy Connections: Artist Activists

Faculty Mentor(s): Katheryn Lynch & Kylie Mosbacher

Abstract:

The Canopy Connections team seeks to provide an interdisciplinary and place-based approach to environmental education for local youth in Oregon. Through an emphasis on arts and humanities

we hope to instill a heightened personal connection between students and their local Pacific Northwest forests. This connection can help cultivate deep passions that inspire the next generation of leaders, science researchers, and engaged Oregon community members. Our overarching theme, “Artist Activists”, represents the projects emphasis on creating a sense of action, movement, and personal connection between our students and their surrounding world. Arts and humanities as a unifying theme will help us to tap into the childlike wonder all students have for the mystery of the universe, provide a platform for creative expression, and cater to individuals of varying interests and learning styles. This approach ties directly into HJ Andrews and its holistic, system-oriented, and interdisciplinary research model. The Andrews Forest incorporates arts and humanities as a unifying thread to connecting all scientific research endeavors together, representing an ideal that science must have meaning and passion inspiring it in order to be effective. To complement the pursuits of the Andrews and maintain a connection to state science standards, art will infuse itself with discussion and activity around the scientific complexity, forest structure, and forest processes of Pacific Northwest old-growth forests.

SOFIA BERMUDEZ-EREDIA

POSTER 124

Title: Colonialism, Vulnerability, and Mortality: How the U.S Response to Hurricane Maria Reveals Existing Racial Hierarchies and Racial Violence in the United States

Faculty Mentor(s): Brian Klopotek & Laura Pulido

Abstract:

On September 20th, 2017, Puerto Rico, alongside with several islands in the Caribbean, was hit by a powerful category 4 storm known as Hurricane Maria. Hurricane Maria is considered the worst natural disaster on record to affect the Caribbean. This put Puerto Ricans in dire need of resources and assistance.

Often times, we look at these hurricanes, floods, and earthquakes as “random acts of nature” that do not discriminate communities based on race, class, sex, etc. So far, however, these disasters tend to negatively affect and impact more communities or areas that are lower in socioeconomic statuses than affluent. This includes high-risk geographical areas such as Puerto Rico, whose island is more susceptible to being affected by hurricanes and floods than somewhere in the Midwest of the United States. But throughout the United States’ history in dealing with natural disasters, a pattern is beginning to emerge. Not only are these natural disasters affecting more marginalized communities, but the responses and support from the U.S government and FEMA are often slower than with communities of higher socio-economic levels.

My research will focus on the history between the U.S and Puerto Rico, Puerto Rico’s financial vulnerability, and FEMA’s processes of disaster relief after Hurricane Maria as examples of neocolonial practices and racial violence.

This research will use the following guiding questions to address these topics:

How do recent processes of disaster relief, such as recent “aid” to Puerto Rico, perpetuate systematic racial violence in the United States?

How can we conceptualize financial vulnerability as an explicit mechanism of racial violence? In what ways is this process neocolonial? What are specific examples of this?

In this study, I will examine the public and federal responses to the aftermath of Hurricane Maria from 2017-2018. I will use governmental constructed data from the Federal Emergency Management Agency (FEMA) website as my primary source. FEMA's website presents data and findings from Hurricane Maria, specifically, the 2017 Hurricane Season FEMA After-Action Report which describes their relief efforts in Puerto Rico. I will then use discourse analysis to identify and analyze a variety of secondary data and archival studies such as news articles and tweets to show how the public commentary from the U.S federal government and Puerto Rico's government are found to contradict with FEMA's report and present examples of racial violence and support neocolonial processes. My research will refine the knowledge of environmental racism by using a recent disaster to demonstrate the lack of progress we have made since Hurricane Katrina in regards to taking into consideration how people of color are disproportionately affected by disasters.

PAULA BERRY

POSTER 15

Title: Using the Auxin-Inducible Degron System to Reversibly Switch *Caenorhabditis elegans* Populations Between Outcrossing and Exclusively Self-fertilizing Reproduction.

Faculty Mentor(s): Megan Moerdyk-Schauwecker & Patrick Phillips

Abstract:

Inducibly switching the reproductive mode of a model multi-cellular organism would be a powerful tool with many applications in genetic, reproductive and evolutionary studies. The nematode *Caenorhabditis elegans* is a functional hermaphrodite, with most individuals in wild-type strains being self-fertile, somatic females. However, non-disjunction events during meiosis cause occasional males to appear in a population, also allowing for sexual reproduction (outcrossing). Using CRISPR/Cas9, a degron tag was added to a key sex determination protein, XOL-1. XOL-1 could then be targeted for degradation by the proteasome by placing the *C. elegans* strain on plates containing auxin (Indole-3-acetic acid), a plant hormone. This caused all male embryos to become non-viable, and created an exclusively self-fertilizing population. Unlike *xol-1* null mutants, which cannot be switched back to producing viable males, this effect was easily reversed by moving individuals to a non-auxin containing plate, restoring outcrossing. This method enables the maintenance of exclusively self-fertilizing lines with outcrossing potential with less labor than existing methods, using benign chemicals. Furthermore, the creation of this strain gives finer controls over experiments by allowing the same, genetically identical, populations to be self-fertile or outcrossing in a controlled manner.

CASEY BISTED

POSTER 60

Title: The Development of a System to Determine the Size Dependence of In₂O₃ Nanocatalysts on CO₂ Reduction

Faculty Mentor(s): James Hutchison & Tawney Knecht

Abstract:

The increase of carbon dioxide in the atmosphere has caused irreversible environmental effects, so reduction of this atmospheric carbon dioxide is necessary to prevent further environmental damage. Nano-catalysts are a promising new avenue in green chemistry as their small size and large surface area allows for less material usage as well as potentially superior chemical properties compared to their bulk counterparts. Bulk In₂O₃ has basis as a promising carbon dioxide reduction catalyst due to it being a poor hydrogen evolution reaction catalyst. Thus, In₂O₃ nanoparticles could be promising in carbon dioxide reduction.

By molecularly linking In₂O₃ nanoparticles to a boron doped diamond electrode via a molecular linker, the size dependence of In₂O₃ nanoparticles on the reduction of carbon dioxide can be determined. To enable this size dependence testing, a system to test this size dependence is developed and assembled. This system consists of In₂O₃ nanoparticles bound to a boron doped diamond electrode via an amine terminated carbon chain electrodeposited onto the boron doped diamond. It is hypothesized that smaller In₂O₃ nanoparticles will be more efficient carbon dioxide catalysts due to their increased surface area to volume ratio that promote a larger amount of active sites. Knowledge of the carbon dioxide reduction activity of a size range of In₂O₃ fills in a piece of the puzzle of about how to eliminate atmospheric carbon dioxide and reduce climate change effects.

SARA BLACKBURN

POSTER 120

Title: Reflecting a Queer Reality: Understanding Bisexual and Transgender Responses to Mainstream LGBT Advertisements

Faculty Mentor(s): Kim Sheehan

Abstract:

Although LGBT consumers have been targeted by various brands and organizations throughout the twentieth century, many scholars cite the 1990s as the era in which the “gay market” truly emerged and mainstream brands increased their efforts to actively and publicly advertise to LGBT consumers. The practice continues today, but such advertisements have typically featured mainly gay men and lesbians, largely excluding bisexual and transgender individuals. My study seeks to understand if modern mainstream advertisements are able to effectively persuade LGBT audiences that are not cisgender gays or lesbians. Through a series of structured, one-on-one interviews with college-aged lesbian, gay, bisexual and transgender participants, this study seeks to gain a qualitative understanding of the efficacy of mainstream LGBT advertisements through interpretive analysis. Preliminary analysis indicates that modern mainstream LGBT advertisements are not universally effective for participants of any gender or sexual orientation. Additionally, participants frequently expressed greater desire for actual action on the part of the

brands in support of LGBT individuals and communities rather than more or different representation in advertisements themselves. Such work creates a foundation that can give specific recommendations to help brands target LGBT consumers in a more effective and ethical way.

PAIGE BLACKLOCK

POSTER 115

Title: Increasing MLU in Two Young Girls with Autism Spectrum Disorder

Faculty Mentor(s): Lindsay Glugatch

Abstract:

One common characteristic of autism is deficits in social/communicative abilities. Autism is more common in boys than in girls, so the research on how this disability affects girls is not as expansive. Furthermore, language development and social impairments might manifest differently in girls compared to boys. In this study we will be investigating the effectiveness of different behavioral interventions to increase the average length of number of words in two young girls with autism. Specifically, this study looks to see if there is a functional relation between communication interventions and increases in mean length of utterances. Three intervention conditions will be alternated throughout sessions including differential reinforcement, prompting, and a combination of the two. Identifying active intervention components on mean length of utterances in these two girls may provide a better look on social communication skills in girls with autism in comparison to boys. The differences found could be utilized to better individualize treatment throughout clinical settings in language intervention.

ALEXIS BLASCHKA

Co Presenter(s): Gabby George

POSTER 166

Title: Fundamentally F**d: America's Racially Disparate Healthcare System**

Faculty Mentor(s): Noah Glusman

Abstract:

This project stems from the treatment, and lack thereof, of undocumented individuals in the United States, with a focus on the quality of healthcare treatment, access, and constitutionality of this issue. Furthermore, there will be a focus on these guidelines and the morality behind it. This investigation will cover the disparate treatment of undocumented citizens in regards to healthcare; this marginalised demographic receives less than adequate care in medical facilities, as compared to their documented counterparts. There are myriad vulnerabilities that dictate the extent to which undocumented citizens suffer at the hands of the American healthcare system. The procedures for discovering the disparities within the healthcare system consisted of searching online for reliable sources. Many sources come from prestigious schools or peer-reviewed journals. There is a plethora of media that has been uncovered, from websites to videos, each including a different aspect of these healthcare disparities. There are two witnesses who have experienced ill medical treatment/advising due to their immigrant-citizen status. As citizens of California they are entitled to medi-Cal insurance and received no compensation or

accurate treatment as diagnosed cancer patients. There is also have statistical evidence of racial/ethnic discrimination in most medical facilities. The importance of this topic lies in the unfortunate mistreatment of underrepresented and marginalized groups all across the nation. This is relevant given that the United States currently has a highly unaffordable health care system that very few are able to access, as well clear racial disparities being integrated into its medical institutions.

MARIAH BLOOM

POSTER 107

Title: Dating App Use Is Associated with Less Sexual Restrictedness in Both Men and Women

Faculty Mentor(s): Lawrence Sugiyama & Colin Brand

Abstract:

30 million Americans use dating technologies. Location-based real time dating (LBRTD) apps (e.g., Tinder) allow users to access photos and short profiles of potential mates in real time, indicate interest, and communicate and arrange meetings if desired. Sexual strategies theory posits humans evolved multiple mating strategies, contextually deployed based on relevant costs and benefits. We hypothesized LBRTDs alter perceived costs and benefits of different mating strategies, leading to different patterns of sexual behavior. We administered a Qualtrics survey to UO undergraduates about dating app usage, and measures including sex, STMs, LTM, perceptions and their Socio-sexual Orientation (SOI, indicative of STM (high SOI) vs LTM (low SOI) attitudes, preferences, and behaviors). Responses of self-identified heterosexual respondents (N=126) were analyzed. General linear models show app use associated with higher SOI ($\beta = 0.09$, $p < 0.001$), but not sex or self-perceived attractiveness. Number of STMs was higher for males than females ($\beta = 4.82$ $p < 0.05$), and positively related to SOI ($\beta = 0.09$, $p < 0.01$). Conversely, SOI was a negative predictor of LTM ($\beta = -0.04$, $p < 0.05$). App-using men had more STMs and LTM than non-app users. Women app users and non-users did not differ in STMs or LTM. Thus we find mixed support for our predictions. Because sample women are near peak fertility, with high mate value, they likely can act on short-term mating desires regardless of dating app usage.

EVIE BLYTHE

Co Presenter(s): Molly Armstrong, Sophie Bailey, Cayenne Peel

POSTER 167

Title: People Incarcerated Working for Wages keen to Slave Labor within the Oregon Prison System

Faculty Mentor(s): Noah Glusman

Abstract:

When the 13th amendment to the US Constitution was added, it outlawed involuntary servitude for almost all cases. The only exception is punishment for a crime. Today, prison labor generates massive amounts of revenue, upwards of \$28 million for prisons in Oregon. Oregon passed Measures 17 and Measure 68 in 1994 and 1999 respectively. Measure 17 required that people incarcerated work 40 hours a week (with the ability to devote half that time to school or other

educational purposes). Measure 68 made it so that labor done by people incarcerated could not be in a highly competitive market. Today, people incarcerated in these prisons work in laundry facilities, call centers, textile, metal, and wood shops, and various other menial tasks that both benefit the penitentiary and other companies who are allowed to subcontract prison labor. The University of Oregon contracted Oregon State Penitentiary workers to make most of the new furniture for residence halls. Incarcerated peoples get paid much less than minimum wage, some working for as little as \$0.20 per hour. Our research question looked into whether or not it is constitutional and productive to society to have people incarcerated, whose numbers are racially disproportionate due to racism in other sectors of the criminal justice system, work 40+ hours for less than a dollar per hour. The working conditions and wages of prison labor constitute a form of modern slavery. We used articles posted by researchers who went into these prisons and interviewed the people incarcerated who work these jobs. The findings of their research were mixed. Some people incarcerated thought that money mattered less than receiving an opportunity to learn valuable skills and feel as though they were needed. Others voiced their concerns about being taken advantage of. Oregon Corrections Enterprises, who contracts the prison labor, said they could not afford to pay people incarcerated more, even if they wanted to. Regardless, it is still unclear as to whether or not this practice is constitutional. The practice of paying little to nothing for the work of people incarcerated feeds into the argument that mass incarceration is the Jim Crow of our era.

CORINNE BRUBAKER

ORAL SESSION 3 O

Title: "The Harbinger of Category Crisis": Understanding Representations of Monstrosity in Mary Shelley's Frankenstein

Faculty Mentor(s):

Abstract:

The "us versus them" binary is the primary rift that divides and defines human culture. The historical catalyst of both destruction and union, this binary is also a prominent literary motif. In the case of Mary Shelley's Frankenstein, the humanity, or possibly the monstrosity, of Frankenstein's creature is the source of "us versus them" confusion and debate. A being constructed of human parts, yet neither gestated nor born as a true human being, the creature is a cause of terror for all characters in the story, including himself. Jeffrey Jerome Cohen's third thesis from "Monster Culture (Seven Theses)" describes monsters as those who "[refuse] to participate in the classificatory 'order of things'" thereby distinguishing them as defiant of the "us versus them" binary (Cohen 3). Julia Kristeva's abject theory and Sigmund Freud's concept of the uncanny are both examples of category disruption at play in Frankenstein, resulting in moments of uncertainty that support the creature's inability to be defined. Using the work of Freud and Kristeva, I seek to demonstrate the ways in which Frankenstein's monster upholds Cohen's third thesis, thereby proving that his monstrosity is defined by his very inability to fit into the "us versus them" binary.

EDEN BRUSH
ORAL SESSION 1 O

Title: Host-microbe evolutionary antagonism in primates: HopQ's role as a bacterial adhesin targeting CEACAM1

Faculty Mentor(s): Matt Barber

Abstract:

How animals and microbes interact with each other can mean the difference between harmonious coexistence and deadly infection. These interactions create the potential for evolutionary conflict between host and microbial proteins which can contribute to antagonistic evolution of host and microbial genomes. Specific adhesion to host tissue cells is often a necessary first step in bacterial pathogenesis; "adhesins" are proteins on bacterial surfaces that mediate host cell adhesion and subsequently, invasion and infection. The N-domain of human carcinoembryonic antigen-related cell adhesion molecule 1 (CEACAM1), a host protein that modulates cell adhesion and other cell processes, is targeted and exploited by various human-associated bacterial adhesins. The Barber Lab at the University of Oregon has recently discovered that primate CEACAM proteins are rapidly evolving, suggesting an evolutionary 'arms race' with the bacterial proteins that target them. One such adhesin is HopQ of *Helicobacter pylori*. *H. pylori* is a bacterium that colonizes the stomach of ~50% of the human population worldwide and is the major causative agent for stomach ulcers and gastric cancer. It remains unclear how genetic diversity among adhesins such as HopQ impacts host specificity. We tested our hypothesis that HopQ will bind differentially to various primate CEACAM1 proteins by performing pull-down assays and western blots with *H. pylori* and recombinant, GFP-tagged, CEACAM1 N domains from a panel of primates. Interestingly, we found that HopQ binds to the N domains of human, chimp, and gorilla CEACAM1. We also found multiple sites of positive selection on HopQ that contact rapidly evolving sites in CEACAM1 lending support to a potential evolutionary 'arms race' between the two. These findings are directly applicable to human health, as the host specificity of a pathogen can determine what species are more susceptible to reverse zoonosis, the transfer of a disease-causing agent from humans to animals.

JACK BUECHLER

Co Presenter(s): Hayden Stotts

POSTER 172

Title: Tour de Friends

Faculty Mentor(s): Sarah Stoeckl

Abstract:

Eugene, Oregon is one of the most bike friendly cities to live in. Due to the high number of bike paths and bike lanes, the League of American Bicyclists awarded Eugene and Springfield as a 'Gold Level Bicycle Friendly Community.' Since biking is a widely loved activity which provides many benefits, we decided to initiate a ride group to both familiarize riders with the numerous bike paths in Eugene and to encourage people to use them safely. We advertised to both the student body at UO and the community within Eugene through flyers and Facebook. Tour de Friends meets once a week on Thursday afternoons, and usually rides for approximately an hour.

We change the route weekly in order to help people, mainly students, gain increased exposure to the different areas within the city. By getting more people to choose to ride their bikes over driving a car, we can hopefully help to reduce emissions caused by vehicles.

MORGAN BUNCH

POSTER 113

Title: How the Use of Simulations Affects the Understandability and Memory for Expert Testimony

Faculty Mentor(s): Robert Mauro

Abstract:

Experts are relying increasingly on the use of computer-generated simulations or recreations of an incident that are constructed by entering data into a computer program, to effectively communicate complex information. However, the validity of a simulation is often based on key assumptions that are obscure and hidden while the imagery is vivid and compelling. This raises the question of whether simulations can be effective ways to enhance the ability of the courts to deal with arcane information, explain complex issues in ways that judges and jurors can understand, or allow judges and jurors to be swayed by presentations that are only loosely grounded in the facts and science. In the effort to enhance the clarity and persuasiveness of expert testimony, we seek to investigate the effect of simulations on individuals' perceptions of the validity of expert testimony. The questions guiding our inquiry are as follows: How effective are simulations relative to traditional visualizations in persuading individuals? How can simulations be effectively cross-examined? In what ways are simulations persuasive and/or being potentially mistaken for fact? How do judges' instructions about the nature of simulations as opinions be sufficient to counter this effect? To answer these questions, participants will be recruited through the University of Oregon Psychology Department human subjects pool and randomly assigned to one of four conditions derived from a 2 (simulation vs. traditional visualization) x 2 (accurate testimony vs. inaccurate testimony) design, used to measure the extent of the simulation's persuasiveness and its effect on juror decision making.

RICHELLE ANN CABATIC

ORAL SESSION 2 M

Title: Quantifying upper layer ocean dynamics using iceberg GPS Tracking

Faculty Mentor(s): Kristin Schild & David Sutherland

Abstract:

The Greenland proglacial fjord system, where glaciers from the ice sheet reach the ocean, is an important contributor to sea level rise. When reaching the ocean, these glaciers break off icebergs. These icebergs travel through the fjord and out into the open ocean. All the while, different types of water circulate through the fjord, meeting with the glacier's terminus and affecting it's stability. The tidewater glacier, Jakobshavn Isbrae, and it's fjord, Ilulissat, is of particular interest because it is the most prolific glacial system in Greenland in terms of ice export. Many studies have addressed Jakobshavn's glacial front, but little is known about Ilulissat's ocean circulation due to the difficulty of collecting field measurements in the ice-

choked region. Through our study, we deploy transmitting GPS units on icebergs in Ilulissat Fjord, thereby directly tracking iceberg movement and indirectly detecting the fjord's circulation patterns. Using icebergs as proxies for surface circulation thus provides an alternative to deploying marine instruments that have minimal likelihood for survival in the treacherous fjord environment. Results of our study show that: at a distance of 35km away from the glacier terminus, iceberg movement is no longer dominated by glacial calving events; and that there are eddy circulation patterns at fjord widening locations. This study has the potential to help oceanographers understand more about Ilulissat's circulation dynamics, and can inform glaciologists about how glaciers such as Jakobshavn's acceleration is affected by this type of circulation.

ZOE CAMERON

POSTER 133

Title: Letters to Tip: A Window into the Development of Feminist Language

Faculty Mentor(s): Judith Raiskin & Linda Long

Abstract:

This research analyzes the correspondence between science fiction writers Joanna Russ and James Tiptree, Jr. in the midst of the Women's Liberation Movement of the 1970s. Unbeknownst to Russ, Tiptree is not a man but a pen name; the woman behind the facade is in fact Alice Sheldon, a 60-year-old with a Ph.D. in experimental psychology living in Mclean, Virginia. It is Alice Sheldon's use of her male pen name, James Tiptree, Jr. that allows for a open, candid discourse and provides a window into the struggle and development of feminist language. Together, the two engage in a discussion involving Russ' experience with feminism, Tiptree's interest in underground feminist writings and the lack of terminology used to describe the woman's experience. This research, which utilizes letters from the James Tiptree, Jr. collection in the University of Oregon Archives, not only highlights the struggle women faced in defining themselves but the language they lacked to do so.

WENJIA CAO

POSTER 132

Title: Training on typical items facilitates learning of new concepts

Faculty Mentor(s): Dasa Zeithamova-Demircan & Caitlin Bowman

Abstract:

Concept learning involves linking pieces of information to a shared category label, like learning that furry creatures that live with humans and bark are called dogs. What factors affect how well people learn new categories? Prior research suggests that people can learn categories either by memorizing individual category members or by averaging across category members to form an abstract representation of the perfect category member, known as the prototype. We reasoned that if people learn categories through memorization, then they should learn better from small training sets, but set size should not affect prototype learning. We also reasoned that if people learn categories through memorization, then they should learn better from training sets where items are distinct from one another (i.e., atypical), but that prototype learning would be

facilitated by training on typical items. To test our hypotheses, separate groups of participants underwent category training that varied in the number and typicality of category members. During training, participants saw category members one at a time, guessed which category they belonged to, and were told whether they were right or wrong. Following training, participants were tested on their ability to categorize the training items as well as new examples that they had never seen. We found that people who trained with more typical items learned more quickly and were better at categorizing new examples. Training size did not have a significant influence on learning rate or categorization accuracy. Therefore, our results support the idea that the typicality of training items greatly influences category learning, which is likely because it promotes formation of abstract, prototype category representations.

DAVID CAPELLE

POSTER 148

Title: Political Mobilization of the Pharmaceutical Industry: Interorganizational Ties, Interlocking Directorates, and Political Activism

Faculty Mentor(s): Ryan Light & Michael Dreiling

Abstract:

The pharmaceutical industry holds a prominent position in the American political sphere. The degree and persistence of political mobilization among pharmaceutical firms warrants investigation into the conditions which account for patterns in their political behavior. This study aims to assess how pharmaceutical firms' embeddedness in inter-organizational networks is associated with levels of political activism and political cohesion in the 2015-2016 election cycle. Inter-organizational networks are comprised of firm-to-firm board of director interlocks and membership in prominent policy-planning groups and trade associations. The maintenance of connections with outside companies and organizations represents opportunities for social cohesion and establishment of shared social perspectives among corporate elites, which is thought to precede unified political action among companies. Corporate political activity is measured through PAC donations and lobbying expenditures. By examining relationships between companies' structural social network ties and political activity within a particularly influential industry, this analysis provides novel insight into the way power is exercised in an intra-industry setting. This analysis demonstrates that the political mobilization of the pharmaceutical industry is structured around positions in inter-firm networks, such that companies which maintain social ties to the broader corporate community through board interlocks and advocacy organizations engage themselves in politics more intensely. The results of this study inform positions regarding the conditions of class-cohesiveness among corporate entities, which possesses significant applications to the study of political science, economics, and sociology.

JOEY CARLSON

ORAL SESSION 3 S

Title: Optimization of Silicon Detector for the International Linear Collider Through Reconstructing of Higgs to Two Tau Decay Chanel

Faculty Mentor(s): James Brau & Jason Barkeloo

Abstract:

The University of Oregon Silicon Detector (SiD) Optimization Group is working to improve the design for the SiD electromagnetic (EM) calorimeter for the proposed International Linear Collider (ILC). Through the use of high energy electron-positron collisions, the ILC aims to create low noise events with a high rate of Higgs boson production. The discovery of the Higgs boson was crucial to providing further evidence for the Standard Model, but there is still much to learn about its properties and interactions. In particular, the Higgs boson self-coupling, which helps determine the strength of Higgs boson interactions, remains undiscoverable with current particle collider technology. Using a realistic physics simulation, we can analyze how particle collisions that decay according to the Standard Model interact with the proposed SiD for the ILC. In my research I attempt to reconstruct a certain decay mode of the Higgs boson (decaying to two tau leptons) using simulated detector information in order to make a statement on the energy resolution of the SiD EM calorimeter for the ILC, and thus its potential to further elucidate the Higgs couplings.

LILLY CARROLL

ORAL SESSION 4 S

Title: Intestinal Phenotypes of Zebrafish Enteric Nervous System Double Mutants

Faculty Mentor(s): Judith Eisen & Kristi Hamilton

Abstract:

The enteric nervous system (ENS) innervates the intestine and regulates the dynamic intestinal environment. ENS reduction causes Hirschsprung disease (HSCR), a genetically complex disease that results in intestinal dysmotility and, in many patients, intestinal inflammation. The zebrafish is an excellent model in which to study the relationship between inflammation and genes linked to HSCR. Zebrafish with a mutation in one HSCR gene, *sox10*, have fewer enteric neurons and develop microbiota-dependent intestinal inflammation. Zebrafish with a mutation in another HSCR gene, *ret*, also have fewer ENS neurons but do not exhibit increased intestinal inflammation. To investigate the opposing intestinal phenotypes of *sox10* and *ret* mutants, I analyzed intestinal phenotypes of *sox10;ret* double mutants. Because *sox10* acts in neural crest cells that form the ENS and *ret* acts later, within ENS cells, I hypothesized that intestinal inflammatory phenotypes of *sox10;ret* double mutants would resemble those of *sox10* mutants. To test this hypothesis, I quantified intestinal inflammation in *sox10;ret* double mutants by counting intestinal neutrophils. Surprisingly, I observed a wild-type (WT) neutrophil abundance phenotype in *sox10;ret* mutants. This result led me to investigate intestinal enterochromaffin cells, which produce serotonin and express *ret* but not *sox10*. I hypothesized that *sox10;ret* double mutants would exhibit the same decreased enterochromaffin cell phenotype as *ret* mutants. However, *sox10;ret* mutants had more enterochromaffin cells than *ret* mutants and

were similar to WT. This result prompts further exploration of the potential interactions of the mutated genes for insights into the role of the ENS in maintenance of intestinal health.

KATILYN CHAMPOUX

Veronica Jones, Paige Kosa, Hunter Moen, Gwynyth Pass, Maddie Pellman, Camille Titus, Tabitha Todd, ,

ORAL SESSION 5 O

Title: "Come One. Come All." Introduction to the "Reacting to the Past Course" Greenwich Village 1913 (HIST 411)

Faculty Mentor(s): Dorothee Ostmeier & Ian McNeely

Abstract:

Step into Greenwich Village in the year 1913 and become a bohemian thinker! Eight students from HST 411 "Reacting to the Past," co-taught by Professors Dorothee Ostmeier, German and Folklore and Public Culture, and Ian McNeely, History and head of GERSCAN, will simulate vivid debates between the labor movement, women's suffrage and bohemian intellectuals around 1913. Our lecture hall will turn into Polly's restaurant at Greenwich Village, and Polly Holladay, bohemian business owner and anarchic thinker, and Mabel Dodge, salonniere and wealthy American patron of the arts, will invite their bourgeois cliental (audience) to witness the debates between union and feminist activists. While searching for true meanings of liberty and free speech everyone at Polly's is eager to move bourgeoisie sympathizers towards actions that overcome censorship, social and political threats to freedom and civilian rights. In the end, the audience will be invited to vote for empowering suffrage or unionists.

Our program will conclude with comments and reflections of individual students about their critical experiences with the game, how it inspired their research and how research and game are connected to productively develop a deeper and more personal understanding of a particular moment in time.

FOUNTANE CHAN

ORAL SESSION 3 M

Title: Piwi-piRNA pathway protein PRG-1 represses in temperature-induced DNA damage in spermatocytes

Faculty Mentor(s): Diana Libuda & Nicole Kurhanewicz

Abstract:

Half of infertility cases worldwide involve male-factor subfertility. As awareness and frequency of male infertility has grown, it is increasingly important to understand the underlying mechanisms of these major human health concerns. Developing sperm are particularly sensitive to fluctuations in temperature, requiring a narrow isotherm of 2-7°C below core body temperature. Although both oocytes and spermatocytes undergo meiosis, the specialized form of cell division that produces haploid sex cells, elevated gonadal temperatures have been shown both to impair only male fertility and produce excess DNA damage specifically in spermatocytes. Preliminary work using the powerful roundworm model *Caenorhabditis elegans* suggests the Piwi-piRNA pathway, a highly conserved genome maintenance pathway, is involved in temperature-induced

DNA damage. Absence of worm-specific Argonaute proteins (WAGO), primary effector proteins of the Piwi pathway, results in considerably elevated DNA damage upon heat-shock. Interestingly, a panel of mutants deficient in the *C. elegans* Piwi protein, PRG-1, which functions upstream of WAGOs, demonstrate highly variable degrees of heat-induced DNA damage. This variability is likely due to acquired mutations stemming from inadequate germline surveillance over multiple generations. To circumvent this issue by controlling the number of generations a strain is without PRG-1, we generated a conditional knockdown mutant of PRG-1. Utilizing this mutant, we found that in the absence of PRG-1 after one generation, spermatocytes demonstrate exacerbated levels of heat-induced DNA damage, similar to WAGO null mutants. Taken together, my data suggest a key role for PRG-1 and male-specific components of the Piwi pathway in heat-induced DNA damage in spermatocytes.

FOUNTANE CHAN

POSTER 47

Title: Piwi-piRNA pathway protein PRG-1 represses temperature-induced DNA damage in spermatocytes

Faculty Mentor(s): Diana Libuda & Nicole Kurhanewicz

Abstract:

Half of infertility cases worldwide involve male-factor subfertility. As awareness and frequency of male infertility has grown, it is increasingly important to understand the underlying mechanisms of these major human health concerns. Developing sperm are particularly sensitive to fluctuations in temperature, requiring a narrow isotherm of 2-7°C below core body temperature. Although both oocytes and spermatocytes undergo meiosis, the specialized form of cell division that produces haploid sex cells, elevated gonadal temperatures have been shown both to impair only male fertility and produce excess DNA damage specifically in spermatocytes. Preliminary work using the powerful roundworm model *Caenorhabditis elegans* suggests the Piwi-piRNA pathway, a highly conserved genome maintenance pathway, is involved in temperature-induced DNA damage. Absence of worm-specific Argonaute proteins (WAGO), primary effector proteins of the Piwi pathway, results in considerably elevated DNA damage upon heat-shock. Interestingly, a panel of mutants deficient in the *C. elegans* Piwi protein, PRG-1, which functions upstream of WAGOs, demonstrate highly variable degrees of heat-induced DNA damage. This variability is likely due to acquired mutations stemming from inadequate germline surveillance over multiple generations. To circumvent this issue by controlling the number of generations a strain is without PRG-1, we generated a conditional knockdown mutant of PRG-1. Utilizing this mutant, we found that in the absence of PRG-1 after one generation, spermatocytes demonstrate exacerbated levels of heat-induced DNA damage, similar to WAGO null mutants. Taken together, my data suggest a key role for PRG-1 and male-specific components of the Piwi pathway in heat-induced DNA damage in spermatocytes.

CAMERON COLBERT

ORAL SESSION 4 CQ

Title: Hemodynamics of Post-Exercise and Post-Passive Heat Stress Recovery Periods

Faculty Mentor(s): Christopher Minson & Michael Francisco

Abstract:

Recent research suggests that individuals exposed to heat stress chronically (e.g. sauna users) enjoy similar benefits as chronic exercisers. Many of exercise's benefits are facilitated during the recovery phase, or the period of time following the cessation of exercise. By studying the cardiovascular responses during the recovery period following both heat stress and exercise, we can further explore clinically-relevant applications of heat therapy. This study seeks to compare the acute physiology of the recovery periods following exercise and hot water immersion (HWI). **METHODS:** 9 subjects (4 F, 5 M, age 22.4 ± 2.4 years) in random order exercised for 60 minutes at 60% VO₂ peak and were immersed in 40.5°C water for 60 minutes on separate days. Measurements were made at baseline, during the interventions, and for 60 minute recovery period following both interventions. Heart rate, blood pressure, core temperature, and subjective measures were recorded every five minutes. Cardiac output, femoral and brachial artery hemodynamics were assessed using Doppler ultrasonography every 20 minutes. Skin blood flow was measured continuously during recovery. **RESULTS:** Brachial artery antegrade shear rate increased during HWI to a greater extent than exercise ($p < 0.06$). Skin blood flow following hot water immersion was significantly greater than that of post-exercise for the first 35 minutes of recovery ($p < 0.028$). **DISCUSSION:** Many of the changes seen during the post-exercise recovery period that lead to beneficial cardiovascular adaptation are also seen during the post-immersion recovery period, suggesting hot water immersion may improve cardiovascular health.

JAZMIN COLE

POSTER 92

Title: The effectiveness of peer-led suicide prevention workshops at the University of Oregon

Faculty Mentor(s): Suzie Stadelman

Abstract:

According to the Center for Disease Control (2016), suicide is the second leading cause of deaths in individuals between the ages 10 and 35 in the United States. In Oregon, the number of deaths by suicide has increased 19-30% since 1999 and surpassed the national age-adjusted rate (CDC Vital Signs, June 2018). As suicide rates continue to rise so does the demand from public health for increased resources and awareness of suicide prevention and mental health promotion. The purpose of my research is to increase awareness of the importance of mental health for our student population and show the effectiveness of peer-to-peer suicide prevention at the University of Oregon (UO). I will be sharing quantitative and qualitative data collected by the Student Suicide Prevention Team (SSPT) from students before and after receiving a peer led workshop on how to help a friend experiencing suicidal ideation. Initial findings from SSPT data show promising results that students report an increase in both their feeling of preparedness to discuss with a peer concerns of suicide and confidence in their ability to help a peer seek help.

CHEYENNE COLLINS

ORAL SESSION 4 C

Title: Starting a Taphonomic Research Facility in the Willamette Valley of Oregon: a joint project between Lane Community College (LCC) and the University of Oregon (UO)

Faculty Mentor(s): Jeanne McLaughlin

Abstract:

Taphonomy is the study of events and processes that affect remains of an organism after death. It is an essential component of medico-legal death investigations and can aid in reconstructing events leading up to the death as well as time since death. The creation of the Anthropological Research Facility, aka “the body farm” in Tennessee changed how taphonomy was perceived and boosted taphonomic study into the field of forensic science through its focus on human decomposition. Recent research has called for more regional studies in order to test widely accepted methodologies in differing environments. The creation of this facility in the Willamette Valley has involved a multi-year effort gaining various institutional approvals, securing grant funding, and planning a pilot project that is the first of its kind in the region. This facility is one of less than ten facilities in the United States and the only one west of the Rocky Mountains. The conclusion of the facilities’ first project has secured a plethora of data on decomposition from this region, as well as yielded new data on animal scavenging, insect activity, and microorganisms. Multiple undergraduate research projects including both LCC and UO students have also stemmed from the pilot study. The incoming data has already demonstrated that additional regional studies are needed in the Willamette Valley, which is a taphonomically unique environment. This presentation will discuss the opening of this unique local outdoor research site, share a variety of the initial outcomes of the pilot project(s), and discuss future plans.

CHEYENNE COLLINS

POSTER 153

Title: Preliminary Decomposition Study in the Willamette Valley of Oregon: A Multi-Method Comparison and Sharp Force Trauma Effects

Faculty Mentor(s): Jeanne McLaughlin

Abstract:

Determining time since death (post-mortem interval or PMI) is an essential part of medico-legal death investigations. PMI can give investigators important information about time of death and may help answer questions about the events leading up to death. The purpose of this study was to collect decompositional data from an understudied region (Oregon), and compare multiple scoring methods that are current standards developed in regions such as Tennessee, in order to characterize the effects of regional variation on decomposition and taphonomy. Six pig heads were placed on the ground surface in a fenced enclosure and exposed to the natural winter environment of the Willamette Valley of Oregon for sixty days. Three of these pig heads underwent sharp force trauma infliction (SFT) in order to compare rate of decay with remains that have a singular SFT wound. Stage of decomposition, temperature, precipitation, and preliminary entomological data were collected throughout the sixty-day observation period.

These data were used to calculate Accumulated Degree Days (ADD); evaluate additional decomposition scoring methods; compare and contrast similar studies from different seasons within the Willamette Valley; and analyze the effects of sharp force trauma (SFT) on decomposition rates and insect activity. This study found that: decay within the Willamette Valley varied from other taphonomic studies; winter decay occurs at a slower pace than summer decay; and that SFT did not influence rate of decay in a winter environment.

FAITH COLLINS

ORAL SESSION 2 SW

Title: The Effect of Delta Frequency Music on Insomniac Sleep Onset Latency

Faculty Mentor(s): Don Tucker

Abstract:

Insomnia, a common sleep disorder, is associated with difficulties initiating sleep (i.e., sleep onset latency). Pharmacological interventions provide moderate relief, but because of habituation and growing problems with substance abuse and addiction, there has been a push by the National Institutes of Health (NIH) to identify non-pharmacological interventions for such conditions. One possible intervention for insomnia is listening to music to improve sleep onset latency. This study is a 3-week intervention in which participants will listen to 45 minutes of slow, rhythmic music as they are falling asleep. Tononi et al., (2010) administered brief tones at 0.8 and 2 Hz (delta frequency), a rate that approximates the natural cellular oscillation of cortical neurons during sleep. They found these tones improved sleep slow waves. Thus, we hypothesize that delta frequency music will improve sleep latency and catalyze the transition into slow wave sleep, similar to the results reported by Tononi, (2010). An a priori power analysis suggested this study will require 10 subjects. The inclusion criteria are aged 18- 65, and a Pittsburgh Sleep Quality Index (PSQI) score >5. The exclusion criterion is a yes response to any item on the Self-reported Comorbidity Questionnaire (SCQ). A repeated-measures multivariate analysis of variance (MANOVA) including within and between interactions will be utilized. The independent variable is group (normal sleepers and insomniacs). Dependent measures include pre- post-PSQI score, sleep onset latency in minutes, a Likert scale sleep quality report, and a sleep log of sleep onset and sleep time in minutes.

PATRICK CONNOR

POSTER 16

Title: Thermodynamic and structural determination of metal and peptide binding to the human S100A9 protein.

Faculty Mentor(s): Jeremy Anderson & Michael Harms

Abstract:

The human S100A9 protein is an important macromolecule found in large quantities in human neutrophils and at sites of inflammation. S100A9 has many functions including killing bacteria and turning on inflammation. It has been identified as a drug target to treat inflammatory disorders such as arthritis, but the mechanisms by which it achieves its diverse functions are poorly understood. In this study we investigated how S100A9 binds to two different types of

targets as part of its biological function: 1) metals (which it sequesters to kill bacteria) and 2) innate immune receptors (which turn on inflammation). We measured binding interactions using isothermal titration calorimetry (ITC) and changes in protein structure using nuclear magnetic resonance spectroscopy (NMR). For the first project, we measured calcium and zinc binding to S100A9 by ITC and observed a large structural change in the protein by NMR. For the second project we measured binding of S100A9 to six peptides from the innate immune receptor TLR4. Only two peptides showed binding by ITC but three showed changes in structure by NMR indicating binding. We are further investigating where these peptides bind S100A9 by NMR. These studies show that S100A9 binds both calcium and zinc and that these metals bind cooperatively together. The peptide experiments showed that the peptides bind weakly to S100A9, which implies that binding may require a larger interface of TLR4. Determining how S100A9 performs these different functions is crucial to determining its role in disease states and what functions are involved.

SAMUEL COOKE

POSTER 77

Title: Investigating ancient flooding caused by the Chicxulub Meteorite impact

Faculty Mentor(s): Diego Melgar

Abstract:

The Cretaceous-Tertiary boundary is marked by a discrete lithologic marker and subsequent die-off of paleo species attributed to the Chicxulub meteorite impact. While many studies have investigated the global effects of the impact, which include a magnitude 10-11 earthquake, there has been limited investigation into the immediate effects triggered by the meteorite's collision. Recently, in a paper published by DePalma et al, an on-shore surge deposit in North Dakota has been examined which contains a high-resolution chronology of the events that occurred immediately after the impact. The authors assert that in this flooding event, a tsunami is probably not the source, and instead a seismic generated seiche is responsible for the rapidly emplaced deposit. A seismic seiche (pronounced 'saysh') is an ephemeral standing wave that oscillates in a partially or fully enclosed basin of water in response to seismic waves. Currently there is a lack of data on seismic seiches that would serve to substantiate this claim. This research seeks to consolidate existing data on observed seiches in order to understand how earthquake and basin properties relate to seiche characteristics. To do this, published scientific papers containing observed seiche measurements in response to a seismic event were collected and characteristics such as earthquake magnitude, epicentral distance, seiche amplitude and magnitude as well as basin dimensions were analyzed. While this analysis is ongoing preliminary findings suggest a logarithmic relationship between epicentral distance and seiche amplitude.

SHANE COONEY

ORAL SESSION 2 SW

Title: Overwhelmed and Undermined: The Use of Psychoactive Substances and the Problem of Meaninglessness

Faculty Mentor(s): Steven Brence & Caroline Lundquist

Abstract:

Today, the opioid epidemic pervades every corner of society. Accordingly, drug use and addiction have been dealt with extensively as social phenomena, with the latter also being studied by psychologists and other medical professionals. Neither, however, has been thoroughly examined as an existential phenomenon. The scale of this crisis is symptomatic of a much deeper problem, viz., the problem of meaninglessness. What consequences follow from the realization that life has no inherent or absolute meaning; that life is, as Albert Camus describes in *The Myth of Sisyphus*, absurd? In this essay, I argue that drug use and abuse can be seen as problematic responses to the meaninglessness consequent of the absurd. Exploring Camus' notion of absurdity and drawing on my experiences with addiction, I situate drug use within the context of the absurd, highlighting how the use of psychoactive substances is, either consciously or unconsciously, an attempt to escape the absurdity of existence. I then discuss the limitations of Camus' account of the human need for meaning and propose potential alternatives, which can be found in Viktor Frankl's book *Man's Search for Meaning* and in Camus' novel *The Plague*. The aim of my project is to analyze drug use vis-à-vis meaning, so that we may gain insight into why some people begin and continue to use drugs, which, as I suggest, is the starting point for understanding addiction. Without answering this principal question, our attempts to mitigate the problem of addiction will always remain somewhat tangential.

RACHEL COOPER

Co Presenter(s): Max Daniels, Alexander Fix, Brian Janisch, Cassidy Malick, Giulia Sala, Zoe Wassman

POSTER 85-86

Title: On Oranges: Creating a Theater Lobby Experience Using Dramaturgical Principles

Faculty Mentor(s): Aryn Bartley

Abstract:

Our purpose in this creative project was to explore themes from Lane Community College's spring 2019 production of *The Wolves* by Sarah DeLappe through the medium of a lobby presentation informed by dramaturgical principles. Dramaturgy is the study and exploration of theatrical elements not explicitly stated in the playwright's literal text, such as cultural allusions and performance history. A lobby presentation is a practical application of dramaturgical studies and is used to prime the audience for a play before they enter the theater. We performed an in-depth analysis of the text and its context, synthesizing our findings into a multimodal (visual, aural, and linguistic) display that represented the play's larger themes, such as feminism, sports as community, and U.S. teen girl culture. Our process was to choose which elements to emphasize without compromising the playwright's vision. We decided to highlight the juxtaposition between the daily aspects of U.S. teen girl culture with the far larger international

dilemmas discussed in the text, and the indirect influence they have upon each other. Our presentation illuminates the way the lobby can establish an overall tone as well as a connection between the audience and the world of the play.

ISABELLE CULLEN

ORAL SESSION 4 C

Title: A Look at Post-Secondary Education Support for Students with Autism Spectrum Disorders (ASD)

Faculty Mentor(s): Laura Lee McIntyre

Abstract:

Autism Spectrum Disorder (ASD), is the fastest growing neurodevelopmental disorder in childhood affecting an estimated 1 in 59 Americans (Center for Disease and Prevention, 2018). ASD affects social, communication, and behavioral functioning across the lifespan. ASD is a spectrum disorder with some individuals significantly impaired and others more mildly affected. Approximately half have intellectual functioning in the average or above range, yet only 15% of those on the spectrum attend a 4 year university. Empirical literature was reviewed and institutional services at UO were investigated to better understand the barriers and supports for students with ASD. In this oral presentation, we will discuss the four primary federal laws that create and define how institutions provide post-secondary education support to those with disabilities, the restrictions that these current laws pose, and what programs and services institutions can provide to better support these students and increase their presence in 4 year universities.

ANSON DANG

POSTER 67

Title: Investigating Gp32 Binding Behavior on Single-Stranded DNA With Different Polarity And Length Using Microsecond Resolution smFRET Measurements

Faculty Mentor(s): Andrew Marcus & Peter von Hippel

Abstract:

The single-stranded (ss)DNA binding protein (gp32) of bacteriophage T4 plays a central role in regulating the functions and integration of the helicase, polymerase and primase components of the T4 DNA replication system. The T4 replication system serves as an excellent model for higher organisms as it contains all the essential components for DNA replication. This project aims to investigate how polarity and length of the ssDNA affect gp32 DNA binding. We perform microsecond resolution single-molecule FRET (smFRET) measurements on four primer templates of 14-15 base pairs and different polarities. Data are analyzed using both second- and fourth- order time correlation functions. At the current stage of this project, our results indicate at least three different conformational stages for gp32 binding. Further analysis is required to compare if and how gp32 dimer bind differently on the different constructs.

CYDNIE DAVENPORT

ORAL SESSION 1 SW

Title: Dialect Variation in English: An Investigation into the Disappearing Word Effect

Faculty Mentor(s): Melissa Baese-Berk

Abstract:

Recent research (e.g., Dilley & Pitt, 2010) has demonstrated that manipulation of speech rate influences listeners' perception of syllables in English. For example, when a sentence like "Don must see the harbor or boats" is spoken quickly, the portion "harbor or" can blend together, creating an utterance that is ambiguous with a sentence like "Don must see the harbor boats." Slowing down the surrounding speech rate can cause a listener's perception of the sentence to switch from the harbor or boats version to the harbor boats version. When listeners hear a slower speaking rate, they expect to hear fewer words than when they hear a faster rate, an effect described as the "context speech rate effect." This behavior has only been investigated in "standard" American English, not in dialects that may differ in terms of their pronunciation and how they can be perceived. Research has also not yet considered how social context influences this effect. This project asked how various dialects of American English impact spoken word segmentation. This is critically important because dialect information in someone's speech can result in both social judgments, and can significantly impact how speech is understood. By investigating how various dialects interact with cognitive mechanisms like this context speech rate effect, we also raise the question of how social and cognitive factors interact during human communication.

KYLIE DAVIS

POSTER 100

Title: Heard it Through the Grapevine: Does Physical Attractiveness Affect Impressions Formed via Gossip?

Faculty Mentor(s): Sanjay Srivastava & Cory Costello

Abstract:

People share information about others' personalities via gossip, but little is known about what affects these impressions formed via gossip (i.e., hearsay reputations). We investigated the effect of targets' physical attractiveness on hearsay reputations, assessing whether attractiveness' effects on direct (face-to-face) impressions (e.g., Lorenzo et al., 2010) carry over through gossip. Across 2 studies, 629 undergraduates participated in groups of 3 or 4. Two participants got to know one another (target/P1), each told a new participant (P2) about the person they had just met, and then they rated each other. Physically attractive people were seen as more conscientious, less neurotic, and more extraverted by P1s ($|\beta's|$ from .13 to .18; $p's < .01$), replicating the link between attractiveness and more positive impressions. This tendency was only partly carried over to P2s, who rated physically attractive targets as only more Extraverted ($\beta = .09$, $p < .05$; other $|\beta's| \leq .05$). Finally, targets' attractiveness did not influence consensus between P1 and P2 ($|\beta's| \leq .05$). Attractiveness thus appears to more greatly impact direct face-to-face impressions than hearsay reputations.

ANA DAZA

ORAL SESSION 1 M

Title: The Rise in Popularity of Reggaetón: How Has Whiteness and U.S. Culture Commodified the Latin Sound?

Faculty Mentor(s): Laura Pulido & Brian Klopotek

Abstract:

This research explores whether the release of the song "Despacito" by Luis Fonsi and Daddy Yankee, featuring Justin Bieber, ignited an increase of popularity in reggaetón, a music genre with origins in the Caribbean and U.S. hip-hop. Through a cultural comparative study, the research studies the history of both rap/hip-hop and Latin music as sounds that have been commodified by and for the white listener. The research implements several literature sources, such as George Lipsitz and bell-hooks, as well as data analysis provided by Google Trends and BuzzAngle Music reports. A historical comparison of the older reggaetón genre to today's music shows a distinct change in sound that plainly targets white U.S. audiences. Similarly to hip-hop, and Latin music overall, reggaetón musicians have capitalized their commodification by appealing to certain standards set under a white gaze (e.g., more of a pop/U.S. trap influence, certain fashion trends, specific personas displayed in music videos and performances). It's important to also acknowledge that, perhaps, reggaetón and Latin music have simply become more popular due to the high population of Latinx in the U.S. However, these peoples and their cultural expressions have been in the U.S. for a very long time, and only in the last two years has this genre become as popular as it is now. I hope to conclude my research by reinforcing how important cultural expression is for people of color and minorities and why it's ultimately problematic for these to become commodified for capitalistic profit.

GEORGE DEARDORFF

Co Presenter(s): Bryson Ramona

POSTER 44

Title: Mutational Analysis of dach Genes During Zebrafish Fin Regeneration

Faculty Mentor(s): Kryn Stankunas & Scott Stewart

Abstract:

Following amputation, zebrafish fins, comprised of intricate skeletal rays and other tissues, perfectly regenerate to their original size and shape regardless of the nature or position of injury. A cell population observed in the regenerating fin, termed "niche", produces Wnt signals that promote fin outgrowth. As a known transcriptional regulator of the niche, dach plays a role in maintaining proper regeneration. Depending upon the extent of regenerative demand, dach becomes enriched at the distal region of the regenerating fin, and is eventually downregulated once the fin has stopped regenerating. A mechanistic explanation for dach induction, in addition to a thorough understanding of how it regulates the niche, is lacking. To explore the role of dach we used CRISPR/Cas9 gene editing to mutate two isoforms of the dach gene, dachc and dacha. By utilizing high-resolution fin imaging, our data showed that dachc mutants display improper morphology, including: abnormal joint segmentation, fusion of rays, and trident-shaped branching patterns. Surprisingly, this observation was not seen during development, but rather

only after amputation and subsequent regeneration. Further, while dacha single mutants exhibited normal regeneration, dachc;dacha double mutants died off at an appreciable rate during development. Our data shows a novel role that dach has in promoting correct branching patterns, in addition to its unique regulation in development versus regeneration. Demonstrating how the misregulation of certain genes like dach can lead to the disruption of growth control mechanisms is critical for understanding the basis of a range of diseases.

IVO DECARLIS

ORAL SESSION 3 CQ

Title: A Silent, Under-recognized Disease: Celiac Disease's Social and Psychological Impacts

Faculty Mentor(s): Casey Reid

Abstract:

This term I am conducting qualitative research about the social and psychological issues that individuals with celiac disease experience. Using information from interviews and relevant secondary research to help contextualize and analyze the issues that individuals with celiac face, I will explain and give examples of the daily problems that individuals with celiac experience. Preliminary research indicates that the social and psychological problems exist due to society's ignorance regarding celiac disease. In doing this project, my goal is to share my research, inform others about what celiac disease is, and explore ways to address the issues that individuals with celiac disease experience.

ALLISON DONA

POSTER 162

Title: Día de Salud: A model for community-based outreach to improve health care access for low-income families

Faculty Mentor(s): Josh Snodgrass

Abstract:

The Oregon-based nonprofit organization Huerto de la Familia ("The Family Garden") and the Global Health Biomarker Laboratory at the University of Oregon come together each year to host Día de Salud, a free health fair for underserved Spanish-speaking individuals in Eugene, Oregon. Día de Salud aims to provide general health information through anthropometric measurements, functional measures (including spirometry), blood pressure, and finger-prick biomarkers (including blood glucose, lipids, hemoglobin, and hemoglobin A1c) as well as consultations with volunteer medical and dental professionals from the community. Each year, 20-25 undergraduate volunteers from the University of Oregon, most with at least some level of Spanish language skills, assist at the event through conducting intake interviews, collecting anthropometric measurements, obtaining capillary blood from finger prick, and providing child care for participant families. Since its creation in 2010, Día de Salud has served between 60 to 80 people every year. This poster describes Día de Salud, including its successes and challenges, in order to outline a model for community-based outreach to improve health care access for low-income families. Although not a substitute for comprehensive primary health care, Día de Salud

combines community outreach and anthropology to provide health care services to underserved populations.

KYMMI DONAGHUE

POSTER 101

Title: Farm Animal Valuation: An Analysis of the Variation in Values of College Students Surrounding Farm Animals and the Way Humans Relate to Them

Faculty Mentor(s): Clare Evans & CJ Pascoe

Abstract:

Meat consumption is a practice that is well ingrained in our society. The diets of most individuals in the United States are heavily meat dependent, yet the meat industry perpetuated by violence and frequently by the exploitation of members of marginalized communities. Sociological examination of values surrounding farm animals and the meat industry is important, as taking a deeper look into practices that are considered normal in our society can provide insight into their implications and how people actually feel about them. This research seeks to answer the question: How do values surrounding farm animals vary across gender, race, socioeconomic status, and LGBTQIA+ community membership? The hypothesis is that members of oppressed groups will answer in ways that indicate an increased sensitivity to the oppression of animals. An qualitative survey of 167 college students at University of Oregon, Lane Community College and Concordia University was conducted in order to assess values surrounding farm animals. The survey asked questions concerning treatment of farm animals, farming practices, and dietary preferences based on a typology of animal values created by Stephen Kellert. Results are analyzed using R. Preliminary findings suggest those who identify as Christian value the material use of farm animals more than those who indicated having no religion. The majority of all respondents across all demographic categories agree that factory farming practices are inhumane, farm animals should be treated with compassion, and that it is important to take into account the environmental effects of the meat industry when making meat purchases.

IMANI DORSEY

ORAL SESSION 3 RA

Title: Continuing the Fight for Freedom: Black College Students Conceptions of Liberation

Faculty Mentor(s): Brian Klopotek

Abstract:

This thesis hopes to demonstrate how Black college-age students hold diverse understandings of Black racial liberation, and suggest strategies for progress based on the various contemporary conditions and barriers to freedom. Through eight one-on-one interviews, there are identifiable differences in thought. Although, despite a lack of unanimity in what they deemed as progress and effective change, in this contemporary moment, they all appear to be most concerned with achieving the formation of an established Black identity/identities, no longer defined in relation to, or against, whiteness. This desire is informed by an awareness and appreciation of historic liberatory efforts, but a general dissatisfaction for the outcomes and their influence on present racial conditions. The insights of these Black students are tested against Black Nationalist, Black

Feminist, and Neoliberal schools of thought, which are utilized as nodes of freedom-oriented discourse to contextualize findings. While unable to identify a unified course of action agreed upon by these students, there is high consensus about the need for material resources as a means of self-sufficiency in order to eliminate the dependency of Black liberation on the conventions of U.S. society. This consciousness of white supremacy as a fact has resulted in active efforts to distance and subvert its influence through the adoption of a pro-Black political practice. Additionally, these students were all interested in exhausting all avenues for progress, so as to not limit the possibilities for a freedom struggle, also for the purposes of attending to U.S. geopolitical complexity.

OLIVIA DOZOIS

ORAL SESSION 2 O

Title: Asexual Representation on Television and its Effects on Public Knowledge

Faculty Mentor(s): Dean Mundy & David Markowitz

Abstract:

While LGBTQ+ representation in the media has greatly improved in recent decades, asexuality remains underrepresented and misunderstood. While there are several examples of LGBTQ+ characters across many channels and streaming services, there have only been two recurring asexual TV characters to date. This lack of asexual representation could be having an effect on public knowledge of the asexual identity. I explore this question using a multi-method approach. First, I do a content analysis of the two recurring asexual characters. I analyze a single episode from each of the shows the characters are featured on. Aside from the content analysis, I conduct a short online survey to evaluate anonymous respondents on their media consumption and knowledge of the asexual identity. My continued research, analysis, and data collection aims to determine if there is a connection between TV representation and general public knowledge of the asexual identity. This study is an attempt at extrapolating the television industry's current circulation of information regarding the asexual identity, and how a greater understanding of asexuality may be achieved through a greater asexual character presence on television.

FREDERICK EDE

POSTER 46

Title: Relating Pumice Permeability to Vesicle Attributes using 3D Printed Models

Faculty Mentor(s): Thomas Giachetti

Abstract:

Pumice is a highly porous rock composed of volcanic glass bearing dense and complex networks of vesicles—bubbles preserved in solid rock resulting from the exsolution of volatiles such as water and carbon dioxide from the magmatic melt during its ascent to the surface. These vesicles often become interconnected, rendering the magma permeable to buoyant gas which escapes into the host rock or the atmosphere. This process, which is known as outgassing, reduces the overpressure in the magma and may prevent fragmentation and explosive eruption. How permeability varies depends on the size, shape, and abundance of vesicles and fractures.

The goal of my project is to analyze the physical properties of 3D printed pumice models. While some data can be obtained from virtual pumice models, having physical representations of the tortuous, constricting passages that render pumice permeable will lead to a better understanding of real-world pumice permeability. Studying the properties of volcanic products grants insight into the eruption process. Understanding how vesicle networks develop and how they impact eruption style will lead to enhanced volcanic hazard prediction and mitigation. To aid in the effort of better understanding the effects that developing vesicle networks have on the eruption process of a volcano, I will establish functional relationships between pumice permeability and vesicle and fracture characteristics such as number density, size, and shape.

MADISON EDGAR

POSTER 106

Title: Caregiver singing and infant vocalizations in everyday infancy

Faculty Mentor(s): Caitlin Fausey

Abstract:

The auditory environments infants encounter impact their vocal development, especially during interactions between a caregiver and their infant (e.g., Franklin et al., 2014; Cartmill et al., 2013). We know that caregivers not only talk but also sing to their infants; however, we don't yet know how singing might matter for many infant behaviors in everyday life (Custodero, Britto, & Brooks-Gunn, 2003). In this study, I ask: Does singing impact infant vocalizations in everyday life? We audio recorded one full day at home from 35 infants (ages 6-12 months old). Trained coders identified moments of live vocal music by listening to these recordings. Speech modeling software automatically identified infant vocalizations (Ford et al., 2008). Overall, infants encountered 6.5 minutes of live vocal music each day (Median = 6.52, SD = 7.24) and vocalized 1165 times over the course of each day (Median = 1165, SD = 523.55). Interestingly, infants who encountered more live vocal music also vocalized more ($r = .48, p < .01$). These results raise the possibility that caregiver singing promotes vocalization practice for infants. We know that high quality auditory environments include lots of speech directed specifically at the child, which suggests that singing may also be high quality input. Thus, this study provides implications for future interventions for infants with lower quality auditory environments.

CHAUCIE EDWARDS

ORAL SESSION 4 S

Title: Exercise-induced Elevations in Skeletal Muscle Histamine Contributes to Increased Post-exercise Capillary Permeability

Faculty Mentor(s): John Halliwill & Matthew Ely

Abstract:

Histamine, an endogenously released molecule in immune and inflammatory responses increases local vasodilation, blood flow, and capillary permeability. During exercise, histamine is produced within exercising muscle and contributes to an elevated post-exercise blood flow. The histamine-induced post-exercise vasodilation is contained within previously exercised muscle as histamine concentrations are not elevated in non-exercised muscle (i.e. arms during leg

exercise). It is unknown if intramuscular histamine also contributes to elevate capillary permeability following exercise. PURPOSE: To compare capillary permeability of the leg before and after prolonged unilateral knee-extension exercise under normal conditions and when histaminergic signaling is blocked. It was hypothesized that H1/H2 receptor antihistamines would decrease capillary permeability following exercise in an exercised leg but not in a resting leg. METHODS: Six (2F) volunteers performed 60 min of unilateral knee-extension exercise at 60% of peak power after consuming either Placebo or histamine (H1/H2) receptor antagonists (Blockade). A capillary filtration coefficient (CFC) reflecting the rate of change in limb girth per rise in venous pressure was calculated using venous occlusion plethysmography. A CFC was calculated prior to (PRE) and following (POST) exercise in both the exercised leg (EL) and the resting leg (RL). Data were analyzed with a 3-way RM ANOVA and presented as Means±SEM. RESULTS: On average, CFC increased 161±90% (PRE: 2.5±1.0 to POST: 6.6±2.3 $\mu\text{g}\cdot 100\text{g}\cdot 1\cdot \text{min}\cdot 1\cdot \text{mmHg}\cdot 1$) in the EL and 38±31% (PRE: 4.8 to POST: 6.5 $\mu\text{g}\cdot 100\text{g}\cdot 1\cdot \text{min}\cdot 1\cdot \text{mmHg}\cdot 1$) in the RL during Placebo. Blockade attenuated the exercise-induced rise in CFC in the EL to 13±41% (PRE = 4.3±1.3 to POST = 4.9±1.8 $\mu\text{g}\cdot 100\text{g}\cdot 1\cdot \text{min}\cdot 1\cdot \text{mmHg}\cdot 1$) and in the RL 2±45% (PRE: 3.8±1.4 to POST: 3.8±1.7 $\mu\text{g}\cdot 100\text{g}\cdot 1\cdot \text{min}\cdot 1\cdot \text{mmHg}\cdot 1$). Due to the high variability in the measures there was a trend for CFC to increase with exercise (P=0.161), for Blockade to attenuate the rise in CFC (P=0.363), and for a leg by drug interaction (P=0.289). CONCLUSION: These initial data suggest that exercise-induced histamine production contributes to the elevated CFC within exercised limbs.

TJ EKSTROM

POSTER 6

Title: Determining the Function of LRIG1 in Colon Cancer Cell Behavior

Faculty Mentor(s): Anne Zemper & Kate Walsh

Abstract:

Regulation of the Epidermal Growth Factor Receptor (EGFR) signaling cascade is critical for cellular homeostasis. Disruption of EGFR control of cell migration and proliferation is seen in many types of cancer cells. The transmembrane protein, Leucine-rich repeats and immunoglobulin-like domains 1 (LRIG1) controls cellular growth via negative regulation of the ErbB family of receptor tyrosine kinases, including EGFR. LRIG1 functions as a tumor suppressor and its expression is often reduced in cancers. In vitro studies of LRIG1 expression could lead to new insights into its regulatory role in highly proliferative tissues like the colon. The colon is a dynamic organ where EGFR and its regulation by LRIG1 may be essential in maintaining homeostasis. The colonic cancer cell line Caco-2 will be used to overexpress LRIG1 and determine changes in EGFR signaling. To overexpress LRIG1, the cells were transfected using a constitutively expressed myc tagged LRIG1 plasmid and selected for using an antibiotic. A scratch assay was performed on cell lines to assess changes in cellular migration and proliferation behavior. An increase of LRIG1 protein in the transfected cells is expected to decrease migration and proliferation. The activity of proteins negatively regulated by LRIG1 within the EGFR signaling cascade including proteins such as pEGFR and pErk 1/2 will decrease as viewed by western blot analysis and immunocytochemistry. Successful manipulation of the Caco-2 cell line will create an in vitro tool to study LRIG1 and its correlation to colon homeostasis.

RAVAHN ENAYATI

POSTER 13

Title: Gait Stability Deficiencies in Healthy Veterans and Veterans with Chronic Mild Traumatic Brain Injury

Faculty Mentor(s): Li-Shan Chou & Will Pitt

Abstract:

While mild traumatic brain injury (mTBI), or concussion, is typically associated with athletics, head trauma is widespread in the battlefield and combat training, as evidenced by 294,010 documented cases of mTBI in the Department of Defense between 2000 and 2016. It has been shown that veteran subjects with chronic mTBI continue to suffer from subjective symptoms. It is reasonable to believe they may also continue to exhibit impairment in their gait stability when tested under a dual-task condition. Eight healthy veterans (1F; 33.9±3.8) and eight veteran subjects diagnosed with chronic mTBI (1F; 32.3±6.5 years old) had their gait imbalance tested. Each subject walked barefoot in two conditions. The first condition involved each veteran providing their undivided attention toward their movements (single-task). The second condition had each subject concurrently completing a continuous auditory Stroop test, which consisted of the individual listening to different auditory stimuli and attempting to correctly identify the pitch (dual-task). A camera motion analysis system was used to collect imaging of each subject's movements during both conditions. A significant difference was found in medial-lateral displacement ($p=0.007$) and in the interaction effect of group and condition for peak medial-lateral velocity ($p = 0.012$). These results indicate that the veterans that suffer from chronic mTBI suffer from certain gait imbalances compared to a control veteran cohort. This information can be used to understand the physiological effects of chronic mTBI and to develop policy for the protection of mental health of military personnel.

PATRICK FAJARDO

POSTER 17

Title: A Novel Application of Carbon Nano hoops in Ion-Sensitive Devices: A Potential Story

Faculty Mentor(s): Ramesh Jasti

Abstract:

Of the many types of ion-sensitive devices, one whose potential has not been fully realized are chemically modified field effect transistors (CHEMFETs). These devices utilize ion receptors to detect specific target ions, commonly used to detect the presence of pollutants. One possible receptor is cycloparaphenylene (CPP), also called carbon nano hoops. In this research we determined the interaction between CPP and a variety of ions using CHEMFET devices, by measuring a change in output voltage at different ion concentrations. We expected CPPs to interact strongly with cations, as these molecules have an electron rich pore which has been applied as a chemical host in other systems. A preliminary screening showed an interaction between CPP and lithium, ammonium, and sodium cations. In addition control experiments established a baseline, in order to accurately quantify the interaction taking place. Further ion screenings, as well as ionic strength control studies, are future experiments that will be carried out to further characterize the interaction taking place.

BRITTANY FALCONER

POSTER 65

Title: Early Observational Data on Arthropods Associated with Winter Decomposition in the Pacific Northwest

Faculty Mentor(s): Jeanne McLaughlin

Abstract:

Forensic Entomology plays an important role within the field of medicolegal death investigations. By studying the presence of certain arthropod species, scientists are able to provide an estimate of post-mortem interval (PMI), or how long an individual has been deceased, for a set of remains in question. This estimate of PMI is based on a known set of growth, development, and succession patterns for necrophagous and predatory arthropods that are associated with remains. Though forensic entomology provides important information for forensic investigators, there are a multitude of factors that can affect succession patterns. Geographic location and temperature are two big factors that can influence how arthropods behave. In a separate research project studying winter decomposition rates using pig heads, insect activity appeared to contradict previously known arthropod succession rates and temperature thresholds. Arthropods exhibit a lower thermal limit, sometimes called a critical thermal minimum, which affects their activity in lower temperatures. Within the research site, maggot activity was present throughout the cold winter temperatures, many days well below freezing. Additionally, female flies needing to lay eggs tend to appear on decomposing remains first, then necrophagous and predatory beetles follow after. The first arthropods observed on the remains were beetles, contradictory to previous observations. Geographic location also influences the behavior of certain species of arthropods and could affect how the arthropods within the research site were behaving.

GABRIELLA FARLAND

ORAL SESSION 2 SW

Title: Morningside Hospital: A Historical Case Study for the Diagnosis and Treatment of Depression in Mid-Century American Psychiatry

Faculty Mentor(s): Kristin Yarris & Mary Wood

Abstract:

Morningside Hospital was an inpatient psychiatric hospital in Portland, Oregon operating from the early 1900s through the 1960s. A significant portion of the hospital's patient population were Native Alaskans, due to insufficient public mental health infrastructure in the then-territory. Morningside serves as a case study for examining the practices of American Psychiatry at the height of the institutionalization of those deemed mentally ill. This research uses archival materials from UO Special Collections, namely, the DeWitt Burkes papers (1955-1958) as primary source evidence to historically analyze how depression was diagnosed and treated at Morningside in the 1950s. I analyze the way in which depression-related disorders were diagnosed by psychiatrists in this period using the first version of the Diagnostic and Statistical Manual of Mental Disorders (DSM-I) and the treatments that followed. Using narrative analysis

of psychiatrists' notes, I examine the tensions around framing depression as reactive rather than neurochemical, ultimately illuminating the inadequacy of DSM-I language as a classificatory scheme. Using basic statistical analysis of psychiatrists' meeting minutes, I present the frequency of depression, showing diagnostic trends by gender, age, and race. Given that depression is so prevalent in American psychiatry and U.S. society today, this historical case study offers a critique on the development of diagnostic language and treatment, while revealing the problems gendered and racialized constructs have created in both institutionalization and community mental health care over time.

SARAH FAULKNER

ORAL SESSION 1 M

Title: Violence to Women in Superhero Comics

Faculty Mentor(s): Katherine Kelp-Stebbins

Abstract:

Since the first issue of Action Comics, violence has been a staple in superhero comics. The violence in these comics is normalized and often forgettable, especially when the violence is done to women, with a few exceptions designed to highlight behavior. This project explores male violence toward women within the superhero narrative using feminist theory and female-authored responses to the content and comic book culture, as well as a comparison to the circumstances when a woman in superhero comics resorts to violence. In order to understand cultural female representation within graphic narratives, this project analyzes visual and verbal cues that identify the intended audience, what constitutes as violence in comics, the targets of violence, and under what circumstances violence against women is acceptable. The violence comes through language, predatory behavior, sexual assault, rape, and murder. These actions put into media desensitizes viewers of the material, either with frequency or the setting up of the character. The violence towards women in superhero comics serves as an excuse to have an action sequence to move along the hero's development, plot, or to critique a the medium, which normalizes the violence and ignores the woman. This reflects ingrained views of how women are treated.

ADELINE FECKER

Co Presenter(s): Hailey O'Donnell

CREATIVE WORK 5 BR

Title: Eco-poetry and Us

Faculty Mentor(s): Barbara Mossberg

Abstract:

Eco-poetry is a long practiced tradition and ritual of understanding the natural world and our place in it. "Eco-poetics" comes from the two greek roots: oikos, meaning family, property and house; and poiesis, meaning to make. Together, we understand eco-poetry as home making; a process of creation and compassion and belonging. In the face of massive ecological and environmental crisis, eco-poetry continues to offer insight, criticism, and a call to action. We need eco-poetry, but more importantly- eco-poetry needs us. True, poetry by itself will not solve

climate change; it is a vessel to act through. We read poetry. We write poetry. By putting words onto a page, we materialize our desire to preserve and protect our surroundings and form views that can inspire action. This installation transforms these declarations into a conversation desperately needed in our community and in ourselves. This installation encourages viewers to engage with their creative selves through ecopoetry new and old and explore how poetry can inform and expose the anxiety, confusion, and joy we experience with the world.

ADELINE FECKER

POSTER 75

Title: Influence of Sensory Systems on Social Behavior

Faculty Mentor(s): Phil Washbourne & Sarah Stednitz

Abstract:

Disruption in social behavior is characteristic of Autism Spectrum Disorder, which is a neurodevelopmental disorder that appears in early childhood. Previous papers measured social orienting behavior in zebrafish in a dyad assay and showed lesioning of the ventral forebrain reduced social orienting specifically (Stednitz, 2018). These specific neurons may be evolutionarily conserved and may be found in humans. This study aims to identify other parts of the forebrain that may be implicated in social behavior, to understand which senses contribute to social behavior, and to understand how brain activity patterns relate to sensory conditions and behavior. Measuring behavior in an open field allows us to qualify more complex social behavior like orienting, following and dispersing. The Stednitz (2018) paper suggested subjects must be able to see each other to demonstrate orienting behavior and show activation of the ventral forebrain. However, in an open field, subjects are able to interact without visual stimulus. A deeper investigation into the importance of sensory systems in social behavior can be achieved through olfactory and mechanosensory ablation. Early results suggest the visual system is not required for social interaction, as zebrafish can still follow each other in the dark. Whole brain immunolabeling with pERK and ERK allows for an unbiased approach to identifying important brain regions in social orienting. The neurons in the ventral forebrain (marked “ γ 321” with GFP) acts as our landmark, and our results confirm the importance of the ventral forebrain in social behavior. However, other regions of the forebrain vary in activity in different experimental sensory conditions. Our analysis of behavior and corresponding brain activity will shed light onto more regions that may be implicated in social behavior.

EMILY FEICHT

ORAL SESSION 2 S

Title: Water and Architecture: The Integration of the Binary

Faculty Mentor(s):

Abstract:

In “Water and Architecture: The Integration of the Binary,” this paper reviews the binaries of Roman architecture and their relationship to water. The facilitation of architecture is not without cultural influence both before and after construction. The paper looks at Hadrian’s Villa in Tivoli, Italy, and specifically the Maritime Theater, during Imperial Rome. While scholarship is

provided on spaces and scholar's interpretations of binaries have been researched in other spaces, little has been found for a transparent and multipurpose space such as this. Therefore, in this paper, I research the concrete evidence of the Villa itself in the time of imperial Rome, while comparing this to research written about Hadrian and other Roman villas. In addition, this paper aims to draw connections to evidence we can infer about the Maritime Theater, through other architectural contexts that involve water, such as bathhouses and a fountain villa, and fusing them with gender theory in antiquity.

TROI FEINBERG

POSTER 130

Title: Literature Review: The Abundance and Density of Duiker in Lomako, DRC

Faculty Mentor(s): Frances White & Colin Brand

Abstract:

Duikers are a widespread family of tiny, forest-living antelope that inhabit sub-Saharan Africa. While approximately 22 species have been identified, little is known about the biology and behavior of many of these species due to their solitary and reclusive nature. Additionally, these species are sensitive to human disturbance and are often among the first species to be hunted and relocated. Population density estimates relate to how a population responds to anthropogenic, biological, and environmental factors. Duikers play a vital role in the ecological health of the forest environment they inhabit as active seed dispersers. Therefore, duiker population density also correlates with the forest health of that tropical region. From 1983-1984, we characterized the abundance and density of duikers inhabiting the forest near the N'dele field site in the Lomako Forest Reserve in the Democratic Republic of Congo, using all-occurrence sampling with standard line-transect methodology. A preliminary estimate of an overall density of 2.46 per sq. km. across all species. We examined scientific reports to conclude why the duiker population in DRC was lower than other populations in nearby regions during 1983-1984: the behavioral crypticity of the species, hunting trends in wildlife and local communities, and cross section of demographic changes over several decades. Monitoring trends such as population size and density of duikers gives insight on how human disturbance affects these animals' behaviors and contributes to future conservation plans for the species

CAILAN FEINGOLD

POSTER 63

Title: Investigating the relationship between heat-stress induced DNA damage and the synaptonemal complex in spermatogenesis

Faculty Mentor(s): Diana E Libuda & Cori C. Cahoon

Abstract:

Male fertility defects affect approximately one-third of couples who are unable to conceive, however many of the male-specific mechanisms that contribute to infertility are unknown. Spermatogenesis, unlike oogenesis and other developmental processes, is sensitive to temperature changes and requires a narrow isotherm of 2-7°C below core body temperature.

Exposing spermatogenesis to elevated temperature conditions, both physiological and environmental, have been linked to increased risks of testicular cancer and male infertility. Despite these defects, the mechanisms behind heat-induced male infertility are unknown. In *Caenorhabditis elegans*, heat stress causes sperm-specific increases in DNA damage and destabilization of the chromosome structures essential for meiotic chromosome segregation. Notably, the largest increase in heat-stress induced DNA damage occurs during late prophase I, which coincides with the stage when the chromosome structures are prematurely lost. Therefore, the proteins involved in establishing these chromosome structures might play a direct role in preventing and/or limiting heat-induced DNA damage. However, the relationship between heat-induced DNA damage and chromosome structures has only been examined using static fixed images, which fail to demonstrate the progression of DNA damage and chromosome structure breakdown relative to one another. To understand the dynamic relationship between heat-induced DNA damage and chromosome structures, fluorescently tagged versions of a DNA damage protein (RAD-51) and a structural protein (SYP-3) will be made and live imaged in whole animals undergoing spermatogenesis both with and without heat stress. Overall, these experiments will determine whether chromosome structure instability directly impacts genome integrity during heat stress in developing spermatocytes.

DIMITRA FELLMAN

ORAL SESSION 2 S

Title: Race, Ethnicity, and Jewish Identity in the Ancient Mediterranean

Faculty Mentor(s): Kristen Seaman

Abstract:

Scholars often use modern constructs of “race” and “ethnicity” to interpret ancient texts about life in antiquity. Both terms connote a shared lineage through which traits, physical or cultural, are passed, and imply that those born outside a particular lineage cannot claim to be a part of it. However, an analysis of works by ancient Jewish authors — both historical and philosophical — reveals that Jewish identity was not a birthright, but cultivated through proper practice of Jewish laws. These authors reveal that the correct upholding of Jewish laws could be achieved by anyone, and encouraged mechanisms that promoted Jewish practices amongst non-Jews. The lack of racial or ethnic exclusivity in ancient Jewish practice serves as an example of the homogeneous and fluid environment of the ancient Mediterranean and provides a more accurate lens through which modern scholars should attempt to understand antiquity.

KATIE FISCHER

POSTER 33

Title: Arsenic and Fluoride Contamination Analysis of Agricultural Topsoil in Guanajuato, Mexico

Faculty Mentor(s): Matt Polizzotto

Abstract:

Groundwater from Guanajuato, Mexico’s Independence Basin has recently been documented to contain elevated levels of arsenic (As) and fluoride (F) from past volcanic activity within the region. Guanajuato’s groundwater poses a potential health risk to residents that utilize the

groundwater as drinking water, resulting in chronic exposure to toxic levels of As and F. Although contaminated groundwater is extensively used for irrigation, it remains unclear as to whether contaminants are accumulating in agricultural soils and threatening the quality of crops. Therefore, the primary objective of this work was to understand the scale of contaminant accumulation within the region's topsoil. To do this, we analyzed fifteen batch soil samples from four farms within Guanajuato using inductively coupled plasma mass spectrometry (ICP-MS) for initial levels of arsenic in topsoil, then analyzed sixteen soil core samples from three farms using a fluoride ion selective electrode to form depth profiles for F accumulation within topsoil. We found that As in agricultural topsoil is currently below the EPA standard of 0.39 parts per million (ppm) for arsenic contamination in soils, ranging from 0.018 ppm to 0.059 ppm. Ongoing work is seeking to define the loading limits of As and F, which influences how much As and F the soil can retain. Ultimately, understanding how As and F accumulate within the region's agricultural topsoil contributes towards creating a management plan in regards to how much and for how long local farmers can irrigate with contaminated groundwater before As and F levels in topsoil become potentially hazardous.

DELANEY FISHER

POSTER 147

Title: A Ptolemaic Egyptian Cartonnage Mask: Analysis of Authenticity and Provenance

Faculty Mentor(s): Chris White & Malcolm Wilson

Abstract:

Museums strive to determine the authenticity and provenance of the artifacts they preserve. Such research also increases the educational value of acquired objects, allowing a rich history and cultural context to be shared with museum patrons. This project was conducted to research the cultural relevance, and confirm the authenticity and provenance of artifact eg11:1, a Ptolemaic funeral mask acquired for the Jordan Schnitzer Museum of Art in the early 1950s. In my research, I have compiled a body of evidence through the combination of art historical research of stylistic elements of the mask, biographical research of various persons associated with the artifact, and the analysis of its pigments using a focused ion beam-scanning electron microscope (FIB-SEM). The stylistic similarities of the mask to ancient objects, associations with a prominent antiquities dealer of Egypt, and the presence of traditional pigments and materials prove the likely authenticity of the artifact. Additionally, I believe that the mask would lend itself well to public exhibition and education, on account of its intriguing history and cultural background.

ALICE FLOYD-PRESTON

Co Presenter(s): Jay Lopez, Zach Colligan, Jordan Hankins

POSTER 173

Title: Diet and the Environment

Faculty Mentor(s): Sarah Stoeckl

Abstract:

In the sphere of sustainable living, veganism is hailed as the ideal diet to reduce environmental harm and degradation because plants require fewer resources and veganism does not contribute to the animal agriculture industry. Numerous scientific studies have demonstrated that a vegan diet emits less carbon than a traditional omnivorous diet but these studies are flawed because they do not consider all of the foods vegans consume. Many vegans supplement their diet with vegan substitutes that are often made with imported ingredients and rely on intense food processing and transportation to get to consumer. The goal of this research project is to analyze the ingredients and transportation of vegan substitutes and compare them to their non-vegan counterparts to determine if these alternatives are really better for the environment. In this research project, our primary indicator of sustainability is carbon emitted per pound. While carbon emissions does not illustrate the full picture, it is the easiest way to quantify environmental damages. Going into this project, our hypothesis is that the biggest indicator of environmental harm would not necessarily be the carbon emissions of the food itself, but how far it had to travel to get there. We thought vegan foods would have lower carbon emissions but since they had to be transported longer distances, they might have similar emissions to their non-vegan counterpart. The conclusions of this paper will add nuance to the discussion of diet and the environment and help consumers make more educated decisions.

LIDA FORD

ORAL SESSION 2 DL

Title: Non-Western Epiphanies

Faculty Mentor(s): Angela Bogart-Montieth

Abstract:

An ending can make or break a story. In the modern tradition, most stories end with an epiphany, whereby the main character of the story comes to a great philosophical understanding or discovery. More recently, however, and in the non-western tradition, the epiphany ending is being reconsidered. Charles Baxter, in his article "Against Epiphanies," calls for a complete overhaul of the epiphany ending, in favor of more complicated and less predictable options. While Baxter certainly makes a valid point, he fails to notice the prevalence of non-epiphany, or reimagined epiphany endings already occurring outside of an English-based canon. In this paper, I explore the work of Spanish-language writer Gabriel Garcia Marquez, who reinvents epiphanies in numerous ways in his short stories. Marquez uses three techniques that I will highlight in this inquiry: the "ubiquitous epiphany" that allows the reader satisfaction at the end, and presents a larger social moral in the story, the "subverted epiphany" that presents the reader with an idea of how the story functions and then subverts that idea, and the "anticlimactic-epiphany," where the story is structured to lead the reader to expect an epiphany, and then does not present one.

These innovative techniques have not only led to Marquez's acclaim as an author but give writers from the English-based tradition inspiration in their own work.

LIDA FORD
POSTER 102

Title: "Corybantic Lycanthropy": Exploring Allen Ginsberg's Unpublished 1944 Poem
Faculty Mentor(s): Judith Raiskin

Abstract:

"Corybantic Lycanthropy" is an unpublished poem by Allen Ginsberg, found during my research in the Stanford University Archives in Ginsberg's private journals. When examining the work, I wanted to understand the significance of the poem not only based on its literary merits but to explore what insights could be gained about Ginsberg's early life through its analysis. The poem was written in 1944, Ginsberg's early college years, during the early beginning formation of the Beat Generation. When read in light of Ginsberg's other journal entries, as well as in through a psychoanalytical lens "Corybantic Lycanthropy"'s significance becomes clear. The poem is a representation of Ginsberg's own struggles with his sexuality during this time, and the many symbols found in the poem represent his own process in understanding and accepting his homosexuality before he was out. This provides a rare scholarly opportunity, to view Ginsberg's work before he was widely out as homosexual, and discover the very early years of a poet for which sexuality and homosexuality would become a significant defining point of his career. As a whole, "Corybantic Lycanthropy" gives us unique insight into a vital chapter in Ginsberg's life, which has not been previously academically explored.

VIOLET FOX
ORAL SESSION 1 SW

Title: Negotiating Freedoms: Women Experiencing Homelessness in Eugene, OR
Faculty Mentor(s): Lamia Karim

Abstract:

Why is there such an increase in homelessness, particularly among women, in the United States? I propose to study this phenomenon among homeless women in Eugene, OR. Recent scholarship and federal counts of homelessness show that the number of homeless people has been steadily increasing since the 1980s, with a sizable increase in women and their children. Research from Europe, Canada, and large U.S. cities show the insecurities that women face living on the streets are different than men's and in the last 10-20 years frameworks have emerged to better understand their lives. Oregon, however, has one of the largest homeless counts in the country, currently ranking fourth in the nation but has little to no targeted qualitative or ethnographic research on women. Women's unique social vulnerabilities and responsibilities make their experiences an important site of study in order to understand the causes of homelessness, as well as to offer pragmatic solutions. This is an urban anthropological research project that is composed of (a) archival research on public policy changes from 1980s onward in Eugene as well as existing relevant theoretical literature; (b) oral histories from 5 homeless women as to the

causes and experiences of homelessness: and (c) interviews with the directors of three homeless shelters in the city of Eugene.

The objectives are to examine the causes of women's homelessness in America, Oregon, and Eugene, as well as analyze and give voice to the gendered experiences and impacts of homelessness on women. My preliminary reading of the literature shows that women experience homelessness due to domestic violence, inability to pay medical and rental bills, and mental illness. However, there are also women who never expected to be homeless due to middle-class lifestyle that they lost unexpectedly.

My research will explore key reasons for homelessness in Eugene, OR as expressed by the interviewed women and shelter personnel, as well as compare how homeless women navigate between the unstructured street life and the highly structured shelter life, and if that is a handicap to their assimilation into the housed world. I have three current hypothesis; one is that the women will express feeling stifled by the restrictions and policing of shelter life, two is that the women will feel frustration at the absence of a transitional "wet shelter" in Eugene (as opposed to a dry shelter), and three that shelter personnel will confirm that women are an increasing demographic in Eugene, as well as the greater state of Oregon and country of America.

JOHN FRANCIS

POSTER 37

Title: The Effect of Varying Reward Treatments on Performance and Learning Acquisition in Mice

Faculty Mentor(s): Paul Steffan & David McCormick

Abstract:

An animal's ability to interpret and respond to environmental stimuli is highly variable, depending on factors such as the reward the animal receives for correctly responding to said stimuli. Using a more favorable reward is expected to positively influence motivation and performance of these animals in a specific behavioral task. The present study examined the effects of using a highly palatable caloric reward in lieu of standard water reward. It was hypothesized that a highly caloric reward solution would facilitate a faster rate of learning on animals completing a behavioral task involving detecting and responding to a correct auditory stimulus embedded within a series of distractor auditory stimuli. Mice were water-restricted and subjected to one of two reward treatment conditions upon correct licking behaviors during a target auditory tone. While the present study determined that a 10% sucrose solution has the capacity to act as a stimulus that promotes correct behavior due to its positive reinforcement properties, ($d' = 2.02$), further experiments and larger sample sizes are required to fully quantify the efficacy of sucrose solution compared to traditional water rewards. By examining the effects of alternative reward treatments on performance in an auditory tone discrimination task, we can determine optimal treatment conditions in which mice learn most efficiently. These results could further elucidate the relationship between caloric intake, nutrition, and learning at large.

LILLY FRENCH

POSTER 103

Title: The Manifestation of Escapism in the Outdoors

Faculty Mentor(s): Avinnash Tiwari

Abstract:

It is an easy claim to make that people are increasingly turning to the outdoors as a means of escape from their real world. "The outdoors" is a loaded term with definitions far expanding that of its physical space. Really, "the outdoors" has everything to do with the opposite of its physical space, urban life. This research essay explores the outdoors as it is used by people as a form of escape. This method of escapism is reflected through case studies that discuss the feminine language surrounding the outdoors and why it is harmful, examples of nature's use to treat anxiety and stress, outdoor recreation as an industry in the United States, and the commodification of time's creation of a need for escape. The culture that questions the authenticity of outdoor experiences is also discussed. When conducting my research, I consulted credible articles, academic journals, and a nonfiction novel as examples and references to previous studies demonstrating elements of my research question. As outdoor recreation becomes a more and more common way to practice escapism, I have found that pieces of the "real world," the parts people are trying to escape, have begun to seep into the outdoor culture and community as well. Without a collective conscious of these hazards, our great escape may fall to the same pains and perils of our real world.

ALYSSA FUENTEZ

POSTER 69

Title: Determining the differential contributions of thalamic nuclei in visual processing

Faculty Mentor(s): Angie Michael & Cris Niell

Abstract:

Visual processing is a vital sense that allows us to interact with the world, yet the mechanisms behind this process remain unknown. Previous research has demonstrated that the thalamus, a midbrain structure, actively regulates information communication to the visual cortex, an area at which attention and decision making occurs. The thalamus is divided into multiple cells called nuclei where first-order nuclei are thought to relay direct sensory information from the outside world to primary cortical areas; whereas, higher-order nuclei are thought to be involved in contextual processing and sensory feedback to higher-order cortical areas. Although research has shown that primary and higher-order thalamic nuclei are involved in visual processing, it has yet to be determined their differential contributions to visual processing. We examined this question by temporarily inactivating primary and higher-order thalamic nuclei separately in six transgenic adult mice that express a fluorescent indicator of neural activity. Visual stimuli were presented and neural activity was monitored using calcium imaging pre and post thalamic nuclei inhibition. Results demonstrated that inhibition of primary thalamic nuclei leads to a minimal increase in visual cortical activity (n=1); whereas, inhibition of higher-order thalamic nuclei resulted in a decrease of both the magnitude and spread of activity (n=1). Results are considered inconclusive due to mistargeting of viral expression observed in four subjects. Additional

experiments targeting thalamic nuclei separately are in progress to obtain conclusive results. These studies will lay the foundation for future studies regarding the differential roles of thalamic nuclei in regulating visually guided behaviors.

LAUREN GARCIA

Co Presenter(s): Jaidan McLean

POSTER 183

Title: 月子中心, “Maternity Hotels” for Chinese Mothers in the United States as a Form of Immigration

Faculty Mentor(s): Matthias Vogel & Alina Chen

Abstract:

In this presentation, we will be exploring the topic of birth tourism, specifically regarding mothers from China. Birth tourism is where pregnant women come to the United States for the purpose of giving birth on U.S. soil so that their child will be granted U.S. citizenship. The 14th Amendment allows birth tourism to act as a “constitutional loophole” for immigration. Many people have voiced mixed feelings and concerns about this, primarily after the discovery of a major “maternity hotel” in Southern California. This has sparked much debate on whether or not the phenomenon should be restricted or if it is simply another form of immigration Chinese mothers use to give their children a brighter future as citizenship in the United States opens up countless opportunities. We will discuss reasons why Chinese mothers leave their country and we will explore why Chinese mothers deem the U.S. to hold some of the “best opportunities” for their children. In the current political climate, immigration is a much-discussed topic and our exploration of this form of immigration aims to bring increased awareness around birth tourism which is often disputed as “unworthy” out of ignorance and often hidden from public view.

ANA GARIBAY MARES

ORAL SESSION 4 M

Title: Belt and Road Initiative: The Sino-Samoa Pact

Faculty Mentor(s): Yvonne Braun & Yizhao Yang

Abstract:

The Independent State of Samoa faces intersecting environmental, economic, and social vulnerabilities as a small island nation. Regionally, the Chinese Belt and Road Initiative (BRI) is an infrastructure and tourism-oriented project proposed to increase Samoa’s development. My research examines these development plans with a focus on local sustainability. I employ the three pillars of sustainability in my analytical framework, including innovative social enterprise projects for generating money, maximizing mutual benefits, reducing Samoa’s need for loans, while also staying aligned with the traditional way of life - the fa’asamoa. As such, I spent three months in Samoa investigating whether the BRI can maximize sustainable development through the hybridization of the Chinese State-Owned Enterprise (SOE) system and the “social enterprise” business model. I conducted field research using purposive sampling methods whereby I identified key informants, such as traditional, private sector, and governmental community leaders. I conducted semi-structured interviews for participants to share their

suggestions and stake regarding BRI engagement, as it pertains to their respective sector. I focus particularly on the intricate social enterprise model executed by the Poutasi Development Trust (PDT). Data collected suggest the PDT offers indigenous communities the platform to directly benefit from the BRI by using funds gathered from the seasonal workers program to establish family businesses, exporting goods to niche communities along the BRI, and enhancing the range of goods and services offered by the tourism sector. Its operations also work to promote environmentalism and preventative health outcomes, while reducing Samoa's dependence on remittances, including international assistance loans.

ELISE GARMON

POSTER 144

Title: Contextual Influences on Shape Perception

Faculty Mentor(s): Kelly Edwards Dr. Margaret Sereno & Margaret Sereno

Abstract:

Visual context influences the ability to process object shape (shape constancy) but can also hinder performance on tasks that require judgments of apparent object shape where an individual must rely on the retinal image of a target. Participants completed a shape judgment task including judgments of projective (apparent) and objective (actual) shape for figures with varying amounts of context, defined as inclusion of 3-D information in the form of additional sides of a polyhedron. In the first study, participants completed judgments on figures with three levels of context: context-absent (only the target face present), context-partial (target face and a portion of additional top and side faces visible), and context-full (complete 3-D shape). In the second study, objective and projective judgments were completed on the same context-absent and context-full figures as well as two additional sets of images where one face of a complete polyhedral shape was missing. Shape judgments were less accurate when projective decisions were made in conditions including context (partial, single face missing, and full context) and when objective decisions were made in conditions lacking full context (absent, partial, single face missing). As the amount of context decreased, errors increased in objective judgments but decreased in projective judgments. Degree of rotation moderates the effects of context such that overall error increases with greater rotation of the target face and illustrates the important influence of level of context on shape judgment, where the most accurate judgments of actual shape require complete 3-D context while this same level of context distorts apparent judgments which benefit from an absence of context. This research can be applied in making real-world judgements about common tasks such as how to successfully grab an object, to how to put away groceries, and pack things in the dishwasher. This study informs able to accurately create the 3-D world on a 2-D medium which would hinder or aide someone in artistic future endeavors and have real-world applicability to interacting with objects and manipulating objects in our everyday world.

GILLIAN GEORGE

Co Presenter(s): Vanessa Zamudio

POSTER 140

Title: Twitter Data for Brand Insight

Faculty Mentor(s): Dave Markowitz

Abstract:

Does a brand's engagement in Corporate Social Responsibility lead to higher financial returns and positive consumer engagement? This study evaluated four Fortune 500 companies (Campbell's, Pepsi, Nike, and Kellogg's) that made public ethics statements on current social issues (e.g., same-sex couples, interracial families, among others). We analyzed these companies within a two-week period, one week before and one week after their ethics statements were made, to understand if their social media activity (e.g., the number of favorites per Tweet) and stock price changed after the campaign period. We gathered Twitter data computationally through the R computing interface to collect number of favorites for each company before and after making their ethical statements public. We also evaluated the language data of each Tweet and performed an automated text analysis with Linguistic Inquiry and Word Count (LIWC) software to evaluate changes in language patterns related to authenticity (e.g., first-person singular pronouns) from before and after the ethical statements. The language data suggest that there was a marginally significant increase in authenticity from before to after the ethics stance ($p = .075$). However, stock price was not significantly different after evaluating company performance before or after the ethics campaign and stance ($p = .987$). We propose that changes in authenticity relate to a credibility mechanism as prior work suggests that people attempt to boost their credibility by using more "I" statements. We did notice a 10% increase in levels of authentic language as well as no change in stock price. Overall, there was no significant findings to prove a correlation between stock price, twitter engagement, and level of authenticity in language when comparing Tweets before and after an ethical campaign.

LYDIA GIERSCH

Co Presenter(s): Imani Wolery, Brittany Jeffery, Sera Kaplow, Graciela Rodriquez

POSTER 168

Title: Oregon's Gender Bias in Regards to Capital Punishment; the Complications and Implications Scholarly Article

Faculty Mentor(s): Noah Glusman

Abstract:

In our research, we analyzed the role that gender plays in correlation to capital punishment in Oregon. Our research started through an abolitionary point of view in regards to the death penalty; we examined gender and its intersections with age and race. After taking a deeper look at gender, we found a multitude of diverse viewpoints. However, the facts are that women only account for 2-3 percent of those executed while they make up 10 percent of those convicted. Our research and project centers around the reasoning behind these facts. We found that women's cases were greatly impacted by cultural narratives, unlike male convictions which encompass the mass majority of death row cases. For example, when a woman is convicted of

murder, she is more likely to be sentenced to death if the murder is of a loved one, such as an intimate partner, family member or child. We believe that this stems from a break in our cultural norms as women are supposed to be caretakers, gentle and loving. The judicial system generally empathizes with women until they break these cultural norms, in which case women receive harsher punishments. When these cultural roles and their correlation to the death penalty are examined for men, it seems as though men are being sentenced to death at a higher rate than women.

JADEN GILL

Co Presenter(s): Jasmine Lewin, Grace Murray, Emma Alsept-Ellis, Lexy Jones

ORAL SESSION 2 CQ

Title: The Media and Social Action ARC: Amplifying the voices of those who may not have one and advocating for progressive social change in our community and the world.

Faculty Mentor(s): Charlie Butler

Abstract:

With each passing day social justice issues become more and more prevalent in the United States. With these issues comes the challenge of spreading awareness of injustice and inequality within our society. Media and all that it entails provides a base for spreading awareness, finding a voice, and using that voice to speak up for issues that need resolving. Members of the School of Journalism and Communication's Media and Social Action ARC combine their passion for social justice with their interest in media to create a platform for students to speak up about societal problems such as homelessness, hunger, safety, race, and many more.

In second first year as an ARC we have had several social justice advocates and journalists visit the ARC and speak to us about their work. They come to tell us about their passions, experiences, and how they tell stories. We had a sit down talk with Bethany Grace Howe, a transgender graduate student in the SOJC who was the subject of a Register-Guard profile. We met with Michelle Matassa Flores, editor of the Seattle Times, to discuss how her newspaper has covered the metoo movement. We heard the stories of Rev, Peter Do and how his immigration story from the 1980s mirrors many of the immigration stories of today. Through these meeting we were able to peer into the lives of people who often face adversity in our society. In addition we have volunteered at Food For Lane County filling food boxes earmarked for the neediest in our community. We've toured KEZI TV to get a taste of the professional storytelling world. And we have taken field trips to some of Oregon's natural wonders to get a better understanding of the state we live in and environmental challenges it faces.

We have created a website where we publish pieces that highlight the stories we've seen. All members of the ARC contribute to the website in an area of their choosing, whether it be writing copy, taking pictures, making videos, or designing layouts. In addition to the website we support and promote our activities on our Instagram account, also run by students in the ARC.

All around campus are people whose voices could be of value and may have the ability to inspire action in others. By finding these people and telling their stories we hope to spark interest and provoke movement towards greater equality among students at the University of Oregon, and hopefully providing a contribution to solving issues that spread across the country.

L. GOMEZ GOMEZ

POSTER 52

Title: Testing the Centromere-Drive Hypothesis in Primates.

Faculty Mentor(s): Kirstin Sterner & Emily Beck

Abstract:

Chromosomal centromeres play a critical role in the process of cell division. Centromeres act as binding sites for microtubules that pull chromosomes apart during mitosis and meiosis. Despite this conserved function, the centromeres themselves can vary in size and sequence content between species. Rapid evolution in these regions can also drive rapid evolution in centromere-associated proteins. Previous work has suggested these rapid changes are likely to accumulate in one of two essential centromere components; either CENP-A or CENP-C. Through compensatory coevolution, positive selection can subsequently cascade into other essential protein complexes resulting in hybrid incompatibility. Cascading selection from the centromere to CENP-A was previously reported in *Drosophila* by Beck et al. 2015 demonstrating the extension of positive selection to the essential Condensin I complex (SMC2, SMC4, NCAPD2, NCAPG, NCAPH orthologs). To test if kinetochore-associated proteins evolve rapidly in other animals, we examined the sequence of CENP-A and CENP-C and their associated protein complexes, Condensin I and Mis12 (DSN1, MIS12, NSL1, PMF1) respectively, across primates. Sequences were mined from publicly available genomes (21-25 individual species per gene), aligned using Clustal-Omega and manually checked in Mesquite to ensure that protein-coding sequences conformed to codon boundaries. We then used the codeml (PAML) to test for positive selection. Our preliminary data suggests CENP-C may be evolving rapidly showing evidence of positive selection in components of Condensin1 and Mis12 complexes. This finding supports the centromere-drive hypothesis, which suggests the presence of an evolutionary tug-of-war between centromeric DNA and centromere-associated proteins that may shape karyotype evolution.

ADRIAN GORDON

ORAL SESSION 3 S

Title: Semiconductor-Electrocatalyst Interfaces on Photoanodes Designed for Photoelectrochemical Cells

Faculty Mentor(s): Shannon Boettcher

Abstract:

Solar water splitting using photoelectrochemical cells is a promising method for storing solar energy in the form of hydrogen bonds. Photoelectrochemical cells consist of two surfaces, the photocathode and photoanode, at which hydrogen and oxygen evolve from an electrolyte solution. Thin metal or metal-oxide electrocatalyst films are often deposited onto silicon based photoanodes in order to catalyze the oxygen evolution reaction and to protect the silicon from corrosion. Previous research has shown that thinner electrocatalyst films are correlated with more efficient photoanodes. However, the underlying physical processes driving this correlation remain unclear. This research uses an electrodeposition technique combined with cyclic

voltammetry and atomic force microscopy to gain a deeper understanding of the semiconductor-electrocatalyst interface on photoanodes.

MARY GREEN

ORAL SESSION 1 M

Title: Ken Kaneki Outside of the Panels: Manga as a Bridge into the Hyperreal

Faculty Mentor(s): Tera Reid-Olds & Pearl Lee

Abstract:

Hyperreality, in short, is the indistinction between reality and a simulated reality, according to postmodern theorist Jean Baudrillard. Protagonist Ken Kaneki of Sui Ishida's Japanese manga, Tokyo Ghoul, is a young man trapped in a body that is not distinctly human or nonhuman. His liminality, and perhaps more importantly his popularity among fans, provides a convenient allegory for the manga's presence within hyperreality. As canonical manga comes out, exponentially more Ken Kaneki related material is being produced as fanfiction (fan-produced content based on established characters and narratives) on the internet, a massive platform of the hyperreal. By exploring texts by famed comics theorists Scott McCloud and Charles Hatfield, along with contemporary cultural theorist Azuma Hiroki, and applying their research to Ken Kaneki's character, I argue that the elements that make manga unique as a form are what allow for manga to be an easy bridge into hyperreality. It is through Tokyo Ghoul's simultaneous use of abstraction, simulacrum, various panel transitions, mimesis, and coded texts and images that the life and subjectivity of Ken Kaneki is spawned and sustained within the hyperreal.

LISA GUERRICABEITIA

POSTER 105

Title: Exploring Mediation Models between Body Dissatisfaction and of Loss of Control Eating in Young Men

Faculty Mentor(s): Nichole Kelly & Claire Guidinger

Abstract:

Previous research has primarily focused on the behavioral and emotional correlates of loss of control (LOC) eating behaviors—the subjective experience of being unable to control what or how much is being eaten—in women and children. However, there is increasing evidence indicating that these behaviors are prevalent among young men as well. Negative affect, including body dissatisfaction, is a common antecedent to LOC eating in both men and women. Theoretical models suggest that dietary restraint and emotion dysregulation mediate or explain the association between body dissatisfaction and LOC eating. However, these models have not been evaluated in men. The current study will explore possible mediators between body dissatisfaction and LOC eating behaviors in young adult men. An ethnically/racially diverse, nationally representative sample (N = 1114) of young men (ages = 18-30 years) completed a 20-minute online survey to assess body mass index (BMI), emotion dysregulation, excessive exercise, dietary restriction, and LOC eating frequency. We hypothesize that dietary restraint, excessive exercise, and emotional dysregulation will mediate the relationship between body dissatisfaction and LOC eating behaviors in young adult men. BMI and race will also be explored

as potential moderators. This exploratory work may aid in identifying similarities and differences between men and women engaging in LOC eating. While men and women may experience similar motivating drives, those drives may manifest in unique behaviors.

Keywords: Loss of control eating, disordered eating, men

ADRIAN GUTIERREZ

ORAL SESSION 2 C

Title: Edge Detection and Deep Learning Algorithm Performance Studies for the ATLAS Trigger System

Faculty Mentor(s): Stephanie Majewski

Abstract:

The upcoming ATLAS Phase-I upgrade at the Large Hadron Collider (LHC) planned for 2019-2020 will incorporate the Global Feature Extractor (gFEX), a component of the Level-1 Calorimeter trigger that is intended for the detection and selection of energy coming from hadronic decays emerging from proton-proton collisions at the LHC. As the luminosity at the LHC increases, the acquisition of data in the ATLAS trigger system becomes very challenging and rejecting background events in high pileup environment (up to 80 interactions per bunch crossing) is necessary. To achieve this goal, edge-detection and deep learning techniques that could be adapted for the gFEX's Field Programmable Gate Array (FPGA) architecture are being investigated. The focus of this study is to analyze the performance of these algorithms using Monte Carlo simulations of Lorentz-boosted top quark decays in order to increase the efficiency of signal detection given a fixed background rejection in our trigger system. Comparing the results of the edge detection and deep learning algorithms has shown an improvement in our trigger system efficiency that exploits the capabilities of the gFEX and could potentially be implemented to help us detect particles that are not described by our current theories.

ZOE HAAKENSTAD

ORAL SESSION 4 M

Title: Visualizing the Politics of Family: The Role of Propaganda Posters in China's One-Child Policy

Faculty Mentor(s): Julianne Newton & Nicole Dahmen

Abstract:

The dawn of 2016 saw the end to what is considered by many scholars as one of the longest-lasting and harshest population policies in the world. From 1979 to 2016, China enforced the one-child policy (OCP), which limited the number of children couples were able to conceive. The policy, which was popularized through a variety of propaganda campaigns throughout the '70s and '80s, had far-reaching effects, some of which continue to ripple through China today. This research looks at the effects of propaganda posters on the dissemination of China's population control ideas, particularly through the lens of visual persuasion theory. I analyze three propaganda posters from the mid-70s, provided by the University of Oregon Jordan Schnitzer Museum of Art. I utilize semiology and discourse analysis to identify specific persuasive elements of the posters, such as color, spatial layout, representation of people, and language. Together,

these qualities better illustrate both the intensity and the persuasive value of the OCP propaganda. I ask the following questions of my research: What is the role of propaganda posters in suggesting certain ideologies about China's OCP? How does scholarship on visual persuasion and propaganda inform the functions of China's OCP propaganda posters? What commonalities and differences did I notice among the three posters I viewed? Rather than take a stance on the ethicality of China's OCP, this research looks at the relationship between visual persuasion, population policy, and the ideas made noticeable through propaganda posters. As a child born under the OCP, this research is also important to better understand the historical contexts during which my biological parents conceived and relinquished me as a baby. The decisions made by many parents under the OCP were inextricably tied to larger economic, social, and political projects that failed to consider the long-term effects the policy would have on not only on Chinese society but also the world. Thus, this research centers the function of visual persuasion and propaganda to expand on one of the mechanisms that made such an impactful policy achievable.

ALICE HARDING

ORAL SESSION 1 SW

Title: Migration and Ideas of "Foreignness" in the Late Bronze Age Near East

Faculty Mentor(s): Lindsey Mazurek

Abstract:

This project (serving as an undergraduate thesis) will explore migration in the Bronze Age Near East. It will focus specifically on times in which migrants emphasized their own "foreignness," arguing that this most often occurred when such difference would be beneficial. The Amarna letters—correspondence between the rulers of several Bronze Age kingdoms, notably Egypt and Babylonia—mention the movement of people such as craftsmen and royal women to other polities, illustrating the importance of migration for international relations. Despite these mentions, most scholarship focuses exclusively on Bronze Age kings and their priorities. This project aims to combine archaeology with literature to offer a new, more holistic approach. It will focus on four types of migrants often omitted from previous works: craftsmen, brides, forced migration (as of captives), and even gods.

These people's perspectives differ noticeably from those of the kings—the elite male view, in other words—that is most often discussed in relation to the world of the Amarna letters. The case studies can reframe our understandings of these groups: rather than being those making decisions and deciding their own movements, these groups were most often controlled by those with power. This project thus aims to re-examine narratives of Near Eastern mobility during the Bronze Age through these groups and their migrations, and offer new perspectives that complement existing histories.

CARSON HAUTH

POSTER 154

Title: Une Singularité Française: Laïcité and the Rise of Radical Islamic Terrorism among French Muslims

Faculty Mentor(s): Craig Parsons & Angela Joya

Abstract:

In the past twenty years France has seen a sharp increase in radical Islamic terrorist attacks committed by its own citizens unparalleled by its neighbors in Western Europe. This study aims to address reasons for which French Muslims are radicalized at a significantly greater rate than Muslim citizens of other European nations. Three dominant theories exist to explain the phenomenon of radicalization: low socioeconomic status, external radicalization by existing terrorist and extremist cells, and secular identity politics which exclude French Muslims from French identities. Drawing from secondary sources regarding key features of the life histories of fourteen French Muslim terrorists between 1985 and 2018, we may address the extent to which these three theories explain the increased radicalization in France, and what sets France apart from other European nations. Founded on staunch republican values, the unique structure of French laïcité creates a French identity which conflicts with religious identities amongst Muslim communities. Through tacit and explicit secular laws- supported by the cultural acceptance of laïcité- which unequally target Muslims, Islam is externalized from French society thus increasing feelings of isolation and anger among French Muslims and facilitating radicalization by external catalysts. This study works towards furthering understanding the underlying causes of radicalization and the recent rise in radical Islamic terrorism.

QUINNE HAUTH

ORAL SESSION 1 S

Title: HOW MIGRATION HAS CONTRIBUTED THE RISE OF THE FAR-RIGHT IN GERMANY

Faculty Mentor(s): Angela Joya

Abstract:

Increased migration into Europe in the summer of 2015 signified a shift in how the European Union responds to migration, and now more so than in Germany, which has opened its doors to about 1.5 million migrants as of 2018. While Chancellor Angela Merkel's welcome helped alleviate the burden placed on countries that bordered the east as well as the Mediterranean, it has been the subject of a lot of controversy over the last three years within Germany itself. This study explores how migration has affected Germany's migration policies, and the extent to which it has affected a shift towards the right within the government. Germany's relationship with migration has been complicated since its genesis, and that ultimately Merkel's welcome was the exception to decades of policy, not the rule. Thus, as tensions increase between migrants and citizens, and policy fails to adapt to benefit both parties, Germany's politicians will advocate to close the state from migrants more and more. However, these actions will fail to account for how Merkel's decision has already drastically changed Germany's culture, socially, demographically, and economically, and above all, politically.

RHYS HAWES

ORAL SESSION 1 C

Title: Sex Work in the Margins: How Intersectional Stigma Affects Queer Sex Worker's Access to Intracommunity Support Networks

Faculty Mentor(s): CJ Pascoe

Abstract:

Previous research has shown that community is essential to sex workers' success: it both offers concrete resources as well as provides space for emotion work and catharsis. Yet despite its importance to the welfare of sex workers, very little research has gone into how intersectionality shapes their experiences with community. This research examines how intersectional stigma affects queer sex workers' ability to access community support structures. Qualitative interviews were conducted with six queer and trans sex workers about their experiences in sex work and queer communities. Responses indicated that while queer identity itself is by no means incompatible with sex work, the heteronormative standards of erotic labor predisposes sex work communities to assumptions of cisgender and heterosexual identity. A lack of visibility and inclusion of queer identities and experiences cause many respondents to turn away from mainstream sex work communities to find specifically queer sex worker spaces. However, due to anti-sex work stigma and the danger of outing one's sex worker identity as well as increases in online censorship, queer sex work spaces are difficult to locate, and access relies heavily on pre-existing social networks. This in turn leads to increased isolation, frustration, and, for some, an inability to continue work. In short, this research finds that intersectional stigma detrimentally affects queer sex workers' ability to access the intracommunity support systems that are integral to their success, and suggests that increasing inclusivity and visibility within queer and sex work spaces is essential to queer sex workers' emotional and tangible welfare.

KATE HAYNES

POSTER 98

Title: Parsing Out Perspective Taking: The Impact of Narrative Point of View and Stereotyping on Social Relations

Faculty Mentor(s): Sara Hodges & Kathryn Denning

Abstract:

Perspective taking is often regarded as a tool to improve social relations, but it can sometimes "backfire," leading to negative outcomes (e.g., increased stereotyping). Most past research has examined the effect of instructing people to perspective take (or not) on various outcomes, but not what people consider when taking another person's perspective. To better understand what causes this "backfiring," we asked participants to write about the typical day of an out-group target (i.e., someone who supported the opposing candidate in the 2016 US Presidential Election) and then answer questions about social outcomes in relation to the target (e.g., how much they liked the target, willingness to engage in conversation with the target, and validity of the target's position). Participants' narratives were coded for the point of view (PoV) they were written in (first-person vs. third-person), degree of stereotyping present in the narrative, and overall valence (positive to negative) of content. Separate multiple regressions will be conducted

using point of view, stereotyping, and valence, as well as a three-way interaction between all three variables, to predict social relations outcomes (liking, willingness to engage, and positive validity). First-person PoV, less stereotyping, and more positive valence are hypothesized to predict more positive social outcomes. However, an interaction is predicted such that first-person PoV will be associated with more negative social outcomes when degree of stereotyping is greater. Understanding when perspective taking brings people closer together – and when it does not – may help bridge current divides between political parties and other contentious groups.

JESSICA HEIERLE

Co Presenter(s): Nora Kearns

POSTER 38

Title: The Influence of Fatty Acids on Maternal Behavior: Kearns NC, Heierle JA, Gustafsson HC, Nousen EK, Nigg JT, Sullivan EL

Faculty Mentor(s): Elinor Sullivan & Hanna Gustaffsson

Abstract:

Several human studies suggest that omega-3 fatty acid intake is associated with positive mental health outcomes in young mothers, though their influence on maternal behavior remains unexplored. Recent rodent research on omega-3 adequate and deficient mice showed that omega-3 adequate mothers displayed more nurturing behaviors. Omega-3s are known to have anti-inflammatory properties which is a potential mechanism for their effect on mental health. Limited evidence exists on the influence of anti-inflammatory FAs and maternal behavior. This study tested the hypothesis that plasma omega-3 FAs and a high omega-3:6 ratio would positively influence maternal behavior. Ten minute free-play interactions from 62 mother-infant pairs were videotaped and maternal behavior was coded using a well-validated scheme. Maternal FA levels were measured in plasma collected during the 3rd trimester of pregnancy. Spearman's correlations were calculated using SPSS. We found significant positive correlations between omega-3 FAs and maternal sensitivity/responsiveness ($r=0.533$, $p=0.004$) and the composite sensitive parenting score ($r=0.366$, $p=0.047$). We also found a significant positive correlation between the omega-3:6 ratio and sensitivity/responsiveness ($r=0.451$, $p=0.031$), and a negative correlation between total PUFA levels and intrusiveness ($r=-0.454$, $p=0.020$). These results indicate that omega-3 consumption and a high omega-3:6 ratio may contribute to improved maternal mood and behavior. If supported by additional studies, these findings suggest that a diet high in omega-3s could benefit maternal mental health and, through improvements in maternal behavior, the infant offspring.

RAMON HERNANDEZ

Co Presenter(s): Elliana Pastrano, Thomas Hesser

POSTER 184

Title: Drones Implanted into Combat, and Their Effects on Countries that Manufacture, Use, and Distribute Them^[1]_{SEP}

Faculty Mentor(s): Matthias Vogel

Abstract:

For over decades, unmanned aerial vehicles (UAVs) have been in combat and dominating the remote fighting tactics that militaries around the world use. Despite being effective and reliable, the question that will be analyzed under this research is the morality behind remotely piloted vehicles (RPVs) in combat, public's consensus on them, and the deadly effects drones have on countries and the targets they are being used on.

Within this research, different UAVs around the world will be examined and compared to Germany, which has recently joined countries like U.S., U.K., and Israel who currently use UAVs. From this approach, the research will take the angle of a country's beginning stages of implementing combat drones. In this context, the research will analyze the countries that manufacture the equipment, the countries that use them and the legal hurdles they may have gone through, and the countries that participate in distributing the drones/ drone parts, though not in combat.

In part of doing this research, a clear hypothesis to the topic will be presented which will assist in future scholarly analysis of the subject moving forward as more countries begin to adopt UAVs as well help give a better understanding of how they will look like for the countries, its people, and the ethics of RPVs combat strategy.

ADRIANE HERSHEY

ORAL SESSION 3 SW

Title: A Social and Psychological Analysis of Fatal Police Violence

Faculty Mentor(s): David Markowitz

Abstract:

Police brutality has been a consistent problem in the United States since inception, but has become more salient due to its intrinsic connections to political and social movements, including the Civil Rights Movement of the 1960s and the Black Lives Matter beginning in 2013. Today, police violence against armed and unarmed citizens is pervasive: between 2015 and 2018, almost 4,000 people were killed by the police. Only 58 of the officers involved in shootings since 2005 were charged according to the Washington Post and 24 were convicted of wrongdoing. While prior work has largely evaluated how often police shootings occur and where shootings are most prevalent, less work has determined if there are signals identifying the type of officer who is convicted or not convicted of brutality. Drawing on research compiled by the Washington Post, we created a database of 75 police officers who killed a civilian and developed demographic and psychological profiles of each officer in search of characteristics that predict if they will be convicted or unconvicted of a crime. The data suggest that officers with over 10 years of experience on the force are less likely to be convicted ($p = .032$). Officers were

marginally more likely to be convicted if there was a suspected cover-up ($p = .07$) and less likely to be convicted if the officer was in plain clothes at the time of the incident ($p = .076$). These patterns emphasize the importance of understanding police brutality from institutional, social, and psychological perspectives.

JOAN HICKS

POSTER 82

Title: How Stigma Surrounding Depression Influences Depression Symptoms in Ghana

Faculty Mentor(s): Alicia DeLouize

Abstract:

The diversity of humanity should be included in any discussion surrounding mental health in order to work towards de-stigmatizing mental health disorders. I will focus mainly on how stigma of depression influences the reports of symptoms of depression in Ghana, and we hypothesize that stigma will predict the symptoms that are reported by participants in each population. Using data from the WHO's study on Global AGEing and Adult Health, we will compare the level of stigma in Ghanaian populations to the symptoms of depression reported, the under diagnosis of depression, and the diagnosis of depression. Gender differences, age differences, income differences, and educational differences, that may influence stigma surrounding depression, as well as the manifestation, and reporting of these symptoms, will also be explored. This will lead to further discussion surrounding culturally specific techniques to recognize, and identify depression in Ghana, and other countries.

PEYTON HINES-NORWOOD

Co Presenter(s): Philicia Robinson, Tamara Jordan, Kiasia Lane, Le'Asia Smith, Adryana White, Bailey Adams

DATA STORY 3 CLS

Title: How do Images Presented In The Media Affect Black Mental Health and Self Perception?

Faculty Mentor(s): Curtis Austin

Abstract:

We wanted to explore how bias and controlling images shape African American self-perception and whether there are any negative impacts to these communities. We will explore the knowledge we have gathered throughout the research project by creating an audio/visual presentation embodying interviews with black individuals and collected information supporting and answering our collective research question.

ELLIOT HODGIN

Co Presenter(s): Devon Houston, Junior Ramirez, Paula Mason, Lindsey Reed, Emily Scarvie, Delaney Young, Emily Harris

CREATIVE WORK 5 EL

Title: Allen Hall Media presentation

Faculty Mentor(s): Maya Lazaro & Michael Rea

Abstract:

Allen Hall Media (<http://allenhallmedia.com>) is a student-run media production agency in the School of Journalism and Communication. I am the group's faculty advisor and am submitting this abstract as a placeholder. The group could present on a variety of topics, such as:

-The process of producing a video for a client from start to finish

-Running a student organization

-Specific projects the group has worked on and their impact

I am meeting with the group's student leadership team today and will confirm their interest in presenting, and what specifically they would like to present. But for now I'm submitting an abstract so it's in your database. Thank you!

ANNA HORACEK

ORAL SESSION 3 M

Title: Mechanisms of sister chromatid repair during meiotic double-strand DNA break repair

Faculty Mentor(s): Diana Libuda & Erik Toraason

Abstract:

Most sexually reproducing organisms utilize meiosis, a specialized form of cell division, to generate haploid gametes such as eggs and sperm. Meiotic cells utilize recombination to repair double-strand DNA breaks (DSBs) with either the sister chromatid or homologous chromosome as a repair template. Although recombination with the homologous chromosome has been extensively studied, little is known about engagement of the sister chromatid during meiotic DSB repair. To characterize sister chromatid recombination, we have developed a sister chromatid repair (SCR) assay in *Caenorhabditis elegans*. The SCR assay contains engineered nucleotide polymorphisms enabling the detection of gene conversions between sister chromatids, which arise from the nonreciprocal exchange of sequences between chromosome templates and indicate recombination intermediates. Analysis of these conversion tracts indicate that throughout meiotic prophase I: 1) sister chromatid repair intermediates remain central to the site of DSB induction; and, 2) sister chromatid repair is highly processive, as template switching is not observed. Interestingly, the length of conversion tracts, indicating the extent of DSB resectioning, changes in the presence of a homolog repair template. In the absence of a homolog repair template, the conversion tract size is uniform throughout prophase I. When a homolog repair template is present, large conversion tracts (>210bp) are observed only in late prophase I, suggesting the presence of the homolog repair template may affect the extent of DSB resectioning in late prophase I. Taken together, our work presents a comprehensive analysis of meiotic sister chromatid recombination and defines mechanisms fundamental to the preservation of genomic integrity.

ANNA HORACEK

POSTER 68

Title: Mechanisms of sister chromatid repair during meiotic double-strand DNA break repair

Faculty Mentor(s): Diana Libuda & Erik Toraason

Abstract:

Most sexually reproducing organisms utilize meiosis, a specialized form of cell division, to generate haploid gametes such as eggs and sperm. Meiotic cells utilize recombination to repair double-strand DNA breaks (DSBs) with either the sister chromatid or homologous chromosome as a repair template. Although recombination with the homologous chromosome has been extensively studied, little is known about engagement of the sister chromatid during meiotic DSB repair. To characterize sister chromatid recombination, we have developed a sister chromatid repair (SCR) assay in *Caenorhabditis elegans*. The SCR assay contains engineered nucleotide polymorphisms enabling the detection of gene conversions between sister chromatids, which arise from the nonreciprocal exchange of sequences between chromosome templates and indicate recombination intermediates. Analysis of these conversion tracts indicate that throughout meiotic prophase I: 1) sister chromatid repair intermediates remain central to the site of DSB induction; and, 2) sister chromatid repair is highly processive, as template switching is not observed. Interestingly, the length of conversion tracts, indicating the extent of DSB resectioning, changes in the presence of a homolog repair template. In the absence of a homolog repair template, the conversion tract size is uniform throughout prophase I. When a homolog repair template is present, large conversion tracts (>210bp) are observed only in late prophase I, suggesting the presence of the homolog repair template may affect the extent of DSB resectioning in late prophase I. Taken together, our work presents a comprehensive analysis of meiotic sister chromatid recombination and defines mechanisms fundamental to the preservation of genomic integrity.

ALLISON HOSLETT

POSTER 71

Title: Exploring Neuronal Cell Ablation & the Social Behavior Network in Zebrafish

Faculty Mentor(s): Alexandra Tallafuss & Phil Washbourne

Abstract:

Research for neurodevelopmental disorders characterized by social deficits, such as Autism Spectrum Disorder, has helped increase the quality of life in individuals and families afflicted by these diagnoses. This research aims to understand the neuronal network underlying social behavior in the developing brains of zebrafish (*Danio rerio*), an experimental animal model that shares relevant cellular pathways and social behaviors that are conserved between vertebrate animals. The neuronal circuit involved in social behavior is poorly understood. We are using genetic and behavioral research techniques to identify populations of neurons that are necessary to recognize biological motion, an important part of social behavior. We are combining behavioral assays and genetic tools that allow for cell tracking and targeted cell death using the nitroreductase/metronidazole system. After targeted ablation of neurons in different areas of the brain, we measure the social behavior of individual zebrafish larvae. We do this by projecting

dots that imitate the presence and movement of another fish, tracking the fish's reaction with these dots, which is then calculated into a social index. We were able to identify neuronal populations that, after ablation, severely reduce social behavior. Using this approach will allow us to identify a more complete picture of how the social circuit works and which neuronal populations are involved. Unraveling the social circuit will allow early identification and more targeted treatment of patients with neurodevelopmental disorders that are characterized by impairments in typical social behaviors.

SARAH HOVET

ORAL SESSION 1 M

Title: "Bannabees," Bananas, and Sweet Potatoes: Claude McKay's Songs of Jamaica and Traditional Jamaican Foodways as a Nationalist Expression

Faculty Mentor(s): Corbett Upton

Abstract:

Jamaican poet Claude McKay is largely anthologized for a handful of poems he contributed to the Harlem Renaissance, but his early work authored in Jamaica has long been dismissed for a variety of racist and xenophobic reasons. This overlooked material includes his first two poetry collections, *Songs of Jamaica* and *Constab Ballads*, both authored in Jamaica before he moved to New York. Even his friend, benefactor, and mentor Walter Jekyll characterized *Songs of Jamaica* as "naive" in his introduction to McKay's complete poems. However, these two collections, which mix traditional English forms with Jamaican peasant dialect, constitute vital parts of McKay's oeuvre. *Songs of Jamaica* in particular exhibits a mastery of Jamaican peasant dialect in combination with extensive allusions to traditional folkways in order to make an anticolonialist, nationalist assertion about Jamaica, the country McKay so loved. I will analyze the role of Jamaican peasant dialect and foodways in making this nationalist assertion in order to advance my claim that McKay's early poetry is at least as sophisticated and versatile as his subsequent collections authored in the States. By turns, McKay praises native Jamaican crops such as the banana, sweet potato, and Bonavist bean for their gustatory, nutritional, and economic superiority to crops imported by colonialism.

CHRISTA HUDDLESTON

POSTER 152

Title: Lane County Publications' Coverage of Forest Fires and Smoke in Relation to Climate Change

Faculty Mentor(s): Mark Blaine & Hollie Smith

Abstract:

Forest fires have been all over the news in Oregon the past two years, especially during the dry summer months which have hit record-high temperatures and record-long periods without rain. Due to nearly a century of fire exclusion, wildfires continue to get larger and wildfire season continues to get longer each year. This already devastating pattern is accelerated by climate change due to climate scientists predicting hotter and drier summers in the Pacific Northwest. Yet, existing literature shows climate change continues to be a low priority for the public. The

media is one of the main avenues through which the public receives information about both forest fires and climate change. I hypothesized that if this media coverage was analyzed then data would show that most coverage of forest fires is not including climate change in the conversation. My thesis project analyzed local media coverage of forest fires and smoke here in Lane County using a content analysis: keyword searching for words such as 'climate change' and 'global warming' in relevant articles. It was found that most Lane County media coverage of wildfires and smoke does not include climate change in the conversation. The purpose of demonstrating coverage/lack of coverage is to have qualitative research to help start a public discussion about the media's role in communicating local issues related to climate change.

ANABELLE HUFFMAN

Co Presenter(s): Isabel Mosley, Sydney Gastman

POSTER 174

Title: Companion planting at the University of Oregon Grow Pod

Faculty Mentor(s): Sarah Stoeckl & Peg Boulay

Abstract:

Our project explores the method of companion planting as an alternative way to produce food. Companion planting is the process of growing different plants together in order to enhance growth, increase pollination, and control pests. We are using the methods of companion planting in order to explore the success and effectiveness of this alternative to monoculture farms. To explore companion planting we have been working in the Grow Pod at the University of Oregon. The Grow Pod is an old shipping container that has been converted into an indoor greenhouse in order to explore the experimental methods of indoor agriculture. We have combined the experimental nature of indoor agriculture with companion planting in order to explore alternative methods which may be the future of agriculture. Within the Grow Pod we have been able to consult Alex, a master gardener, who has the background and expertise to guide our companion planting experiment. As our work with companion planting progresses we are looking to see how this method of agriculture impacts our produce through either supporting or infringing on healthy plants. Through our exploration of companion planting we are hoping to explore whether or not this method is more effective as a solution to stray away from the harmful forms of agriculture in that are currently in use in the future.

ABBY HYLAND

ORAL SESSION 1 C

Title: Social Smoking & Its Patterns in Relation to Intention to Quit Smoking

Faculty Mentor(s): Larissa Maier & Erin Vogel

Abstract:

Introduction—Social smokers are a specific group of smokers who smoke mainly or only with others. They usually tend to underestimate the health risks associated with their tobacco consumption and are more confident in their ability to quit smoking. The goal of this study was to identify whether the intention to quit smoking differs between young adult social smokers and non-social smokers entering a social media intervention.

Methods—Young adults (N=179) aged 18-25 were recruited through Facebook to participate in the Smoking Tobacco And Drinking Study (STAND). Validated social smoking and stage of change measures collected at baseline from STAND were examined. Participants were grouped by: self-identification as a social smoker (SS+) or a non-social smoker (SS-), and daily smoker (DS) or non-daily smoker (NDS). A chi-square test was run to examine whether the groups differed in getting ready (GR) or not ready (NR) to quit smoking in the next 30 days.

Results— Two thirds (67.6%, n=121) identified as SS+ and 82.7% (n=148) were DS. About two thirds of SS+ (n=81) and SS- (n=38) were NR to quit. NDS, SS+ (n=20, 74.1%) had the highest proportion of participants who were NR, followed by DS, SS- (n=36, 66.7%), DS, SS+ (n=61, 64.9%), and NDS, SS- (n=2, 50.0%) but differences were not significant ($\chi^2=1.293$, $p=.731$).

Conclusion—The intention to quit smoking in the next 30 days did not differ between SS+ and SS- entering the intervention. Given that the NDS, SS+ group is likely to experience fewer problems related to smoking, they may be the least likely to quit smoking during the intervention.

ABBY HYLAND

POSTER 164

Title: Social Smoking & Its Patterns in Relation to Intention to Quit Smoking

Faculty Mentor(s): Larissa Maier & Erin Vogel

Abstract:

Introduction—Social smokers are a specific group of smokers who smoke mainly or only with others. They usually tend to underestimate the health risks associated with their tobacco consumption and are more confident in their ability to quit smoking. The goal of this study was to identify whether the intention to quit smoking differs between young adult social smokers and non-social smokers entering a social media intervention.

Methods—Young adults (N=179) aged 18-25 were recruited through Facebook to participate in the Smoking Tobacco And Drinking Study (STAND). Validated social smoking and stage of change measures collected at baseline from STAND were examined. Participants were grouped by: self-identification as a social smoker (SS+) or a non-social smoker (SS-), and daily smoker (DS) or non-daily smoker (NDS). A chi-square test was run to examine whether the groups differed in getting ready (GR) or not ready (NR) to quit smoking in the next 30 days.

Results— Two thirds (67.6%, n=121) identified as SS+ and 82.7% (n=148) were DS. About two thirds of SS+ (n=81) and SS- (n=38) were NR to quit. NDS, SS+ (n=20, 74.1%) had the highest proportion of participants who were NR, followed by DS, SS- (n=36, 66.7%), DS, SS+ (n=61, 64.9%), and NDS, SS- (n=2, 50.0%) but differences were not significant ($\chi^2=1.293$, $p=.731$).

Conclusion—The intention to quit smoking in the next 30 days did not differ between SS+ and SS- entering the intervention. Given that the NDS, SS+ group is likely to experience fewer

problems related to smoking, they may be the least likely to quit smoking during the intervention.

KEVIN IRIAWAN

POSTER 185

Title: Smoking in China: A Student's Perception

Faculty Mentor(s): Matthias Vogel

Abstract:

Teenage smoking in China as well as America has been a rising problem. With the evolution of e-cigarettes, smoking has become easier than ever before. Interestingly enough, the rise of tobacco through e-cigarettes has been spread and is used by many celebrities and influencers. In China, cigarettes are easily accessible to underage children and are primarily used by citizens in professional fields. In my project, I explore the smoking epidemic in China and interview three international students in order to shed light on the issue. Being a person who was previously addicted to nicotine products, I compare my experience to theirs and made connections and comparisons with the international students.

NIKKI IRVINE

Co Presenter(s): McCall Delaney, Genevieve Slaton, Malaya Cansdale

POSTER 186

Title: Uyghur Muslims in China

Faculty Mentor(s): Matthias Vogel & Alina Chen

Abstract:

The issues facing the Uyghur minority in China are pervasive, yet severely underreported, which is why our group decided to research this topic. The Uyghur minority Muslim group, located in Northwestern China, is facing persecution by the Chinese government. The Chinese government has painted a fear-based narrative to its citizens that the minority group is a significant terrorist threat. The government has been detaining the Uyghur minority groups in internment camps where they are forced into "re-education" programs/detention camps, which include physical and mental torture. China has vehemently denied the allegations, but surveillance in Xin Jiang and reports from journalists who have been granted access to report there has shown otherwise. By synthesizing multiple academic articles, available statistics, and journalists' reports, we hope to paint a more comprehensive picture of what is happening to the Chinese Uyghur minority and what some potential solutions may be.

TAKAKO IWASHITA

POSTER 128

Title: Behavioral and Neural Predictors of Individual Differences in Concept Generalization

Faculty Mentor(s): Dasa Zeithamova & Caitlin Bowman

Abstract:

Concept learning involves linking related pieces of information to a shared label, like learning that furry creatures that bark are called ‘dogs.’ People vary in how well they learn concepts and apply them to new situations (generalization). What factors drive these individual differences? In the present study, we tested whether stable aspects of intelligence or transient activations in the brain best predicted concept generalization abilities. To measure aspects of intelligence, subjects underwent an assessment that included measures of working memory, processing speed, perceptual reasoning, and verbal comprehension, which could be combined into an overall IQ. Subjects also completed a concept generalization task while undergoing fMRI, allowing us to measure activations in brain regions that are part of the explicit rule-learning system (hippocampus, prefrontal cortex) or part of an implicit system that learns without awareness (caudate, posterior visual cortex). To elucidate the shared or dissociable roles of behavioral and neural predictors in concept generalization, we tested the relationship between accuracy in concept generalization and individual differences in measures of intelligence and activation in each brain region of interest. Behaviorally, we found that overall IQ, but not its subcomponents, predicted concept generalization abilities. Neurally, we found that only the activation in the hippocampus predicted concept generalization abilities. Finally, we found that IQ and hippocampal activation each predicted concept generalization above-and-beyond each other. These results show dissociable contributions of behavioral and neural predictors of concept generalization, suggesting that both stable cognitive abilities and transient brain states influence the ability to learn new concepts.

ALEXANDRA JANSKY

POSTER 163

Title: DEFINE AND DEFEND: EXPRESSING OPPOSITION TO THE RAJNEESH SETTLEMENT THROUGH CONSTRUCTION OF AN IN-GROUP IDENTITY IN ANTELOPE OREGON

Faculty Mentor(s): Judith Raiskin

Abstract:

In the early 1980s, hundreds of members of an East Indian cult called the “Rajneesh” settled in Eastern Oregon, establishing therein a sprawling community of young, wealthy, and sexually liberated followers of their leader, Bhagwan Shree Rajneesh. The cult members were met with swift opposition from the citizens of Antelope, Oregon, a neighboring retirement community of less than 60. This archival research project, developed from the University of Oregon Special Collections, seeks to uncover how the Antelope citizens defended their way of life against the so-called Rajneesh invasion. Through a sociological analysis of the Antelope citizens’ complaint letters to both federal and local entities, as well as examination of the city’s publicized anti-Rajneesh propaganda, I explore how the Antelope citizens’ rejection of the Rajneesh served as a fundamental departure from common xenophobic patterns of social elitism, racism, or religious

discrimination. This work aims to explain how the Antelope citizens constructed and implemented an “in-group” identity based on traditional, rural principles, which they used as a tool to successfully resist the influence and assimilation of the Rajneesh. This case study offers a parallel between the Antelope citizens’ response to outside pressure, and that of otherwise insular and conservative communities challenged by the “other.”

RACHEL JOHNSTON

POSTER 117

Title: Political Communication on Twitter: How Young People Obtain Information, Construct Identity, and Understand Events

Faculty Mentor(s): Ryan Light & CJ Pascoe

Abstract:

The rapidly changing landscape of political communication is exemplified by Twitter’s extraordinary growth in popularity. The platform’s influence on elections and public opinion is undeniable. The social network has even changed the way news is distributed. Information that used to rely on newspapers, radio, and television is now accessible to millions of Twitter users in 280 characters and a matter of seconds. Some scholars have defined this as the “personalization of politics.” Studies have shown that Twitter increases political polarization by giving users the opportunity to choose information that aligns with their own opinions and ignore everything else. How does using Twitter help young people construct their own political identities? This research examines how the use of Twitter as a political communication platform influences young people’s understandings of and attitudes towards political events. Interviews were conducted with over twenty-five regular Twitter users to determine how young people use the medium to interact with news, express political opinions, and participate in online community networks. Experiences with Twitter varied significantly for conservatives and liberals. Young people use the platform for news because it is quick, accessible, and connects them to social networks. The majority of participants used traditional media sources to supplement Twitter news. Principal uses of the social network platform include involvement in larger conversations about political events, building online communities, and staying up to date with live happenings. This research is essential to understanding the drastically changing landscape of political communication, which is a landmark of government institutions and democracy itself. The way in which people consume and understand news has a significant effect on public opinion, and ultimately representation and public policy. Social media outlets such as Twitter have transformed the ways in which young people form political opinions and engage with news, politics, and government. Current research on this topic is limited to quantitative methods. Thus, the qualitative structure of this project fills a gap, facilitating crucial insight into individual opinions and behaviors.

ELLIE JONES

POSTER 55

Title: Plastic debris in deep-sea canyon, estuarine, and shoreline sediments.

Faculty Mentor(s): Craig Young & Alan Shanks

Abstract:

Recent calculations estimate there are currently 5.25 trillion plastic particles afloat in the world's oceans. Many of these plastics are characterized as microplastics < 5 mm in diameter. Studies within the past few decades show that no ecosystem is exempt from plastic contamination. This study examined sediment samples from Norfolk Canyon off the coast of Virginia, the Coos Bay Estuary in Oregon, and headlands along the Oregon shoreline to characterize the abundance of microplastics within various marine sediments. Box core sediment samples were taken from within Norfolk Canyon and from the adjacent continental slope. Plastics were removed by density differentiation using a saturated salt solution. Nineteen pieces of plastic were found from the nine samples within the canyon, while only eight pieces were found from the seven samples on the continental slope. This suggests that canyons can be accumulation zones for microplastics due to strong down-canyon currents. Next, box core and Ponar grab sediment samples were taken from within the Coos Bay Estuary and the adjacent continental shelf. Plastics were removed by density differentiation, and the majority of plastics were found within the mouth of the bay. This suggests that plastics can become concentrated in areas where fronts are created between two bodies of water (in this case, the ocean and the estuary.) To analyze shoreline sediment, belt transects were taken during January and February on the northern and southern sides of Yaquina Bay Head, Cape Perpetua, and Cape Blanco. The majority of plastics were found on the southern side of each headland. This suggests that microplastics are carried onshore by winds, which are blowing onto southern-facing beaches on Oregon's coast during the winter. Knowing where plastics settle in the ocean can influence mitigation and management decisions. Therefore, it is important to determine possible places for microplastic accumulation to manage and conserve natural resources.

KATE JONES

POSTER 83

Title: Importance of Grand Collection to undergraduate research

Faculty Mentor(s): Frances White & Alexana Hickmott

Abstract:

Natural history collections allow researchers to answer questions using the large amount of data available from specimens housed in those collections. Bones or osteological specimens allow for investigations of the shape, function and movement of a particular species. With good information or provenance about the lives each specimen, detailed investigations can be undertaken. Collections, such as the Grand Collection housed in the University of Oregon Primate Osteology Lab, offer researchers the ability to study remains of primates after death. The Grand Collection was moved in 2010 and has over 300 specimens allowing for investigations covering a wealth of topics, including the morphology of primate hands and cranial symmetry, all of which were conducted primarily by undergraduate researchers. From the provenance

information about each specimens before death, variables of the specimen's life may be attached to information present in the bones. The natural and biological history collection found in the Grand Collection gives students the opportunity to learn aspects of curatorial maintenance and to prepare, clean, sort, identify, catalogue and measure specimens in the Grand Collection. These opportunities provide students with hands-on experiences in a biological laboratory and skills relevant to collection management, bone identification, and zoological educational experiences, which is invaluable in future scientific and biological pursuits. Overall, osteology laboratories create a safe and research-gearred environment for researchers investigating a variety of questions.

COURTNEY KALTENBACH

Co Presenter(s): Alli Eroh, Stella Augustine, Caitlyn Mccall, Racheal Maloney, Maggie Craven

POSTER 175

Title: Proposal for Textile Recycling at the University of Oregon

Faculty Mentor(s): Sarah Stoeckl

Abstract:

We are in an age of fast fashion in which clothing is produced unsustainably on a massive scale. College campuses are where many trends develop and are expressed. While there are many opportunities to buy and sell used clothes near campus and in the greater Eugene area, there is a lack of clothing recycling and repurposing in Eugene, especially among college students. Once clothes develop holes, become stained, or become unwearable in any way, we struggle to find a use for them. We are going to create a proposal to begin a textile recycling program through the Student Sustainability Center in which there will be a permanent bin that anyone can bring any sort of textile to. We are hosting a pilot event at a freshman dorm in which we will be collecting unwanted clothing and textiles, handing out an educational zine, screening a documentary about fast fashion "The True Cost", and leading an upcycling craft with unwearable clothes. We will use this event to collect data on the type of things donated and gauge the interest of college students with textile based activities. The goal of this project is to get students passionate about recycling their materials, specifically their clothing. We hope that through our pilot event and project proposals we will convince students and organizations around campus to lengthen the lifespan of their clothes and think critically about purchasing new garments.

JACK KAPUSTKA

DATA STORY 2 CLS

Title: The Impact of Negative Emotion on Associative Memory

Faculty Mentor(s): Dasa Zeithamova

Abstract:

Previous research suggests that the ability to remember associations is impaired by negative emotions, though these findings remain inconclusive. In this study, we examined whether this impairment from exposure to a negative stimulus could be transferred to subsequent associations. Sixty-five students were recruited from the University of Oregon Human Subjects Pool. Subjects completed a paired-associates paradigm, in which they learned to link neutral

object pairs (AB & BC) that shared a common associate (B). After being tested on AB learning, subjects then learned BC pairs, as well as unrelated pairs (XY) that did not share any AB associations. There were no differences in learning for any of the pairs as a function of emotional distractor condition. Overall, our results suggest that irrespective of distracting emotional experiences, learning of overlapping associations is more difficult than learning of non-overlapping associations.

ABIGAIL KELLEMS

ORAL SESSION 3 O

Title: The Life of the Composer Francesca Caccini and How It Reflects the Music and Culture of the Baroque Period

Abstract:

This project explores the life of Francesca Caccini and her path to both musical and societal success, which were difficult for women of her period to combine. Through talent, work, circumstance, and an understanding of her context, Caccini rose to significance not only in her time, but in ours. Her collection of monodic music (a single vocal line with basso continuo accompaniment) is studied today for knowledge about the Baroque period. Her works illustrate the musical elements in vogue during the Baroque era, such as monody, contrast, and the importance of text. By studying books, dictionaries, and musical scores, I have discovered that Caccini not only survived as a female musician, but flourished. She was educated by her father Giulio Caccini, a well-established composer. By spending almost all of her professional life as a married woman, she was able to elude the shadow of the courtesan that followed most female musicians during her time. She developed many skills, enabling her not only to compose, but also to teach and perform. And her utilization of the patronage system ensured her steady work. By studying her life, we can learn about the challenges that female musicians had to navigate during her era in order to remain in good standing. By studying her music, we can understand the aesthetic values of that society, as well as of music at the time. And by studying her success, musicians can learn how to achieve their own.

DAKOTA KELSEY

ORAL SESSION 1 M

Title: Refinement of Poetics

Abstract:

Since joining the Walter and Nancy Kidd Creative Writing Workshops in the fall term of 2018 my creative writing work has improved. My exposure to a curriculum of focused workshoping and powerful craft essays has refined my execution and understating of both poetic forms and structure. I have developed a stronger personal taste for and perception of the craft of poetry and wish to share it with the creative community. I am grateful for my time in the program and how it has shaped my understanding of writing. I hope to use my newly refined skills to show both appreciation for the program and how important it is to constantly strive for improvement of an artistic craft.

DAKOTA KELSEY
ORAL SESSION 4 DL

Title: Poems

Faculty Mentor(s): Jonathan Hill

Abstract:

Since joining the Walter and Nancy Kidd Creative Writing Workshops in the Fall of 2018, my creative writing work has dramatically improved. My exposure to a curriculum of focused workshoping and powerful craft essays has refined my execution and understating of both poetic forms and structure. I have developed a stronger personal taste for and perception of the craft of poetry and wish to share it with the creative community. One effect of the workshop was the change of my poetry towards self-expression in a way I aspired to but couldn't reach. Before the Kidd, I was overly reliant on form to produce meaning in poetics. I repressed my personal skill for narrative. Now, however, I have accepted form as a tool, not the soul of poetry. My presentation will showcase a selection of free verse poems to illustrate how poetry can be effective with less traditional form. I am grateful for my time in the program and how it has shaped my understanding of writing. I hope to use my newly refined skills to show both appreciation for the program and how important it is to constantly strive for improvement of an artistic craft.

BRIANNA KENDRICK
POSTER 66

Title: Re-Examining Pluvial Lake Chewaucan Shorelines

Faculty Mentor(s): Pat McDowell

Abstract:

The Chewaucan Basin of Eastern Oregon has been the subject of numerous studies and notable archaeological finds, including the oldest known human remains in North America. While currently a high desert, 20kya it held Lake Chewaucan, a vast lake covering 1,244km² and up to 114 meters deep. Due to the archaeological significance of the region, it remains imperative to build on the previous lake-level research and develop the most accurate shore-line map possible in the hopes of supporting further archaeological and paleoenvironmental research in the Great Basin. This project re-examines previous lake-levels cited in literature through the use of an RTK GPS system to obtain more accurate elevations from previously identified lake shore sites and then maps those elevations using current satellite imagery and DEM data. Shoreline profile elevations obtained from different data sources are then compared to discuss the best method.

RENNIE KENDRICK

POSTER 119

Title: Effect of Blocked vs. Interleaved Training on Associative Inference Ability

Faculty Mentor(s): Dasa Zeithamova & Caitlin Bowman

Abstract:

Memory allows us to link across multiple experiences to derive new information. For example, if we see a person, person 1, walking a Dalmatian, and later see another person, person 2, walking the same Dalmatian, we may infer that person 1 and 2 live in the same household. This linking of experiences to derive new information is called associative inference, and my research asks which conditions lead to the best associative inference. Participants are trained and tested on object pairs that each share an object in common with another pair. Half of the participants see object pairs in blocked format and the other half see the object pairs in interleaved format. In the blocked condition, participants have strongly established prior knowledge before encountering overlapping new information. In the interleaved condition, participants encounter a new overlapping episode before the first is strongly established. For the associative inference test, participants must infer that two objects that were never directly paired together, but paired with the same object, are indirectly related. I found that participants in the blocked condition performed significantly better on associative inference and directly-paired object tests compared to interleaved condition participants. Thus, strong memory for the first episode before encountering the second, overlapping episode enhanced associative inference ability and memory for both individual episodes. One possibility for this effect is that strongly established prior knowledge prevents interference from overlapping, but distinct episodes. Further investigation into the effect of blocked versus interleaved training on learning could lead to enhanced teaching methods.

ELLYN KENNELLY

POSTER 142

Title: The Role of Infant Attachment and Self-Efficacy in Predicting Later Academic and Social Competence

Faculty Mentor(s): Jennifer Ablow & Jeff Measelle

Abstract:

Child self-efficacy has been shown to predict better social and academic problem solving skills, both of which are foundational to school success. Additionally, attachment security has been linked to school achievement via its effect on socioemotional adjustment. Presently, few studies have addressed the interaction of self-efficacy and attachment early in life to determine whether they have a joint role in shaping readiness for school. We hypothesize that self-efficacy during infancy will predict school readiness outcomes at age 5. However, we also anticipate that this association will be moderated by infant attachment security. In particular, we expect that infants with disorganized attachment histories will fail to develop the self-efficacy capacities needed to begin school on an adaptive trajectory. Our high-risk sample comprises 74 low SES mother-infant dyads who were followed longitudinally from pregnancy through 60 months postnatally. When infants were 17-months-old they completed the Strange Situation Procedure as well as a task

designed to probe early self-efficacy, which together we used to predict mother's reports of their child's social and academic competence at age 5, before entry to kindergarten. Our findings provide insight into the manner and degree to which attachment and self-efficacy interact to predict important real-world outcomes, such as social and academic competence at school entry.

CASSIDY KENNEY

Co Presenter(s): Meredith Gusky

ORAL SESSION 1 C

Title: Investigating Human Rights and Peace Studies in the Western Balkans

Faculty Mentor(s): William Johnson

Abstract:

Introductory Sentences: Our research studied the dissolution of the former Yugoslavia, and the subsequent tensions inherent in peaceful rebuilding and international human rights practices. Our research examined the role of art in peace building, religion in peace building, and public perception toward refugees.

Research Question: How have peace and human rights mechanisms transformed society in the Western Balkans?

Methods: Students conducted qualitative research through interviewing citizens, experts, leaders and activists and by attending museum exhibits, sites of memorial, places of worship, and political and legal organizations. The research was conducted over a four-week period following two five-week long courses on these subjects.

Key findings: Our key findings include a realization that the abstract aims of most religious communities inherently build peace, that art is a powerful healing mechanisms, and that refugee policy and perception in the Balkans continues to be impacted by the conflicts of the 1990s. Because our areas of research varied in discipline and many of the human rights mechanisms continue to evolve today, much of our research is incomplete and only represents the time frame from July 2018 to now. Despite the constant evolution and limited scope of the research, it is essential in creating a larger understanding of human rights and peace-building mechanisms, their successes and shortcomings.

Significance: Our research offers pieces of a complex and growing narrative of the Western Balkans and analyzes the ways in which human rights and peace mechanisms can be improved upon now and in the future.

ASHLEY KIM

ORAL SESSION 1 C

Title: How Marginalized Communities Have Been Affected by the Me Too Movement

Faculty Mentor(s): Cheyney Ryan

Abstract:

In 2006, activist Tarana Burke coined the phrase “Me Too” as a means to show solidarity and support for survivors of sexual violence. Her personal mission was to provide the resources that the black community lacked in response to sexual violence, and provide a large population of survivors with a sense unity to prove that they were not alone in enduring through their painful experiences. Over the past decade, shifts in society’s perspective of survivors have created a vocabulary to describe sexual violence and its’ presence in society, such as rape culture and even “Me Too”. The ability to clearly communicate experiences of sexual violence has given a voice to those who were previously unable to come forward with their experiences, as we are now able to identify the systems in place that enable assault and work to dismantle them. Even with the strides society has made in supporting survivors of sexual assault, the Me Too movement still only works for a subset of the population it seeks to represent. Through the examination of social media posts, interviews, and personal experiences, I sought to understand the marginalized groups that are still excluded from the public narrative and the methods society collectively needs to adopt to address exclusion and oppression in widespread social movements. Societies and cultures are shifting towards a future where sexual violence is not only unacceptable, but where every case of sexual violence is acknowledged and investigated and survivors are given the resources they need to move forward.

MIN KIM

ORAL SESSION 3 MI

Title: Expensive sneakers

Faculty Mentor(s): Cybele Higgins

Abstract:

Have you ever heard about sneakers costing more than \$2,000? Do you know that many people are enthusiastic about limited edition sneakers and clothes? Nowadays, many people know about the sneaker culture, and many people pay attention to clothes related to street culture. Despite astronomical prices, people still spend money to buy these products. The question is, “Why?” In social media such as Facebook and Instagram, accounts that promote information about sneakers can be found as well as people selling or buying sneakers. This presentation delves into the expensive sneaker community. Primary research from interviews with customers and participant observation as well as secondary research using credible sources show people’s statistical reactions to this topic and investigate its origins and troublesome issues that have developed within this community. The presenter found that the most significant reason to explain why people spend such large amounts of money on sneakers is that people want to show their wealth by wearing expensive clothes. However, the research uncovered the fact that such purchases lead to excessive consumption -- frequently over people’s financial means. In addition, when people buy expensive sneakers, they are likely to unwittingly buy fake products. This

presentation includes recommendations for people who want to buy expensive sneakers and clothes, addressing the risks and describing how to make such purchases carefully and wisely in the sneaker and clothing market.

TAYLOR KISSINGER

ORAL SESSION 3 C

Title: Generation Z's Hidden Social Media Rule Book

Faculty Mentor(s): Kim Sheehan

Abstract:

This study explores how Generation Z's behavioral expectations for each other on social media impact their relationships, health, and overall well-being. According to a 2016 study published in the Journal of Adolescence, about half of the time that teens spend on the internet is dedicated to social media. Adolescents experience heightened pressure to be active on social media out of fear of becoming "irrelevant" or fading into the background of their friends' social circles. In addition, previous studies have shown that young people are experiencing heightened levels of depression, lack of sleep, problematic social media usage, and social media addiction. And unlike any previous research, this study looks at the intersection of social media usage with inter/intrapersonal relationships and wellness. Generation Zers who consistently use social media must think about how their online activity could be perceived by their friends. Due to social media's transparency in revealing real-time activity, the digital landscape has created an authentic level of complexity to relationships and a coinciding unspoken set of social standards to abide by online. I predict that these hidden norms are pervasive and relevant in the minds of Generation Z, that Gen Zers individually hold themselves to lower social media standards than their peers, and that social media expectations negatively impact their real-life friendships. Eighty-six participants completed a scenario-based survey that gauged how they would feel or react in a situation on a given social media platform. The results show that social media is no longer an outside element from interpersonal communication; it is an entangled third entity that can drastically and irreversibly change a friendship. It is imperative to study how online interactions can alter relationships so that we can foster healthy social media usage in the coming generations.

ETHAN KIZZIAR

POSTER 48

Title: The Likelihood of Eliciting Motor Evoked Potentials with Paired Pulse TMS

Faculty Mentor(s): Ian Greenhouse

Abstract:

The excitability of the corticospinal pathway changes in a dynamic manner. Here, we used paired-pulse transcranial magnetic stimulation (ppTMS) to test the hypothesis that rapid changes within motor cortex determine the likelihood the corticospinal pathway will become active. In six participants, pairs of electromagnetic pulses separated by 3ms were administered over primary motor cortex to induce a twitch, or motor evoked potential (MEP), in a target finger muscle. The first 'conditioning' pulse was changed dynamically to a percentage of a subject's active motor

threshold (AMT, the minimum TMS intensity to consistently elicit MEPs during a mild tonic contraction). The second 'test' pulse, produced the MEP. Using electromyography to record muscle electrical activity, we calculated MEP sizes of the course of 100 measurements, with 20 measurements at each 5 conditioning pulse intensities.

We observed a recurring pattern of an increased likelihood of eliciting an MEP at higher conditioning pulses. Conditioning pulses at 95% of the subject's AMT produced MEPs 85% of the time, whereas at 50% AMT, MEPs were only detected on less than 40% of attempts. This finding suggests that momentary increases of excitability within motor cortex determine the likelihood of activating the corticospinal pathway and helps shed light on the mechanisms by which motor cortex mediates corticospinal output to muscles.

GRANT KLAUSEN

POSTER 43

Title: Determining Lipid Specificity Using Alpha-Hemolysin

Faculty Mentor(s): Jim Prell & Jesse Wilson

Abstract:

Many therapeutic drugs target membrane proteins, many of which likely have specific lipid interactions that effect their oligomerization, structure, and function. However, only a small fraction of the proteins in the Protein Data Bank are characterized with bound lipids. Membrane protein-lipid complexes are often extremely difficult to characterize due to protein instability in solution and to the high degree heterogeneity that makes crystallization challenging. Here, we use state-of-the-art native mass spectrometry to quantify stoichiometries and specific lipid interactions of alpha-hemolysin (AHL) toxin from *Staphylococcus aureus*. AHL is a well studied transmembrane toxin that shares many similarities in structure and function with other membrane toxins, such as anthrax. AHL causes host cell death by forming pores in host cell plasma membranes that lead to cell lysis. AHL is secreted as a monomer, and we have shown it oligomerizes as both a hexamer and a heptamer in detergent micelles. Our end goal is to determine if this toxin binds specifically to sphingolipids (SL) or phosphatidylcholines (PC). For this purpose, AHL is oligomerized in stable detergent micelles to which various types of lipids are titrated at specific concentrations to measure differences in binding and determine lipid specificity.. Detergents C8E4, C10E6, C12E8, DDM, OG, LDAO, and FOS-14 were tested for their ability to form AHL pores, and initial results show that both SL and PC bind strongly to the pore, but phosphatidic acid lipids do not. Results from these experiments have relevance in developing therapeutic drugs to block these interactions and neutralize the toxins.

MASON KLEPP

POSTER 187

Title: Japanese Tattoo

Faculty Mentor(s): Matthias Vogel

Abstract:

Japan has a rich history with the medium of tattoo that stretches back thousands of years, a history which has occupied a fascinatingly unique place in Japanese society. This traditional form

of art has been and is currently going through vast changes, both in form and in social standing. We are using multiple media sources to research this topic; the book *The Japanese Tattoo* by Donald Richie and Ian Buruma as our main historical references, and multiple online sources for the contemporary aspect. The common thread throughout all of the literature around Japanese tattoo is that, for better or for worse, the art and economy of Japanese tattoo is changing faster now than it has ever had before. Tattoos are slowly losing their social stigma, “beauty tattoos” are appearing in the fashion industry, a new generation of skilled “neo-Japanese” style artists tattoo-seeking tourists are expanding the market and attracting foreign tattoo tourists, and the focus of the Japanese tattoo community is shifting away from traditional style, imagery, and method. Despite these changes, the form of art remains criminalized across Japan. The tides of this form of art are slowly shifting, but this changing tide is not yet a tsunami.

HANNAH KLOFT

POSTER 91

Title: The Great White Outdoors: Racialized Outdoor Leisure Identity in American Advertising
Faculty Mentor(s): Troy Elias & Deborah Morrison

Abstract:

Appearing on postcards, maps, and murals, the Great Outdoors has served as an archetype for both the geography and culture of the United States for decades. With more than 58 national parks and 109 million acres of wilderness area, the utilization of these spaces by a wide range of Americans seems likely. In reality, although 2017 was the second highest year for national park visitation in American history, 80 percent of visitors were white. In this study, a content analysis of more than 1,000 magazine advertisements aimed to advance a study performed two decades ago to gauge if representation of recreational use of outdoor spaces among minorities has increased. In addition, the concept of “racialized outdoor leisure identity” was analyzed to determine the kinds of activities minorities were depicted participating in within the Great Outdoors.

HALEY KOCH

POSTER 138

Title: Best Practices for Attributing Extreme Weather Events to Climate Change in Media
Faculty Mentor(s): Deborah Morrison & Hollie Smith

Abstract:

Occurrences of extreme weather events such as hurricanes, forest fires, and floods are increasing in frequency and severity on a global scale, and climate scientists have proven that these events are exacerbated by the effects of anthropogenic climate change. These events are then represented variably through mass media channels, some which effectively attribute these events to climate change, and some which do not. Studies have shown that improperly attributing the cause of extreme weather events could be incredibly harmful to our environmental future, and must be done correctly in order to avoid significant further damages to our society. In order to participate in the resolution of the disconnect between extreme weather events and climate change, my thesis research has led to the development of a “Code

of Best Practices for Attributing Extreme Weather Events to Climate Change,” for media producers and outlets to use to ensure that their content is effectively covering events of extreme weather, and how they relate to anthropogenic climate change. Through a content analysis of sources that have attributed events of extreme weather to climate change in a variety of ways (both effective and ineffective), I have determined criteria that guarantee the effectiveness of communicating climate change attribution. These criteria can be applied to different forms of media and communications in order for a media outlet to ensure that they are accurately and effectively attributing extreme weather events to climate change.

KELLY KONDO

Co Presenter(s): Bella Conferti, Yuhui Li, Yuwei Shi, Tyler White

POSTER 99

Title: Local vs National Restaurants: Localness Drives Greater Rates of Engagement on Twitter

Faculty Mentor(s): David Markowitz

Abstract:

In this study we analyzed how Twitter engagements, such as likes and retweets, differed between local Eugene, Oregon restaurants and comparable national chains. Drawing on Construal Level Theory from psychology (Trope & Liberman, 2010), which suggests that people are more psychologically attached to proximate objects rather than distant objects, we predicted that the local restaurants would have greater online engagement than national restaurants. To test this, we matched local and national chains based on ten food categories (local chain/national chain): (1) Track Town Pizza/Pizza Hut; (2) Little Big Burger/Wendy’s; (3) Joe’s Burgers/Burger King; (4) Burrito Boy/Qdoba; (5) Ambrosia/Olive Garden; (6) The Sandwich League/Panera; (7) Dutch Bros Coffee/Starbucks; (8) Off the Waffle/IHOP; (9) Elk Horn Brewery/BJ’s Restaurant & Brewhouse; and (10) Prince Pucklers/Baskin-Robbins. We used data science techniques in the R statistical environment to automatically scrape engagement data from each chain’s Twitter feed. The results suggest that local restaurants have significantly more likes proportional to their follower count compared to national restaurants ($p < .001$). However, there was no significant difference in the average number of retweets proportional to followers between local and national restaurants ($p = .31$). This discrepancy between likes and retweets likely stems from different media affordances and how these features contain unique social meaning for users. We will discuss how localness affects the psychological attachment that people have to businesses.

MORGAN KRAKOW

POSTER 112

Title: Fact Checking a President: Analyzing News Reporting on Trump’s Tweets About Climate Change

Faculty Mentor(s): Nicole Dahmen

Abstract:

When President Trump makes statements about global climate change that lack context or scientific facts, journalists must decide how to refute and better contextualize such claims.

Often, Twitter is the medium where President Trump makes these statements, placing journalists in a precarious moment — reporting on such informal presidential communication while accurately portraying issues of climate change. This research investigates how reporters grappled with responsibly covering the nexus of two emergent and critical issues: a president who touted often inaccurate information on Twitter, and the consequences of a rapidly changing climate. Using a textual analysis, stories from 3 large American newspapers that quoted at least one climate change related tweet by the president since his initial candidacy were categorized by tweet. The articles were then coded based on how the tweets were used as a journalistic tool. The coding revealed that there are many reporting styles to deal with the President's tweets about climate change. The results demonstrated that the way the tweets were used depended primarily on the context, newspaper section and timing of the story that was published. Sometimes, the tweets provided context in a longform piece about President Trump's overall views on the climate. Other times, the tweets were quoted as breaking news without any sort of in-article fact checking. Further, some reports used the inaccurate information as the focus of the story itself. Overall, the research showed that there is no standard manner of reporting on President Trump's tweets about climate change.

EMILY KRASCHEL

Co Presenter(s): Enrique Menjivez

POSTER 188

Title: The Oil Economy of Venezuela

Faculty Mentor(s): Matthias Vogel

Abstract:

This project explores Venezuela's oil based economy and how that exacerbates employment and poverty issues. In Venezuela, there have been many issues regarding trade, poverty, and hunger. Within Venezuela there is a high rate of poverty, with much of the population being under the poverty line. The economy relies almost fully on oil, lending itself easily to monopolization, which creates more poverty among working folks. The oil economy has an effect on the country as a whole. News sources and books on the structure of the Venezuelan economy were particularly useful in researching this topic. The high rates of poverty and suffering among the Venezuelan people is due to the unitary reliance of the Venezuelan economy on oil and the high level of political unrest and corruption. We find the Venezuelan situation particularly jarring because the path the Venezuelan economy and government took in the 20th century bears a striking resemblance to the path many Western economies are taking today, presenting reasonable fear that other prominent countries may fall victim to the same negative effects.

ELISE KRONQUIST
ORAL SESSION 1 C

Title: THE EFFECT OF PYRIDOXAMINE ON AGES AND AORTIC WALL STRUCTURE

Faculty Mentor(s): Ashley Walker

Abstract:

Aging leads to arterial stiffening, likely due to increased advanced glycation end products (AGEs), oxidative stress, and collagen, which contribute to vascular dysfunction. Pyridoxamine, a form of vitamin B6, prevents age-related arterial stiffening. We hypothesized that pyridoxamine treatment will prevent AGEs formation in aged mouse aortas, while not affecting aortic wall structure.

Eight aged C57BL6 mice (18 mo) were treated with pyridoxamine in their water for six months and compared with eight vehicle control old mice (normal drinking water, 18 mo) and 6 untreated young mice (6 mo). Histological samples were collected. Aorta samples were quantified for AGEs via immunofluorescence. Aorta samples were also stained with Verheoff-Van Gieson and wall area was measured.

Young mice trended toward fewer AGEs than old control mice in the aorta (0.01 ± 0.003 vs 0.1 ± 0.05 AU), but the pyridoxamine treated animals were not different than old control or young mice (0.05 ± 0.02 ; $p=0.11$). The overall thickness of the aortic wall was unchanged between young, old treated, and old control subjects (area: $25840 \pm 3388\mu\text{m}^2$ vs. $34617 \pm 5232\mu\text{m}^2$ vs. $34165 \pm 3377\mu\text{m}^2$; $p=0.3$). Treatment did not change adventitial thickness between young, old control, and old treated groups (area: $21352 \pm 2695\mu\text{m}^2$ vs. $26102 \pm 5006\mu\text{m}^2$ vs. $30099 \pm 4587\mu\text{m}^2$; $p=0.4$).

These results indicate pyridoxamine treatment does not prevent the formation of AGEs or change the wall structure of the aorta in aged mice. Further studies are needed to identify the mechanism by which pyridoxamine prevents age-related arterial stiffening.

HANNAH KRUSE
POSTER 40

Title: Examining patterns in volume and spatial occurrence of cinder cones at Newberry Volcano, Oregon

Faculty Mentor(s): Thomas Giachetti

Abstract:

Newberry Volcano is a large quaternary shield-shape volcano that sits 60 km to the east of the Cascade Volcanic Arc. It is the second most voluminous volcano in the Cascades ($\sim 500 \text{ km}^3$) and has more than 400 satellite vents dotting its flanks, some over 20 km away from the central caldera. Many of these vents sport cinder cones that postdate the last caldera-forming eruption and are most common to the north and south of the caldera, less so to the east and rare to the west, drawing a crescent across the landscape. This is an unusually high number of satellite vents for any volcano to exhibit, and in an unusual geographic pattern. These vents may tell us

something unique about the internal structure of Newberry's magma chamber and plumbing system.

Using geological maps and Digital Elevation Models, my research focuses on gathering and analyzing data that describe the spatial and temporal occurrence, size, volume, and chemical composition of Newberry's cinder cones to find any relationships that exist between them and the central caldera, other local geologic features, and each other. Newberry provides a unique opportunity in its abundance and preservation of somewhat recent vents to explore these. Newberry is currently designated as a "Very High Threat" by the U.S. Geological Survey. Understanding its architecture and eruptive patterns is therefore essential to hazard assessment, preparedness, and mitigation.

TOVA KRUSS

POSTER 5

Title: An Investigation into the Genetic Basis of Spinal Cord Regeneration

Faculty Mentor(s): Dylan Farnsworth & Adam Miller

Abstract:

Unlike mammals, Zebrafish (*Danio Rerio*) are unique in that they can regenerate their nervous systems. The genetic expression involved in Zebrafish nervous system regeneration remains widely uninvestigated, however with potential applications in mammalian cell therapy and injury recovery, it remains a critical area of ongoing research. Throughout the following experiments, the spinal cord of Zebrafish was used as a simplified model for the entire connectome, with regeneration initiated through mechanical lesioning. To narrow the scope of the inquiry gene expression exploration focused on the neural progenitor lineage of olig2 expressing cells, a subset of neurons including motor neurons and glia. Through the utilization of single cell RNA sequencing gene expression during regeneration was assessed on a cell by cell basis, and Vimentin was found as an exciting candidate gene for further study due to the high degree of specific expression of this gene in regenerating cells.

JENA KUNIMUNE

POSTER 93

Title: Is Inhibition Dependent on Working Memory Capacity?

Faculty Mentor(s): Ulrich Mayr & Melissa Moss

Abstract:

The ability to stop initiated actions is a critical component of effective self-regulation, such as resisting the urge for 'sex, drugs, and rock and roll.' The current dominant theory in cognitive control assumes that maintaining task-relevant information in working memory is necessary for the effective implementation of inhibitory control. In this study, we addressed the interplay of inhibitory control and working memory maintenance processes using a dual-task paradigm in which both inhibitory control demands and working memory load were manipulated. Because the standard theory predicts mutual interference between the two processes, we hypothesized that if inhibition interferes with working memory maintenance, working memory performance

will be lower when participants successfully employ inhibitory control in response to a stop signal, versus when they fail to inhibit their action. Further, this interference in performance should be greatest when working memory load is high. Participants completed a combined working memory and stopping task in which stopping behavior occurred during the working memory maintenance interval. Our results showed no evidence of mutual interference between working memory load and stopping behavior on working memory performance. This result is inconsistent with the dominant view of working memory capacity as the primary constraining factor in inhibitory control. Rather, distinct processing resources may underlie these two different aspects of self-regulation.

LISA KWAN

ORAL SESSION 3 DL

Title: Variations on Affection

Faculty Mentor(s): Mark Hennion

Abstract:

My short story “Variations on Affection” is told in first person point of view from the perspective of an Asian-American mother. The fictive present follows the mother on her daughter Sophie’s wedding day as she is walking down the aisle. The story alternates between this short time frame and flashbacks detailing important moments in their relationship. It is largely focused on exploring the difficult relationship between mothers and daughters, which is a result of cultural and generational differences. Mainly, it puts the ideas of individualism and collectivism in contention, contrasting Sophie’s independence with her mother’s stubborn traditional upbringing. The navigation of these tensions and their eventual reconciliation, though ambiguous, reflects the experience of many second-generation children and their immigrant parents. As the title suggests, there are many ways in which love and affection manifest.

LISA KWAN

POSTER 26

Title: Sterilization and Treatment of Women and Children in Rajneeshpuram

Faculty Mentor(s): Bharat Venkat

Abstract:

My research revolves around the community of Rajneeshpuram, which was established and fully realized during the 1980’s in Antelope, Oregon. Headed by a spiritual named Bhagwan Rajneesh, residency on the ashram required adopting a specific lifestyle and ideology characterized by free sex and thought. Due to this, Rajneeshpuram often earns itself the title of ‘cult,’ although its members vehemently rejected this label. Rajneeshpuram was infamous for a number of reasons—its rampant voter and immigration fraud, bioterrorism stunts, assassination plots, militia, and unethical practices regarding sex and reproductive health. This last issue is what my research focuses largely on, particularly the rumors surrounding sterilization and encouragement of sex in young girls. I explore how the principle of ideological totalism fueled an unhealthy perception of sex and sexual relationships in the community, as well as the pedophilia allegations against Bhagwan and many male Rajneeshis. Further, I did extensive research on the Rajneesh Medical

Corp and the sterilization surgeries they performed on young girls. These discoveries led into an exploration of eugenics and reproductive control on the ashram, and more broadly, the treatment of women and children in the community. The demonization of nuclear family units as well as monogamous relationships created a unique isolation which deemed Bhagwan the sole emotional and spiritual outlet for these individuals. While preaching feminist ideology, Rajneeshpuram was in reality a destructive environment not only for women but also the young girls that grew up there.

BRITTANI LANCASTER

Co Presenter(s): Britta Bauer, Ramsey Sullivan, Annika Minges

POSTER 156

Title: Influencers Participation in Sponsored Content Using #Ad and the Effects of its Use on Twitter Engagement

Faculty Mentor(s): Dave Markowitz

Abstract:

What is the relationship between using #ad in social media posts and Twitter engagement? Consistent with prior work suggesting that consumers prefer to receive insight from unsponsored rather than sponsored advertisements, we predicted that in a comparison of Tweets, those including #ad would have fewer favorites than Tweets that do not contain #ad. We performed a case study of Kendall Jenner's Twitter account (N = 3,200 Tweets) and used RStudio's rtweet package to scrape the Twitter data from her feed. We ran a t-test, comparing the mean number of favorites per Tweet for those that had #ad and those that did not. The average number of favorites for Tweets with #ad was more than double the average number of favorites on her tweets without #ad ($p = .0096$). The results from this research were statistically meaningful but inconsistent with our prediction. We believe these results suggest that consumers respond well to posts that are clearly distinguished as sponsored advertisements because there is no deception occurring. We offer theoretical explanations for these data and future work should test this contention experimentally.

RUBEN LANCASTER

POSTER 10

Title: Population size mediates mating effects on lifespan in female *C. elegans*

Faculty Mentor(s): Katja Kasimatis & Patrick Phillips

Abstract:

Mating is vital for sexually reproducing species, yet the ideal mating strategy for males and females can differ. The ensuing conflict between the sexes results in negative population fitness effects. Previous studies in the nematode *Caenorhabditis elegans* show that a male-skewed sex ratio during mating causes female lifespan decreases, indicative of sexual conflict. However, these studies do not reflect ecologically relevant mating conditions on which sexual selection and sexual conflict are acting. Therefore, I conducted population-based mating assays using both natural and male-skew sex ratios. I found no effect of mating on lifespan relative to virgin females in either sex ratio condition in two different strains of *C. elegans*. My results identify

population size as a potential mediator of mating effects on female lifespan and highlight the need for ecologically relevant conditions for understanding life-history traits.

CONNOR LANE

POSTER 58

Title: The Effect of Geography on Genome-Wide Patterns in *Mimulus Aurantiacus*

Faculty Mentor(s): Matt Streisfeld

Abstract:

Characterizing patterns of the genome for species spanning a large geographic space may influence the way we understand evolutionary differences between populations. For example, areas of the genome that are highly differentiated and are presumed to result from natural selection may instead arise from genome properties such as low diversity that exaggerate the differences between populations. As a first step towards making conclusions about natural selection in *Mimulus aurantiacus*, a phenotypically diverse plant occurring continuously across Southern California, we tested for correlations between genome statistics to characterize ways in which properties of the genome may be contributing to differences between populations. As an example, we expect high within-population diversity (π) to mask “real” differences between populations, leading to a lower differentiation score (F_{ST}), which we did observe. We also expected this negative relationship between π and F_{ST} to grow stronger with higher distance corresponding to more “real” differences to be masked by the within-population variation, which we only observed weak patterns of. This trend of correlations existing but only being weakly associated with geographic distance held true for all statistical comparisons. We conclude that *M. aurantiacus* does display specific genome properties that may act as confounding variables for processes we wish to examine such as natural selection. However, these patterns do not strongly correlate with greater isolation due to distance, indicating that genome properties may have less of an effect on distantly related populations than we might have otherwise assumed.

MARISSA LANE-MASSEE

Co Presenter(s): Joe Dahlke, Katie Fischer, Michaela Fishback, Steven Pearlman

ORAL SESSION 2 CLN

Title: ELP 2019 Riparian Restoration: Pollinator, stream temperature, photopoint, and aquatic invertebrate monitoring and native revegetation of Goose Creek

Faculty Mentor(s): Peg Boulay

Abstract:

Whitewater Ranch is an organic blueberry and sustainable timber farm in Leaburg, Oregon that aims for sustainable practices through the improvement of the Goose Creek riparian area within the property. Through their support of the Environmental Leadership Program’s Riparian Restoration teams since 2014, the teams have been restoring the riparian area of Goose Creek for the goals of restoring vegetation to increase biodiversity and habitat for terrestrial and aquatic wildlife, as well as creating a diverse habitat that encourages pollinators needed for the production of blueberries. The current Riparian Restoration team aims for the same goals in addition to collecting more data, continuing the monitoring of Goose Creek, and to improve

upon the last teams work. The current team will be monitoring this area through the use of photopoint monitoring, individual plant monitoring, community plant composition monitoring, stream temperature monitoring, aquatic macroinvertebrate monitoring, and pollinator monitoring. The team will use this data to assess trends seen in present and past data and to provide this additional data for next years team. The current team hypothesizes that from 2017, overall biodiversity and abundance of ecologically key species will increase.

FRANKIE LEONARD

ORAL SESSION 3 SW

Title: Success in Neoliberal Capitalist Societies

Faculty Mentor(s): Avinnash Tiwari

Abstract:

Success, particularly in our society in the US, is a complex social construct that often determines the life an individual will lead. I have analyzed the ideas of power and wealth, and the effect that these elements have in determining the success of a person. These elements are key to understanding success in the US because they determine a person's advantage and privilege. Often in neoliberal capitalist societies, many systems that give access to success, such as education, and inheritance, are predisposed toward people of a certain class, gender, and race. Essentially, success is a societal norm set in place by those who define people by the power and wealth they possess, a self replicating system that enforces keeping the privileged in power. Fallacies, such as the exercise fallacy and the vehicle fallacy prove how people can use their privilege to express power over others. I chose to analyze businessmen who supposedly portray the hallmark of the American success story because they fit the model of the neoliberal, capitalistic "American Dream." In addition, I will discuss what lead to their wealth, and how their wealth morphed into power. Success can be defined as construct based on a measure of worth in a social context, imposed by a system dominated by whiteness, patriarchy, and class.

RYAN LERICHE

ORAL SESSION 4 CQ

Title: Effect of inter-stimulus interval duration and predictability on sensorimotor beta

Faculty Mentor(s): Nicole Swann

Abstract:

It is well established that the oscillatory beta band (13-30Hz)—a range of frequencies detected from electrical brain waves—modulate in a consistent manner during motor-response tasks over the sensorimotor cortex contralateral to movement. Studies have shown a myriad of parameters (e.g. movement certainty, grip type, response speed, etc.) that cause movement related beta band spectral power decreases. Purely visual stimulus processing studies have also shown analogous beta band suppression 300-500ms post-stimulus. Delayed-go tasks (a type of motor response task) start with an initial stimulus, the "fixation cue", that indicates an upcoming movement. A subsequent cue, the "GO cue", tells the participant to execute the experimental movement. The inter-stimulus interval (ISI) between these two stimuli is often jittered to prevent excessive movement related beta band suppression. If jittered, the beta oscillatory changes from

visual stimulus may irregularly confound the beta power surrounding movement over these sub-second ISIs. To examine this, electroencephalography (electrodes that record electrical signals from the scalp), was recorded from 11 participants in a delayed-go task with modulations to the predictability and duration of the inter-stimulus interval. Across all participants, the averaged beta power had a strong negative correlation with the length of the varied ISI condition which ranged from 300-700ms. There was also a significant difference in the per subject average of beta power based on the predictability of go-cue presentation. These data suggest that future studies need to investigate the often ignored and possibly confounding interaction of stimulus timing and movement execution on electrophysiological measures.

DANIELIA LEWIS

ORAL SESSION 1 O

Title: Determining growth and development in *Wyeomyia smithii* mosquitoes using fluctuating temperatures

Faculty Mentor(s): William Bradshaw Chris Holzapfel-Bradshaw

Abstract:

Mosquito bites cause over one million deaths per year by spreading blood-borne diseases like malaria, and yellow fever. Synchronous emergence in the spring facilitates males finding mates and also saturating the ability of predators to consume all of the emerging insects (predator satiation). With mass swarming, it ensures that some, or many, of the potential prey will escape predation and reproduce. The ability to predict mass emergence of disease vectors increases the efficacy of control measures, whether by sterile males, toxic baits, or conventional pesticides. Using two northern and two southern populations of the pitcher-plant mosquito, *Wyeomyia smithii*, I determined the degree of synchronization of development by using realistic, fluctuating temperatures simulating a temperate spring environment. I found that hibernating individuals that started development at warmer temperatures later in the spring developed faster than individuals that started development at cooler temperatures earlier in the spring, both in northern and southern populations. This difference led to later developing mosquitoes "catching up" to those that started development earlier. We call this passive synchronizing effect of warming environments "autosynchronization." The autosynchronization effect was apparent within both southern and northern populations.

These results demonstrate the autosynchronization effect, but this effect was not able to synchronize the developmentally conservative northern populations with the more developmentally progressive southern populations, even when encountering the same warming spring environment. The efficient timing of mosquito control efforts will be highly applicable within climatic zones but not between climatic zones due to differences in the developmental physiology of target organisms.

FRANKIE LEWIS

ORAL SESSION 4 S

Title: Rationalizing the Ratio Difference: Analysis of Molecular Factors Related to Primate Skeletal Muscle Fiber Type

Faculty Mentor(s): Kirstin Sterner

Abstract:

Bipedalism is a defining human characteristic, and many distinctive human traits increase efficiency when walking or running. While most research has focused on the skeleton, fewer people have investigated the role of muscular changes on human bipedal evolution. In muscle, slow-twitch fibers produce energy more efficiently and are better for endurance activities, whereas fast-twitch fibers consume more energy and are advantageous for activities requiring short bursts of power. In general, quadrupeds have more fast-twitch fibers and bipeds have more slow-twitch fibers, but it is still unclear how evolution shaped these patterns. My research addressed this gap in knowledge by characterizing a set of candidate genes that encode proteins that play a role in fiber type. First, I compared the protein-coding sequences of five candidate genes in 23 primates to test if differences at the DNA level are associated with differences in locomotion. Second, I tested if these genes are expressed differently in the muscle tissue of quadrupeds vs. bipeds. The structure of each muscle fiber is generally conserved between species, whereas the abundance ratio is not. Therefore, I predicted that differential expression, not sequence variation, is the main source of the fiber-type ratio variation. Preliminary data suggests these genes are highly conserved and there are a number of differentially expressed genes in primate muscle tissue. Reconstructing the evolutionary history of this trait is important for understanding the evolution of human bipedalism and identifying genes involved in fiber type may also inform our understanding of muscular diseases.

DI LI

ORAL SESSION 4 M

Title: The Crisis of Ableism in China

Abstract:

How does disabled life differ in other countries? Disabled people who are living in China are unfortunately not supported by the government, communities or organizations. Even in daily life, they are facing social discrimination, poor accessibility and public inconveniences. The majority of disabled people in China are unemployed and have an average annual income of just 655 USD. They are not considered part of society and simple things like access to a handicap bathroom or equal educational opportunities are unfortunately not always enforced. Ableism is when you discriminate against people with physical or mental handicaps and show a preference for able bodied individuals. In this poster, I will evaluate the current situation of ableism in China. As an educator, I want to actively change my students' perception about disabled individuals. I believe educating people on the realities of living with disabilities can positively affect and change the current situation. For example, in China the disabled are referred to as “残废”. “残” means disabled, “废” means rubbish or garbage. I will address this hurtful terminology and also

other ways educators should challenge ableism concepts and teach their students to embrace diversity. Society should not be evaluated by its wealth, but instead how it treats its citizens. Sympathy cannot change the fundamental concepts of ableism. True change is needed to create a healthier environment for disabled individuals to improve their daily life and sense of independence.

CRISTOFF LIGON

Co Presenter(s): Gavin Bradley

POSTER 176

Title: A Sustainable Growing Method for Everyone

Faculty Mentor(s): Sarah Stoeckl

Abstract:

During the Winter 2019 term and the Spring 2019 term, the Community of Environmental Leaders hydroponics team has been hard at work building and maintaining hydroponics systems in the University of Oregon GrowPod. Hydroponics is an easy and cheap growing method that does not require the use of soil to raise plants, more specifically food such as leafy greens, mint or any other edible plant organically and with a minimal impact to the environment. The hydroponics team built three Deep Water Cultures in order to grow lettuce, mint and tomatoes. We used five-gallon buckets, small air pumps, plastic baskets and finally Growrock, a lightweight, expanded clay aggregate as the growing medium. Our result was beautiful, lush and not to mention delicious leaves of lettuce and will most likely result in tomatoes and mint in the near future. Hydroponics can easily be integrated into any home as it is inexpensive, easy to maintain, very sustainable, and requires little knowledge of how to grow food traditionally. This will inspire and educate people to add hydroponics into their home so they can achieve a smaller carbon footprint and live a more sustainable life.

MICHELLE LO

ORAL SESSION 4 C

Title: Student or Teacher? A look at how students facilitate public sensemaking during collaborative group work

Faculty Mentor(s): Jennifer Ruef

Abstract:

As institutions strive to develop equitable classrooms, educators must consider what features equitable classrooms include. One such feature is the equitable distribution of authority and agency among students. Authority is the level of provided opportunities for making decisions during a mathematical task, the type of method to use in solving a problem, or the pace of learning, whereas agency is the power to carry out self-made decisions on a mathematical task. Equitable distribution of authority and agency can be enhanced in mathematics classrooms where students participate in discourse as an active member of the classroom. Students in these mathematics classes are asked to publicly make sense of mathematics. In other words, they are asked to participate in public sensemaking, where students understand and acknowledge one

another's ideas as well as mistakes, present and revise arguments, and take risks by sharing ideas.

This study strives to answer the following questions: "How are students positioned during mathematical group work in public sensemaking classrooms?" and "How does this positioning impact the distribution of agency and authority?" Students are commonly positioned as an expert, novice, or facilitator in the group. Data comes from existing video footage of sixth-grade students in a mathematics class, as well as interviews from these students. Qualitative data from videos and interviews were transcribed and coded. Results in one group show that one student is positioned as a clear expert-facilitator, but there is no obvious novice. However, the student, similar to the teacher of the classroom, distributes authority and agency to other members of the group. This research intends to inform teachers of the positioning patterns that may occur during group work, and the effectiveness of public sensemaking classrooms on distributing authority and agency equitably during group work.

MARINN LONGENECKER

Co Presenter(s): Kristi Thompson, Nick Pierson, Sakina Shahid, Jane Yeoman, Seth Arbogast, David Josi, Sarah Cudworth, Marie Moore, Marina Harrington

ORAL SESSION 2 CLN

Title: Oregon White Oak (*Quercus garryana*) Habitat Monitoring and Management: Thurston Hills Natural Area (THNA)

Faculty Mentor(s): Peg Boulay & Sara Worl

Abstract:

Prior to European colonization, Oregon white oak (*Quercus garryana*) savannas and woodlands were a prominent ecosystem across the Pacific Northwest (Devine and Harrington 2013). Presently, their area is reduced by 97% in the Willamette Valley (Pritchard et al. 2017) as a result of reduced fire frequency, introduced species, and mismanagement (Devine and Harrington 2013). Land managers are increasingly adopting active management for oak savanna restoration in order to support biodiversity. Primary actions include the removal of invasives, underbrush, and competing conifers. Establishing baseline data on forest composition and health is required for informed and adaptive management decisions. At Thurston Hills Natural Area (THNA), a team of students from University of Oregon's Environmental Leadership Program conducted a survey of Oregon white oaks to establish a baseline for use in restoration management decisions by Willamalane Park and Recreation District. Data was collected on the location, health, and threats to mature oak trees within the study area. Additionally, qualitative observations about wildlife, natural features, and neighboring vegetation were recorded to help evaluate recreational opportunities. This data was used to create detailed maps of THNA forests, and compile a detailed database of oak trees. As a comprehensive baseline, these deliverables provide the means for developing, implementing, and evaluating effectiveness of restoration management strategies.

ELMIRA LOUIE
ORAL SESSION 3 O

Title: A Woman's Voice: Methods and Obstacles of Feminist Translation in Persian, Spanish, and Turkish Poetry

Faculty Mentor(s): Leah Middlebrook & Michael Allan

Abstract:

One feature of poetry is its ability to prompt words to create meaning in unusual ways. A striking example appears in a twentieth-century Persian poem, where a seemingly innocuous word like “hair” carries an unexpected meaning that inscribes gender in a language without gendered pronouns. Drawing from the area of inquiry of feminist translation theory, I track the work of three key poets: the Spanish Rosalía de Castro, the Persian Forugh Farrokhzad, and the Turkish Gülten Akin. I argue that feminist translation theory, when expanded beyond its current Eurocentric frame, reshapes conventional understandings of gender. My project works to dismantle misogynistic aspects of patriarchal language through translation, and uses the process of transference to reclaim the “feminine” voice through women poets writing under cultural marginalization. At the same time, I offer my own alternative feminist translations as a means to examine the implications of transnational feminist translation for world literature writ large. My ambition for this project is thus additive and transformative of both feminist translation theory and poetics.

RACHEL LUTZ
POSTER 14

Title: Structure-Activity Relationship Study of the Ortho and Para Positions of Azide Triggers in Self-Immolative Thiocarbamate Donors

Faculty Mentor(s): Michael Pluth & Carolyn Levinn

Abstract:

Since the discovery of hydrogen sulfide (H₂S) as a gasotransmitter in the body, there has been a need for organic donors which can release H₂S to mimic its endogenous release in cells. H₂S is a key molecule for signaling in the body, is a known vasodilator, and is also involved in promoting cell healing. It is important to learn as much as we can about the relationship between structure and activity of H₂S donors so that donor design can be optimized. In this study, we used two self-immolative thiocarbamate donors with azide triggers in the ortho and para positions to observe how the position of the trigger affects the rate of H₂S release. When the self-immolative thiocarbamate donors are triggered they produce carbonyl sulfide (COS) as a precursor for H₂S. The COS is then converted to hydrogen sulfide via carbonic anhydrase (CA) enzyme. Through a methylene blue assay, we were able to measure the rate of release of H₂S of both the ortho and para donors. Structural analysis of these donors will allow for more fine-tuning of H₂S donors and a better understanding of how to develop fine-tuned donors.

EMILY MA
POSTER 53

Title: Investigating amino acid-modulated motility of the zebrafish bacterial isolate, *Aeromonas veronii*

Faculty Mentor(s): Cathy Robinson & Karen Guillemin

Abstract:

Animals are colonized by communities of microorganisms that influence the health and development of their host. However, the mechanisms of host colonization are still underexplored. To investigate this, previous work in the lab used experimental evolution to adapt a bacterial symbiont, *Aeromonas*, to the zebrafish gut. These experiments led to the identification of a novel gene, *spdE*, which significantly impacts host colonization. We found that evolved isolates with mutations in *spdE* had faster rates of motility and increased host immigration. Sequence analysis revealed that the protein, SpdE, has a domain for sensing extracellular signals and a diguanylate cyclase domain which produces an intercellular signaling molecule that regulates motility. Further biochemical investigation identified that the signal SpdE senses is hydrophobic amino acids, specifically proline, valine, and isoleucine. To further investigate the relationship between SpdE-dependent *Aeromonas* motility and environmental amino acids, we developed a new technique (“exploration assay”) which is designed to measure differences in motility between strains or conditions. Using the exploration assay, we compared motility of wild type and *spdE* knockout strains in different amino acid environments. From our results, we found that the wild type strain is more motile in the presence of these amino acids. However, even in the absence of amino acid signal, the *spdE* knockout is more motile than the wild type. From these data, we have created a model for how SpdE regulates motility in response to amino acids which offers novel insights into *Aeromonas* biology and the mechanisms of host colonization.

AARON MACARTHUR
ORAL SESSION 3 C

Title: Referential communication task in a naturalistic setting

Faculty Mentor(s): Dare Baldwin & Netanel Weinstein

Abstract:

Reaching shared understanding in conversation is an important part of daily life. Various mechanisms facilitate this achievement including: the ability to engage in perspective taking, sensitivity to gaze, sharing attention, and making pragmatic inferences about an interlocutor’s intent. Prior research on this topic has prioritized experimental control over ecological validity by placing participants in highly constrained situations. We addressed these limitations in the present study by correlating performance in a modified referential communication task with participants’ performance on several standard personality and socio-cognitive measures. Specifically, pairs of participants were placed on either side of a shelf with a series of cells and prepared a cake from a given recipe card. Some of the cells on the shelf were visible to only one participant or the other, while some cells were visible to both. We measured participants use of various disambiguation strategies (e.g. gaze checking or making a clarification request) and

examine whether performance on standard socio-cognitive measures predict these behaviors. This research helped shed light on the relationship between standard decontextualized socio-cognitive measures and real-life social interaction as well as the extent to which these measures predict individual differences in the way people achieve shared understanding in conversation.

ALVARO MACIAS-GONZALEZ

POSTER 87

Title: Feeding The Identity

Faculty Mentor(s): Dr. Elliot Berkman

Abstract:

From the moment we are born, we have little input on what foods we eat. From breast milk (or formula) to cereal, individuals are given limited choices when it comes to what foods they consume. Fast forward to adolescent years, we are still at the mercy of a parent or guardians decision of what to feed us but have a bit more freedom for food selection. Then what happens when individuals move away from a primary caregiver and choose to live on their own and have to find various forms of nutrition? The purpose of this study is to understand how college-bound freshman diet influences their narrative identities versus college Juniors, who have greater amounts of freedom in regards to foods consumed. Does an individual who consumes food prepared by someone else believe that this food can help explain their narrative identity? Or can an individuals diet help dictate if they believe themselves to be what we would call “winner”? My research looks at the differences between College freshmen, sophomores, juniors, and seniors dietary intake. Research has shown the dreaded “freshman fifteen” is a phenomenon across college campuses but what effects does this additional weight have on the students' psyche?

ASHLEIGH MARTINS

DATA STORY 3 CLN

Title: Preserving Childhood Through Enhanced Prevention Measures: Investigating predatory language patterns throughout the grooming process to prevent sex crimes against children – a study on prevention and harm reduction.

Faculty Mentor(s): Lynette Danley

Abstract:

Child abuse may occur in several ways, and in various environments. This project will look specifically at Child Sex Abuse (CSA) cases that were initiated and have taken place in-person only. Cases that began in an online environment but transitioned to face-to-face, or are based only online, have different components which will be investigated in future work. For this project, we propose the use of existing data: previously recorded forensic interviews performed at Child Advocacy Centers. We intend to utilize forensic interviews to determine whether there may be common speech patterns and behaviors that occur early in the grooming process of CSA. The research question we ask is: Are there earlier indicators of abuse than our current understanding? Forensic interviews are conducted by experts with special training in a specific environment. They are 1) video recorded, and, 2) done in a manner which elicits information

from the interviewee, without contaminating the story with suggestions or any “leading” from the interviewer. Through the strategic use of these interviews, data is readily available and would be as free from interview errors as possible (i.e. interviewer opinions or suggestions) — and without further imposition upon survivors of having to do additional interviewing — while illuminating predatory behavior. The potential implications of this work are far-reaching. If new patterns are discovered, prevention measures would be updated accordingly, and information disseminated to communities. If existing patterns are confirmed, we would have stronger evidence to support current prevention measures.

DYLAN MARTINS

ORAL SESSION 1 O

Title: Examining Pairwise and Multi-Species Interactions in Larval Zebrafish

Faculty Mentor(s): Raghuvveer Parthasarathy

Abstract:

The microbial communities resident in animal intestines are composed of dozens to hundreds of species and play important roles in host health and disease. The determinants of microbial composition, which may include physical characteristics or biochemical interactions, remain largely unknown. Further, it is unclear for many multi-species consortia whether their species-level makeup can be predicted based on an understanding of pairwise species interactions, or whether higher-order interactions are needed to explain community assembly. It is also unclear how spatial organization plays a role in determining the make up of these complex communities. To address this, we consider commensal intestinal microbes in larval zebrafish, initially raised germ-free to allow introduction of controlled combinations of bacterial species. Using a combination of dissection and plating assays and three-dimensional live imaging, we demonstrate the construction of communities of one to five species and test whether outcomes from two-species competitions contain enough information to predict the abundances in more complex communities. We also quantify changes in species’ spatial distributions induced by the presence of other species, which may explain correlations in their abundances. Lastly, we explore the ability of in vitro interbacterial relationships to predict those of the same bacteria in in vivo association.

LEANDRO MARX-ALBUQUERQUE

POSTER 28

Title: Impaired Erythropoiesis in Notothenioids Predated the Loss of Hemoglobin in White-blooded Antarctic Icefish

Faculty Mentor(s): John Postlethwait & Thomas Desvignes

Abstract:

The 16 recognized white-blooded Antarctic icefishes (Channichthyidae) are the only known vertebrates living without hemoglobin-- the protein packed into red blood cells and responsible for oxygen transport throughout an organism. Red-blooded dragonfishes (Bathydraconidae), plunderfishes (Artedidraconidae), and “notothens” (Nototheniidae) are close relatives of icefishes and all possess hemoglobin. All four families are part of the Notothenioidei suborder.

While the genetic mechanism that led to the loss of hemoglobin genes in icefish is well understood, whether icefish possess mature red blood cells remains contested. Therefore, our purpose was to decipher if red blood cell development (erythropoiesis) in icefishes progresses as it does in their red-blooded relatives. These investigations were conducted using head kidney histology samples and blood smears from six species of white-blooded icefishes and seven closely related red-blooded fish species (four dragonfish species, one plunderfish species, and two notothen species). We conducted a morphological analysis of erythropoietic cells using principal component analyses to differentiate and compare cell types across species. Our results indicate that icefishes have Pro-erythroblasts and some more advanced cells morphologically similar to red-blooded erythroblasts. Additionally, we observed that in plunderfishes and two of the four dragonfishes, the most developed erythropoietic cells are morphologically akin to erythroblasts. These results suggest that while hemoglobin was lost at the origin of the icefish radiation, the erythropoietic pathway was impaired earlier-- likely in the common ancestor of plunderfishes, dragonfishes, and icefishes. Thus, our investigation provides a new perspective into the evolutionary history that led to the unique white-blooded icefish phenotype.

JORDYN MASCARENAS-WELLS

POSTER 36

Title: Spotting Young Stars in the Age of Precision Distance Measurements

Faculty Mentor(s): Aaron Rizutto

Abstract:

Studying populations of young stars is essential to humanity's understanding of planet formation and thereby the existence and development of life in our universe. Such pre-main-sequence stars have previously been very difficult to identify due to the lack of precision on distance measurements available with current technology. The Gaia Space Telescope has revolutionized our ability to assign position and distance values to targets, offering sub-milliarcsecond parallax uncertainties. This allows for unprecedented exactness in absolute magnitude calculations and accurate placement of objects onto Hertzsprung-Russell Diagrams. Based on plot location and isochrone modeling, age and mass predictions for each object can be determined. This research aimed to use Bayesian Statistics to assign probability values to these predictions. Targets were confined to the Taurus-Auriga Star Forming Region, the nearest and most well-studied region of low mass star formation, to ensure the model worked as expected. A synthetic population was constructed, incorporating an initial mass function, binary probability and model photometry from PARSEC isochrones. The theoretical data set was then compared to each Taurus star, producing subsequent age and mass probability distributions. The model produced results as expected up until the range of one solar magnitude. Moving forward, a third dimension of metallicity will be built into the model. The mass range for the synthetic population will be increased and infrared photometry will be included. The model will be applied to other important data sets and a blind search for new groups of young stars in the full Gaia dataset will be performed.

ONSARIGO MATARA

ORAL SESSION 3 CQ

Title: NEW ESL ACADEMIC CHALLENGES IN EUGENE OREGON.

Faculty Mentor(s): Casey Reid & Cyebel Highins

Abstract:

English as a Second Language (ESL) students new to the Eugene, Oregon area who are studying at a two-year community college face intercultural and personal challenges. To find out more about the specific needs of this mix of students from over 20 countries, I conducted qualitative primary and secondary research through interviews, participant observation with students, and library research. Preliminary research suggests that even with the mentor and advisor support from the students' program, students still face significant challenges overcoming culture shock and connecting with native English speakers from the campus community. Recommendations for how to improve the students' integration into the campus and local community will be discussed. Findings will be useful to ESL academic programs advisors, instructors and students to give instructors and learners a voice in the development of successful language use and learning strategies.

CLARE MCCANN

POSTER 150

Title: INCREASING COMPLIANCE DURING TRANSITIONS FOR A YOUNG GIRL WITH AUTISM

Faculty Mentor(s): Lindsay Glugatch

Abstract:

Autism core symptoms include rigid repetitive behavior and deficits in social communication. These challenges effect the ability to appropriately comply with transitions from activities for a 4-year-old girl with autism spectrum disorder. In this single-case study, we are investigating which type of behavioral intervention is functionally related to increases in compliance during transitions. Specifically, we are using an alternating treatment design to compare the effectiveness of the following treatments: (a) choices, (b) transitional warnings, (c) going from low to high preference activity, or (d) a combined intervention package. We will be using a video-based activity preference assessment to identify a hierarchy of preferred activities. It is predicted that the combined treatment of all three interventions will have the most compliance during transitions. We will discuss the use of preference utility in clinical settings and the predicted accuracy of a video-based preference assessment to identify a hierarchy of activities. From this study, we will determine whether a combined treatment package works better or if there is one active ingredient component of intervention. By identifying the most useful intervention, this will further the progression of students and children with autism in their performance during school and at home transitions.

RACHEL MCGILL

ORAL SESSION 2 SW

Title: Analyzing Treatment of Schizophrenic Patients within Morningside Hospital from 1955-1958

Faculty Mentor(s): Kristin Yarris

Abstract:

Mental health affects all individuals directly or indirectly and remains a significant problem within the global burden of disease. As there is not a test for a schizophrenia diagnosis, nor a direct form of treatment, it has proved difficult to diagnose and control in patients even now. When looking to analyze the history of mental health, the Morningside Hospital in Portland provides original documents of patient records with various psychiatric diagnoses, with a heavy concentration of schizophrenic patients. Morningside Hospital ran from 1883- 1986, and through a contract with the US Interior, Alaskan patients were transported to Morningside as a mental illness was seen as a crime in Alaska. By using patient records from 1955-1958 donated by Dr. William Burke, a doctor at the hospital, diagnostic coding, and interviews, an outline of patient treatment were analyzed. Shown through the findings with patients being treated with ECT, electroshock therapy declined from 1955 to 1958 and the use of Thorazine increased during this period. While we have moved away from the controversial treatment of shipping mentally ill patients from Alaska to Morningside, the mental health industry is still facing financial problems, many state hospitals are now closed, and community outreach programs are stretched to the breaking point. Through this research, there is optimism that recognizing the past will be used to model the future. In the future, it will remain paramount that how mental disorders are perceived, diagnosed and treated continues to evolve and grow to reduce mental health's global burden of disease.

HANNAH MCKAY

Co Presenter(s): Isabel Rivera

POSTER 90

Title: Fact Check: Understanding Carbon Impacts of Cross Laminated Timber

Faculty Mentor(s): Alison Kwok

Abstract:

According to Architecture 2030, an architectural initiative, embodied carbon will represent 49% of the carbon emissions associated with new construction between 2020 and 2050, unless substantial effort is made to reduce embodied carbon emissions immediately. In collaboration with the TallWood Design Institute, the University of Oregon NetZED Laboratory is examining the carbon impacts of Cross Laminated Timber (CLT), through a comprehensive literature review and Life Cycle Analysis (LCA) case studies of North American projects that utilize CLT. To quantify the carbon impact, we will show a case study of a commercial office building in Portland, Oregon (called District Office) designed by Hacker Architects, completion expected in 2019. The project is a 6-story, 90,400 sf., with a structure of cross-laminated timber floors with glulam columns and beams. Using Tally®, a plug-in for Revit, it is possible to measure the embodied carbon impact of the building materials over their full life-span, from the acquisition

of raw material to disposal or reuse at the end of the material or building's useful life. This study also accounts for variables such as the distance the material has traveled, the carbon impact of each component used, and what happens to the materials during demolition. The poster will identify terminology used in the industry, graphically compelling and informative and easy-to-read numerical calculations, addressing environmental information about CLT in North America. This research may be used to identify strategies to improve the overall carbon impact of material-use in buildings and inform the use of CLT material in future construction.

SHAWN MELENDY

POSTER 7

Title: Adipocyte-Specific p85a Overexpression in Mice: Insight into Type-II Diabetes Pathogenesis

Faculty Mentor(s): Carrie McCurdy & Byron Hetrick

Abstract:

Type 2 Diabetes is an increasingly prevalent disease worldwide that is partially caused by a progressive loss of insulin response in adipose tissue and skeletal muscle, two essential insulin target tissues. The class 1A phosphatidylinositol-3-kinase (PI3K) plays a central role in the insulin signal transduction cascade, as it controls the first point of signal propagation. It has been previously shown that the PI3K regulatory subunits (p85 α /p55 α /p50 α) are upregulated in adipose tissue from high-fat diet (HFD) fed obese mice, concurrent with insulin resistance. Obese, insulin resistant adipose tissue is also characterized by chronic, low grade inflammation. This elevated inflammation attenuates signaling through the PI3K/Akt signaling pathway contributing to insulin resistance. The objective of this study is to determine how adipocyte specific overexpression of p85 α affects insulin signaling in adipose tissue, independent of obesity. We have generated a lean mouse model designed to overexpress p85 α in an adipocyte-specific manner, and measured insulin response in white adipose tissue (WAT) via Simple Western probing for phosphorylated Akt (pAkt). No significant difference in pAkt has been observed compared to wild-type, though the data trends towards increased signaling in p85 α overexpressing (OX) mice. Additionally, p85 α OX mice show no significant change in insulin sensitivity, as observed by an oral glucose tolerance test (OGTT). These results prompt the need for further validation of the overexpression of p85 α in the transgenic mice. Future work will include measuring WAT p85 α abundance via Simple Western, p85 α transcript abundance via RT-qPCR, and detecting the presence of the p85 α -inserted transgene with PCR.

NADAV MENASHE

POSTER 20

Title: The Role of Cortical Inhibitory Interneurons in Auditory Signal Detection

Faculty Mentor(s): Santiago Jaramillo

Abstract:

For years, researchers have been trying to uncover how different auditory areas in the brain allow us to segregate signals from a noise. The goal of this study was to use a mouse model to understand how two types of cortical inhibitory interneurons found in the auditory cortex,

known as somatostatin-expressing (SOM) and parvalbumin-expressing (PV) interneurons, contribute to our perception of sound masked by noise. We hypothesized that suppressing the activity of auditory cortical SOM interneurons would decrease a mouse's ability to detect a tone masked by noise when the background noise was composed of broadband signals. We expected a similar decrease when PV interneurons were suppressed when the background noise was composed of narrowband signals. To test these hypotheses, we taught transgenic SOM-ArchT and PV-ArchT mice how to perform a behavioral task where they had to determine if a pure tone was present in background noise. We then implanted optical fibers over their auditory cortex and they performed the same task while having their respective interneurons suppressed through an interaction between the light-sensitive ArchT protein and green light. We found that suppressing SOM interneurons decreased the percentage of trials in which the mice were able to detect a tone in all bandwidths of background noise, while suppressing PV interneurons did not affect performance, showing that they might not be important for mice to perform this task. These findings allow us to better understand the roles that different sources of inhibition play when detecting a sound masked by noise.

HANNA MINNS

POSTER 41

Title: The Role of Gene Expression in the Origin of Species Differences

Faculty Mentor(s): Patrick Phillips

Abstract:

Speciation, or the process of how new species are formed, is responsible for the incredibly diverse world we live in today. Speciation develops as a result of reproductive isolation, or the inability to produce viable offspring, which is caused by an accumulation of genetic and phenotypic incompatibilities between two groups of diverging organisms. Understanding the genetic and molecular mechanisms responsible for this regulatory divergence and reproductive isolation is crucial to understanding speciation and evolutionary change (McManus, J.C., et al. 2010). To investigate this phenomenon of reproductive isolation in order to observe and understand speciation first hand, we crossed *Caenorhabditis remanei* to the closely related, yet recently speciated, *C. latens*. Using RNA-sequencing analysis, we observed the gene expression levels of both the parental species as well as the F1 population and found that there was significant differential gene expression between the two groups. More specifically, we found that a higher proportion of the differentially expressed genes were caused by cis-regulatory changes and that these genes were more likely to be downregulated in the F1s. We also found that many of these genes play a role in the formation of the ribosome complex. In conclusion, our exploration into if and how differential gene expression is acting in the offspring of these two species contributes to the growing body of work on speciation, a process that is still relatively unknown despite its vast importance in creating and maintaining our earth's biodiversity.

EMILY MIRBOD

Co Presenter(s): sophie hansen, Desiree Whitney, Madisen Campbell, Tom Tandberg

POSTER 169

Title: Portland, Oregon: Minors Affected by Sex Trafficking

Faculty Mentor(s): Noah Glusman

Abstract:

Portland, Oregon has one of the highest rates of human sex trafficking, especially of juveniles, in the United States. The high number of homeless youth, as well as youth who have 'run away' from home, are high targets as their more often than not increased vulnerability, psychologically and physically, can be manipulated and coerced by traffickers. One in six 'runaways' in 2014 were victims of sexual exploitation. Although trafficking of youth populations may not always be openly discussed or treated as the most prevalent issue, it is blatantly apparent that youth are targeted by the trafficking industry at alarmingly high rates. This is due to the populations increased vulnerability and in this case, Portland's location which often allows for much more efficient transportation of the trafficked youth. Statistical evidence shows that 36% of those subjected to human trafficking in Portland, Oregon are 15 years old. The number becomes even more alarming when looking at homeless and runaway youth populations- 1 in 6 of these youth have been affected by exploitation. All available data on the subject shows that the more attention paid to this issue, the more likely people can recognize victims of sex trafficking and attempt to help them. With these findings, people may push for a greater federal and state information campaign. A campaign like this can extend beyond policy to not only to punish those responsible for these heinous crimes but actually prevent more cases and recognize those already in the system to safely extradite them from their captors.

CHRISTOPHER MISA

ORAL SESSION 2 C

Title: MACE: Improving Measurement Accuracy in Containers Through Trace-based Network Stack Latency Monitoring

Faculty Mentor(s): Ramakrishnan Durairajan

Abstract:

Container systems (e.g., Docker) provide a well-defined, lightweight, and versatile foundation to streamline the process of tool deployment, to provide a consistent and repeatable experimental interface, and to leverage data centers in the global cloud infrastructure as measurement vantage points. However, the virtual network devices commonly used to connect containers to the Internet are known to impose latency overheads which distort the values reported by measurement tools running inside containers. In this study, we develop a tool called MACE to measure the latency overhead of virtual network devices as used by Docker containers. MACE is implemented as a Linux kernel module using the trace event subsystem to hook into key points along the network stack code path. Using CloudLab, we evaluate MACE by comparing ping round trip time (RTT) measurements emitted from a slim-ping container to the ones emitted using the same tool running in the bare metal machine under varying traffic loads. Our evaluation shows that the MACE-adjusted RTT measurements are within 20 microseconds of the bare metal ping

RTTs on average while incurring less than 25 microseconds RTT perturbation. We also compare RTT perturbation incurred by MACE with perturbation incurred by the ftrace kernel tracing system and provide a perturbation breakdown for the various components of MACE to focus future development.

QUINN MITCHELL

POSTER 116

Title: How Delayed Articulation Skills Effect the Outcome on Suprasegmental Aspects of a Lexical Stress Task.

Faculty Mentor(s): Melissa Redford & Jill Potratz

Abstract:

Lexical stress is determined by varying amounts of duration, intensity, and pitch. These aspects work together to convey if a word is iambic or trochaic. The purpose of this study was to compare two groups of 5-year-old children: (n=10) typically developing children and those with delayed articulation skills (n=5). Their performance on a lexical stress task was analyzed to determine how an articulation delay effects the suprasegmental aspects of production. The Diagnostic Evaluation of Articulation and Phonology (Dodd et al., 2012) was used to determine if the children were in the typically developing (TD) group or the delayed articulation skills (DA) group. The lexical stress task used in this study tests children's ability to repeat randomized disyllabic non-word sounds that were either trochaic (/ˈbada) or iambic (baˈda/) and increased in repetition length as the task progressed. The children's productions were judged and scored by 6 trained research assistants who determined that the DA group produced more errors than the TD group. Acoustic measures on duration, intensity, pitch (F0), and vowel quality (F1 and F2) of correctly produced vowels gave no indication as to why the DA group was performing more poorly. In some case's the DA group made more correct trochees and iambs, yet they still have more errors than the TD group. Perhaps children with delayed articulation skills are putting focus on their articulators and do not have enough residual attention to give to their working memory to be able to recall the order of trochees and iambs.

MICHAEL MONETERY

ORAL SESSION 3 SW

Title: Abstract: The Economics of Corruption vs. Economic Justice

Faculty Mentor(s): James Kiser & Lee Imonen

Abstract:

This work introduces a proactive alternative to economic injustice involving a redefinition of value, reassessment of the real scope of cultural exchange and personal interactions affecting the quality of life (QOL), not just the ethically valueless GDP. The thesis critiques the corrupting influence of inherently destabilizing, destructive national monetary policy and unrealistic economic theory. The sociolinguistic conceptual framework of modern civilization, its paradigm, its symptoms, causal factors and governing principles were holistically analyzed and critiqued. The research showed that pervasive disinformation, commercially sponsored propaganda and political corruption subverted the nature and purpose of human culture, education and

governance. Developing bio-ethical, ecocentric econometrics to supplement quantitative econometrics is proposed for initiating realistic, qualitative analytics, essential for enhancing QOL and conservation of our only habitat. New definitions and unrecognized or under-appreciated principles are presented—essential for understanding the realities of economic injustice and political corruption—to support the proposed solution. The information and stratagems are presented to help parents, teachers, students, voters, leaders, corporate executives & directors, scientists, architects, engineers, planners and policy advisors successfully accomplish their missions. The presentation also serves as a prologue to a more extensive work on axiology and meta-economics metatheory in-progress.

BRYANNA MOORE

POSTER 155

Title: Seeking InSite: What the U.S. Can Learn from Vancouver's Supervised Injection Site and How Harm Reduction Affects the Lives of Intravenous Drug Users

Faculty Mentor(s): Dan Tichenor

Abstract:

The focus of my Honors thesis is on supervised injection sites and the feasibility of harm reduction as a political framework in the United States. Though there has been much research on the success of harm reduction in places outside of the United States, no supervised injection sites currently exist in the U.S. Part of my research will comprise of a comparative analysis of U.S. and Canadian drug policy, including a sociohistorical analysis of shifting cultural values around the issue of healthcare and the eventual establishment of InSite, a supervised injection site in Vancouver, British Columbia. My primary research questions are: Could a facility like InSite operate in the United States? If so, how? If not, why not? What are the obstacles -- social, political, economic, legal, or otherwise -- that have prevented the successful establishment of a supervised injection site in the United States? My research will make a unique, distinct contribution to the academic discourse surrounding harm reduction because it will center personal narrative and accurately situate the lives of drug users and their communities as those most affected by drug policy. This research approach reflects the principles of the harm reduction movement itself, not focusing solely on abstract policy goals or legal history but instead contextualizing law and policy in relation to lived experiences. I expect to find that drug users themselves, while at the forefront of organizing for drug policy reform and public health approaches to the issue of drug use, are rarely included in conversations with actual law-makers and policy influencers. Little existing research takes a personal narrative approach to drug policy reform. I plan to address that gap by building a body of ethnographic research that can be used in the future to determine resource allocation and shift the sociopolitical conversation about drug use from its current punitive focus to a more humanistic, health-centered approach.

RENATA MORENO PEREZ

POSTER 118

Title: HIV risk behaviors and their relationship with social support across racial/ethnic identities

Faculty Mentor(s): Jessica M. Cronce

Abstract:

Social support is associated with health, in particular reduced engagement in HIV-related risk behaviors (HRRB), such as not getting tested (Qiao, Li, & Stanton, 2014). However, less research has examined if there are group differences in social support based on past/current engagement in HRRB. This project addresses this question, hypothesizing that people engaged in HRRB would have lower social support, and also explores whether the level of social support among people that are engaged in HRRB differs based on their racial/ethnic identity. I used a secondary data set from the Behavioral Risk Factor Surveillance System (BRFSS), collected in 2017 by the Centers for Disease Control and Prevention. An independent samples t-test showed those endorsing any HRRB in the past 12 months reported less social support than those endorsing no HRRB, $t(19305) = 7.81, p < .001$. When the sample was restricted to only those endorsing any HRRB, an ANOVA showed an overall difference in social support based on race/ethnicity, $F(5, 703) = 5.78, p < .001$. Post hoc tests showed that Black, Non-Hispanic and Hispanic individuals had less emotional support compared to white individuals. This research is important because individuals lacking in social support may be less likely to get tested for HIV due to fears of stigma and further loss of social connections. Knowing that individuals engaged in HRRB have lower social support, and that this support is particularly low for two populations that suffer discrimination can help inform and target social support interventions aimed at reducing HIV incidence.

JOSHUA MOSTALES

POSTER 34

Title: Investigating the Physiological Effects of Mutations in the Proposed Backtrack Site of Yeast RNA Polymerase II

Faculty Mentor(s): Diane Hawley

Abstract:

Transcription, the first step of gene expression, is a process fundamental to all known forms of life. In eukaryotic cells, the enzyme RNA polymerase II (Pol II) executes transcription by moving forward along the DNA, transferring the genetic information encoded in DNA to messenger RNA. However, Pol II also backtracks on the DNA, causing transcription to become arrested. When backtracking occurs, Pol II slides backwards on the DNA, displacing nascent RNA from the active site into a proposed "backtrack site," comprising residues in the Pol II subunits Rpb1 and Rpb2 that interact with the RNA. The resulting stable "arrested complex" must be reactivated for elongation to continue. While backtracking has been implicated in numerous processes essential for regulating gene transcription, its physiological relevance is not yet certain. Using *Saccharomyces cerevisiae* (Baker's yeast), we have engineered individual and combinations of mutations in the Rpb1 region of the backtrack site to disrupt the protein-RNA interactions that arise from backtracking. Through phenotypic and growth comparisons between wild-type and mutant strains, we examine how impairing the binding of RNA to the backtrack site affects yeast

fitness and various Pol II functions in vivo, providing further insight into the possible functions of Pol II during backtracking and arrest.

FRANCESCA MUCHOW

Co Presenter(s): Katee Kuhlman, Bronwyn Lord

POSTER 189

Title: "Drug Cartels and the Colombian Economy"

Faculty Mentor(s): Matthias Vogel

Abstract:

A city built on drugs: Medellin, Colombia. For most that live in the city, especially those in more impoverished neighborhoods, the illicit drug trade is a large part of daily life and affects citizens both politically and economically. What this study will investigate further is the direct impact the cocaine industry and drug cartels have on the functioning of not only Medellín's economy but Colombia as a whole. The methods of our research were conducted by reading articles, journals, thesis, and using the extremely informative website Cocaineconomics, created by Netflix to give an accurate historical depiction of Pablo Escobar's, one of the most infamous drug lords, business and its shaping of society. In 2009 cocaine was a bigger business than Google, bringing in an estimated 38 billion. For the seemingly abandoned lower class of Colombia, the narco money was a blessing cursed with unimaginable violence. Escobar's legacy is often discussed as a modern day Robin Hood taking from the rich Americans and negligent government to fund social programs and put money in the hands of the lower class. Cocaine has played a huge role in Colombian economics and continues to today. Although an exact figure would be difficult to find, understanding how deep the ties go between cocaine and the current quality of life in Colombia is important. As the world continues to attempt to eradicate drugs, it's important to know the implications of the industry beforehand.

JULIA MUELLER

ORAL SESSION 2 DL

Title: Sexual Trauma, Representation, and Ambiguity

Faculty Mentor(s): Angela Bogart-Montieth

Abstract:

Literary depictions of traumatic experiences are as complex as the human minds that experience and remember them. In literature, traumatic experiences are typically filtered through a character's perspective: presented to the reader as a memory, clouded by that character's naivete or lack thereof, shrouded by denial or emotion, and grappled with through language unique to that character. This research project explores the different techniques authors use to convey to the reader the confusion, struggle, and emotion of their characters' traumatic experiences. In an effort to depict the realism of how that trauma affects or is comprehended by the character, authors often use types of ambiguous language. This is especially true with stories that depict sexual violence. I've examined five short stories wherein the authors use ambiguity to depict or refer to the character's rape and found three main categories of ambiguity used: inexactness, omission, and allusion. In all five cases, the authors use different types of ambiguity

to convey through language that their characters are struggling internally to come to terms with the traumatic experiences they've endured. This project aims to help authors and readers both understand techniques used to convey traumatic experiences and explore the human mind of a literary character as he or she processes trauma.

ANTONIO MUNOZ

ORAL SESSION 4 CQ

Title: Odor Concentration Change Sensing in Mice

Faculty Mentor(s): Avinash Singh & Matt Smear

Abstract:

Our brains are constantly tracking dynamic sensory information from our environment. Exactly how the brain computes sensory input over time is not fully understood. The mouse olfactory system provides a great model to study stimuli changes over time because mice utilize odor concentration changes for olfactory navigation. It is not understood how mice optimize sensory information for spatial navigation.

One of the mechanisms guiding odor localization involves changes in odor concentration (ΔC). The ability to track odor concentration gradients is critical for vertebrates like the mouse for survival.

Previous work in the Smear lab has revealed a population of neurons in the olfactory bulb that respond to dynamic stimuli changes. The neural activity in this population of neurons was sensitive to concentration changes in odor.

The brain somehow maintains a neural representation of odor across sniffs, and this is the behavior I want to observe. A behavioral representation of these ΔC neurons had previously not been studied before. By investigating ΔC tracking behaviors in mice, my goal is to relate the neural activity we see in this neuronal population with a behavioral representation in mice and increase our understanding of sensory optimization.

SIMON NARODE

ORAL SESSION 3 SW

Title: A Critique of Hume's Compatibilist Philosophy: The Challenge of Reconciling Free Will and Causality

Abstract:

David Hume was an 18th century philosopher who sought to reconcile the notion of free will with causal necessity. The conflict is that if the world unfolds in a causal order, and all of our actions and decisions are predetermined, how can we call ourselves free? In answering this question, Hume tried to redefine freedom such that it was compatible with causality. My paper argues that Hume failed in this endeavor. He redefined freedom as "a power of acting or not acting according to the determinations of the will," but did not specify the temporal relationship of the will to its corresponding action. For instance, can we know ourselves to be free if the action we are willing is located in the future instead of the past? I challenge Hume's thesis by reading it in relation to time. Through this lens, I highlight the epistemic problems of uncertainty

concerning events of the past, present, and future, and demonstrate how Hume is unsuccessful at accounting for free will in a deterministic world.

JENNIFER NELSON

POSTER 24

Title: Preliminary Identification of fungi presenting on the surface of decomposing porcine heads

Faculty Mentor(s): Jeanne McLaughlin

Abstract:

Taphonomy is the study of events and processes that affect remains of an organism after death. It is an essential component of medico-legal death investigations and can be used to reconstruct the events leading up to the death as well as time since death. Although fungus is a known decomposer, very little research has been published in relation to the identification and morphology of fungi found on decomposing flesh, which is a potential source of data for estimation of PMI (post mortem interval). The purpose of this study is to identify and indicate the morphology of the fungi found on three *Sus scrofa* (pig) heads, as pigs are a commonly used proxy for human cadavers in the field of forensic taphonomy. Skin samples with visible fungal growth were taken from the heads of three separate pigs in the same outdoor enclosure, however, each head has exposure to differing amounts of sunlight. Methodology for identification includes culture media for growth and microscopic examination to identify and compare morphological features. The identification of numerous different fungi and growth patterns on decomposing flesh may be useful as an independent line of evidence for establishing PMI and gain ecological information regarding a scene. There has been limited attempts to identify saprophytic fungi on decomposing flesh, and none to this researcher's knowledge in the Pacific Northwest. This study attempts to identify potentially significant species for further study. Primary results pending.

Primary conclusion pending.

Significance pending.

HUNG NGUYEN

ORAL SESSION 3 CQ

Title: Is Badminton a sport for Americans?

Faculty Mentor(s): Casey Reid & Cybele Higgins

Abstract:

This term, I am researching the badminton community in the United States to determine why this sport is less popular in the United States than in other contexts. To better understand this issue, I have conducted archival research into popular magazines and newspapers about the role of badminton in U.S. culture. For primary research, I have interviewed a sports professor who teaches badminton and conducted participant observation in a badminton class. Preliminary research suggests motivational and financial issues contribute to badminton's lack of popularity. The implications of this research for badminton players in the United States will be discussed.

MINH NGUYEN

POSTER 22

Title: The Effect of Varying Reward Treatments on Performance and Learning Acquisition in Mice

Faculty Mentor(s): Laura Boddington & Paul Steffan

Abstract:

An animal's ability to learn and perform perceptual tasks is highly variable, depending on factors such as reward type. Using a more favorable reward is expected to positively influence motivation and performance. The present study examined the effects of using a highly palatable caloric reward in lieu of standard water reward. It was hypothesized that a high caloric reward solution would facilitate a faster learning rate on an auditory discrimination task. Surgically head-posted mice were habituated and put on water restriction prior to behavior sessions. They were trained in a "tone-in-noise" detection task with 10% sucrose solution reward for correct licks and time out (resetting trial) for incorrect licks. We recorded the animal's performance while simultaneously monitored the pupil dilations. The results showed that 10% sucrose solution has the capacity to act as a reward stimulus due to its positive reinforcement properties, however, larger sample sizes are required to fully quantify the efficacy of sucrose solution compared to traditional fluid rewards. By examining the effects of alternative reward treatments on performance in an auditory discrimination task, we can determine optimal treatment conditions in which mice learn most efficiently. These results could further elucidate the relationship between caloric intake, nutrition, and arousal.

EMILY NIEBERGALL

POSTER 54

Title: Advancing threespine stickleback as an outbred immunogenetics model by pinpointing the onset of adaptive immunity

Faculty Mentor(s): Emily Beck & William Cresko

Abstract:

T-cell deficiencies cause a wide range of cell-mediated immunodeficiencies including Severe Combined Immunodeficiency (SCID), Wiskott-Aldrich Syndrome (WAS), and DiGeorge Syndrome. The genetics underlying these deficiencies is complex and the genetic basis of many cell-mediated deficiencies is poorly understood. Due to the invasive nature of prenatal tests used to study T-cell deficiencies in mammals, the development of an outbred immunogenetics model system is needed to understand how genetic variation impacts phenotypic variation of immune disease. Threespine stickleback fish (*Gasterosteus aculeatus*) provide just such a model. Stickleback are genetically tractable laboratory organisms with a well-annotated genome, and individuals from disparate populations show high levels of genetic variation. Additionally, stickleback provide an excellent system to study T-cell deficiencies, as they experience external fertilization, providing an amenable system to study immune development. To characterize the early development of adaptive immunity in threespine stickleback, we will analyze the expression of known early indicators of adaptive immunity maturation in marine and freshwater stickleback. These include recombination activating genes, *rag1* and *rag2*, and T cell receptor

genes, tcr- β and tcr- γ . To analyze gene expression, we will perform rtPCR on a developmental time series of fish. We can then implement in situ hybridization to detect when and where the genes are first expressed, followed by flow cytometry to detect phenotypic variation of T cell activity. Knowing when adaptive immunity onset occurs in threespine stickleback advances these fish as an outbred disease model in immunogenetics studies, allowing manipulative studies of immunological disease phenotypes in the context of genetic variation.

JILLIAN NIEDERMEYER

ORAL SESSION 2 O

Title: Framing International News at the Headline: Comparing and Analyzing Tone, Frequency, and Descriptive Word Choice in Articles About the United States, China and Germany
Framing International News at the Headline: Comparing and Analyzing Tone, Frequency, and Descriptive Word Choice in Articles About the United States, China and Germany

Faculty Mentor(s): Dean Mundy & Pat Curtin

Abstract:

Modern media is largely controlled by large organizations and, in particular, those in first-world countries commonly known as "core nations" in communication studies. This study explores the intersection of international mass communication and the traditional communication theory of framing. The research asks: Is it possible for news organizations, when reporting international news stories, to frame the subject countries as "the other" at the headline? Using the Washington Post and BBC, I analyzed over 600 headlines to evaluate how journalists frame stories about other countries and, for the Washington Post, their own. Ultimately, this research found the majority of international news is negatively framed and only arises when events occur. Whether these organizations are framing the countries as the "other" is inconclusive. Moving forward, this study could gain from analyzing more than two countries' approaches to news about other countries, as well as analyzing additional sources. Modern media is largely controlled by large organizations and, in particular, those in first-world countries commonly known as "core nations" in communication studies. This study explores the intersection of international mass communication and the tradit

KAYA NOTEBOOM

ORAL SESSION 2 DL

Title: Auto-Fiction: Better Fiction Through Non-Fiction

Faculty Mentor(s): Mark Hennion

Abstract:

Auto-fiction is a literary form that situates autobiographical elements of the author in fiction. How much is made-up and how much is factual varies on a spectrum from almost all to almost nothing. This is a form interested in challenging monotonous expectations of fiction by utilizing components of non-fiction. My research explores how narrative voice and character interiority function differently in fiction compared to non-fiction, and how narrative voice and character interiority can be used to subvert expectations of fiction in works of auto-fiction. I analyze the writings of Ben Lerner, a prominent auto-fiction author, and contrast his work with personal

essays. My research is guided by the critical analysis Amit Chaudhuri and Ben Marcus, who practice versions of auto-fiction themselves, and provide helpful opinions on the subgenre. By exploring the role of character interiority and narrative voice in blurring the line between fiction and non-fiction, we might gain insight on how to better innovate components of fiction that are tired and expected.

KAYA NOTEBOOM

ORAL SESSION 3 DL

Title: On Being Full

Faculty Mentor(s): Mark Hennion

Abstract:

The personal essay, as a mode of creative writing, allows total agency in the representation of stories coming from writers of under-represented backgrounds. As an artist who identifies as a trauma survivor, as queer, trans, and mixed-race, I prioritize telling true stories from my life because I feel an urgency to complicate the sparse existing narratives surrounding these identities. “On Being Full” is a personal essay that mediates on two opposing fears: the fear of unplanned pregnancy and the fear of infertility. Within it, I weave expository elements with scenes of unpleasant doctor’s visits, and flashbacks of pivotal moments in my family history. This essay is a meditation on fertility—for the purpose of procreation, and creating as an artist. “On Being Full” provides a queered perspective on pregnancy and motherhood, contributing to the visibility of stories and lives that are seldom given light in the literary community.

ANIKA NYKANEN

ORAL SESSION 1 SW

Title: Literary Racialization: The Function of Children in Southern Gothic Literature

Faculty Mentor(s): Mark Whalan

Abstract:

Children, who occupy a unique position as creatures of innocence in the American psyche, have haunted the pages of American Gothic literature from its inception, vulnerable figures in whom cultural and psychological anxieties find fecund ground. As such, they have featured critically in racial discourses as well, from slavery and abolition to Jim Crow and the Civil Rights movement. Gothic literature’s exploration of the dark, antagonistic elements of the human mind enables Southern Gothic writers to examine the violent underbelly of the American dream—the removal of indigenous peoples, slavery, and white supremacy—with unique license. This project investigates how relatively underexamined Modern Southern Gothic works such as Eudora Welty’s “Delta Cousins” and Richard Wright’s “Big Boy Leaves Home” reimagine American Gothic’s traditional depiction of race in the South as “the specter of otherness”(Ellen Weinauer, *Cambridge Companion to Gothic Literature*) by portraying the racialization of children. From the foreclosure of black male childhood to the adopted innocence of white girlhood, Gothic children become a device by which the South’s history of racism, playing out in the lives of literary children, is critically explored. I will examine the work of these authors with a variety of lenses—gothic, historical, racial, and modernistic—looking at Teresa Goddu’s *Gothic America: Narrative,*

History, and Nation, Fred Botting's Gothic, Robin Bernstein's Racial Innocence: Performing American Childhood from Slavery to Civil Rights, as well as the seminal *Playing in the Dark: Whiteness and the Literary Imagination* by Toni Morrison.

RYAN OBERMEYER

POSTER 8

Title: Environmental controls on glacial thinning along the West Antarctic Peninsula.

Faculty Mentor(s): David Sutherland & Kiya Riverman

Abstract:

The West Antarctic Peninsula holds over 300 glaciers, all with unique environmental conditions. The peninsula is losing ice, but it is not fully understood what determines change for individual glaciers. Fortunately, Antarctica is rich in remotely sensed data. We use a suite of remotely sensed data to determine environmental controls on glacier retreat and thinning. Using Landsat-7 and laser altimetry derived grounding lines, infrared temperature data, bathymetry swath data, Regional Ocean Modeling runs, and calculated retreat rates we have found more specific correlations between retreat and environment. Furthermore, the creation of the Reference Elevation Model for Antarctica (REMA) allowed for an opportunity to further our understanding of these systems with thinning rates. REMA is a 2m resolution elevation data base for Antarctica from 2009 through 2017. Here we calculate elevation change over time for the West Antarctica Peninsula from REMA. With these rates, we can spatially see how ice is changing on a 2m by 2m scale. We find that glaciers are sensitive to ocean temperature and are directly affected by Antarctic currents, and glaciers with floating tongues have potential for faster retreat. Glaciers in the southern portion of the West Antarctic Peninsula are retreating faster than glaciers in the north.

MEGAN OLIVERA

ORAL SESSION 2 SW

Title: Systematic Review of Mental Illness Measures and Diagnosis in the United States

Faculty Mentor(s): Lynette Danley

Abstract:

The purpose of this study is to conduct a systematic review of current psychological assessments used primarily in the United States intended to address mental illness symptomology or bring about a mental illness diagnosis for patients. Measures included in this study to assess mental illness symptomology or bring about a mental illness diagnosis by clinicians include the Mood Disorder Scale (MDQ), Generalized Anxiety Disorder Scale (GAD-7), Brief Psychiatric Rating Scale (BPRS), Hamilton Depression Rating Scale (HAM-D), Hamilton Anxiety Scale (HAM-A), and the Bipolar Spectrum Diagnostic Scale (BSDA). This review will have specific attention paid to language used in addressing mental disorders or symptomatology, the structure of said assessments and research, and their design. Effectiveness levels, potential harms, and benefits of the most common mental illness assessments commonly used will be discussed and explored in regard to the language used on said assessments. Implications of these findings will provide evidence for where current assessments used by mental health experts may be lacking in. This

information will be useful to not only professionals wanting to reinvent how we screen for mental illness, but also informative for individuals who likely will at some point come across one of these assessments.

KAITY OLSEN

ORAL SESSION 3 DL

Title: Dishes

Faculty Mentor(s): Angela Bogart-Montieth

Abstract:

Dishes is a short story that follows Anna as she navigates difficulties in her marriage and in her rocky relationship with her sister. Following a series of escalating fights, Anna goes to stay with her sister, where she is finally forced to confront the trouble between her and her sister and the infidelity she has ignored for years. When I first started writing Dishes, I was focusing primarily on the relationship between Paul and Anna, two people who had married at a young age and, through the years, struggled to maintain that love. As the piece grew, and in much of my work this year, I became more interested in exploring the complicated dynamics of women in families-between sisters and their mothers.

JESSICA O'NEILL

POSTER 94

Title: Increasing Variability Across Play Routines for a Young Girl with Autism

Faculty Mentor(s): Lindsay Glugatch

Abstract:

One of the defining characteristics of autism is repetitive and rigid behaviors (RRB). RRB can impede social learning and impact appropriate play. Having flexibility in play is important for young children with autism in order to increase positive social interactions in various social settings. This study aims to determine if there is a functional relation between a lag schedule of reinforcement and variability in play routines. A single-case design study is used in which the subject serves as her own control, testing with a multiple-baseline design across different play routines. The intervention includes a lag schedule which provides social reinforcement after a varied amount of responses. The anticipated results include increases in flexibility within the targeted play routines. Implications for future research using lag schedules of reinforcement within social domains will be further discussed.

RIMA PANDIT

POSTER 12

Title: Aggregate Packing Structure and Photophysical Properties of Pseudoisocyanine Thin Films

Faculty Mentor(s): Kelly Wilson & Cathy Wong

Abstract:

Electronic coupling between organic molecules in an aggregate gives rise to distinct features in the measured linear absorption spectra. Electronic coupling is determined by the physical

arrangement of the molecules within the aggregate packing structure, and this results in specific photophysical properties of the aggregate. In dropcasted thin films of pseudoisocyanine (PIC), in situ absorption spectra reveal a distinct intermediate aggregation stage with potentially useful photophysical properties. Single-shot transient absorption (SSTA) spectroscopy can measure the exciton dynamics of the intermediate aggregation stage and of the entire aggregation process. This work describes improvements to a novel SSTA spectrometer that can concurrently measure exciton dynamics, absorption, and fluorescence during the PIC aggregation process. These measured photophysical properties are correlated with aggregate packing structure and composition inferred from fitting in situ absorption spectra with a Holstein-Hamiltonian. This strategy provides insight into the evolving composition and properties of aggregates during the process of aggregation, and can inform initiatives to tune aggregate packing structure to yield aggregates with desired electronic properties for photovoltaics and semiconductors.

BRYNNA PAROS

POSTER 64

Title: Reopening Auditory Critical Periods by Digesting Perineuronal Nets

Faculty Mentor(s): Michael Wehr & Jonathan Saunders

Abstract:

Long-term memories are thought to be encoded by synapses, but synaptic proteins recycle within days. Roger Tsien hypothesized that Perineuronal Nets (PNNs) could provide a durable “punch card” for memory storage. PNNs are tightly-regulated protein lattices surrounding some neurons that inhibit new, while maintaining existing synapses. Understanding speech requires learning the low-level acoustic features of a language, which becomes difficult or impossible after a developmental sensitive period. Do PNNs preserve the acoustic features learned during infancy and inhibit learning new sound categories? Our preliminary experiments demonstrated that the enzymatic digestion of PNNs in auditory cortex enabled mice to learn a distinction between english phonemes (/b/ and /g/) that they were previously unable to. We will present these and other pilot data investigating the effect of PNN digestion on the rate of phonetic acquisition. If PNNs serve as a scaffolding to preserve learned low-level sensory representations, they would be an entirely unexplored therapeutic target for children or elderly people with sensory processing impairments, as well as provide a promising new explanation for the mechanistic origin of developmentally sensitive or critical periods.

CHARLES PAULINO

POSTER 84

Title: Effect of Root Symbionts on *Inga laurina* (Fabaceae) in Disturbed Tropical Forests

Faculty Mentor(s): Krista McGuire & Stephanie Ostresh

Abstract:

Succession in tropical forests is an important yet poorly understood topic in ecology. Dynamic principles are at play that are dictated by resource availability, inter and intraspecific competition, and environmental conditions that affect community structure and function. In this experiment I aim to investigate the physiochemical outputs of *Inga laurina*(Sw.) Willd., a mid-

successional tree, in both early and mid-successional forest plots using Carbon-Nitrogen analysis. Since the roots of *I. laurina* can be colonized by arbuscular mycorrhizal (AM) fungi and nitrogen-fixing *Rhizobium* sp. bacteria, I hypothesize: H1: net Nitrogen output into the environment will be higher in the early-successional plot than the mid-successional plot where environmental conditions favor N-fixing bacteria; H2: if H1 is true, then AM fungal root colonization will be higher in mid-successional stage than early-succession, where environmental conditions are favorable for fungal symbionts.

JOSHUA PEARMAN

POSTER 96

Title: Perceived Power and Affiliation: The Association Between Perceived Power and Liking in Dyadic Interactions

Faculty Mentor(s): Bradley Hughes & Sanjay Srivastava

Abstract:

In interpersonal dynamics, perceptions of power can influence social outcomes, such as liking or respect. Although most studies focus on how power in others influences these outcomes, there is a lack of work on the influence of self-perceived power on one's behavior and judgments. Therefore, this research examines how one's self-perception of power predicts social outcomes during dyadic interactions, which involve two people interacting with one other. Specifically, I worked with the Personality and Social Dynamics Lab to examine the relationship between self-perceived power, experienced during the interaction, and how much the perceiver liked the interaction partner, thought the target liked them, and how much they enjoyed the interaction. These relationships were tested with actor-partner interdependence models. We collected data after 20 minute dyadic social interactions, in which participants worked together on an art gallery task to choose the best 3 paintings out of the 20 provided to display in a hypothetical museum (N = 320). Results indicated a strong relationship between perceived power and how much a participant liked their partner, as well as a strong relationship between perceived power and how much a participant thought their interaction partner liked them. There was not a significant relationship between perceived power and enjoyment of the interaction activity. While previous literature focuses on either how assigned power can influence behavior or how perceived power can be influenced by socio-structural and psychological factors, the present work seeks to examine how perceived power can predict feelings of affiliations when two people interact.

CALVIN PENKAUSKAS

POSTER 61

Title: Resolving conflict between oak conservation and organic hazelnut production

Faculty Mentor(s): Lauren Hallett & Alejandro Brambila

Abstract:

Filbertworm (*Cydia laiferreana*) is a polyphagous moth that burrows into acorns of Oregon white oak (*Quercus garryana*) and hazelnuts (*Corylus* spp.). Filbertworm source populations in remnant oak habitat can lead to cyclical infestation in neighboring hazelnut stands. This makes these

remaining oak stands, which are mostly on private agricultural land, a potential liability to hazelnut production in Oregon – which accounts for over 90 percent of the US production. Oregon white oak habitat is one of the most reduced habitats in Oregon and is of conservational concern. I'm testing a novel way to mitigate hazelnut filbertworm infestation through pig grazing in oak woodland and organic hazelnut understories. Removal of infested nuts interrupts the developmental stage in the filbertworm life cycle. I hypothesize that controlled grazing will reduce filbertworm populations, nut infestation rates, and herbaceous cover. During Spring and Summer of 2018 I conducted baseline filbertworm inventories via pheromone-lured sticky traps in the canopy and ground-based emergence traps in oak woodland and organic hazelnut orchard on My Brothers Farm in Creswell, Oregon. Grazed and ungrazed plots were established in the woodland and orchard. Domestic pigs (*Sus domesticus*) were rotated through two-acre pastures in late September/early October with four to five days in each. Understory vegetation was sampled along transects in each plot and acorn density/infestation rates were inventoried before and after treatment. Preliminary results display a reduction of infested acorns in the oak woodland and no effect on understory vegetation. Ongoing filbertworm, acorn, and vegetation monitoring will continue through Fall of 2019.

MAKENNA PENNEL

POSTER 25

Title: A Flux Story: Harnessing the Power of a Continuous Growth Synthesis to Study the Formation of Indium Oxide Nanocrystals

Faculty Mentor(s): Jim Hutchison & Kenyon Plummer

Abstract:

Nanoparticles have led to incredible technological advances and continue to revolutionize the world around us. In order to pursue novel forms and enhanced synthetic control of these particles, however, we need a fundamental understanding of the growth processes involved. The concept of flux— in this context, the rate at which new material (monomer) adds to a growing particle— is one factor that has remained elusive with traditional synthetic routes. Using a novel slow-injection, continuous growth method developed by the Hutchison lab, we were able to study flux and its influence on the morphology (appearance) of indium oxide nanocrystals, as visualized with transmission electron microscopy. It was found that high flux conditions resulted in relatively branched particle morphologies, while relatively lower flux resulted in cubic particles. We tested several growth mechanisms to explain these observations in the context of different temperatures, and from these experiments, developed a model for nanocrystal growth involving diffusion of monomer across the crystal surface and attachment at reactive edge sites. Our group then utilized this model and the principles of flux to alter the morphology of preexisting particles. The importance of flux during nanoparticle growth, as demonstrated in this study, has far-reaching synthetic implications and should be a consideration in future inquiries.

ALYSSA PETE
ORAL SESSION 3 O

Title: "Swim the Warm Waters of Sins of the Flesh": Deviant Gender and Sexuality in Frankenstein and The Rocky Horror Picture Show

Abstract:

A myriad of authors have examined gender roles and sexuality in Mary Shelley's Frankenstein (1818), directing their attention to the homosexual undertones in the relationship between Victor Frankenstein and his creature, the incestuous connection between Victor and Elizabeth, and Victor's role as either male scientist or mother. While studies of similar themes and relationships in The Rocky Horror Picture Show (1975) are growing in number, they are still limited. Furthermore, there is little literature that directly compares the two works and when they are discussed simultaneously, the emphasis remains on thematic similarities and differences of The Rocky Horror Picture Show as a variant of the original 1818 text. This essay works to directly utilize the blatant representation of shifting gender roles and sexuality in The Rocky Horror Picture Show to illuminate or reevaluate our understanding of subliminal homosexual desires, negative coding of sexuality, and androgyny present in Frankenstein. By analyzing the characterization of and relationships between characters in both the novel and film, I will demonstrate the corresponding depictions of gender roles and sexuality in each text. This essay will also draw from the cultural context of the novel and film, the 19th century and the 1970s respectively, to understand the differences in the visibility and reception of shifting gender and sexuality norms in Frankenstein and The Rocky Horror Picture Show.

ERIN PETRUCCIONE

Co Presenter(s): Temerity Bauer

POSTER 49

Title: The Role of the Auditory Cortex in Speech Sound Discrimination in Mice

Faculty Mentor(s): Santiago Jaramillo

Abstract:

The ability to communicate in languages besides our native tongue is an important skill in a globalized world. In order to learn a new language, a person must learn new ways of categorizing speech sounds. While several strategies have been developed for second-language learning, the neural basis of how we learn a new language are largely unknown. To investigate the neural mechanisms responsible for learning sounds from a new language, we taught mice to discriminate between different sets of speech sounds. The anatomy and physiology of the auditory system of the mouse is such that principles learned in this animal model may provide important hypotheses for how learning occurs in humans. Mice were successfully able to categorize speech sounds according to spectral features (which differentiate the sound /ba/ from /da/) or temporal features (which differentiate /ba/ from /pa/). In the second part of the study, we used optogenetics to test whether mice were able to discriminate among speech sounds when their auditory cortex is inhibited. We accomplished this by expressing a light-sensitive protein in the neurons of the auditory cortex so they could be inactivated with green light. Preliminary data suggests a decrease in performance during optogenetic inactivation,

indicating that categorization of some speech sounds in mice depends on the activity of the auditory cortex. A full characterization of how performance is affected during auditory cortex inactivation is underway. Identifying the neural mechanisms of speech sound categorization will inform better approaches for effectively and efficiently learning a foreign language.

MOLLY PICKEREL

POSTER 21

Title: Paleopiezometry Analysis of Recrystallized Quartz from Pre-Main Stage Veins in the Porphyry Copper Deposit in Butte, Montana

Faculty Mentor(s): Mark Reed & James Watkins

Abstract:

Recrystallized quartz grains from pre-main stage veins in the porphyry copper deposit in Butte, Montana show microscopic evidence of different temperature and pressure conditions seen through the presence of all three recrystallization regime patterns that imply a range of conditions. In this study new methods are applied to analyze recrystallized quartz veins to generate strain rate conditions not previously constrained for these veins. Thin sections of these recrystallized quartz grains are densely populated with a range of different sized fluid and mineral inclusions. The presence of these inclusions prevents the standard application of the analysis function in ImageJ to accurately measure the area of the grains and create a grain boundary map. In order to overcome this obstacle in the study Fourier transforms were created of the images and a bandpass filter applied to eliminate the frequencies of those inclusions so that the inverse Fourier Transform images did not include them. More image processing was needed to skeletonize and fill left over holes in the images before ImageJ analysis. The grain diameters collected are inputted into paleopiezometry equations from Fazio and Ortlano et al. (2018) with temperature estimates from Fouriner et al. (1999). These determined strain rates can provide insights into the conditions of the porphyry system in early stages.

CHRISTINE PONS

POSTER 151

Title: Assessing the Nutritional and Physical Needs of Students Outlined in Oregon Wellness Policies

Faculty Mentor(s): Elizabeth Budd & Elinor Sullivan

Abstract:

The prevalence of childhood obesity continues to increase in the United States. To prevent this rate from increasing, schools have been identified as an effective setting to address obesity. Specifically, school-based interventions that focus on changing dietary intake and physical activity levels lead to decreased prevalence of obesity in students. In addition to obesity, physical activity and nutrition have direct impacts on one's risk for chronic diseases and many types of cancer. Thus, the aims of the project include identifying gaps in Oregon school district wellness policies, as well as determining social and environmental factors (i.e., racial/ethnic makeup of the school, % receiving free/reduced-price lunch at the school, rurality of school setting, walkability of area surrounding school) associated with the strength and comprehensiveness of

district school wellness policies across the state. The research question is answered through the location and evaluation of each school district's wellness policy. These policies are evaluated based on the Wellness School Assessment Tool (WellSAT: 2.0), which assesses how each policy addresses 78 policy items. Based on the assessment, areas of improvement are identified and suggested to the specific school district. The overall assessment shows the strength of each wellness policy in addressing the nutritional and physical needs of Oregon students. Combined with the demographics of each district, these results indicate how a community influences the services provided for student's nutritional and physical health and attempts to prevent obesity.

ALEXANDER PULASKI

ORAL SESSION 3 C

Title: Knowledge Transfer and Performance in Differently Structured Teams

Faculty Mentor(s): Ralph Heidl

Abstract:

In the business world, the mutual understanding and sharing of knowledge is a critical factor of success. There is a plethora of research that indicates the network of social relationships within organizations influences how valuable information is shared and diffused. Traditionally, business organizations have used hierarchical structures to maintain stability and impose pathways for communication. However, non-hierarchical modes (which are flatter and less rigid) of organizing have recently emerged with mixed results. To better understand the micro-processes that drive the costs and benefits of knowledge exchange in structured and unstructured networks, the proposed research seeks to compare and contrast the evolution of hierarchically and non-hierarchically organized collaborative work using surveys and Bluetooth enabled sensor devices. Using these devices, continuous data streams recording varying proximity states among study participants will be examined and analyzed to illustrate how communication is occurring and changing. This effort will shed new light on how hierarchical and non-hierarchical teams evolve in collaborative work settings.

CLAIRE PUTNAM

Co Presenter(s): Bridget Johns, Amanda Henney, Myrriah Jones

POSTER 190

Title: Islam in France: Secularism

Faculty Mentor(s): Matthias Vogel & Laurie de González

Abstract:

In this project, we will examine how France reflects the ideas of the separation of church and state. Specifically, we will look out how it is enforced in every level of schooling. In general, open, outright displays of religion are generally frowned upon in France--but this is enforced more so in schools by law. In 2004, France banned the display of religious symbols and clothing and such in schools, which goes for every religion, including Christianity, even though France used to be a Catholic country. However, this has arguably had a great impact on France's Muslim student population. In France, there is a very large Islamic population due to its proximity to the northern tip of Africa. Hijabs, headscarves, and turbans are not allowed to be worn in the classroom, so

students who practice Islam are forced to sacrifice their expression of religion, which some could say is sacrificing part of their identity. We aim to explore the ways secularism in French schools impacts its students, and, more specifically, the Muslim population of France. After exploring the history of Islam in France, and how Muslims are viewed and treated, we believe that laws set up in the name of secularism are actually created with islamophobic intent.

CORA PYLES

POSTER 57

Title: Neuronal projections to the auditory striatum

Faculty Mentor(s): Santiago Jaramillo & Nick Ponvert

Abstract:

The striatum, a brain area involved in decision making and learning, receives information from both the thalamus and the cortex. However, the precise cortical layers and thalamic nuclei that send auditory information to the striatum are unclear. To address this question, a retrograde viral approach was used in mice to label cells that project to the striatum, allowing quantification of striatal-projecting cells across thalamic nuclei and cortical layers. The study found that the projections from the thalamus come from non-lemniscal nuclei and projections from the auditory cortex come from layers 5 and 6. These results suggest that thalamostriatal neurons are located in nuclei that do not primarily project to the primary auditory cortex. Additionally, the results indicate that the striatum receives auditory information from multiple cortical layers, and each of these neuronal populations may convey different features about sounds to striatal cells. Understanding where striatal-projecting cells are located will allow for targeted extracellular recordings to characterize their neural responses evoked by different frequencies and amplitude modulations rates of sound.

LAURA QUEEN

ORAL SESSION 2 M

Title: Future Flood Risk in the Columbia River Basin Under Climate Change

Faculty Mentor(s): Hank Childs & Phil Mote

Abstract:

The Columbia River has long provided resources as a cultural, economic and ecological agent in the Pacific Northwest. People have congregated along the Columbia's banks throughout history, from the earliest settlements to contemporary metropolises, but this close proximity poses a serious threat when extreme flooding occurs. Understanding how climate change will affect the future flood risk throughout the Columbia River Basin is imperative for risk mitigation and infrastructural planning. To address this question, we are using an ensemble data set which provides daily streamflow values (1950-2100) for 172 different future projections for 396 locations in the Columbia Basin. To run just one future projection, a modeler must make four choice decisions: the representative concentration pathway (RCP), global climate model (GCM), meteorological downscaling method (MDM), and the hydrological model setup. This ensemble dataset contains 172 projections created by a modeling decision chain containing 2 RCPS, 10 GCMs, 2 MDMs, and 4 setups. With an ensemble dataset produced by multiple hydrologic model

parameterizations, we are able to diminish the influence of human-made modeling decisions and find a trend in flood risk change amongst the 172 projections. From the daily time-step streamflow data, we fit probability distributions to extreme events from each water year and estimate flood statistics for floods with 10, 20 and 30 year return periods. From this analysis, we find a substantive increase in flood risk for all outlets sites in the Columbia River Basin and are beginning to study the correlation between sub-basin snow-dominance and increased flood risk.

ITZEL QUIROZ

Co Presenter(s): Michelle Scalise Sugiyama

POSTER 39

Title: Transmission of Traditional Ethnobotanical Knowledge Among the Wichí of the Bolivian Gran Chaco

Faculty Mentor(s): Michelle Scalise Sugiyama & Marcela Mendoza

Abstract:

Western conservation research is increasingly recognizing the value of traditional ecological knowledge (TEK) for preserving and managing wild resources. Because indigenous peoples are increasingly faced with the loss of their language and traditional subsistence practices, documentation of TEK is urgently needed. However, it is unclear how this knowledge is stored and transmitted. In this study, we tested the hypothesis that stories (e.g., myths, legends, folktales) are an important means of TEK storage and transmission in indigenous cultures. Focusing on the botanical knowledge of the Wichí of the Bolivian Gran Chaco, we predicted that their oral tradition would contain stories about important plant resources, and that these stories would contain information useful for locating, identifying, extracting, processing, and/or predicting the availability of these resources. To test this prediction, we surveyed a collection of traditional Wichí narratives (n = 319) for stories about plants; the search yielded 39 plant stories, which were then analyzed for information about characteristics, habitat, distribution, ecological cues, management, seasonality, processing, and uses. All 39 stories contained the predicted information, which was cross-checked against the Wichí ethnographic record to ascertain that it matched actual plant use. The study concludes that oral tradition plays an important role in the transmission of Wichí practical ethnobotanical information, and may be useful for reconstructing the TEK of other indigenous peoples facing cultural disruption. Future research will analyze the oral traditions of other first nations to determine how widespread this phenomenon is.

SKY RAMIREZ-DOBLE

ORAL SESSION 1 O

Title: Tropical land use change effect on soil microbial function

Faculty Mentor(s): Krista McGuire & Stephanie Ostresh

Abstract:

70% of remaining tropical forests, sites with high biodiversity, primary productivity, and CO₂ exchange, are being converted into agricultural or logged areas. Tropical agricultural sites have been found with altered levels of soil carbon, nitrogen, and microbial composition; however, anthropogenic effects on soil and litter microbial functional potential are poorly understood. To

help reveal the relationship between an altered soil and litter chemistry and microbial functionality, total soil and litter carbon and nitrogen concentrations were correlated with the presence of key decomposition macromolecules in litter and soil in the three most abundant tree species in El Yunque National Forest: *Prestoea montana* var. *acuminate*, *Casearia arborea*, and *Dacryodes excelsa*. Through a series of statistical tests, we were able to determine if (1) tree species and land use create distinct physical and chemical zones that alter microbial composition and functional potential, (2) differential carbon and nitrogen availability across land use reflects the dominant tree species present, and (3) high land use areas are correlated to earlier successional species such as *Casearia arborea* and low land use are correlated with late successional species such as *Dacryodes excelsa*. My research will provide insight into the anthropogenic effects of tropical agriculture.

KOMRON RASULOV

ORAL SESSION 3 MI

Title: Restaurants Service and Customers Care

Faculty Mentor(s): Cybele Higgins & Casey Reid

Abstract:

The culinary community -- a community in which people learn and get cooking skills -- has problems between restaurant service and customers. In sales, commerce, and economics, a customer, also known as client or purchaser, is a receiver of delicious food, good service, and products that sellers can offer. In the restaurant business, the customer is the most important. Unfortunately, not all customers are happy, patient or satisfied. The presenter researched three of the most common problems which restaurants encounter with customers and proposes solutions for those customers who create these problems for restaurants in order to create a better customer-led experience. This informative presentation will help inform customers to recognize and change their often unpleasant behaviours in public places. Also, the recommendations presented will help the audience to be "woke" in welcoming behaviours, which every customer should exhibit in public places.

CLARA REHMANN

Co Presenter(s): Joe Dahlke

POSTER 59

Title: Reduced success of *S. purpuratus* fertilization under low pH conditions

Faculty Mentor(s): Lisa Munger & Caitlin Plowman

Abstract:

The oceans serve as an important carbon sink, but rising amounts of dissolved carbon are reducing their pH. Projections anticipate a decrease in mean surface pH from 8.07 to 7.67 by 2100, and some regions are already experiencing pH fluctuations with lows below 7.15 units. Studies have demonstrated *Strongylocentrotus purpuratus* urchins to be evolving in response to acidifying conditions, but successful spawning amongst this species may be inhibited by more acidic seawater. To determine the effect of reduced pH on fertilization success, we simulated spawning by mixing collected gametes in seawater solutions of decreasing pH and assessed eggs

for fertilization using a compound microscope. We found that mean percent fertilization decreased significantly from pH 8.06 (M=98%, SD=1.81) to pH 7.00 (M=84%, SD=12.33) seawater; $t(8)=-2.52$, $p=.026$. Natural pH fluctuations combined with ocean acidification could bring pH levels below 7.00 in the near future, possibly inhibiting the success of *S. purpuratus* reproduction. The resultant decline in urchin populations would have negative consequences for the Pacific kelp forests in which this species lives and could disrupt these fragile ecosystems.

SYDNEY RETAMAR
ORAL SESSION 3 RA

Title: Infrastructural Inhibitors: The Social and Educational Barriers for Individuals with Mobility Impacting Disabilities on the University of Oregon Campus

Faculty Mentor(s): Pascoe CJ (Cheri Joe)

Abstract:

In a time where advancements in architecture have the feasible potential to give all body types access to innovative landscapes, ableism is still present in many institutions. Sociological literature that illustrates explicit acts of ableism in popular institutions such as college life are sparse. The focus of this study was to explore ableism and its manifestation(s) in universities. The research conducted in this study sought to answer the following question: How do infrastructural landscapes shape the social and educational experiences of individuals with mobility impacting disabilities? Through in-person interviews, six individuals with disabilities were given a platform to voice and/or elevate their experiences with ableism on the University of Oregon campus. This research demonstrates that there is a lack of visibility and awareness for accessible accommodations. Results also suggest that infrastructural barriers inhibit students from socially and educationally participating on the University of Oregon campus. A unanimous consensus from participants illustrates unacceptable architectural landscapes that individuals with mobility impacting disabilities attempt to use or alternatively are unable to use daily. Aside from few exceptions, accommodations—if made at all—are a second thought and are conceived by participants of this study to be made for legal protection of the university above all else, not as a means of inclusion for all body types.

GIOVANNI RICCI

Co Presenter(s): Ian Dolbec, Isaac Jodel, Grace Gibbs, Hannah Lake, Enam Bustami

POSTER 170

Title: Immigration Customs Enforcement's Deliberate Targeting of Undocumented Activists

Faculty Mentor(s): Noah Glusman

Abstract:

In the nearly twenty years since September 11th attacks, the United States has seen, as a result of changed cultural values, a dramatic increase in aggressive immigration policy as a means of controlling the influx of both high risk individuals and various racial and ethnic groups. Paired with the refugee crisis from the Syrian Civil War, there has been an increase in the government's pursuit of more aggressive immigration policy. Regardless of the effectiveness of such immigration policies, there has been increasing criminalization of South and Central American

immigrants, a growing anti-Muslim sentiment, and a general increase in xenophobic rhetoric in the American political sphere. As such, the United States has seen intensifying public criticism of various administrations' immigration policies, and perhaps most notably, the increasingly aggressive tactics utilized by Immigration Customs Enforcement (ICE). Many argue that the aggressive nature of these policies infringes on the human rights of immigrants. However, due to the vulnerable nature of their immigration status, these immigrants often lack the ability to make their voices heard without risk of detainment, deportation, and family separation. This has since raised the question of whether or not ICE is actively targeting immigrant activists as a means of preventing immigration policy criticism in the public eye. Upon review of various first hand accounts and the work of investigative journalists, there is evidence that ICE is deliberately targeting immigrant activists. This is immensely problematic as it poses a number of potential human rights violations under both US constitutional law and various international human rights treaties of the United Nations. ICE's policies infringe on the human rights of the especially vulnerable population of immigrant refugees, as such practices limit the right to speak out against the potential human rights violations caused by current immigration policies and practices.

HALEY RICE

Co Presenter(s): Faryn Dahlen, Victoria Dang, Cindy Le, Yalin Li, Jack Lien, Tawny Nguyen, Hanson Pham

POSTER 42

Title: The role of daf-16 in *C. elegans* response to alcohol

Abstract:

All organisms experience various stressors in their environments. Model organisms provide a powerful opportunity to investigate the mechanisms by which organisms cope with these challenges. In the nematode model *C. elegans*, daf-16 is a global stress regulator. Our research focused on testing the role of daf-16 in the organismal response to alcohol exposure to understand the function of this gene. *C. elegans* with the daf-16 mutation have a reduced ability to respond to stressful environments. We predicted that daf-16 mutants would be less able to respond to ethanol, resulting in lower survival compared to wild-type. We sought to determine whether daf-16 mutants are able to respond to alcohol in a manner comparable to wild-type. After incubation in a weak ethanol solution, we exposed groups of wild-type or daf-16 worms to either acute alcohol stress (10% EtOH; treatment) or to a buffer (control). After five minutes, we counted the number of alive and dead *C. elegans* and calculated percent survival in both wild-type and daf-16 in both solutions. Our data indicate a significant effect of alcohol on survival, though the magnitude of the reduction in survival in response to ethanol is modest. Our data further indicate no significant effect of genotype on survival in response to ethanol exposure. From the collected data, we concluded that the daf-16 mutation has little to no effect on the alcohol-associated stress response of the *C. elegans*. Future work will be aimed at determining the role of daf-16 in organismal responses to other stressors.

NICOLE RINGSDORF

POSTER 18

Title: Characterization of Asteroid 93 Minerva Searching for Variation of the Light Curve to Determine Physical Attributes

Faculty Mentor(s): Dr. Jim Imamura & Scott Fisher

Abstract:

In 1967 Pine Mountain Observatory (PMO) made its first observations of astronomical objects that included everything from nearby planets and asteroids to distant nebulae and galaxies. In 2018, PMO continues to make research-grade observations of various kinds of celestial targets. In this poster we present the results of Broad-band optical photometry of the asteroid 93 Minerva using the 0.35 m Robbins telescope on September 5, 2018 (UTC). On this night the target asteroid was continuously observed for roughly 2.5 hours to measure variations in its light curve. The shape and magnitude of the changes in the light curve can be used to determine physical characteristics of the target including rotation period and 3-D shape. Photometry of the target, as well as calibration stars, was performed using The Aperture Photometry Tool (v.2.7.5). Although there were limitations in the data due to non-optimal observing conditions, our obtained light curve closely matches previously published 93 Minerva data. These data are a successful proof-of-concept of our ability to perform accurate photometry of moderately faint objects at PMO. With this successful test, we will soon start a larger asteroid monitoring program at PMO. In conjunction with our colleagues at Kobe University in Japan, we will collect multiple-epoch, short-cadence photometry on several asteroids to construct light curves and map their three-dimensional features.

LILY RITCHIE

POSTER 104

Title: Education as an Equalizer?: Youth Homelessness and Navigating Educational Institutions

Faculty Mentor(s): CJ Pascoe

Abstract:

Educational institutions are increasingly improving in supporting students experiencing homelessness. With the installment of the McKinney-Vento Act (1987), schools are able to provide resources and transportation needs to families and youth without a permanent address. However, barriers still remain. The question guiding this sociological research is as follows: how does a youth's living situation, specifically youth experiencing homelessness, impact their ability to both have access to educational resources and successfully navigate educational institutions? Using qualitative methods, this research explores the differing perspectives of three populations to uncover the implications that living situations have on access to and success in educational settings for homeless families and youth. The three populations interviewed include educators, families and former students that have or are experiencing homelessness, and social workers. Results show that while families experiencing homelessness are supported by schools upon identification, homeless youth who are not identified by educational institutions receive no support. The current educational system relies upon families and students to self identify their homeless condition, which is problematic for those who are hesitant or unable to step forward.

Furthermore, data suggests that unless educators are passionate in supporting homeless youth at an administrative level, students do not receive adequate resources to succeed in educational settings. This research suggests, then, that implementing clear standards for administrators to follow as well as the training of properly identifying youth as homeless to receive support is necessary in order for educational institutions to be a source of security and equality for all students.

ANDREA RIVERA

Co Presenter(s): Laura Ho

POSTER 180

Title: Send Noodles

Abstract:

Send Noodles

College students are stereotyped to live off caffeine and Cup Noodles, and for a good reason. Cup Noodle can be prepared in 3 minutes with hot water and for a very affordable price, making it a quick fix for anyone pinching pennies on the go. What we will be looking at is the nutritional value of Cup Noodles and how it affects the human body. We will also continue researching the history behind the instant ramen noodles and how they came to be.

60 years ago, the very first instant ramen was invented and commercialized by Momofuku Ando after he noticed the food shortages brought about by World War II. After a few prosperous years, Momofuku looked to expand his market globally and noticed Americans preparing his noodles to eat with a cup and fork, sparking a revelation that brought us today's popular instant ramen: Cup Noodle. Cup Noodle has grown to be a global sensation, selling in more than 80 countries. As of 2015, only 30 percent of Nissin's Cup Noodle sales were from within Japan while the other 70 percent comes from overseas. Its active market has spurred plenty of competition as well, with many brands offering their own varieties of instant ramen. Nissin has even opened two Cup Noodle museums in Japan, located in Osaka and Yokohama, where visitors are able to make their very own Cup of Noodles.

With so many types of flavors offered worldwide today, Cup Noodle remains a classic favorite among many, inside and outside of Japan and one of Japan's strongest food exports.

HELEN ROBINETT

Co Presenter(s): Helen Robinett

POSTER 191

Title: The Spread of Islam and Eastern Religion in Chile and Argentina

Faculty Mentor(s): Matthias Vogel

Abstract:

In an increasingly isolationist society, multiculturalism is becoming less of a goal and more of a buzzword as citizens are subjected to arguments against the variety of languages, religions, and social norms that come naturally with living in a "melting pot". Nationalists warn against the flow of immigrants, predicting increasing conflicts between religions and ethnicities as more and more diverse identities come into close proximity every day. Our research compares the spread

of eastern religion and Islam in catholic countries such as Argentina and Chile to Islam in the United States, where religious and cultural tensions are more prevalent. Through statistics surrounding religions in Argentina and Chile and research on current tensions (or lack thereof) between the different religious communities, we seek to set Latin America as a model for tolerance, and identify ways that the United States can follow its example.

MALYSSA ROBLES

CREATIVE WORK 2 RA

Title: The Exploration of Translating Abstract Artistic Mediums: Non-Verbal Expression and Communication

Faculty Mentor(s): Tze-Yin Teo

Abstract:

My research is an abstraction of translation and translative practices. In my studies I have explored what it means to transverse concepts, themes, and ideas from one artistic medium: dance, to another: written poetry. Because the former of these mediums is an abstract art form, it was therefore integral to the progression of this task to define dance as not only an art form, but also a method of abstract communication that is used as a non-verbal platform to relate from person to person. I found that there is a “mutation” that dance phrases must go through to pass from the language of the body, to the verbal language of English. The challenge became applying linguistic techniques to abstract material in order to transform dance into poetry. It is easiest to discern the message of dance by utilizing the intuitive sense of human connection during the interpretation of the performance and the impact that this has on the experience of the viewer. Our senses leave residual impact throughout the creative piece which leads the audience to the original concept meant to be conveyed which parallels the experience one has in the flow of meter. This being the basis for the conversion of languages. This research was important to me as a Comparative Literature major and Dance minor, in connecting both areas of study while highlighting their nature of communication. This research helps prove both art forms provide the same service and are valid ways to share experience with the world.

ELEANOR ROCHESTER

ORAL SESSION 1 C

Title: “I Don’t Have Deaths on my Conscience”: Perspectives of Intravenous Drug Users on a Peer-Delivered Naloxone Program in Eugene, Oregon

Faculty Mentor(s): Melissa Graboyes

Abstract:

The United States is in the midst of an epidemic of overdose deaths. In response, harm reduction programs commonly distribute the opioid antagonist naloxone directly to drug users so that they can act as first responders to overdose. When injected, naloxone reverses respiratory depression and can save the life of a person overdosing on opioids. As evidence for the effectiveness of these programs at reducing deaths continues to be collected, little research has been conducted into the impact of serving in this role on drug users themselves. To better understand the lived experiences of drug users with naloxone, semi-structured interviews were conducted with

seventeen syringe exchange participants who currently carry naloxone. Interviews revealed that carrying and using naloxone is empowering for many drug users, because it contrasts with the powerlessness they may feel in other aspects of their lives. Peer administrators use naloxone in a way that reinforces the community of care among drug users. This aligns with the goals of harm reduction programs, which seek to empower drug users to make choices to improve their lives, without abstinence as the ultimate goal. Future programs distributing naloxone to drug users should be aware of its potential not only to save lives, but to increase drug users' self-confidence and strengthen the network of overdose care in their communities.

ELLE ROGERS

ORAL SESSION 2 O

Title: Why Can't We Be Friends?: Masculinity in the TV Sitcom "Friends"

Faculty Mentor(s): Dr. Allison McGuffie

Abstract:

On the surface, "Friends" is viewed as an All-American, wholesome television series. Though the love for the series is immeasurable by original audiences and the newest generation of on-demand viewers like myself, many commentators have said "Friends" upholds masculinist social norms that are unacceptable in our current era marked by gender awareness such as the me too movement. A close analysis of looking relations in a single episode, in fact, reveals that the male gaze, originally defined by Laura Mulvey, maintains control of the show's depiction of masculinity at the expense of femininity. Drawing on Judith Butler's theory of gender performativity and building on David Gauntlett's analysis of gender identity in television, this presentation examines exactly how Friends enforces hegemonic masculinity. I ultimately show that problematic norms of masculinity in the episode, "The One with Ross's Teeth," are enforced by character depictions, the construction of the gaze, and the utter absence of feminine perspective.

ZORA ROSE

POSTER 2

Title: The Effect of Auditory Theta Stimulation On Memory, Mood and Attention (Works in Progress Presentation).

Faculty Mentor(s): Mike Posner & Dasa Zeithamova

Abstract:

The theta frequency (4-8hz) has been implicated with states of restful awareness (Posner, Fan, McCandliss, and Raz 2002). Increased frontal theta waves as measured by EEG have been achieved through meditation training in several studies (Tang et al, 2010; 2012). Studies of the effects of mediation also show increased executive control using measures involving the resolution of conflict (Cavanagh and Frank, 2014). Additionally, some research suggests that the use of auditory theta stimulation may improve overall cognition (Ortiz, Martínez, Fernández, Maestu, et al 2008). Other studies demonstrate a link shared between auditory binaural beat stimulation and improved overall mood (Padmanabhan, Hildreth, Laws, 2005). The aim of this current study is to determine if auditory stimulation utilizing the theta frequency may improve

mood, increase working memory capacity and improve executive attention scores as measured by the attention network test, similar to the effects produced by meditators experiencing self-induced states of “restful alertness”.

FRANZISKA ROTH

Co Presenter(s): Sterling Baraquio, Emily Gonzalez

POSTER 141

Title: High Frequency Hashtag Usage Negatively Influences Musicians’ Twitter Engagement

Faculty Mentor(s): Dave Markowitz

Abstract:

In this research project, we evaluated the effect of hashtag frequency on musicians’ Twitter engagement. Our project specifically analyzed musicians with albums from the Billboard Top 200 list who actively posted on Twitter in 2017. In total, we scraped Twitter timelines from 93 musicians, including a sample of 53,299 Tweets using a software for statistical computing called R. The program allowed us to observe all 53,299 tweets at once, including metadata (username, engagements, date posted, etc.) Drawing on prior work that suggests that excessive hashtag use may be perceived as inauthentic (e.g., the concept of wear-out from marketing; Danaher, 1996), we found support for the idea that artists with more hashtags per post (as a proportion of their followers) had significantly fewer Twitter engagements. Therefore, the more hashtags an artist uses, the fewer engagements they will receive on their Tweets and this negative relationship was robust across musicians. Our findings emphasize the importance of using digital media traces to form perceptions about people and musicians online. We anticipate that this information can have reputational and financial impacts on artists as brands and change how social media strategy is pursued in the music settings.

NOLAN RUDOLPH

DATA STORY 2 CLN

Title: Self-Driven Network for the University of Oregon

Faculty Mentor(s): Ramakrishnan Durairajan

Abstract:

Our nation has perpetually progressed toward an era of fully automated devices. Obliging by the expectations of the future, I intend to create a device for real time network monitoring and measurement with self remediation abilities that would allow University of Oregon (UO) to run on an entirely self reliant network. This device will be installed with unique software designed for UO to emulate a robust network. This project could benefit UO in a multitude of ways, but most importantly, the security of its network would heighten due to its ability to rapidly diagnose its current state and react accordingly.

EMIL SADOFSKY

ORAL SESSION 2 M

Title: The effects of restoration fill elevation on carbon accumulation in Pacific Northwest estuaries

Faculty Mentor(s): Scott Bridgham

Abstract:

Agricultural development has significantly decreased the extent of coastal wetlands in the Pacific Northwest. Some previously developed wetlands have been restored, but the effects of restoration on their carbon cycling functions are still unknown. To better understand land use effects on carbon cycling, we compared soil carbon dynamics in restored and reference wetlands in the South Slough estuary in Coos Bay, Oregon. We measured soil carbon content and used radioisotope dating to calculate carbon pools and carbon accumulation rate, and we measured in situ carbon dioxide (CO₂) and methane (CH₄) emissions in restored and reference wetlands to better understand carbon fluxes. To compare different methods of restoration, the restored sites were originally restored to different elevations. We found that the restored wetlands will have smaller and shallower carbon pools than reference sites. We also found that carbon accumulation will be fastest in the reference marsh. Among the restored marshes, we found that carbon accumulation is fastest in the low elevation marsh and slowest in the high marsh.

ALINA SALAGEAN

ORAL SESSION 3 M

Title: SMC-5/6 E3 SUMO ligase subunit NSE-2 is required for robust repair of meiotic DNA double-strand breaks

Faculty Mentor(s): Diana Libuda & Erik Toraason

Abstract:

Most organisms utilize meiosis, a specialized form of cell division, to produce haploid gametes such as sperm and eggs. Failure to maintain genomic integrity during meiosis can cause infertility and cancer. Using the model organism *Caenorhabditis elegans*, previous work has demonstrated that the conserved Structural Maintenance of Chromosomes 5/6 complex (SMC-5/6) is required for robust repair of double-strand DNA breaks (DSBs) in late meiotic prophase I. The specific mechanisms by which SMC-5/6 promotes DSB repair remain unknown. One subunit of the SMC-5/6 complex, the E3 SUMO ligase NSE-2, has been implicated in DNA repair in multiple organisms. To identify the specific contributions of NSE-2 to meiotic DSB repair and fertility, we generated four *nse-2* null mutants using CRISPR/Cas9 genome editing and assessed their phenotypes associated with genome integrity across generations. Utilizing these *nse-2* mutants, we find that similarly to SMC-5, NSE-2 is required for a germ line-response to exogenous DNA damage. In contrast, unlike SMC-5, NSE-2 is not required for maintenance of fertility over generations. These data suggest NSE-2 is required for either a specific subset of functions of the SMC-5/6 complex or the efficient function of SMC-5/6. Our future experiments will utilize both genetic assays and immunofluorescence imaging techniques to distinguish between these hypotheses. Taken together, our research defines mechanisms preserving genomic integrity and fertility across generations.

JESSICA SAMPLES

Co Presenter(s): Lucille Shadburne, Emma Meese

POSTER 192

Title: Naturalization and Immigration in Quebec

Faculty Mentor(s): Matthias Vogel & Laurie deGonzalez

Abstract:

Obtaining Canadian citizenship is a process many people aspire to complete every year. Going through the naturalization process is one step towards becoming a Canadian citizen. According to macleans.ca, Canadian citizenship was granted to more than 260,000 individuals during the year of 2014, after completion of a number of tasks. Depending on their reasons for wanting to immigrate, these people help boost the Canadian economy, while diversifying the country at the same time. A fraction of these hopefuls are immigrants seeking refuge specifically Quebec.

For this presentation, our focus will be on the immigration and naturalization process for the Canadian province Quebec. Quebec is a French-speaking province and has recently begun to accept larger numbers of Haitian refugees into its borders. The main topics we will be examining are how open the borders are, how difficult or easy it is to gain naturalized status, why immigrants chose Canada, and also why the country is so welcoming to refugees and immigrants to draw parallels and to suggest different approaches to the discussion about immigration in the United States of America.

TULKU SANGYE TENZIN

ORAL SESSION 3 MI

Title: Behavior of Human Beings and their Effect on Global Warming

Abstract:

Changes in the earth's climate are a consequence of the actions of the human species in the past and present. If we care about our mother Earth, then we need to react to this situation by changing our behavior as a global community, specifically our motivation. How do we as individuals change our perception in order to reduce global climate change, and why don't we respond to this issue with urgency this? For my research, I participated in environmental and climate justice events, watched a professional documentary about climate change, interviewed knowledgeable activists in the community who work to bring awareness to global climate change, and read reliable articles related to global climate change. My research shows that we have many methods that can help reduce climate change, including studying, changing our behavior, and informing ourselves so that we can change the world through our actions; however, this is complicated by the fact that there are many people in this world of different cultural, political, and economic backgrounds. On the other hand, if we all work together, we can have a powerful effect. My research predicts that if we can change, reduce the causes of climate change, and work continuously toward a solution, then we will naturally experience a positive result in the future. It is our responsibility to act because of the interdependent nature of the human activity and climate change.

SHELBY SAPER

POSTER 122

Title: Cascade Phase Context and Chronology at the Connley Caves, Oregon

Faculty Mentor(s): Richard Rosencrance & Katelyn McDonough

Abstract:

Cascade projectile point chronology in the northern Great Basin is poorly understood, with associated evidence ranging from the early to middle Holocene. The broad temporal range of Cascade points results from the difficulty in distinguishing this type from the more general “foliate” category and lack of well-dated sites containing such artifacts. Recent excavations at the Connley Caves, in the Fort Rock Basin of south-central Oregon, have recovered diagnostic Cascade points in association with directly dated early Holocene cultural features. As such, this site offers a unique opportunity for the refinement of local projectile point chronologies and informs Cascade point user procurement and technological strategies. This poster presents new radiocarbon dates, projectile point source provenance data, and a preliminary debitage analysis of the Cascade component at the Connley Caves.

ARDEN SARAIVIS

POSTER 159

Title: The Correlation Between Stigma Stemming from HIV and Antiretroviral Packaging: Design Recommendations for Introducing Discrete Packaging

Faculty Mentor(s): Clare Evans

Abstract:

Failure to adhere to antiretroviral therapy (ART), the medication for HIV, persists in exponentially large numbers in the adolescent population in Western Kenya. The presence of stigma surrounding HIV heavily contributes to this immense prevalence in society. Adolescents living with HIV fear premature disclosure of their status to their peers, therefore leading to isolation, so many choose to not bring their ARTs in public and even hide them in their homes. This study investigates alternative packaging/casing for the ARTs that will be discrete, and thus encourage adolescents to carry their medication in public since they will be unrecognizable. This study will conduct in-depth interviews (IDI) among adolescents aged 10-24 years as well as key informant interviews (KII) with those who work directly with HIV infected youth. Extensive preliminary research amongst 300 adolescents with HIV has confirmed the need for a discrete package to be developed and creative suggestions have already been made. The results of this study will present design recommendations and ideas from the affected population themselves, and this information gathered may be used to inform a new product design for ART casing/packaging.

RYAN SAYEGH

POSTER 9

Title: Exploring the Role of Lrig3 In the Colon

Faculty Mentor(s): Annie Zemper & Janelle Stevenson

Abstract:

The colon is a vital organ for digestion. Its inner epithelial lining has tubular invaginations known as colonic crypts. These crypts contribute to a dynamic system containing stem cells necessary for colonic repair and maintenance (Barker et al. 2014). Disruption of the colonic crypt system is a symptom of diseases like Irritable Bowel Disease, colitis, and colorectal cancer. The protein EGFR plays an important role in the cell proliferation necessary for maintaining homeostasis within the colon. Leucine-rich repeats and immunoglobulin like domains 1 (Lrig1) is a protein that plays an antagonizing role to Egfr (Wang et al. 2013). LRIG3, a homolog of LRIG1 was shown to positively regulate EGFR in a cell culture model (Rafidi et al. 2013). However, its role in the colon remains unknown. I hypothesize that mice lacking Lrig3 (Lrig3^{-/-}) will have smaller epithelial tissue areas with lower expression of Egfr. I used immunofluorescence to analyze the expression of Egfr in the absence of Lrig3 and found no difference compared to control mice. I then analyzed colonic epithelial area using Hematoxylin and Eosin staining and found that Lrig3^{-/-} mice had a larger area of epithelial tissue when compared to control mice. These data show that Lrig3 may be playing a different role in the Egfr pathway than what other models would suggest.

JAYCIE SCHENONE

DATA STORY 2 CLN

Title: Out of Bounds

Faculty Mentor(s): Ed Madison & Jesse Abdenour

Abstract:

The combination of poor mental health and college athletics has caused many young adults to take their own life. A year ago, Tyler Hilinski borrowed his friend's rifle and fatally shot himself in the head. Five years ago, across the country, Madison Holleran jumped from the top of a parking structure in Pennsylvania to her death.

Their stories have been told countless times with the hope and intention of inspiring people to ask for help. But the ending never changes. You want it to change so badly and it doesn't. That's why I'm going to tell someone else's story.

The 10-12 minute documentary, "Step Out of Bounds," is a take on how one female lacrosse player at the University of Oregon medically retired to quite frankly save herself.

At the UO Research Symposium, I want to share my research, process, and development for this documentary because journalist/filmmakers have a duty to tell similar stories but there are several challenges in doing so. We should be discussing them.

MADLYN SCOTT
ORAL SESSION 3 S

Title: Correction of evolving background signals in single-shot transient absorption measurements

Faculty Mentor(s): Cathy Wong & Kelly Wilson

Abstract:

The electronic properties of organic molecules can be tuned to attain target electronic functionality. This feature of organic molecules enables their use in technologies like solar cells and light-emitting diodes (LEDs), in replacement of conventional silicon materials. The electronic properties of organic systems can change depending on way individual molecules pack together to form larger aggregate structures. Understanding how the behavior of organic molecules changes while molecular aggregation occurs enhances our insight into how target electronic functionality can be obtained by altering the environment of the molecular system. Conventional methods of studying the electronic properties of molecular systems are not equipped to measure evolving materials. To examine the changing electronic properties of materials systems, we have developed a single-shot transient absorption (SSTA) spectrometer capable of measuring structurally non-equilibrated samples, like molecules in a solution stacking into a final aggregate structure. However, evolving samples have changing background signals which can hinder SSTA measurements of the electronic properties of a sample. In this work, we demonstrate a shot-to-shot correction of dynamic background signals for SSTA measurements. Our correction scheme improves the robustness of SSTA for measurement of materials systems during molecular aggregation. Characterizing the electronic properties of organic semiconducting molecules during molecular aggregation will ultimately facilitate the achievement of target electronic properties for use in technological devices, like solar cells and LEDs, which are becoming increasingly prevalent in our contemporary society.

ARI SEPULVEDA
POSTER 158

Title: Sleep Intervention Effects on Sleep Quality and Mental Health

Faculty Mentor(s): Melissa Latham

Abstract:

Poor sleep hygiene and mental health issues are common amongst college students due to high stress and rigorous environments. This project uses the Depression Anxiety Stress Scale (DASS) and the Pittsburgh Sleep Quality Index (PSQI) to assess improvements in sleep quality and mental health after exposure to our developed sleep intervention. During the intervention, participants had a phone application which provided helpful suggestions (“nudges”) and reminders to help initiate healthier sleep hygiene, and improve related mental health conditions, such as depression, anxiety, and stress. Participants in the study were given both the DASS and the PSQI surveys at the beginning and culmination of the five-week study. Our research indicates that although scores in the DASS measurement did not significantly decrease, overall sleep quality was significantly improved through the intervention. While depression and lack of sleep are correlated, sleep does not directly impact stress and other mental health issues. Although not all

hypotheses were met, we were able to successfully implement the sleep intervention to impact the quality of sleep in college students.

KARISHMA SHAH

DATA STORY 2 CLN

Title: Calculating the Economic Impacts of Food Gentrification on Communities of Color in Portland

Faculty Mentor(s): Michael Pangburn & Beth Hjelm

Abstract:

While there is much research about the extreme gentrification currently occurring in most major cities around the United States, the economic impacts of food gentrification remain unstudied. Understanding how much annual profit is lost by people of color in the restaurant industry helps to realize the larger cultural impacts of food alongside gentrification. This paper explores the cultural and economic impacts of food gentrification in Portland using literature review, data collection, and data analysis. This data shows the quantitative impacts of gentrification in the food industry and how it contributes to the displacement of communities of color in Portland.

LUCAS SHANNON

Co Presenter(s): Zachary Gee

POSTER 193

Title: Islam in the German Sphere

Faculty Mentor(s): Matthias Vogel

Abstract:

The Muslim population in Germany, Austria, and Switzerland is growing in a manner parallel to the ever more polarizing political spectrum in the German Sphere. Two extreme views of Islam have developed: Islamophobia and Islamophilia. Both are on opposite ends of a spectrum, and both are equally unhealthy. While one is blinded by hatred for Islam, the other is blinded by a seeming infatuation with it. Complicated by Germany and Austria's history, these attitudes often prevent proper discourse from taking place, something all the more necessary as migration brings more and more people of Islamic cultures to Western Europe. Islamophobia and Islamophilia are part of a self-fueling cycle that incites and increases each other's outrage. If better tempers prevailed, the public debate around Islam and immigration would be more nuanced, allowing for the possibility to find real solutions to the problems caused by mass migration. To gauge public opinion on the matter, we will be analyzing polls, political documents, and be looking at media coverage on public opinion within Germany, Austria, and Switzerland. These statistics will show the trends and differing attitudes within the debate, and will also point to possible solutions for a more civilized debate over the issues.

ALLENE SHAW

ORAL SESSION 1 SW

Title: The Role of Intonation in Japanese Politeness

Faculty Mentor(s): Kaori Idemaru

Abstract:

The purpose of this study is to examine linguistic relationships between phonetics (the way people sound) and politeness in Japanese. Prior studies investigated voice characteristics in Japanese deferential speech (addressed to persons of superior social status) and non-deferential speech (used with persons of equal or inferior status). They found that the Japanese language exploits phonetic features to express politeness (Idemaru et al, forthcoming). Their study, however, observed overall intonation for entire utterances. I propose to conduct a more detailed analysis of their data, by dividing utterances into meaningful phrases in order to determine where in a sentence intonation is employed to express politeness. Understanding how and where important social cues like politeness are embedded in speech is critical for understanding how communications work in Japanese society and also for developing language and cultural fluency, particularly for non-native language learners.

Traditional research on politeness typically focused on type of words and grammatical features used to communicate politeness in various languages. However, a new wave of research began examining other dimensions such as voice characteristics and gestures (e.g., Winter and Grawunder, 2012; Brown et al 2014; Idemaru et al., forthcoming) with the theoretical view that speakers employ multiple politeness strategies to ensure successful communication. Their results indeed demonstrate that multiple linguistic and non-linguistic features contribute to produce the intended meaning of politeness. This study attempts to advance these efforts further. I will use the same data analyzed in Idemaru et al. (forthcoming) to measure and analyze important acoustic features (pitch, intensity, voice quality) at critical regions within words or phrases. This study will yield a more accurate understanding of the phonetic basis for one of the most fundamental Japanese social cues – politeness.

CAITLIN SHREEVE

Co Presenter(s): Nichole Biggs

POSTER 62

Title: Grooming as an Indicator of Male Dominance and Reconciliation in Japanese Macaques (*Macaca fuscata*)

Faculty Mentor(s): Frances White & Kylene Gartland

Abstract:

In primate societies, social rank is very important in males. Higher-ranking males get more food, more mates, and better social situations than lower-ranking males. Males, therefore, fight over rank and as a result, often need to “make-up” or reconcile after a fight. This reconciliation is important for repairing social bonds and group cohesion. Dominance rank is primarily determined by primatologists from watching aggressive interactions, but if fights are rare it can be hard to identify male rank. In this study, we will be researching whether it is possible to use a more common behavior to identify male rank. Japanese macaques (*Macaca fuscata*) spend a lot

of time grooming, which is used to rebuild and strengthen bonds within the social group. The directionality of grooming may be indicative of dominance relationships because high-ranking individuals may receive more grooming than low ranking individuals. Additionally, reconciliation through social grooming may also be related to the dominance rank of the males involved. Through an examination of published studies, we will extract information on the relationship between grooming and reconciliation with dominance rank. We will then develop a data collection methodology which we will use in a research study of the adult males in the Japanese macaque group at the Oregon National Primate Research Center. Studies of reconciliation and dominance rank through the lens of grooming behaviors can give us a better understanding of the complex social relationships in multi-male Japanese macaque societies.

KELLY SHULL

Co Presenter(s): Owen Collins, Jackson Dailey, Betsy Finn, Ben King, Haley Nicholson, Sky Ramirez-Doble, Nick Richardson, Haley Santos, Kiana Seto

ORAL SESSION 2 CLN

Title: Landscape scale forest health assessment in Hendricks Park, Eugene, Oregon

Faculty Mentor(s): Peg Boulay

Abstract:

During Spring 2019, the Environmental Leadership Program will be partnering with the City of Eugene to collect data on Hendricks Park, located in Eugene, Oregon. The Hendricks Park team will collect data on vegetation, wildlife habitat features, recreational impacts, and invasive species in the original twenty-four plots that were surveyed in 1999. This data will be collected through multiple qualitative and quantitative measurements that indicate forest health, such as measurements of invasive species cover, coarse woody debris, and plant composition. The team will then conduct a comparative analysis of the 1999 and 2019 data to assess what has changed over time, and how this change influences the City of Eugene's management objectives. This analysis will be compiled in a report for the City of Eugene to use and make informed decisions about the future management of Hendricks Park.

SAMANTHA SIDLINE

ORAL SESSION 1 C

Title: Embodied Experiences: The Health Implications of Transnationality and Undocumented Migration Among Latin Americans

Faculty Mentor(s): Kristin Yarris & Christabelle Dragoo

Abstract:

Given the current political climate, studying Latin American migrant experiences and adverse consequences to health is particularly important and relevant. By evaluating health disparities, studying social stigmas, and examining institutions and policies, ethnographic research has been able to show how being a Latin American in a transnational setting negatively affects health outcomes. This project draws on three ethnographic studies about health and transnational migration written by Kristin E. Yarris, Whitney L. Duncan, and Sarah B. Horton. The ethnographic research follows the experiences of Latin Americans in three distinctly different transnational

circumstances, including grandmothers serving as caretakers of their grandchildren in their migrant daughter's absence, families separated by the United States and Mexico border, and undocumented migrants in California. The arguments of this presentation synthesize the findings in these ethnographies by identifying key themes and commonalities among Latin American transnational migrants and applying theories to these themes. The health outcomes of the individuals studied in these ethnographies reveal how mental and physical health symptoms are the manifestation of lived experiences based on social position, such as socioeconomic and legal status. These outcomes are directly related to the concept of syndemics, which describes the interrelationship between mental health struggles and chronic disease. Intersectionality Theory, which describes how systems of oppression contribute to health inequity, is also foundational in the evaluation of health outcomes across Latin American populations. The culmination of these ethnographic studies and the application of other theories demonstrate how Latin American transnational families and undocumented migrants suffer disproportionately from chronic disease and mental health challenges.

KENDRA SIEBERT

ORAL SESSION 1 SW

Title: The Unofficial Story and the People Who Paint It: An Investigation of Urban Art's Mobilizing Power in Oaxaca and Mexico City

Faculty Mentor(s):

Abstract:

Although parietal writing – the act of writing on walls – has existed for thousands of years, its contemporary archetype, urban art, emerged much more recently. An umbrella term for the many kinds of art that occupy public spaces – graffiti, murals, stencils, etc. – urban art can be accessed by whoever chooses to look at it, and has roots in the Mexican muralism movement that began in Mexico City and spread to other states like Oaxaca.

Over the course of three years, I have been developing my undergraduate thesis, which looks into the Mexican Revolution and the origins of the Mexican muralism movement, before narrowing in on the function of urban art – specifically in times of unrest. In both 1968 and 2006, two points in Mexico's recent history that birthed national social movements, urban art emerged as a visual form of testimony when other outlets like public radio became restricted and censored. Today, it continues to take on new forms and meanings, reflects culture from a different perspective than that of the government, leaders, corporations, etc.: that of the people.

I first traveled to Mexico City and Oaxaca for three weeks in August 2017 to investigate this topic, and returned on a follow-up trip this past winter term. My objective has remained the same since I first started exploring this topic: to bring the voices and unique perspectives of contemporary Mexican artists to people in other parts of the world. To accomplish this, I conducted one-on-one interviews with more than 25 urban artists in Oaxaca and Mexico City and asked questions ranging from "What do you think is the function of urban art" to "Is all art in the public space inherently political?" I also dove deeply into the existing body of relevant

literature, toured museums and national monuments, and embedded myself in the artistic community as best as I could.

Additionally, I created a digital archive of photographs from 2017 and 2019 that highlight the changes I myself have witnessed on walls in Oaxaca and Mexico City. Through the various methodological approaches I have used in this project, I have identified four functions urban art can, and has served, in Oaxaca and Mexico City: 1) It can act as a form of identity affirmation – one that reflects everyday people, regardless of status or affiliation; 2) It places cultural testimony in public spaces; 3) When combined with other approaches, it can lead to social mobilization; 4) in the aftermath of a movement, it can preserve the collective memory, rather than a dominant hegemonic narrative.

My objective is to challenge common perceptions surrounding urban art and encourage people to go see these works for themselves. It was made possible thanks to support from UROP and HURF.

MICHAEL SILVER

POSTER 110

Title: Social Isolation: Which aspects of Social Media are at Fault?

Faculty Mentor(s): Kate Harmon

Abstract:

Social isolation as a result of social network use is a problem that has gained much media attention, but we don't know how deeply rooted this problem is or how to approach it. While researchers previously have found our online lives cause socially isolating feelings, I would like to discover potential solutions in incentivizing a more meaningful online experience for our youth. Using an online survey and offering continuous focus groups over summer I hope to engage directly with Social Media Users to find out how we can best redesign key social media features to bring value to users' online experience. There are strong indications that the current social networking model has some socially isolating features, while only specific use scenarios actually provide a positive benefit to the user. My hypothesis is that one-click features of social media usage are more socially isolating than others. To gather participants I plan to advertise a survey that asks to scale a social media user's state of mental well-being as well as their social media usage for each particular social site and feature. After the survey has enough responses I will be able to use a Chi-squared test and dummy variables to deduce which features of social media are more socially isolating than others. Then using focus groups that will be held monthly I should be able to gather additional anecdotal evidence in figuring out which ways are most beneficial in bridging the gap between our digital and real-life experiences, so they can co-exist and complement each other. Learning from the past, I believe a brand new social network can be specifically re-designed to embrace the positive merits of social networking and bring value to the users themselves.

LAURALEI SINGSANK

ORAL SESSION 4 M

Title: From Massacre to Genocide: Redefining the Sook Ching

Faculty Mentor(s): Tuong Vu

Abstract:

Sook Ching is a Chinese term meaning “purge through cleansing.” Operation Sook Ching took place in Singapore from February 21 to March 4, 1942. The Sook Ching was a military operation carried out by the Japanese with the intent of executing anti-Japanese Chinese men between the ages of 18 and 50. Ultimately, it is impossible to know exactly how many people were killed; the Japanese official figure is 5,000, while unofficial estimates reach as high as 50,000. These men were called into screening centers, where it was decided if they were anti-Japanese. These determinations have been said to be extremely disorganized. The legacy of the Sook Ching lives on to today as one of the greatest tragedies in Singaporean history.

The intent of this paper is to argue for a redefinition of the Sook Ching as a genocide rather than a massacre. The United Nations’ definitions and qualifications of genocide, as well as contemporary sources discussing the event, act as the cornerstones of the research. This research is important because it sets a precedent of accountability, as well as acknowledging the wrongs that the Japanese committed during the second World War. This presentation will discuss the Sook Ching, its legacy, and the steps required to address the incident and right the wrongs that occurred. It will also examine the racial and political environment that set the stage for the tragedy, as well as the scars it left behind.

ALEXANDER SMITH

POSTER 73

Title: Life History Responses to Variation in Bacterial Food Sources in the Nematode

Caenorhabditis elegans

Faculty Mentor(s): Patrick Phillips & Stephen Banse

Abstract:

Diet is directly tied to the life history traits of an organism. Life history traits, such as development, reproductive capability, and lifespan, respond to changes in diet. The nematode *Caenorhabditis elegans* can serve as a model to demonstrate the effect of various bacterial diets on development and fecundity. Using various available natural bacteria isolates, we screened for bacterial diets that produce observable effects on the health and development of nematodes.

Two bacteria species, *Comamonas aquatica* and *Comamonas testosteroni*, were observed to produce accelerated development in the growing nematodes relative to the standard laboratory diet of *E. coli* OP50. This prompted investigation into whether a tradeoff exists between life history traits, or whether this food source is simply a better food. We measured the number of offspring produced by organisms given a diet of *Comamonas aquatica* or *Comamonas testosteroni* and found that it is less with the number normally observed in nematodes given a diet of *E. coli* OP50. This demonstrates a tradeoff that is also well understood in temperature.

When temperature is increase, nematode development is accelerated, and total offspring count is reduced. We found that when fed a diet of *Comamonas aquatica* or *Comamonas testosteroni*

that the pattern of change relative to temperature is not consistent with nematodes on a diet of *E. coli* OP50. This work shows that this change in diet produces a tradeoff between development time and total offspring count, and that interactions with abiotic factors do not alleviate the tradeoff completely. Future research could show the specific nutrient composition differences in bacteria species that are responsible for the accelerated development and reduced offspring count.

FRANKLIN SMITH

ORAL SESSION 2 C

Title: Automating Dev Ops with Docker Application Technology Shell Scripts

Faculty Mentor(s): Ramakrishnan Durairajan & none none

Abstract:

With an emerging rise of Dev Ops technology like Docker and other application containers comes an underlying challenge that has been plaguing the computer industry for years, how to efficiently learn and use the technology in a timely manner. Most users are tired of long and meaningless online tutorials and videos which shove irrelevant information down the throat of the consumer. I have solved this problem by programming a shell script that automates the dev ops process with docker while allowing the user to interact and choose where, what, and how they would like to learn about the technology. With a computer execution run time of 2-3 minutes, one can now learn to: set up their docker environment; build an image and run as one container; scale their application to run multiple containers; distribute their application across a cluster; stack their services by adding a back end database; and deploy their application to production.

JOSEPH SMITS

POSTER 35

Title: Metatarsophalangeal Joint Mechanics Differ Between Overground and Treadmill Running

Faculty Mentor(s): Mike Hahn & Evan Day

Abstract:

Treadmills are commonly used in fitness centers and physical therapy clinics for training and monitoring gait mechanics during return-to-running programs. Previous work has established kinematic and kinetic differences between treadmill and overground running. This study sought to investigate how metatarsophalangeal joint (MTPJ) mechanics differ between the two conditions. Running trials were conducted on an instrumented treadmill (Bertec, Inc.) and on a 20-m overground runway at 4.0 m/s. Overground running velocity was monitored by calculating the average anterior-posterior velocity of a sacral marker during stance. Data were collected for five foot strikes and averaged for each condition for analysis. Participants all wore the same neutral footwear (Nike Streak 6 Flyknit) for both conditions. Range of motion, peak moment, and joint stiffness of the MTPJ were significantly different between overground and treadmill running. There was no significant difference in duration of the forefoot serving as the base of support ($p=.18$). Initial examination of these findings reveals that MTPJ kinematics and kinetics

are different during overground and treadmill running. Clinicians and footwear scientists should be aware that treadmill evaluation may lead to inadequate translation to overground running.

HANNAH SOLHEIM

ORAL SESSION 3 RA

Title: Admissions Without Acquittal: The Effect of “Ban the Box” on College Admissions

Faculty Mentor(s): Ben Hansen

Abstract:

In February of 2018, Oregon State University President Edward J. Ray decided to “ban the box” on the university’s application. Ray’s decision eliminated any questions about an applicant’s criminal history from the Oregon State University application. Officially, President Ray’s policy was designed to protect black and Hispanic men, who are more likely to have felony convictions. Many other institutions are also making the contentious decision to “ban the box” (BTB). However, does implementing a “ban the box” policy actually have a net positive effect on college enrollment for minorities and ex-offenders? Or, will admissions committees find other ways to keep ex-offenders off their campuses? Because the push to remove criminal history information from the college admissions process is so recent, little academic research has been done on it. However, economists have studied the analogous “ban the box” policies in the labor market. They found that BTB policies had a net negative effect on employment for young black and Hispanic men. Without criminal history information, employers may try to guess who has a criminal record, and avoid interviewing low-skilled black and Hispanic men as a result. Perhaps we will see the same phenomenon in the college admissions setting: after BTB goes into effect, admissions committees will be extra wary of admitting black and Hispanic applicants. Using data from the Integrated Postsecondary Education Data System (IPEDS), I use a two-way fixed effects regression model to estimate the effect of adding criminal history questions to college applications. Preliminary results show that adding criminal history questions decreases enrollment for both male and female Hispanic students. Furthermore, using the synthetic control method, preliminary results show that BTB policies may cause statistical discrimination against Hispanic students. Further investigation is needed because it is imperative to understand any unintended consequences of BTB policies.

ELIZABETH SOPER

POSTER 143

Title: An Analysis of the Connection Between Agnes von Calatin and Josephine Lang

Faculty Mentor(s): Stephen Rodgers

Abstract:

Josephine Lang is one of the few documented women composers from 19th-century art songs and analysis of her work is crucial for having a comprehensive knowledge of composers from this era. While research suggests the male composers from this era played a large role in Lang’s success, an equally important relationship was her friendship with Agnes von Calatin, an underrepresented female poet. This friendship was a great benefit to Lang’s career as she used Calatin’s poetry as inspiration. The unique relationship between these two female artists

illustrates how mutually collaborative relationships are just as important as having supportive connections to famous male artists. By examining the original sources such as letters written by Emma Niendorf and Justinus Kerner and the art that Lang and Calatin co-created, I will illustrate how this relationship between Josephine Lang and Agnes von Calatin differed compared to her relationship with male counterparts. von Calatin provided more support and experimentation than was common in the traditional male mentorship, including personalized poetry, musical inspiration, and connections to prominent male composers and poets. However, because of von Calatin's status as a female artist, not simply an artist, she was not able to provide as many exposure opportunities as her male counterparts for Lang. Most women composers from the 19th century found themselves in a similar dilemma where purely female collaboration promoted equality but hindered success in their careers.

KENDALL SORIANO

Co Presenter(s): Sarah Brown

POSTER 31

Title: Reliability and accuracy of post-mortem methods of manual 2D:4D assessment in primates Kendall Soriano, Sarah Brown, Enrique Gomez, Colin M. Brand, Frances J. White

Faculty Mentor(s): Frances White & Colin Brand

Abstract:

The ratio of the length of the second to the fourth digitis[AH1] related to levels of prenatal hormone in exposure, specifically testosterone. A lower 2D:4D ratio indicates higher levels of prenatal androgen exposure, and a higher ratio indicates lower levels. Digit length is typically measured from the proximal crease to the most distal end of the digit in living and post-mortem individuals. However, post-mortem processes such as desiccation or decomposition can affect both landmark identification and accuracy of the measure. Digit length can also be measured on osteological specimens, but there is little information on how these measures compare to post-mortem measures. This study compares post-mortem measurements with osteological measurements taken on the same specimens. Here, we compared these measures across multiple primate species (N=40). We also examined the 2D:4D ratio in a macaque foot. First, using a caliper, measurements of the 3 segments in each digit were taken of a fully fleshed foot. Then, after removal of skin and flesh, measurements were taken of bones and tendons. Lastly, measurements of only bones were recorded after removal of tendons. This technique was shown to be an effective way of analyzing digit measurements as the results indicate clear differences in the ratio of digit sizes. This study demonstrates that the disarticulated measurement is the most accurate osteological method of estimating post-mortem 2D:4D. We want to take our knowledge of the relation between 2D:4D ratio and prenatal hormone exposure and apply it to across various other primate species.

BRIANNA SOUTHWORTH

POSTER 80

Title: Qualitative Study of Speech Language Pathologists Working With Culturally and Linguistically Diverse Patients with Dysphagia

Faculty Mentor(s): Samantha Shune

Abstract:

Dysphagia, commonly described as difficulty swallowing, affects a wide-range of culturally and linguistically diverse patients. As the importance of patient-centered care has continued to grow in the medical field, speech-language pathologists continue to search for ways to accommodate the needs, and wants of the countless diverse patients that they treat, particularly when they vary from the mainstream culture. This is especially true in inpatient settings, such as hospitals and nursing homes. This qualitative study was conducted to identify common challenges and potential solutions for accommodating the unique preferences of culturally and linguistically diverse (CLD) patients with dysphagia. In this study we interviewed six speech language pathologists who had experience working with CLD populations in nursing homes and hospitals. Interviews were transcribed and data was then analyzed using thematic analysis, or “qualitative description” in order to identify the common themes across participants. Analyses revealed many problems created by the limiting environment that these patients are confined to, such as decreased flexibility in food options and eating times. It was clear that speech-language pathologists have to be creative and compassionate to minimize these barriers and that individualized care and trusting relationships are crucial. This research is vital for identifying strategies for speech-language pathologists to be able to better care for the ever growing diverse population in America.

NISHA SRIDHAR

Co Presenter(s): Camille Sullivan

POSTER 114

Title: Observing Responsive Caregiving and Action Monitoring (ORCA)

Faculty Mentor(s): Tyson Barker

Abstract:

Although parenting is a naturally rewarding activity, excess stressors such as food and housing insecurity impact a caregiver’s interactions with their children. Existing literature suggests that a caregiver’s reaction to their child’s social-communicative signals -- known as responsive caregiving -- is a strong predictor of positive child outcomes; however, the degree to which each parent engages in this practice varies greatly. Thus, to maximize responsive caregiving and consequently support child development, it is important to identify the mechanisms by which stress impacts parenting. Our goal is to determine the presence of a neurobiological indicator of caregiver reward that can provide insight on how stress impacts responsive caregiving, which would provide a quantitative way to measure the effectiveness of parenting interventions. To examine these mechanisms, we recruited mothers with children ages 3-6 to observe their children complete simple computer tasks. During the tasks, the mother and child wear electroencephalogram (EEG) caps, which monitors the brain’s electrical activity, measuring

observational reward positivity (observational RP) -- the extent to which the mother responds positively when the computer rewards her child. While other studies have examined neurobiological components of caregiving via fMRI, the EEG can be operated in a social setting that mimics real-life caregiver-child interactions.

The expected outcome includes the identification of a proposed neurological mechanism that demonstrates the reduction of responsive caregiving as a result of parental stress. With the collected EEG data, survey information, and coded observed interactions, we intend to analyze the extent of the correlation between caregiving reward and observational RP. We additionally intend to examine the correlation between responsive caregiving and observational RP.

ERIC STRAND

POSTER 51

Title: Modulating Diradical Character in Indenoindenodibenzothiopene and Benzofluorenofluorene Structures For Ultimate Application Within Organic Electronics

Faculty Mentor(s): Michael Haley & Joshua Barker

Abstract:

The Haley Lab is interested in the synthesis and characterization of organic hydrocarbon scaffolds which can be used as semiconductors. The family of indenofluorene hydrocarbons exhibit unique electronic properties such as antiaromaticity and diradical character, which contribute to their allure for scientists. Our lab has developed highly modular synthetic routes toward many analogues of this parent scaffold, which can be further optimized through subtle synthetic tuning. Our ultimate goal is to create a library of analogues with tuned electronic characteristics such that we may identify the most promising candidates for device implementation. Fusing a variety of aryl moieties onto the parent scaffold allows for this by decreasing the HOMO-LUMO energy gap and subsequently improvement in electron mobility and conductivity. Initially focused on proving the diradical character in an analogue of indenoindenodibenzothiopene, our current project has successfully shown this by reacting the molecule through a known radical degradation pathway.

Our studies into indenofluorenes have shown promise in regard to the ability of these molecules to serve as potential replacements for current inorganic counterparts within devices. Continuous fundamental studies into the electronic abilities of these molecules will help to elucidate the ideal characteristics of organic semiconductors, which is imperative for the feasible implementation of these molecules into devices. This project is now focused on the optimization of previous synthetic routes such that further studies into these highly interesting molecules can be carried out.

JIA SUWATANAPORNCHAI

Co Presenter(s): Hanna Drake

POSTER 181

Title: Nintendo and its Climb to the Top

Abstract:

Author: Drake, Hanna (UO GE ARC) Primary Presenter & Jia Suwatanapornchai (UO GE ARC), Co-Presenter

Abstract: Nintendo is a common household name, but many often don't know how it came to be this way. This presentation explores and discusses strategies and means which Nintendo has utilized to expand their influence in today's gaming industry. To be able to pull back the curtain on their business model and creative strategies will allow for a better understanding of how their consoles and games, such as Pokemon, became so popular and very quickly found a worldwide reach. Almost any person who has previously played a Nintendo game can vouch for how addictive and fun they are. Pokemon alone, for example, has vastly expanded the Nintendo market share because of its successful and captivating game design. Nintendo is widely acknowledged as a market leader and many scholarly articles, public opinion pieces, and magazine and newspaper articles have commented on different aspects of Nintendo game design and strategies to increase market share. In this research project we hope to collect and collate the specific ways Nintendo has accomplished such great strides and make these strategies accessible to a general public.

JOSEPHINE SWIFT

POSTER 95

Title: The Relationship Between Self-Reported Mindfulness and the P300

Faculty Mentor(s): Jennifer Lewis & Don Tucker

Abstract:

Mindfulness is a state of awareness that allows an individual to more effectively monitor their cognition and emotions. The ways in which mindfulness impacts aspects of cognition, including attention and attentional control, are still being researched. The current study examines how dispositional mindfulness is related to individuals' attention and attentional control as measured through dense-array EEG (dEEG). We examined participant's (n=72) scores on the Five Facet Mindfulness Questionnaire (FFMQ; Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006) and their event-related potentials (ERPs) generated from completing the color-word Stroop task modified for dEEG recording. Response times were also recorded. ERP waveform amplitude differences for the P300, an ERP associated with attentional processes, did not significantly differ by category (i.e., Incongruent, Congruent). However, preliminary analyses showed a relationship between self-reported mindfulness and the amplitude of the P300 (across both categories), whereas higher scores on the FFMQ were associated with attenuated P300 amplitudes. Decreased P300 amplitudes may indicate the deployment of less attentional resources. It's possible that individuals who are more mindful, have naturally increased attention and therefore require less attentional resources in a cognitively demanding task. Mindfulness has been found to be an effective intervention for mood disorders, particularly anxiety disorders (Blanck et al.

2018). Understanding the particular ways that mindfulness impacts cognition may lead to a further understanding of the mechanisms by which mindfulness improves anxiety symptoms and thus improve treatment.

NICOLE SZCZEPANSKI

POSTER 19

Title: Characterizing Early DNA Break Repair in *C. Elegans*

Faculty Mentor(s): Diana Libuda & Austin Harvey

Abstract:

Accurate chromosome segregation is critical for the formation of viable gametes by the specialized cell division of meiosis. During meiosis, programmed double strand DNA breaks (DSBs) are formed and repaired by recombination mechanisms to maintain genomic integrity and to promote proper chromosome segregation. In order to better understand early repair dynamics of DSBs, we intended to devise a strain via CRISPR with an early repair phenotype closer to wildtype phenotype for future live imaging experiments. In past experiments, endogenously tagged GFP::RAD-51 mutants were utilized, but strayed from the usual wildtype phenotype. RAD-51 is a conserved recombinase that indicates an early repair stage of DSBs and is required for all meiotic recombination events. Using immunofluorescence, DSBs display distinct early repair dynamics through differential RAD-51 foci, leading to the hypothesis that these distinct dynamics indicate different DSB repair outcomes. Using the *C. elegans* model, we found that endogenously tagged GFP::RAD-51 mutants did not show a more wildtype RAD-51 foci phenotype after inheriting two copies of wildtype RAD-51 compared to worms that did not inherit the duplication. We also found that there is a significant difference between RAD-51 foci in early pachytene and late pachytene, the former having larger volumes and stronger intensities, representing interhomolog repair outcomes. In addition, interhomolog crossover repair outcomes show smaller, dimmer foci than do noncrossover outcomes. This indicates differential DSB end-resectioning between different stages within meiosis and between different repair outcomes.

SRAVYA TADEPALLI

POSTER 126

Title: The Impact of Foreign Involvement on Political Reform Organizations

Faculty Mentor(s): Dan Tichenor & Jane Cramer

Abstract:

This paper assesses the impact of foreign involvement on political reform organizations in Jordan. Through a comparative evaluation of the democratization work of completely foreign-funded international organizations, partially foreign-funded Jordanian organizations, and Jordanian organizations that do not receive foreign funding, derived from several interviews conducted with democracy practitioners in international and local NGOs, political activists, scholars, and others, this paper examines the effect of foreign involvement on organizational strategies, credibility, and effectiveness, ultimately arguing that foreign involvement (and conversely, the lack thereof) has a considerable impact on the way political reform organizations

have been able to carry out their activities. This study can hopefully be used to help both foreign and Jordanian policymakers and activists understand the way in which foreign involvement can help and/or impede democratic progress in Jordan.

ASHLEY TERRELL

Co Presenter(s): Jared Giles, blayne goring, miles Lawson, Kundin Semeredin, Ellis Mimms, Okeoma Okoro, Samson Johnson, Halston Harper, Miracle Trice

CREATIVE WORK 5 M

Title: How Do Images Presented In The Media Affect Black Mental Health and Self Perception?

Faculty Mentor(s): Curtis Austin

Abstract:

This project examines the black community and how images in the media impact their daily lives, their self-perception and their mental health. The research was conducted on a personal level in which information was gathered by looking at scholarly articles, various books, and in-person interviews designed to understand the individuals. We believe that if there are negative images in the media that are showing black people in a negative light, then it'll affect their well-being and mental health. To collect the data, we used a camera to record interviews around UC Berkeley. For those who didn't feel comfortable being filmed, we provided the option of completing a written survey. The sources we used were the students that attended UC Berkeley and those that we encountered in various locations throughout the Bay area. The majority of our sources were sociological abstracts that contained information relevant to our study. Through the collection of quantitative and qualitative data, we reinforced the concept that media of all types (newspapers, advertisements, social media, etc.) collectively distorts the representation of the lives of the black community. This misrepresentation leads to real-world consequences that essentially perpetuate societal and systemic racism that is subsequently internalized by black people. We focused on how the media perpetuates the negative stereotypes of black people. The purpose of the research is to explore the link between how the media portrays black individuals and its effect on their communities. We wanted to explore how bias and controlling images shape African American self-perception and whether there are any negative impacts to these communities.

ANDREW TESORIERO

ORAL SESSION 1 DL

Title: Revealing the Reveal: How and Why Authors Build to and Execute Plot Twist

Faculty Mentor(s): Mark Hennion

Abstract:

Authors evoke narrative surprise to catch the audience off-balance. While plot twists are often associated with film, fiction also employs foreshadowing to build towards their reveals. However, fiction is a different medium than film. Film is often seen from outside its characters whereas fiction often puts the reader in a character's mind or over their shoulder in the third person. Thus, interiority can make a plot twist more satisfying. When inside a character's head, a reveal that they are not what they seem is more impactful than if viewed from the outside. Authors

such as O. Henry, Ursula K. Le Guin, James Tiptree Jr., Seth Dickinson and Kazuo Ishiguro have used plot twists and narrative surprise to catch the reader off-balance. The meaning and emotional impact of each of their works is enhanced by the plot twist, but all in different ways that suit their disparate genres and tones. These authors' varying works demonstrate multiple ways of executing plot twists: some feature dramatic reveal moments, others never acknowledge the twist and wait for the reader to figure out what is going on, but each of them use narrative surprise to support the tone and meaning of the piece.

ANDREW TESORIERO

ORAL SESSION 4 DL

Title: Greener Fields

Faculty Mentor(s): Mark Hennion

Abstract:

"Greener Fields" is a story of unrequited love in a dystopian future. The ambiguity of the narrator—who has no name or gender—explores questions of identity and conveys the mutability of the story's theme across genres. The narrator shares this sense of unknown identity and inner turmoil with the story's setting: a future defined by corporate servitude and an endless war. As the narrator visits their childhood friend Aaron, now a veteran, in a strange facility, they are forced to confront their history with Aaron and their future without him. When writing this story, I considered how science fiction can explore themes of unrequited love in new ways. I wanted the larger world to be ambiguous as to focus the story on the two characters, and found through revision which details of the outside world are important to defining the worlds of the characters. "Greener Fields" confronts love and loss amidst the uncertainty of the future—while exploring how this future is painfully tethered to the past.

KAYLA THOMET

POSTER 32

Title: Communicating Change: A Study of Current and Proposed Communication Strategies for Prompting Individual Behavior Towards Ocean Conservation

Faculty Mentor(s): Dean Mundy & Hollie Smith

Abstract:

Due to the volatile state of our oceans, I am studying the effectiveness of different environmental campaigns on individual behavior towards reducing plastic waste in the ocean. Results indicate that individuals are most likely to change their behavior based on a moderately emotional advertisement which provides specific direction on how to alter behavior. Individuals appear willing to advocate for policy change to solve the overall problem. Currently, there is a shortage in research regarding the area of oceanic environmental communication. Through surveys, focus groups, and interviews, this study will address the effectiveness of current campaign strategies used to communicate environmental issues and provide suggestions for communicators to prompt sustained behavior change towards ocean conservation. The theoretical foundations of this study are the awareness-action gap, the effects of Grunig's Theory of Publics, and the effectiveness of broad environmental campaigns. There is a profound

lack of awareness regarding the health of the ocean; nearly half the survey respondents indicated that the ocean's health is neutral, moderately healthy, or very healthy. Preliminary results from the survey indicate greater impact of emotional advertisements on prompting desire for action. Furthermore, advertisements depicting a consumer product directly harming an animal are the most effective in generating a visceral response. With the current status of the health of the ocean, it is crucial to take action as communicators and create lasting change. The environment is at a turning point; if communicators don't act immediately, there will be no chance to reverse the damage done to the planet.

ALEXANDRA THOMPSON

POSTER 72

Title: A Lithostratigraphic Analysis of the Crooked River Mascall Formation

Faculty Mentor(s): Samantha Hopkins

Abstract:

This project presents a comprehensive lithological and biostratigraphic record of the Miocene Mascall Formation deposits of the Crooked River Basin in Central Oregon. The Columbia River Basalt Group (CRBG) covered the Crooked River Basin and much of the Pacific Northwest in the middle Miocene, altering the landscape and ecosystem. As a result of this event, an analysis of the depositional history of this region is worthwhile because it explores the impact of large scale basalt flows on subsequent basin evolution. University of Oregon geology students have measured stratigraphic sections in four different locations across the Crooked River basin in order to quantify the differences in depositional history across the basin. The sites are stratigraphically situated between the lower boundary CRBG and upper capping Rattlesnake Ash Flow Tuff (RAFT). For each region, we have created a representative stratigraphic column, and correlated rock units between the regions. The Mascall Formation in the Crooked River Basin is consistent with published descriptions of the Lower Mascall Formation: mostly fine siltstone and sandstone with diatomite, ash, and chert deposits and some tuff strata (Bestland, 1998). Each of the four sites share characteristics of the Lower Mascall which suggests similar depositional environments across the sites; however, the sections vary in the thickness and representation of individual identifiable strata, suggesting variation in where deposition was greatest through the half-million years of the section. This is the first comprehensive assessment of the stratigraphy of the Crooked River Basin, which has significant implications for understanding landscape reorganization following volcanism.

JESS THOMPSON

ORAL SESSION 1 DL

Title: Defamiliarizing the Horror Genre

Faculty Mentor(s): Angela Bogart-Montieth

Abstract:

This project explores the method behind the fear-inducing works of fiction created by two of the most famous masterminds of literary horror, Edgar Allan Poe and Stephen King. The research delves into close readings of both King and Poe's work, and analyzes the tactic known as

“defamiliarizing the familiar,” a strategy that turns a variety of recognizable components—from characters to setting to even stylistic choices—into something strange in order to disorient and scare the reader. As an aspiring horror fiction writer, my goal is to put the work of these two authors in conversation with each other in order to borrow tools from them and further improve my own writing.

MAGGIE THOMPSON

Co Presenter(s): Odelia Hartl, Nicole Ringsdorf

VISUALIZATION LAB 2 & 4 PSC

Title: Connecting Students to the Universe through Research and Outreach at Pine Mountain Observatory

Faculty Mentor(s): Scott Fisher

Abstract:

Located in central Oregon atop a 6500-foot peak, Pine Mountain Observatory (PMO) is an astronomical facility owned and operated by the UO Department of Physics. PMO is a hybrid research/outreach facility where UO students are deeply involved in projects that range from engineering and facility maintenance to making research-grade observations and data analysis. In particular, the size of the telescopes at PMO makes it well-suited for undergraduate research programs. In the last two years many UO undergraduates have worked at PMO to bring our newest telescope online. This robotic telescope, named 'The Robbins' after a generous benefactor, has been designed from the ground up to be operated remotely from the UO campus in Eugene.

Although we are still in the process of upgrading the internet connection to PMO to allow routine remote observing, in this presentation we will demonstrate the software programs that will be used when we have a live connection to the facility. Additionally, we will be demonstrating commercial and custom-written software packages that are used to reduce, calibrate, and analyze astronomical data. Our goal for this unique session of the symposium is to introduce visitors to PMO and the projects that our undergraduates are leading at their astronomical observatory.

AMBER THORP

Co Presenter(s): Anneliese Merrigan

POSTER 179

Title: The Hukou System's Influence on Rural-Urban Inequality in China

Faculty Mentor(s):

Abstract:

The Hukou system used to be the main tool to curb urban migration, especially the diaspora of rural farmers. In the past ten years, in spite of rising numbers of migration, the Hukou remains bound to public services, impacts government tax incomes, and influences regional economies. All of these factors give the government little motivation to make a change. Some small cities have slackened the system, but the division is still strong, and migrant workers have

monumental problems adapting to cities and obtaining new urban identities. This delay of reform causes great insecurity for farmers with and without land. Farmers' interests are encroached, and the simple structural divide of urban resident to farmer has evolved to include rural workers, those who the Hukou leaves out.

CORINNE TOGIAI

ORAL SESSION 3 M

Title: Effects of Alisertib in Acute Lymphoblastic Leukemia NSG Mouse Models

Faculty Mentor(s): Bill Chang

Abstract:

Acute Lymphoblastic Leukemia (ALL) is a common cause for disease-related mortality in children and adolescents. As we have made great strides in curing ALL we have identified subsets of diseases that continue to have a poor prognosis. To develop novel targeted therapies in hopes to advance the treatment of these diseases, our lab initiated the use of rapid, state-of-the-art genetic and functional assays to identify aberrant activated pathways from primary patient leukemic samples. Results through collaborative research with the Knight Cancer Institute Leukemia Research Group, have identified significant hypersensitivity to different cellular pathway inhibition. Our current proposal builds on these findings. We have identified a unique hypersensitivity of certain subsets of leukemic cells to inhibition of the Aurora class of cell cycle kinases. Aurora kinases are members of serine/threonine kinases that play pivotal roles for the cell to faithfully undergo mitosis. Studies have shown that certain cancers are heavily dependent on the activity of these kinases beyond mitosis and that these kinases can be targeted by specific small molecule drugs. Our preliminary data is the first to identify subsets of ALL that are hypersensitive to aurora kinase inhibition. What remains unknown is the mechanism of hypersensitivity in subsets of ALL as well as in vivo validation.

Other future directions in parallel aim towards determining the mechanism of hypersensitivity to Aurora kinase inhibitors in subsets of ALL, and developing in vivo models testing single agent and combination therapy specifically targeting these pathways.

CORINNE TOGIAI

Co Presenter(s): Donovan Neal

ORAL SESSION 2 O

Title: Women Ball Too: Changing the Culture Around Women in Sports and Defining Women Excellence

Faculty Mentor(s): Donovan Neal

Abstract:

Women Ball Too (WBT) is a social movement and business bringing awareness, advocating for recognition, and pushing towards equality for women excellence in sports. Thus, our central questions concern: how WBT can change the culture around women's sports? What does changing the culture of women's sports mean and look like? With that said, Women Ball Too's mission is to change and cultivate a culture of excellence around women in sports that takes ownership and partnership. By recognizing and continually growing attention around women in

sports through products, programs, and perspectives this will build a platform for an increase in women's viewership, salaries and businesses.

In this project, we work through three main methodological approaches to enact the change we want to see: products, programs, and perspectives/community. Therefore, WBT current products sold include apparel from t-shirts, long sleeves, and hoodies. This is used to measure the level of engagement people are investing financially and socially via their purchase. For programs, we initiate teams to help host WBT events held before major women's sporting events, collaborations with school departments and local businesses to host dances, sports camps, and other community activities to use as a platform to foster awareness about women in sports. Lastly, social media is one of our largest outlets to post current events regarding women in sports, to connect with major athletes and social influencers, and to encourage individuals to stand behind the WBT social movement and business to empower and respect women on and off the court.

TUONG VY TRAN

POSTER 131

Title: Is Forgetting Good for Learning? Examining the Emergence of Abstract Rule Representations

Faculty Mentor(s): Ulrich Mayr & Atsushi Kikumoto

Abstract:

Most actions are driven by abstract action rules that need to be applied to specific environmental conditions. The abstract goal to make coffee is implemented differently in your own than in your office kitchen. We examine here the degree to which improvements through practice result from (1) strengthened representations of abstract rules, from (2) better adaptation to specific environmental conditions, or from (3) representations that integrate abstract rules and specific conditions into conjunctive representations. We used a task that required the application of up to four different abstract spatial translation rules in order to respond to a given spatial stimulus. Subjects (N=46) performed an initial, 45-minute session applying two of the four rules to one of two possible stimulus configurations. During the second, 45-minute session, the two withheld abstract rules and the second stimulus configuration were introduced. To test the possibility that abstract, generalizable knowledge is fostered through consolidation or forgetting of specific conjunctive representations the second session occurred either right after the first session, or one week apart. Results showed that it was harder to apply new rules to practiced than to new stimulus configurations— a clear indication conjunctive representations between abstract rules and stimulus settings. Importantly, this effect was substantially weakened when the new rules/stimulus settings were tested after one week. This suggests that during the 1-week delay, specific conjunctive representations were weakened (i.e., forgetting), thereby increasing the contributions of abstract rule representations. In other words, forgetting can benefit the emergence of generalizable skills.

KIELEY TREMPY

POSTER 30

Title: The role of limb dominance in visuoproprioceptive tasks

Faculty Mentor(s): Kate Spitzley & Andy Karduna

Abstract:

Movement is the product of sensory input, mainly from vision and proprioception, and motor output. Vision is the sense of the surrounding space and proprioception is the sense of the body's position in space. Joint position sense (JPS) is commonly used as a measure of proprioception. JPS of the dominant and nondominant shoulder was measured in healthy subjects to quantify error in a JPS task with and without visual information. Previous studies have examined sensory differences in limb dominance with conflicting results. Some have shown that no differences exist, while others show that movements with the dominant arm rely more on visual information and movements with the nondominant arm rely more on proprioceptive information. The latter theory is illustrated in activities of daily living, such as with preparing food, where the dominant arm uses a knife by viewing the movement while the nondominant arm guides the food by feeling the movement. It was hypothesized that in a JPS task, the dominant arm would have less error with visual information whereas the nondominant arm would have less error without visual information. Subjects wore a virtual reality headset with a tracker on their arm while performing a JPS task. Using the headset, subjects were presented with either a visual representation of their arm location or no visual information about arm location. No difference was found between sides. However, difference was seen between the vision and no vision conditions regardless of limb dominance. Higher error with no vision indicates that proprioception alone is not as effective in driving accurate movements as the combination of vision and proprioception. Future studies analyzing the contributions of vision and proprioception to movement may rule out variation associated with limb dominance.

ELISA TRUJILLO

POSTER 56

Title: Connexins are not responsible for specification of the electrical synapse

Faculty Mentor(s): Adam Miller & Abagael Lasseigne

Abstract:

In order to initiate synaptogenesis two cells must come together and undergo intracellular communication; both can be done through a protein with cell adhesive properties. At chemical synapses, extracellular cell adhesion molecules allow two neurons to communicate in order to recruit compatible pre- and postsynaptic machinery. By contrast little is known about electrical synapses, where gap junction channels physically couple neurons. Transmembrane gap junction proteins at the electrical synapse, Connexins, have adhesive properties. We hypothesized that Connexins are required to initiate electrical synapse formation. To investigate this we created Connexin mutant animals and assessed whether or not a highly stereotyped electrical circuit containing Mauthner neurons was still morphologically normal. We used the localization of the required scaffolding protein, Tjp1b, as an indicator for electrical synapse specification. Connexin proteins are co-dependent; without one Connexin the other is unable to localize to the synapse.

I tested the requirement of the pre- and postsynaptically required Connexin proteins for normal neuron morphology and Tjp1b localization by selecting fish with green fluorescent protein (GFP) positive Mauthner neurons and immunostaining zebrafish larvae for Tjp1b, and GFP in animals with non-functional Connexin proteins. Despite the loss of Connexins, Tjp1b still localized at the potential electrical synapse site and the morphology of the Mauthner neuron remained normal. Thus, Connexins do not appear to be the proteins responsible for electrical synapse initiation. My future work will aim to identify the protein with cell adhesion properties necessary for electrical synaptogenesis.

DAN TUDORICA

ORAL SESSION 3 M

Title: Chemoreceptor Zinc-Binding Protein Domains Sense Hypochlorous Acid

Faculty Mentor(s): Arden Perkins

Abstract:

The Chemoreceptor Zinc-Binding domain (CZB) is a protein module common in host-associated bacteria that seems to regulate bacterial chemoreceptors that control motility. The ligand these protein domains sense remains uncertain, however CZB domains contain a cysteine that binds to zinc, a chemical moiety that is known to be reactive with bleach (HOCl). Thus, my hypothesis is that CZBs are responsible for sensing HOCl, which is a prevalent antibacterial agent synthesized by human neutrophils to combat infections. Using the fluorescence of a sample of purified CZB, my data indicate the protein's structure changes in response to physiologically-relevant concentrations of HOCl, consistent with a mechanism for signal transduction. Furthermore, by examining the circular dichroism spectrum of CZB under increasing concentrations of HOCl, I identified this structural change as a loss of alpha-helicity.

I also examined the hardiness of CZB-possessing bacteria in vivo in the presence of varying concentrations of HOCl. I found that the bacterial pathogens *Salmonella* and *Helicobacter pylori*, which possess CZB-regulated chemoreceptors, can tolerate acute treatments of HOCl and remain motile, and were more resistant than *Escherichia coli*, which has a CZB-regulated diguanylate cyclase but lacks a CZB-regulated chemoreceptor. *E. coli*, however, proved to be more tolerant of surviving high levels of HOCl over 6-12 hours. In summary, my research suggests CZB domains have the surprising capability to sense HOCl, the strongest oxidant generated by the human immune system, and that bacteria that colonize humans may use these sensors for different purposes in their colonization strategies.

BETHAN TYLER

ORAL SESSION 3 O

Title: Reconceptualizing Feminist Utopias: Marge Piercy's *Woman on the Edge of Time* and Margaret Drabble's *The Millstone*

Faculty Mentor(s): Elizabeth Raisanen

Abstract:

Theories of feminist utopia tend to focus on its presence within science/speculative fiction, upholding works like Marge Piercy's 1976 novel *Woman on the Edge of Time* as exemplars of the

genre. Literary critics typically designate this novel's vision of the future, the community of Mattapoissett, as a source of radical, mobilizing inspiration for feminists. I will argue against this reading by attesting that Mattapoissett presents a regressive model of feminism in its failure to permit women the choice of (traditional) maternity and, moreover, does not sufficiently distance itself from that which is condemned in the novel's dystopian present – the stripping of women's reproductive agency. Mattapoissett thus fails to fulfill half of Sally Miller Gearhart's essential criteria for the identification of feminist utopia. By contrast, I argue that Margaret Drabble's 1965 novel, *The Millstone*, presents a radical vision of maternity, as divorced from patriarchy, that aligns with threads of the feminist movement yet to come at the time of its publication, and that this, under Gearhart's framework, strongly suggests the presence of a feminist utopia. This is striking in that the novel is categorized as a work of realism, rather than science fiction. By revealing the vision of feminism within a speculative fiction novel to be retrograde in comparison with that of a realistic novel, I argue that feminism unyokes realism from the present, thus collapsing boundaries between genres, and making a case for the study of the feminist utopia in realms beyond science fiction.

MARIE VAN RYSSELBERGHE

POSTER 108

Title: The Micro-Mobility Narrative: Understanding the Effects of Anecdotal and Visual Communication on Health and Safety Behavior

Faculty Mentor(s): Autum Shafer & Nicole Dahmen

Abstract:

In the face of extreme pollution and congestion, micro-mobility transportation presents an alleviating solution for many megacities. However, as e-scooters, such as Lime and Bird, have rolled out in major cities across the globe, media coverage has centered around the accompanying safety epidemic related to user error and miscommunication. To understand how shared e-scooter companies can better design health and safety information, my research examines the presentation of terms and conditions statements that include safety instructions. By using a 2x2 factorial design experiment, my research examines participants' interaction with the following stimuli conditions: (1) narrative example in standard (i.e., text-only) presentation, (2) narrative example in visual presentation, (3) non-narrative example in standard (i.e., text-only) presentation, and (4) non-narrative example in visual presentation. Participants are randomly assigned to one condition and exposed to the stimuli online via Qualtrics before answering a posttest questionnaire. Examining the effect of narrative and visual communication on health and safety attitudes and behavior, this research measures participants' knowledge and understanding of the presented safety information, perceived fear of scooter use, perceived vulnerability, intentions to comply with safety instructions, and organizational trust. On these outcomes, hypotheses predict increased levels of knowledge, intentions to comply and organizational trust, as well as predict decreased perceptions of fear and vulnerability.

TRACE VANCLEAVE

Co Presenter(s): Grace Floyd

POSTER 129

Title: Weight Related Teasing is Associated with Exercise Dependence Symptoms in African American Men

Faculty Mentor(s): Nichole Kelly

Abstract:

Few studies have examined the correlates of weight related teasing in African American men. Yet, extant data indicate that weight related teasing is linked with body image concerns and unhealthy weight control behaviors in college women. The purpose of this study was to explore the relationship between weight related teasing and exercise dependence symptoms in young African American men. Body image concerns were evaluated as a possible moderator. Study participants (N = 261; Mage = 23.72 ± 3.47; MBMI = 25.01 ± 5.90 kg/m²) completed an online survey and reported on frequency and distress of perceived weight related teasing (Perceptions of Teasing Scale), exercise dependence symptoms (Exercise Dependence Scale), and body image concerns (Revised Male Body Image Attitudes Scale). Linear regression models were conducted, controlling for income, education, presence of a psychiatric diagnosis, and body mass index. Frequency and distress of weight related teasing were both positively associated with exercise dependence symptoms (ps < .001). Body image concerns did not moderate the link between frequency of teasing (p > .05) or distress from teasing (p > .05) and exercise dependence symptoms. These results suggest that, regardless of body image concerns, higher frequency and distress of weight related teasing are associated with increased exercise dependence symptoms in young African American men. Contrary to prior research in women, African American men may have different motivations for excessive exercise that makes their body image concerns less relevant.

MICHAEL VEIRS

POSTER 23

Title: Investigation of Riboswitch Structure and Dynamics Using Fluorescent Spectroscopy

Faculty Mentor(s): Julia Widom

Abstract:

Fluorescence Resonance Energy Transfer (FRET) is a photophysical phenomenon in which the excitation of a donor fluorophore results in fluorescent emission from an acceptor fluorophore when the two molecules are in close proximity. Using a FRET system, we intend to investigate the folding dynamics of the preQ1 riboswitch, which is an RNA species that regulates gene expression in bacteria. We used a double-stranded DNA system and the fluorescent adenine analog 2-aminopurine (2AP) to determine fluorescent molecules that can be used as FRET acceptors for 2AP. We found mFluor violet 450 and Atto390 to be appropriate acceptor fluorophores for use in more complex RNA systems. We also found that the riboswitch has a tendency to dimerize under our experimental conditions. To investigate this process, we ran our RNA samples using polyacrylamide gel electrophoresis. We determined protocols for minimizing dimerization of our RNA by varying the procedure by which the construct was annealed and

stored. These results lay the foundation for using FRET to study the folding of this riboswitch and, by extension, the mechanism by which it regulates gene expression.

NATHALIE VERHOEVEN

POSTER 81

Title: Regulatory success and eating disorder symptomatology: does cognitive reappraisal scores predict specific eating disorder risk?

Faculty Mentor(s): Dani Cosme

Abstract:

This study seeks to illuminate the effects of high stress on eating habits, such as craving regulation, and the relationship between regulatory success and eating disorder symptomatology. Many years of research have showed a strong correlation between emotional regulation and ED risk. High stress has major effects on eating habits, such as craving regulation, and acts as a mediator between regulatory success and eating disorder symptomatology. A lot of modern and foundational research on eating disorders (ED) and emotional regulation (ER) has focused primarily on risk reduction and mitigation, but very little has been dedicated to prevention. In this study, we observe the correlation between ED scores and reappraisal abilities.

ALLY WALDRON

POSTER 161

Title: Medical Technologies in Context: Maternal and Child Healthcare at Ghana's Cape Coast Teaching Hospital

Faculty Mentor(s): Melissa Graboyes

Abstract:

This ethnographic thesis explores medical technologies in the context of the Cape Coast Teaching Hospital in southern Ghana. All too often the transfer and integration of medical technologies to the global south are based on the simplistic assumption that the advantages of foreign technology are self-evident and universal. However, in settings where conditions are harsh, resources limited, and culture dynamic, medical technology develops new meaning and purpose beyond original clinical expectations. To explore this phenomenon, I use ethnographic observations and field notes gathered from clinical shadowing in hospitals in Oregon and Cape Coast to investigate three medical technologies involved in maternal and newborn health. I show how the fetal ultrasound, pulse oximeter, and neonatal incubator change when exported to the Ghanaian context to fit the needs of doctors and patients while also working to change the way people relate to each other and their illnesses. In this process, medical technology becomes both a changeable force and a force for change in this hospital environment. Exploration of these examples of global medical technology transfer demonstrates that context matters in how medical technology operates and is operated within the clinical space. This thesis presents evidence against the idea that medical technology remains a static element of healthcare when transferred globally and also calls for more consideration of cultural, social, and economic institutions when exporting foreign medical technology to a new context.

CLAREN WALKER

POSTER 149

Title: "The Perfect Hybrid": Art, Architecture, and Advertising in Solange's Metatronia (Metatron's Cube)

Faculty Mentor(s): Emily Scott & Gretchen Soderlund

Abstract:

In April 2018, multidisciplinary artist and musician Solange Ferguson (néé Knowles) debuted a collaborative performance piece titled Metatronia (Metatron's Cube) at the Hammer Museum in Los Angeles. Although the piece centers around a choreographed dance performance within a sculptural white cube structure, Metatronia's ultimate manifestation is the short video that has been widely circulated on the internet and social media. While Solange's sculptural white cube both relies upon and disrupts the canons of modern architecture and minimalist art, it also occupies a place in the landscape of brand advertising. Critically, the video was executed "in partnership" with the Japanese fast fashion corporation Uniqlo (whose clothes the dancers wear) and produced by their advertising agency of record, Droga5 UK. By critically examining media coverage of the project and bringing it into dialogue with historical and contemporary art, architectural, and media scholarship, this research explores the tension in Metatronia (and other branded cultural phenomena like it) between its status as a work of art for public benefit and its function as a media vehicle to generate capital for corporate interest. Metatronia's effectiveness as an advertisement depends on the veiling of its very function as one: with brand involvement masked under smooth rhetorics of "partnership," the piece can exist comfortably in high art contexts while still elevating a fast fashion company. Metatronia exists at a nebulous--but commercially successful--intersection of art, architecture, and advertisement. More broadly, this case study reveals the complex dynamics and contradictions of contemporary cultural production under late neoliberal capitalism.

MADELINE WALTERS

ORAL SESSION 2 DL

Title: Empathy in Fiction as Shown Through the Second Person Point-of-View

Faculty Mentor(s): Mark Hennion

Abstract:

My project explores the various methods authors use to tell stories in the second person point of view, and how these methods portray a powerful empathetic effect in the reader. This particular point of view is not often used in traditional narratives. Rather than using I, he, she, or we, some authors choose to use "you" in a stylistic manner. In analyzing multiple stories, I've found many different methods of using the second person in various stories over more than one genre. I've analyzed these methods in order to answer this question: How is the second person point of view told to make the readers more empathetic towards different narratives? As a writer myself, my goal is to share the art of reading and writing stories that portray an in-depth experience of emotion.

ZOE WASSMAN

ORAL SESSION 3 SW

Title: American, Societal Structures Inhibiting Empathy for Criminals

Faculty Mentor(s): Caoimhin OFearghail

Abstract:

When American incarceration rates were at their peak in 2008, 1 out of every 100 adults were in prison or jail¹. If prisons were successful at keeping criminals off the street, punishing offenders cost-effectively, preparing them for re-entry, and deterring future offenders, that figure would not be so troubling. Research, however, indicates that incarceration fails to fulfill any of its promised results; the current system is both unsustainable and arguably increases crime rates. In this study, I use an interdisciplinary approach to explore how elements of American culture such as the “American Dream” ideal, capitalism, chronic individualism, founding morals, and even our use of language inhibit our ability to feel empathy for criminals, and thus support the existing structures of institutional corrections. The tentative results suggest that the roots of the current failure of U.S. corrections are cultural, and that solving them will require a reassessment of our fundamental values and the courage to make bold decisions before they reach crisis levels. For my research, I used text from “Collapse: How Societies Choose to Fail or Survive” by Jared Diamond, anthropologist, ecologist, and Professor of Geography at UCLA; “From the Native's Point of View,” a paper by Clifford Geertz, world-renowned anthropologist and philosopher; research presented by Lena Boroditsky on “How Language Shapes Thought”; and reputable online resources for various facts and figures, including the Civil Rights Journal and The National Academy of Sciences of the United States of America.

Alexander, Elizabeth (Fall 1998). "A Troubling Response To Overcrowded Prisons", Civil Rights Journal.

SIERRA WEBSTER

ORAL SESSION 2 O

Title: Portraits of Fans: Sports Fandom in Women's Professional Basketball

Faculty Mentor(s): Lori Shontz

Abstract:

Male sports reporters produce nearly 90 percent of sports media coverage (The Status of Women in the U.S. Media, Women’s Media Center). Just 13 percent of sports staff are white women, while 5 percent are women of color. Further, men predominately hold decision-making roles in sports media, making up 90 percent of sports editors (2018 AP Sports Editors Report Card). Thus, the underrepresentation of women and women of color in sports media necessarily produces misrepresentations of female athletes and female athletes of color. In the very nature of how journalism works and the role of journalists as agenda-setters, reporters and editors decide which and how narratives around women are told.

For my School of Journalism and Communication honors thesis, I have produced a long-form feature story focused on fans of the Seattle Storm, the 2018 WNBA champion, and their relationship to a professional team that is not centered around masculinity and whiteness. The

Storm seems to sit at the forefront of a movement that is giving more prestige and attention towards professional sportswomen.

My project has combined extensive sports media coverage research and knowledge with journalistic storytelling, interviewing and reporting to tell the story of Storm fans and why their stories matter through the accessible medium of journalism. I traveled to Seattle to interview sources and gather information, scene and a sense for the city's support of its WNBA franchise. The information gathered on reporting trips paired with information gathered through research culminates in a product that is more than a research article but is a compelling story that demonstrates the value of women's professional sports. Using my research and my experience as a woman in sports media, I have produced a narrative that is dignifying, nuanced and representative of the women on the court and in the stands.

SARAH WEISHAAPT

ORAL SESSION 4 DL

Title: The Hollows of the Heart

Faculty Mentor(s): Mark Hennion

Abstract:

Creative writing is unique in its ability to give form to our immersive inner worlds: it is the only art form that can give a direct voice to thought. In "The Hollows of the Heart," I explore my experiences with mental illness and relationships through metaphor. When I conceptualized this piece, I endeavored to incorporate several themes, such as addiction, loneliness, and self-control; I constructed narrative elements in the vein of speculative fiction, also known as fantasy, to represent those themes within the story. However, through the revision process, I found that these themes and metaphors got muddled together, and that the story improved when I constrained it to one or two metaphors and ensured the plot was cohesive. In the end, the act of transforming my feelings through metaphor and sharing the product with others helped me clarify them and find closure.

LILLIAN WHEARY

Co Presenter(s): Sam Kirby, Nick Belair

POSTER 27

Title: The effects of leucine, arginine and lysine, and HMB stimulation of anabolic and catabolic mechanisms on myoblasts

Faculty Mentor(s): Hans Dreyer & Doug Foote

Abstract:

Total knee arthroplasty (TKA) procedures are projected to increase nearly seven-fold to 3.4 million per year in the U.S. by 2030. Nearly all patients undergoing this surgery experience some degree of muscle loss during the first two weeks after surgery. Although effective at eliminating osteoarthritic pain, muscle atrophy and functional deficits persist. Essential amino acid (EAA) supplementation has been successfully used by us in mitigating muscle atrophy after TKA. To understand how EAAs work at the cellular level, we isolated myoblasts from biopsies. Our goal was to model the cellular responses to anabolic stimuli using cell culture methods. Our

objectives were: 1) isolate myoblasts from biopsies with >80% purity, 2) measure changes in anabolic mTORC1 response to anabolic amino acids (leucine, lysine and arginine (LRK)) ± insulin, and 3) measure changes to the leucine metabolite hydroxy-beta-methylbutyrate (HMB). Cells were seeded and myogenic purity confirmed via immunocytochemistry (ICC). Phosphorylation status of anabolic and catabolic signaling were determined. Preliminary results: isolating myoblasts from older muscle is more difficult than young controls. LRK+I produced a significant increase in rpS6 and Akt phosphorylation while no change was detected when myoblasts were incubated with HMB. Additional research is needed to refine our isolation methods and to better understand the mechanism(s) through which amino acids can help to maximally preserve muscle mass after common orthopedic procedures in older adults. If successful, recovery strategies such as amino acid supplementation will improve functional mobility following surgery and enhance long-term quality of life for these older individuals.

DEFOREST WIHTOL

ORAL SESSION 1 SW

Title: CALIBAN YISRAEL: CONSTRUCTING CALIBAN AS THE JEWISH OTHER IN SHAKESPEARE'S THE TEMPEST

Faculty Mentor(s): Kate Myers

Abstract:

This paper seeks to introduce new data into the centuries-long discussion of William Shakespeare's portrayal of Jewish people through intertextual and close reading of Shakespeare's plays *The Tempest* and *The Merchant of Venice*, sections from the Geneva Bible, and primary documents discussing Anglo-Jewish life in the Elizabethan era. Shakespeare's relationship to and purported views of Jewish people have been scrutinized for centuries. However, almost all conclusions put forth by scholars about Shakespeare and his ties to Elizabethan Jewish communities and anti-Semitism have been drawn from one work, *The Merchant of Venice*. *Merchant* contains Shakespeare's only explicitly Jewish characters, Shylock and his daughter, Jessica, although she happily converts to Christianity. In this paper, I propose that Shakespeare has an implicitly Jewish character lurking in *The Tempest*: Caliban, the play's main antagonist, a native to the island, and Prospero and Miranda's slave. I will support the interpretation of Caliban as a Jewish-coded figure through cross-reading *The Tempest* with *The Merchant of Venice*, sections of the Geneva Bible, and non-fiction testimonials from English residents during and before the Elizabethan era. Using both these plays alongside other scholarly and historical texts, I will bring cultural and historical context to these portrayals in order to explore a deeper understanding of the complicated and nuanced portrayals of Judaism in Shakespeare's work and the dynamics of modern scholarship on Shakespeare's relationship to Judaism.

JOY WILCOX

POSTER 97

Title: Racialized and Gendered Justice in the Criminal Court System

Faculty Mentor(s): Debra Thompson

Abstract:

Criminal courts facilitate mass incarceration and the disproportionate incarceration of people of color, especially Black people, and Black men in particular. While other research has been done around this topic, this study offers insight into how exactly this is produced in the courtroom specifically. This study sought to observe (1) the potential use of coded language in the courtroom as a proponent of mass incarceration, (2) the reproduction of race and gender-based biases in the criminal justice system, and (3) the role of the courts in both mass incarceration, and the disproportionate representation within the incarcerated population. This study employed an observational research approach which included the accumulation of both quantitative and qualitative data by recording the race and gender of main courtroom actors, every reference to race, gender, and/or class made in the courtroom, and a brief overview of each case in order to contextualize this information. The types of cases observed during this project include: Attempted Robbery, Burglary, Child Endangerment, Possession of a Controlled Substance with Intent to Sell, Robbery, and Theft (including Vehicle Theft). This study found that defendants for these cases were disproportionately Black and Latinx men, while the other main courtroom actors were disproportionately White, with all categories other than prosecutors also being disproportionately men. The structural dependency on police within the courtroom resulted in the court legitimizing all police discretion with no interrogation of bias. When defendants and their legal representation attempted to discuss any identity-based bias of the criminal justice system before a jury trial, this attempt was stopped by the judge. This study concluded that in order to produce justice, anti-racism must be made a genuine priority of the criminal justice system.

DYLAN WILLIAMS

POSTER 146

Title: Effects of Gender Transition on Language Use in Second Language Acquisition of Japanese

Faculty Mentor(s): Kaori Idemaru

Abstract:

Issues related to identity play an important role in guiding learners as they acquire a new language. The purpose of this study was to examine how gender transition may affect the use of linguistic gender-forms during language acquisition. Japanese is a highly gendered language, with varying degree of feminine and masculine forms in pronouns and sentence ending particles. My learning of Japanese and experience with transition provided an opportunity to analyze the interaction between the two. In order to conduct this study, I completed an autoethnography of my own past journal writings from the Japanese 301 and 302 courses here at the UO. The analysis revealed heavy avoidance of explicitly gendered forms and a strategy of solely using neutral pronouns and sentence ending particles, reflecting a low comfort level between using gender-matched features and the struggle with gender identity. The anxiety associated with

transition appeared to have influenced language performance, also leading to less classroom interaction and involvement. The implication of this study is that students in this situation are not fully able to center themselves as users of that language, and so are less likely to center themselves in classwork. More support from instructors and researchers is needed in order to properly address the obstacles that trans students face, such as alleviating anxiety due to gender transition and understanding how it influences language use. Such efforts could address gender in broader ways, leading to overall more inclusive, comfortable, and inviting classroom environment that encourages language use and learning.

ELEANOR WILLIAMS

Co Presenter(s): Brittany Calabria, Chloe Johnson, Hannah Schmidt, Cameron Wallenfels, Savannah Winchell

ORAL SESSION 4 C

Title: Environmental Education: Restoring A Sense of Place

Faculty Mentor(s): Katie Lynch

Abstract:

Interactive environmental education has proven to enhance emotional health, academic success, and physical development. By cultivating a sense of place early on, kids can apply critical thinking through unique teaching techniques to discover the importance of conservation efforts. The Restoring Connections team is a part of the Environmental Leadership Program at the University of Oregon that collaborates with Mt. Pisgah Arboretum and Adams Elementary School to develop an outdoor field trip curriculum for elementary students. Our mission is to engage students with nature through a place-based environmental education approach incorporating pre-trip lessons and outdoor field trip experiences three times a year. Our curriculum focuses on woodland, wetland, and riparian habitats with three different local focal species for each grade. Goals that are central to our curriculum include discussion of the effects and impact of seasonal changes, habitat restoration through stewardship projects and developing a general respect and appreciation for the environment. Through completion of this program we intend to create a classroom culture that incorporates DEI (Diversity, Equality, and Inclusion) and engaged pedagogy principles; enabling students to connect to the environment at Mt. Pisgah and empower the students to use their learned knowledge to create a long-lasting, meaningful connection to the world around them. We will be exposing 15 K-4th grade classrooms, a total of 450 students, to the wonders of Mt. Pisgah's natural ecosystems. At the end of this program students will be well versed in environmental problems and apply knowledge to investigate, plan, and create a sustainable future.

ANNA-MAGDALENA WILMS-CROWE

ORAL SESSION 3 RA

Title: Challenges to Democratic Inclusion and Contestation of Space: Contemporary Student Activism in Transforming South Africa

Faculty Mentor(s): Janine Hicks & Dan Tichenor

Abstract:

Twenty-four years into democracy, in a time marked by stark inequality and rising levels of political disillusionment, student activists are key players in the pursuit of a more just, more equitable, and more democratic South Africa. Using universities as spaces to contest, disrupt, and challenge the status quo, student activists challenge narratives of youth political apathy and act as agents of change, encouraging society to meet the goals established in the 1996 Constitution, the document enshrining the very promises they were born into believing would be their reality. Through mobilization and organizing, student actors boldly engage in questions of substantive equality and reveal the limits of South African democracy, highlighting especially how a hegemonic neoliberal framework has coopted radical transformation and maintained exclusionary principles. Yet, while #FeesMustFall protests in 2015-2016 temporarily garnered international media awareness and scholarly recognition, prolonged attention to student activism is lacking in the field of democratization and youth are often popularly conceived as apathetic or disengaged from politics. This study aims to correct this epistemological oversight by focusing on students as political agents and their contributions to the process of social transformation. This focus is especially important in Africa, the youngest continent on earth, demographically speaking, where youth hold a key role in the process of development and democratization, but has global relevance. Drawing on in-depth semi-structured interviews and focus groups with student activists at the University of KwaZulu Natal (UKZN) and a review of secondary literature, this project reflects on the role that student activists and institutions of higher learning play in the larger project of transforming post-94 society and deepening South African democracy. Informed by the voices of student activists involved in #FeesMustFall and more recent campaigns against gender-based violence, this study considers how student activists operate within and beyond the university to influence social change. Ultimately, I focus on how student activists conceptualize their role in creating a new social order and how that ideal translates into action. As student activists are often misunderstood, misrepresented or overlooked all together, this work fills a critical space and has important implications for our understanding of transformation in post-1994 South Africa. Moreover, examining students and universities has critical significance to the larger field of democratization and international affairs as the parallels between the state and the university reveal compromised experiences of citizenship and the urgency in addressing democratic deficit at a global scale in all spheres of society.

MATHIEU WILSON

POSTER 109

Title: Sociosexual behaviors of captive bonobos (*Pan paniscus*) in proximity to an artificially built termite mound

Faculty Mentor(s): Frances White & Kylene Gartland

Abstract:

Studies of wild apes are fundamental to our understanding of humans and human evolution. Biological anthropologists investigate the behavior of our closest relatives, chimpanzees and bonobos, in an effort to understand the evolution of human social behavior. Whereas chimpanzees are male-bonded and aggressive, bonobos have been found to be female-bonded and peaceful. Bonobos are known to engage in sociosexual behaviors for a variety of purposes beyond reproduction. These behaviors are thought to be used to strengthen social bonds and as a means of diffusing group tension in both wild and captive populations. Given these hypotheses, sociosexual behavior is particularly evident in feeding contexts. Here we study the effects of an artificially built termite mound, baited daily with food, on the sociosexual behaviors of a captive group of 16 bonobos at the Columbus Zoo and Aquarium. To collect data, the bonobos were observed during the day time from June 19th through August 29th, 2011. All occurrences of sociosexual behavior were recorded, in addition to the age and sex of the individuals involved, and who initiated the contact. We hypothesized that (1) the termite mound would bring the group into closer contact in the space near the mound, and (2) that tensions over who had access to the food in the mound would lead to sociosexual behaviors. Our data support that sociosexual behavior is important in both group cohesion and resolving tension in these bonobos.

ALLY WIMBERLY**POSTER 70****Title: Behavioral Correlates in Sleeping Laboratory Mice with Widefield Imaging****Faculty Mentor(s): Paul Steffan & David McCormick****Abstract:**

Pupillometry has effectively correlated pupil size with cortical states in awake mice. High amounts of brain activity have been associated with large pupil size whereas low amounts of brain activity associate with smaller pupil size in awake mice. The purpose of this project is to acquire widefield imaging on sleeping laboratory mice in order to gain a better understanding of mouse neuronal activity during sleep. I aim to find lower amounts of brain activity and small pupil size during non-REM sleep along with high amounts of brain activity with large pupil size during REM sleep. The widefield and pupil imaging will provide the opportunity to correlate certain neuronal activity with behaviors and other neuronal activity with deeper neural mechanisms happening during sleep. Some of the behavior correlates we will use are: movement of whiskers, paws, and fluctuation of the pupil size. Once the behavioral activity is excluded, the deeper neural mechanisms during sleep will be narrowed down and able to be focused on. Finding the deeper neural mechanisms will enable us to track neural circuits and networks involved during different stages of sleep in order to evolve a better profile of overall neuronal activity during sleep.

ALEXANDER WIND

Co Presenter(s): Sam Ahlquist, Whitney Oliva

POSTER 74

Title: Variation in Severity of Cartilaginous Fusions in *fras1* Mutant Zebrafish Following Independent Transgene Insertions

Faculty Mentor(s): Charles Kimmel

Abstract:

This study assesses the effect of the *fli1a:gal4vp16* transgene insertion on *fras1* mutant zebrafish. The *Fras1* protein stabilizes craniofacial development and is studied to understand Fraser syndrome in humans. Fraser syndrome is a fatal disease that results in facial deformities and hearing loss. Zebrafish facial cartilages are homologous with human ear bones, making them good model organisms. The *fras1* homozygous mutation causes fusions between the Meckel's (m) and palatoquadrate (pq) cartilages in the zebrafish jaw. In previous experiments, we found that *fras1* mutant embryos containing the transgene increased m-pq fusion severity. One hypothesis is that increased severity results from changes in host DNA sequences at the insertion site. An alternative hypothesis is that increased severity results from function of sequences within the transgene. In this study we hope to distinguish between these hypotheses by generating independent insertional lines with the expectation that the transgene has inserted in a unique location in each line. Mutant eggs were injected with the transgene and raised to score severity between transgene-containing and control groups. Polymerase Chain Reaction (PCR) can be used to verify the location of the independent insertions. As predicted by the second hypothesis, the majority of genetic lines with new transgene insertions exhibited increased m-pq severity, suggesting importance of the transgene sequences. This study gives us insight on the widespread variation of mutation in Fraser syndrome in humans to help us treat/prevent it, and helps us gain a better understanding of transgenic effects on mutants in general.

ERICK WONDERLY

POSTER 50

Title: Niche Separation Between Three Sympatric Lemur Species at Berenty Reserve, Madagascar

Faculty Mentor(s): Frances White & Colin Brand

Abstract:

One of the central goals of ecology is to understand niche differentiation: how different species use the same environment in different enough ways so as to coexist. Typically, this is tested by examining dietary overlap between species. The Lemuriformes, lemurs and their relatives, provide an interesting test of niche differentiation given the antiquity of this superfamily and subsequent adaptation to various unoccupied niches. In this study we first tested for dietary overlap in feeding ecology among three lemur species: Ring-tailed lemur (*Lemur catta*), Verreaux's sifaka (*Propithecus verreauxi*), and Brown lemurs (*Eulemur fulvus rufus*), at Berenty Nature Reserve, Madagascar. We also considered the degree to which species can monopolize a food source from other species. We analyzed 1,988.16 hours of feeding and social behavior data collected by Alison Jolly between 1988-89 and 1992-93. We found consistent, substantial overlap

in the diets of all three lemur species across all four study periods. The majority of aggressive intergroup encounters were within species. Between species encounters rarely resulted in aggression and exclusion from a feeding patch. Collectively, these results suggest greater dietary overlap than previously considered in these taxa and that niche separation beyond lemurs occurs beyond feeding contexts.

JOSEPH YACONELLI

ORAL SESSION 2 C

Title: Low Level Control of a Quadrotor with Deep Model-Based Reinforcement learning

Faculty Mentor(s):

Abstract:

Generating low-level robot controllers often requires manual parameters tuning and significant system knowledge, which can result in long design times for highly specialized controllers. With the growth of automation, the need for such controllers might grow faster than the number of expert designers. To address the problem of rapidly generating low-level controllers without domain knowledge, we propose using model-based reinforcement learning (MBRL) trained on few minutes of automatically generated data. In this paper, we explore the capabilities of MBRL on a Crazyflie quadrotor with rapid dynamics where existing classical control schemes offer a baseline against the new method's performance. To our knowledge, this is the first use of MBRL for low-level controlled hover of a quadrotor using only on-board sensors, direct motor input signals, and no initial dynamics knowledge. Our forward dynamics model for prediction is a neural network tuned to predict the state variables at the next time step, with a regularization term on the variance of predictions. The model predictive controller then transmits best actions from a GPU-enabled base station to the quadrotor firmware via radio. In our experiments, the quadrotor achieved hovering capability of up to 6 seconds with 3 minutes of experimental training data.

NOZOMI YAMADA

Co Presenter(s): Alexandra Urrutia, Riley Roefaro

POSTER 177

Title: Reducing Plastic Straw Use on the University of Oregon Campus

Faculty Mentor(s): Peg Boulay & Sarah Stoeckl

Abstract:

In the U.S alone, approximately 500 million plastic straws are used everyday. Earlier studies estimate that about 8.3 billion plastic straws pollute the beaches around the world (Gibbons). Most plastic debris end up in the ocean and in the bellies of wildlife creatures, compromising the welfare of marine ecosystems and organisms. Because plastic is not biodegradable, it remains in the ocean and the environment for years. Our mission is to create an environment for students to consider taking action to reduce plastic straw use. Our project works to try and minimize the use of plastic straws on campus so that less waste is produced and that students will rethink their lifestyle choices by considering what role plastic plays in their lives. Using the results of our recently conducted survey, we will make flyers about plastic straws and promote the issue of

plastic pollution on campus. Our goal is to propose a policy change that will make plastic straws available on request only at all dining halls. In regards to our survey results, 75.2% of the 234 respondents are in favor of such a policy. By proposing a straw upon request only policy statement, we will be helping make the University of Oregon a more sustainable campus.

SCOTT ZEIGLER

ORAL SESSION 1 SW

Title: Antagonistic River: Reading Nature through Ken Kesey's Sometimes a Great Notion

Faculty Mentor(s): Gordon Sayre & Stephanie LeMenager

Abstract:

This research evaluates the representation of the fictional Wakonda Auga River as a character in Ken Kesey's 1962 novel *Sometimes a Great Notion*. By investigating Kesey's personal journals and correspondence, I show how Kesey took his native Oregon, the natural world in which he lived, and wrote it into his story. Rivers are traditionally viewed in English literature as a component of setting or as a metaphorical representation of some human dilemma. Occasionally, a fantastical work gives nature agency by applying human characteristics like speech or movement or some combination thereof. Yet, a river is a force unto itself, and it interacts with the human animal in its own ways, both positively and negatively. Ecocriticism offers a method for exploring how rivers can be given agency without adding anthropocentric characteristics. Through the ecocritical theoretical lens, readers can evaluate the natural components of a text, understand the figurative or metaphoric meanings, and still read nature for its powerful literal meaning. I will use this lens to evaluate the text and show how Kesey represented the Wakonda Auga River in the novel as both a fictive place, one based on the actual Siuslaw River, and as an antagonistic character in conflict with other characters in the story. By reading *Sometimes a Great Notion* in this way, readers gain access to the historical world of Kesey's Oregon and the fictive world of an Oregon mill town in the 1960s, and they are encouraged to explore today the natural places associated with both.

MIN ZHANG

POSTER 111

Title: The Role of Abstract Chunk Patterns in the Organization of Complex Sequences

Faculty Mentor(s): Ulrich Mayr & Melissa Moss

Abstract:

In order to execute complex sequences, such as playing a piece of music, people group sequential elements (e.g., individual notes) into "chunks". The dominant theory assumes that chunks are merely independent bundles of elements (Lashley, 1951), though little is known about the organization of chunked information. Applying the efficient coding principle, chunks may be coded in a relational manner, based on structural similarities, to allow people to smoothly execute complex tasks (Botvinick et al., 2015). In two experiments, we assessed how performance is affected by whether chunks contain similar, abstract patterns of elements ("matching" chunks, e.g., ABA pattern of elements in both chunks). Participants completed a task in which they needed to remember and execute sequences of rules. The rule sequences

contained two 3-element chunks with various patterns of rule elements. Some sequences contained matching chunks, while others contained non-matching chunks. In Experiment 1, participants executed sequences in which both chunks contained the same types of rules arranged in matching or non-matching patterns. In Experiment 2, the two chunks contained different sets of rules, thus requiring a greater degree of abstraction across chunks. Results showed better performance for sequences containing matching chunks. The effect of pattern similarity on sequential performance was much weaker in Experiment 2 than in Experiment 1. Generally, these findings indicate that our cognitive system makes use of abstract patterns to efficiently code sequential information.

SHAN ZHANG

Co Presenter(s): Kyla Martindale, Hana Nguyen

POSTER 121

Title: Helping STEM Students Thrive: Investigating the Relationship of Course Belongingness and Approaches to Learning

Faculty Mentor(s): Shawn Lampkins & Jenefer Husman

Abstract:

In college, students become increasingly responsible for their learning behaviors which determine their academic performance, known as self-regulation. If instructors expect students to be self-regulated, they need to know what factors they must address to support student self-regulation. We argue that self-efficacy (students' belief in their ability to complete a task) and course belongingness (feeling of being valued in the course) are related to student self-regulation (SR), low-regulation (LR), deep learning strategies, (e.g., QAH, engagement of material by asking questions that take critical thought) and surface learning strategies (e.g., QAL, asking surface level questions). The majority of research in university science education have male-dominated samples, our sample is 61% female-identified. We hypothesized that self-efficacy and course belongingness together would explain a significant portion of the variance in SR. By utilizing an existing validated survey of student approaches to learning from 271 undergraduate, non-major physics students, we conducted multiple regression analyses to explore these topics. We found that course belongingness and self-efficacy had strong positive relations with SR and strong negative relationship with LR. We also found that course belongingness and self-efficacy had a positive relationship with QAH and QAL, though its relation was not as strong as with SR. In conclusion, self-efficacy and course belongingness are strongly and positively related to students' self-regulation. Based on these preliminary results, professors should consider promoting students' sense of self-efficacy and feeling of belongingness in their courses. We will also explore gender as a moderator and mediator in this context.

SHIJING ZHOU

Co Presenter(s): Kylie Rothhouse

POSTER 123

Title: Associations of Adherence to Exercise Dependence Symptoms in Asian/Asian American Men

Faculty Mentor(s): Nichole Kelly & Claire Guidinger

Abstract:

Exercise dependence (ED) symptoms, which can be conceptualized as a complex pattern of excessive exercise behaviors, have been shown to be more prevalent in males than females. Preliminary data suggest that Asian/Asian American men frequently endorse ED symptoms. However, the sociocultural correlates of ED symptoms in this population are understudied. The purpose of this study was to examine whether Asian cultural values were associated with ED symptoms in Asian/Asian American men. Internalization of both muscularity and thinness appearance ideals were examined as potential moderators. We hypothesized that men who endorsed greater adherence to Asian cultural values would report more ED symptoms. We also hypothesized that greater internalization of both muscularity and thinness appearance ideals would exacerbate this positive association. The present sample consisted of 266 Asian/Asian American men between 18-30 years. The mean age was 24.4 and the mean body mass index (BMI) was 24.2 kg/m². Participants completed an online survey that assessed demographic information, ED symptoms, adherence to Asian cultural values, and internalization of both muscularity and thinness appearance ideals. All analyses adjusted for BMI, education, income, and presence of a psychiatric diagnosis. Multiple linear regression models indicated that adherence to Asian cultural values was significantly and positively associated with ED symptoms. Men who reported greater adherence to Asian cultural values reported more ED symptoms, $p < .05$. Neither internalization of muscular nor thinness appearance ideals moderated this association. These findings highlight the importance of considering cultural factors in our investigations of ED symptoms and related pathology in men.

BRANDON ZUEL

Co Presenter(s): Rachael Dahlen, Sean Galka

POSTER 157

Title: Comparing Language Input Measures with TV Exposure in Dual Language Learners

Faculty Mentor(s): Stephanie De Anda & Lauren Cycyk

Abstract:

The use of parent report is a common method for quantifying language exposure in bilingual children. A less studied method is analyzing real-world language input. Additionally, there is a lack of research that examines how English and Spanish language input from television (TV) can impact the linguistic experience of bilingual children. The present study seeks to fill the gap of quantifying language exposure by examining the amount of language input in each language through real-world audio recording in the everyday lives of bilingual toddlers.

The study presents data on participants from Spanish-speaking homes (N= 10 participants; 4 female, 6 male, median age = 19.5 months; range: 17 months to 22 months). Sixteen hours of

language input data were collected over three days for each participant. From these recordings, we calculated exposure to Spanish and English via TV sources during periods when the child had the highest amount of (a) adult words, (b) linguistically meaningful interactions (highest amount of human input within six feet), and (c) child-directed speech (versus overheard speech). Results showed that TV exposure is related to the segmentation method categories of highest adult words, linguistically meaningful interactions, and highest child-directed speech due to a lot of meaningful language being present within those language samples. Typically, we found that the moments of high TV exposure did not align with moments of high language exposure as a function of adult words, linguistically meaningful interactions, and child-directed speech. This work informs our understanding of the language environment of bilinguals across a variety of sources.



An equal-opportunity, affirmative-action institution committed to cultural diversity and compliance with the Americans with Disabilities Act. This publication will be made available in accessible formats upon request. Accommodations for people with disabilities will be provided if requested in advance by calling 541-346-1221.