RESEARCH, SCHOLARLY & CREATIVE ACTIVITY DAY

Thursday, April 17, 2014 • 12:00-2:00 p.m.
Riverview Ballroom, UC
Spring RSCA Day is an on-campus annual spring showcase event to celebrate the research, scholarly, and creative activity of UWRF students. Students from all areas of study present their work through posters, artwork, interactive displays, short films, and computer presentations. All members of the UWRF campus and local business communities, including families and alumni are invited to attend and enjoy coffee and ice cream while viewing the wonderful undergraduate research that is happening at UWRF. Spring RSCA Day is supported by the Office of Undergraduate Research, Scholarly and Creative Activity.

**Program Details:**

*Abstracts are listed alphabetically by student’s last name within each mentor’s college.*

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Chatt, Elizabeth
Poster

*Composition and Labeling Analysis Towards Metabolic Flux Analysis of Maize Embryos*

Author(s): Elizabeth Chatt, Rebecca Roussey, Leann Matta, and Yair Shachar-Hill

Faculty Mentor(s): Yair Shachar-Hill in the Plant Biology department at Michigan State University

Understanding and quantifying the production and labeling of compounds and respiration rates of maize embryos aids in the characterization of phenotypically similar strains such as hybrids, inbred lines, and transgenics, and provides valuable data for metabolic flux analysis. Additionally, examining the metabolism of specific tissue from a transgenic plant can identify the effects of a transgene on the tissue and its expression. Metabolic flux analysis is utilized to gain insight into the regulation and control of substrates through a subset of metabolic pathways in a complete cellular network within a target tissue.

This study utilizes a steady-state labeling approach as a means of simplifying the complex metabolism of maize embryos (Ratcliffe, R.G. and Shachar-Hill, Y., 2006). Young maize embryos were excised from kernels and cultured on different defined media with or without 13C labeled glucose. After a growth period in culture, the CO2 produced and biomass accumulated (oils, solubles, proteins, starch, and cell wall) were quantified for both composition and labeling analysis, using a variety of methods. These methods included GC-FID, GC-MS, and enzymatic testing.

Eggert, Katie
Poster

*Student perception of peer review for written and oral exercises for three UWRF plant science courses*

Author(s): Katie Eggert, Dr. Loretta Ortiz-Ribbing, Dr. David Zlesak, Sonja Maki
Improving student communication skills can be challenging. Using a peer review process is one method to help students obtain additional constructive feedback in addition to feedback from their instructor. A peer review process was implemented for three courses (Plants and Society, Plant Propagation, and Weed Science) at the University of Wisconsin-River Falls. Each course had a unique type of writing and/or oral presentation project. Surveys assessing student perception of the different components of the peer review process were developed for each course and included a core set of questions across courses and project specific questions unique to each course. All students agreed that the peer review process was valuable. Data reveal significant differences in the relative strength of student perception of the benefit of the peer review process between courses across the common survey questions.

The strong positive response from students and the perception of improved projects by instructors help to justify the continued use of peer review in these courses and working to identify ways to make the process even more beneficial for students.

**Freeman, Vanessa**  
Poster  
*Havarti Style Cheese*  
Author(s): Vanessa Freeman  
Faculty Mentor(s): Michelle Farner, Animal and Food Science  
For this project, I made a Havarti Style cheese. Last semester was my first time making Havarti and it went really well. This semester I changed the recipe a little bit to see how the cheese would turn out. This project has been a great opportunity that will help me immensely with my future career plans.

**Peterson, Erin**  
Poster and Sample Collection  
*Comparing and Contrasting Italian Volcanoes*  
Author(s): Erin Peterson  
Faculty Mentor(s): Dr. Ian Williams, Plant and Earth Science  
A poster presentation on the research conducted during Study Abroad Europe (SA:E). The research project compares Italian volcanoes in a way that is
understandable to lower level students. The presentation will be enhanced with my collection of samples from Italy as a "show and tell" demonstration.

**Walsh-Brenizer, AJ**

*Poster*

*Bench-scale Methane Digester*

Author(s): David Von Ruden, Andrew Desselier, AJ Walsh-Brenizer

Faculty Mentor(s): Dr. Joel Peterson, Agricultural Engineering Technology

The Bench-scale Methane Digester has been a project in the making for several years. With funding from the Falcon Grant the digester was able to get overhauled and improved. A new design was developed and the goal of increased efficiency was the main objective. The rebuilt digester included a heating apparatus, new reaction vessel, and many new fittings. After successfully collecting and burning methane from the digester was accomplished in the spring of 2013 the digester was torn down and rebuilt with the funds. Testing is now beginning a new in the spring of 2014.
Adam, Christopher
Poster

*Promoting Intercultural Connection on the UWRF Campus*

Author(s): Jessie Lundberg, Jenna Lisowe, and Christopher Adam

Faculty Mentor(s): Diane Jacobson, English and Steve Phalen, Communication Studies and Theatre Arts

With an increasing amount of international students on campus as a result of UWRF's initiative to develop a strong global presence, UWRF students have a unique opportunity to take advantage of the creative and professional opportunities afforded through intercultural collaboration. This project is a collaboration between one section of COMS 213 -- Intercultural Communication and ESL 322 - Advanced Oral Communications to develop strategies for promoting intercultural connections on campus to foster an environment that welcomes diversity.

Anderson, Candace
Poster

*Promoting Intercultural Connection on the UWRF Campus*

Author(s): Candace Anderson, Katrinna Dodge, Plinio Honorato Muella Peixoto, Rafael Rodrigues Da Siwa and Kimberly Evert

Faculty Mentor(s): Diane Jacobson, English and Steve Phalen, Communication Studies and Theatre Arts

With an increasing amount of international students on campus as a result of UWRF's initiative to develop a strong global presence, UWRF students have a unique opportunity to take advantage of the creative and professional opportunities afforded through intercultural collaboration. This project is a collaboration between one section of COMS 213 -- Intercultural Communication and ESL 322 - Advanced Oral Communications to develop strategies for promoting intercultural connections on campus to foster an environment that welcomes diversity.

Azazu, Samuel
Short Film
Dealers

Author(s): Samuel Azazu

Faculty Mentor(s): Erik Johnson, Communication Studies and Theatre Arts - Digital Film and Television

This short film project is about three guys who set up a fake drug trading scene on a highway. The police were notified because it looked so real.

Barton, Samuel

Poster

Detection of Phorid Fly Parasite in Wisconsin Honey Bees

Author(s): Samuel Barton, Theodore Cummins, Zachary De Moulin, Kyle Karlen, Mark Martinez and Michaela Wildes

Faculty Mentor(s): Dr. Brad Mogen, Biology and Dr. Kim Mogen, Biology

The honey bee, Apis mellifera, is important for its ability to pollinate food and forage crops. Nationwide, the population is in critical decline. We looked at a potential contributor, the parasite Apocephalus borealis, and determined it is not a threat to Wisconsin honey bees. Other contributors are discussed.

Berg, Maddie

Music Video

Wrecking Ball

Author(s): Jordan Lynch and Maddie Berg

Faculty Mentor(s): Erik Johnson, Communication Studies and Theatre Arts - Digital Film and Television

A music video assignment for a class.

Bergstrom, Tina

Poster

Promoting Intercultural Connection on the UWRF Campus

Author(s): Scott Nielsen, Tina Bergstrom, Brian Uitdenbogerd and Naif Malaikah

Faculty Mentor(s): Diane Jacobson, English and Steve Phalen, Communication Studies and Theatre Arts
With an increasing amount of international students on campus as a result of UWRF's initiative to develop a strong global presence, UWRF students have a unique opportunity to take advantage of the creative and professional opportunities afforded through intercultural collaboration. This project is a collaboration between one section of COMS 213 -- Intercultural Communication and ESL 322 - Advanced Oral Communications to develop strategies for promoting intercultural connections on campus to foster an environment that welcomes diversity.

**Berman, Taylor**
Artwork (2D Watercolor)  
*The Transformation*

Author(s): Taylor Berman

Faculty Mentor(s): Jeannine Kitzhaber, Art and Dr. Kaylee Spencer, Art

I am currently enrolled in Dr. Kaylee Spencer's Pre-Columbian art history class here at the University of Wisconsin-River Falls. In this course we have explored many topics that directly relate to my interest in indigenous cultures, spiritual beliefs, and practices, as well as the artwork which they created. Fascinated by the symbolic content of the carved stelae found at Izapa, an early Mesoamerican site, I couldn’t help but want to reflect this new knowledge in artwork of my own. Inspired, I decided to reference my class notes and new understandings of these historical artworks in order to create this watercolor painting titled, "Transformation."

**Bermudez, Rosemarie**
Artwork (Loom Demonstration)  
*Shaft-switching Demo*

Author(s): Rosemarie M. Bermudez

Faculty Mentor(s): Morgan Clifford, Art; Lyz Wendland, Art; Dr. Kaylee Spencer, Art

I am demonstrating the shaft-switching weaving technique on a small table loom; I will also give visitors a chance to try it out for themselves.

**Campbell, Taylor**
Music Video  
*Dig Two*
Author(s): Taylor Campbell - pre-production, production, and post production; Melissa Musselman - main actress; Erin Peterson - supporting actress; Song written and recorded by the Band Perry

Faculty Mentor(s): Erik Johnson, Communication Studies and Theatre Arts - Digital Film and Television

My interpretation of the Band Perry's song, Dig Two's music video. Features a woman scorned by her husband and she follows him around town before she kills him and digs her own grave next to him.

Catelyn, Steinmueller
Poster

*Teratology of Xanthine Derivatives*

Author(s): Catelyn Steinmueller

Faculty Mentor(s): Dr. Cheng-chen Huang, Biology and Dr. David Rusterholz, Chemistry

The possibility that caffeine may have teratogenic effects on vertebrates is an important concern in a society that consumes a large amount of caffeine-containing products. In order to study the potential teratogenic effects of caffeine and related substances, zebrafish embryos offer a useful model. The focus of my project is to synthesize a variety of compounds related to caffeine. These new compounds will be tested for their ability to induce teratogenesis in the zebrafish model organism.

Caturia, Alyssa
Poster

*Promoting Intercultural Connection on the UWRF Campus*

Author(s): Xia Khang, Cassandra Turner, Alyssa Caturia, Rebecca Tarrago and Jose Luiz Dos Santos Manfio

Faculty Mentor(s): Diane Jacobson, English and Steve Phalen, Communication Studies and Theatre Arts

Chen, Zihan
Poster

*Promoting Intercultural Connection on the UWRF Campus*

Author(s): Jessica Adams, Kari Wasielewski, Yudie Shen and Zihan Chen
Faculty Mentor(s): Diane Jacobson, English and Steve Phalen, Communication Studies and Theatre Arts

With an increasing amount of international students on campus as a result of UWRF’s initiative to develop a strong global presence, UWRF students have a unique opportunity to take advantage of the creative and professional opportunities afforded through intercultural collaboration. This project is a collaboration between one section of COMS 213 -- Intercultural Communication and ESL 322 - Advanced Oral Communications to develop strategies for promoting intercultural connections on campus to foster an environment that welcomes diversity.

Chous, Julia
Poster

**Investigating the role of conservatism in brand preference.**

Author(s): Samuel Minor, Julia Chous and Coleman Sandstrom

Faculty Mentor(s): Dr. Travis Tubre, Psychology

Recent research by Khan, Misra, and Singh (2013) found that two behavioral markers of conservatism (i.e., Republican voting and worship attendance) predicted purchase patterns for brand-name products over generic products. Drawing on prior work (e.g., Graham, Haidt, & Nosek, 2009; Jost, Glaser, Kruglanski, & Sulloway, 2003), the authors suggested that conservative tendencies reflect traits such as conscientiousness and openness to experience that affect preferences for established products. However, Khan et al.’s data were aggregate, population-level numbers on voting patterns, worship attendance, and product sales. Consequently, they lack individual-level, and trait-level measures. Our study extends their findings by replicating their hypotheses in a controlled research setting. We had 134 college students taste and rate both Mountain Dew and a generic alternative. Participants were randomly assigned to either a congruent condition (correct product labeling) or an incongruent condition (incorrect product labeling). To replicate and extend Khan et al.’s findings, participants also completed measures of conscientiousness, openness to experience, worship attendance, and Republican voting. Our taste test results indicated no significant differences in actual preferences for the products. Rather, participants preferred what they thought was brand-name soda, even when they were actually tasting generic soda in a brand-name bottle. To test our hypotheses, we constructed a difference score by subtracting the participant rating for Mountain Dew from that for the generic alternative. Looking at the correlations showed that both trait measures were significant predictors of preference for the brand-name
product. Openness to experience was strongly and negatively correlated with brand-name preference \((r = -0.28, p > 0.01)\). Conscientiousness was moderately and positively correlated with brand-name preference \((r = 0.20, p < 0.05)\). However, neither behavioral marker significantly predicted brand-name preference. Neither worship attendance \((r = 0.07, p > 0.05)\) nor Republican voting \((r = 0.08, p > 0.05)\) was significantly correlated with brand-name preference. We verified our correlational results in a simultaneous multiple regression analysis. In contrast to Khan et al. (2013), we did not find evidence that the specific behavioral markers of conservatism they examined predicted brand-name preference for soda. Interestingly, however, we did find support for their theoretical suggestion that personality traits associated with conservatism predict brand-name preferences. Specifically, study participants higher in conscientiousness and lower in openness to experience indicated stronger preferences for the brand-name over the generic soda. One potential explanation for the differences in our results may be that the narrow bandwidth measures are not as salient to college students as they may be to members of the general population. In conclusion, our findings add to the understanding of how conservatism is expressed in everyday life.

**Cummins, Theodore**  
**Poster**  
**Detection of Phorid Fly Parasite in Wisconsin Honey Bees**  
Author(s): Samuel Barton, Theodore Cummins, Zachary De Moulin, Kyle Karlen, Mark Martinez and Michaela Wildes  
Faculty Mentor(s): Dr. Brad Mogen, Biology and Dr. Kim Mogen, Biology  
The honey bee, Apis mellifera, is important for its ability to pollinate food and forage crops. Nationwide, the population is in critical decline. We looked at a potential contributor, the parasite Apocephalus borealis, and determined it is not a threat to Wisconsin honey bees. Other contributors are discussed.

**Cunningham, Tessa**  
**PowerPoint presentation**  
**You Are What You Drink: A Feminist Critique of Milk and its Consequences for the Female**  
Author(s): Tessa Cunningham  
Faculty Mentor(s): Dr. Greta Gaard, English
Within the field of Human-Animal Studies, several scholars have examined the intersections of Western culture and the Western animal-based diet. In The Sexual Politics of Meat, Carol J. Adams uses a feminist perspective to examine the cultural implications of food, revealing a wealth of evidence for the cultural associations among women, femininity, passivity, and vegetables. Adams’ research shows how meat has become the symbol of patriarchy. Lisa Kemmerer expands this feminist perspective on food and its relation to stereotypical gender roles in her book, Sister Species: Women, Animals, and Social Justice, addressing the exploitation of all lactating female mammals in their experiences of physical pleasure, reproduction, and nursing their young. Building on Adams’ and Kemmerer’s research, my presentation explores the cultural implications of dairy through Western popular culture’s representations of milk. Milk’s depiction in contemporary advertisements, photography, and protest are examined and compared to Classical depictions of this liquid. In contemporary media, Western society views milk as a symbol of female sexuality: for example, in Jaroslav Wieczorkiewic’s photograph, “Milky Pinup”, the liquid has become sexy. But, sexual objectification of milk succeeds only if the culture is not reminded of milk’s origin: the mother, the cow. This presentation works to remind society of the uses and abuses of dairy cattle, who constitute one of Carol Adams’ absent referents. By making invisible (“absent”) the separation of mother cow from her nursling so that humans may take the cow’s milk, Western culture’s anxieties about the connection between the human female and her non-human counterpart are concealed. This anxiety is a manifestation of denial and abuse towards lactating mothers across species boundaries. In a time when Human-Animal Studies has exploded across academia and popular culture alike, it becomes important to remind society of the absent referent in the Western diet. Revealing the cow as the origin of milk exposes the connections between the human and non-human in order to rectify Western gender and species injustices. This presentation utilizes a multi-disciplinary approach to examine the topic of culture in relation to milk.

**Dahlke, Jessica**

**Poster**

*Isolation and characterization of novel Arthrobacter phages from soil*

Author(s): Students: Megan Archambault, Jessica Dahlke, Sarah DeGroote, James Kaczor, Elizabeth Kriese, Emily Lehmann, Emilee Plautz, Noah Stueven, Zachary VonBerg, representing students in the BIOL 160/195 courses; Teaching Assistants: Stephen Aiken, Bobbi Kelling
Several phages infecting a new bacterial host, Arthrobacter, were isolated from soil. Complete DNA sequences of two phages, TymAbreu and Toulouse, were annotated. These phages have extremely small genomes compared to known phages, with only 25-26 genes. Current experiments will yield information about their multiplication and other biological characteristics.

Davis Ph.D., Tricia
Poster

Learning Statistics: Flipping the Classroom, Self-Efficacy and Success

Author(s): Dr. Tricia Davis and Avalon Hanson
Faculty Mentor(s): Dr. Tricia Davis, Department of Sociology, Anthropology & Criminal Justice

The purpose of this study is to investigate whether two different pedagogical techniques make a difference on a student’s statistical anxiety, statistical self-efficacy, and performance in a course. Over one academic year, an Introduction to Social Statistics course was taught with two different pedagogical approaches. During the fall semester, the course was taught in a traditional face-to-face lecture format, wherein students are expected to work on homework outside of class. During the spring semester, the course utilized a flipped classroom format, wherein students are expected to watch recorded video lectures prior to coming to class and the classroom time is spent working on homework in groups. The lecture and content were exactly the same during both semesters – presented by the same instructor. Moreover, the mid-term and final exams were identical. The research question is: Does the pedagogical format of the course have an effect on students’ statistical anxiety, statistical self-efficacy, and performance?

De Castro, Edson
Poster

Promoting Intercultural Connection on the UWRF Campus

Author(s): Camille Howerton, Molly Prahl, Lauren Hefty, Edson de Castro and Felipe Barreto
Faculty Mentor(s): Diane Jacobson, English and Steve Phalen, Communication Studies and Theatre Arts
This is to give a description on bringing intercultural communications to UWRF campus!

De Moulin, Zachary  
Poster  
*Detection of Phorid Fly Parasite in Wisconsin Honey Bees*  
Author(s): Samuel Barton, Theodore Cummins, Zachary De Moulin, Kyle Karlen, Mark Martinez and Michaela Wildes  
Faculty Mentor(s): Dr. Brad Mogen, Biology and Dr. Kim Mogen, Biology  
The honey bee, Apis mellifera, is important for its ability to pollinate food and forage crops. Nationwide, the population is in critical decline. We looked at a potential contributor, the parasite Apocephalus borealis, and determined it is not a threat to Wisconsin honey bees. Other contributors are discussed.

DeGroote, Sarah  
Poster  
*Isolation and characterization of novel Arthrobacter phages from soil*  
Author(s): Students: Megan Archambault, Jessica Dahlke, Sarah DeGroote, James Kaczor, Elizabeth Kriese, Emily Lehmann, Emilee Plautz, Noah Stueven, Zachary VonBerg, representing students in the BIOL 160/195 courses; Teaching Assistants: Stephen Aiken, Bobbi Kelling  
Faculty Mentor(s): Dr. J. Alfred Bonilla, Biology and Dr. Karen Klyczek, Biology  
Several phages infecting a new bacterial host, Arthrobacter, were isolated from soil. Complete DNA sequences of two phages, TymAbreu and Toulouse, were annotated. These phages have extremely small genomes compared to known phages, with only 25-26 genes. Current experiments will yield information about their multiplication and other biological characteristics.

Deiss, Jennifer  
Poster  
*Promoting Intercultural Connection on the UWRF Campus*  
Author(s): Jennifer Deiss, Rachel Klamm, Paige Nelson, Felice Maciel Azevedo and Rodrigo Lanzarin
With an increasing amount of international students on campus as a result of UWRF's initiative to develop a strong global presence, UWRF students have a unique opportunity to take advantage of the creative and professional opportunities afforded through intercultural collaboration. This project is a collaboration between one section of COMS 213 -- Intercultural Communication and ESL 322 - Advanced Oral Communications to develop strategies for promoting intercultural connections on campus to foster an environment that welcomes diversity.

Dodge, Katrinna
Poster

Promoting Intercultural Connection on the UWRF Campus

Author(s): Candace Anderson, Katrinna Dodge, Plinio Honorato Muella Peixoto, Rafael Rodrigues Da Siwa and Kimberly Evert

Faculty Mentor(s): Diane Jacobson, English and Steve Phalen, Communication Studies and Theatre Arts

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Dos Santos Manfio, Jose Luiz
Poster

Promoting Intercultural Connection on the UWRF Campus

Author(s): Xia Khang, Cassandra Turner, Alyssa Caturia, Rebecca Tarrago and Jose Luiz Dos Santos Manfio

Faculty Mentor(s): Diane Jacobson, English and Steve Phalen, Communication Studies and Theatre Arts

Dusek, Aimee
Poster

Promoting Intercultural Connection on the UWRF Campus
Author(s): Stephanie Gianforte, Yejin Kwun, Bonghwan Kim, Katherine Smaglik and Aimee Dusek

Faculty Mentor(s): Diane Jacobson, English and Steve Phalen, Communication Studies and Theatre Arts

With an increasing amount of international students on campus as a result of UWRF's initiative to develop a strong global presence, UWRF students have a unique opportunity to take advantage of the creative and professional opportunities afforded through intercultural collaboration. This project is a collaboration between one section of COMS 213 -- Intercultural Communication and ESL 322 - Advanced Oral Communications to develop strategies for promoting intercultural connections on campus to foster an environment that welcomes diversity.

Engle, Marcus
Poster

Student attitudes toward chemistry as they progress in a typical science major course sequence

Author(s): Dr. Jamie L. Schneider, Julian Ikeri and Marcus Engle

Faculty Mentor(s): Dr. Jamie L. Schneider, Chemistry

We will present student attitudes in two different science major chemistry sequences. Student attitudes were measured using a previously published 8-item Likert scale instrument titled Attitude toward the Subject of Chemistry Inventory Version 2 (ASCI V2). This instrument consists of two factors (intellectual accessibility and emotional satisfaction). We first validated that the survey factored similarly to the previously published work. Then, average factor scores were measured for students at the beginning of the course sequence and at the end of each course in the chemistry sequences. Average factor scores will be compared and contrasted for each sequence of courses.

Engle, Marcus
Poster

Chemistry self concept changes as students progress through two different science major chemistry course sequences

Author(s): Dr. Jamie Schneider, Marcus Engle, Julian Ikeri

Faculty Mentor(s): Dr. Jamie Schneider, Chemistry
The chemistry department has been collecting survey data in the first two years of two different chemistry curricular sequences using a published survey titled Chemistry Self-concept Inventory (CSCI). The CSCI survey focuses on how students perceive their knowledge in the area of chemistry. The original survey contained the following five self-concept factors: chemistry, math, academic, academic enjoyment, and creativity. We reduced the survey items to only include those related to chemistry and academic self-concepts. As part of a UWRF Summer Scholars project and a Undergraduate Stipends and Expenses Grant, we analyzed multiple semesters of data from each course. We will present exploratory factor analysis data and reliability data supporting that our modified version of the published Likert survey is functioning in a similar way to previously published work. We will also compare and contrast average student chemistry and academic self-concepts as they progress through two different chemistry course sequences.

**Evert, Kimberly**  
Poster  
*Promoting Intercultural Connection on the UWRF Campus*  
Author(s): Candace Anderson, Katrinna Dodge, Plinio Honorato Muella Peixoto, Rafael Rodrigues Da Siwa and Kimberly Evert  
Faculty Mentor(s): Diane Jacobson, English and Steve Phalen, Communication Studies and Theatre Arts  

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**Fernandes, Natalia**  
Artwork (3D Metals)  
*Preserving Nature in Metal*  
Author(s): Natalia Fernandes  
Faculty Mentor(s): Asako Nakauchi, Art
These wearable art pieces are a celebration of nature and the sustenance we receive from it. In a culture where people choose to show their wealth through precious gems and metals they neglect the bare necessities the earth gives us. This lose of respect has fueled a disconnect with nature. These jewelry pieces are meant to immortalize and celebrate nature bringing it to the forefront in a positive dialog.

Gianforte, Stephanie
Poster

Promoting Intercultural Connection on the UWRF Campus

Author(s): Stephanie Gianforte, Yejin Kwun, Bonghwan Kim, Katherine Smaglik and Aimee Dusek

Faculty Mentor(s): Diane Jacobson, English and Steve Phalen, Communication Studies and Theatre Arts

With an increasing amount of international students on campus as a result of UWRF's initiative to develop a strong global presence, UWRF students have a unique opportunity to take advantage of the creative and professional opportunities afforded through intercultural collaboration. This project is a collaboration between one section of COMS 213 -- Intercultural Communication and ESL 322 - Advanced Oral Communications to develop strategies for promoting intercultural connections on campus to foster an environment that welcomes diversity.

Groth, Adam
Poster

The Anti-Viral Properties of Propolis

Author(s): Adam Groth and Nikolai Stephens

Faculty Mentor(s): Dr. Kim Mogen, Biology; Dr. Karen Klyczek, Biology; Dr. Brad Mogen, Biology

Propolis, a natural, sticky material honey bees use to line their hives, has antimicrobial properties and has been proposed to reduce viral loads in colonies. In collaboration with UMN, we tested the levels of three honey bee viruses to determine the correlation between the amount of propolis and viral loads.

Gullickson, Brittni
**Poster**

**A Sense of Belonging: How Student Feelings Influence Learning about Racism**

Author(s): Brittni Gullickson; Dr. Cyndi Kernahan, Psychology; Dr. Wei Zheng, Management and Marketing; Dr. Tricia Davis, Sociology, Anthropology and Criminal Justice

Faculty Mentor(s): Dr. Cyndi Kernahan, Psychology; Dr. Wei Zheng, Management and Marketing; Dr. Tricia Davis, Sociology, Anthropology and Criminal Justice

Learning about race and racism can be difficult and emotional. Instructors hope that learning and awareness will mobilize students to action and behavior change. Building on previous research (Chick, Karis, & Kernahan, 2009), we hypothesized that a sense of belonging would be predictive of student learning and awareness. Students in three courses (two semesters of the Psychology of Prejudice and Racism and one semester of Managing Workplace Diversity) were assessed in terms of their sense of belonging, their awareness of racial privilege and discrimination (pre- and post-course), their grades, and their post-course perceptions of learning. Regression analyses revealed that a sense of belonging positively predicted post-course racial attitudes as well as self-reported learning and grades (controlling for course). By increasing students’ feelings of connection to others, it may be possible to help move our students (and ourselves) past inertia and into greater awareness and action.

**Gullickson, Brittni**

Poster

**A Sense of Belonging: How Student Feelings Influence Learning about Race**

Author(s): Brittni Gullickson; Dr. Cyndi Kernahan, Psychology; Dr. Wei Zheng, Management and Marketing; Dr. Tricia Davis, Sociology, Anthropology and Criminal Justice

Faculty Mentor(s): Dr. Cyndi Kernahan, Psychology

Learning about race and racism can be a difficult process. Previous work has shown that courses in this area can help to increase awareness of racial bias and discrimination, but less work has focused on how that change occurs. We hypothesized that feelings of belonging within the classroom could play a key role in student learning and our results showed that indeed this was the case. Across three courses, all focused on race and diversity, feelings of belonging predicted not only perceptions of learning, but also graded forms of learning.
and increases in racial awareness. Results are discussed in terms of the larger literature on feelings of belonging.

Keywords: racial attitudes, belonging, grades, learning

Haas, Mark
Poster

_Historical Analysis of Dams in the United States_

Author(s): Mark Haas
Faculty Mentor(s): Dr. Matthew Dooley, Geography and Mapping Sciences

A historical look into dams throughout the United State and the effects they have on culture and the environment.

Hage, Lyndsay
Poster

_Predation Behavior in Freshwater Amphipods_

Author(s): Lyndsay Hage and Danielle Peterson
Faculty Mentor(s): Dr. Joseph Gathman, Biology

Amphipods are common components of benthic communities. They are usually classified as detritivores whose diet largely consists of decaying vegetation, plus dead or injured animals. Few researchers have investigated the possibility of predatory behavior in amphipods, but at least one species has been found to attack and consume live invertebrates. We used randomized-block laboratory-microcosm experiments to determine to what extent these amphipods prey upon invertebrates by looking at their predation rates over time. We used replicated experimental arenas in several chilled, flow-through aquaria to mimic natural stream conditions with various treatments of potential prey or food sources. We found that amphipods readily prey upon midge larvae (Chironomidae) and mayfly nymphs (Ephemeroptera: Baetidae). We also ran an experiment in which amphipods were offered a choice of mayflies and pieces of well-conditioned detritus in one treatment, versus a control treatment with mayflies and pieces of paper towel, to see if the presence of detritus would cause amphipods to reduce their predation rates on live mayfly nymphs. We found that the presence of detritus did not significantly alter the rate of amphipod predation on mayfly nymphs, suggesting that they do not prefer detritus to live invertebrate prey.
Hanson, Avalon
Poster

*Learning Statistics: Flipping the Classroom, Self-Efficacy and Success*

Author(s): Dr. Tricia Davis and Avalon Hanson

Faculty Mentor(s): Dr. Tricia Davis, Department of Sociology, Anthropology & Criminal Justice

The purpose of this study is to investigate whether two different pedagogical techniques make a difference on a student’s statistical anxiety, statistical self-efficacy, and performance in a course. Over one academic year, an Introduction to Social Statistics course was taught with two different pedagogical approaches. During the fall semester, the course was taught in a traditional face-to-face lecture format, wherein students are expected to work on homework outside of class. During the spring semester, the course utilized a flipped classroom format, wherein students are expected to watch recorded video lectures prior to coming to class and the classroom time is spent working on homework in groups. The lecture and content were exactly the same during both semesters – presented by the same instructor. Moreover, the mid-term and final exams were identical. The research question is: Does the pedagogical format of the course have an effect on students’ statistical anxiety, statistical self-efficacy, and performance?

Hanson, Katrina
Poster

*Modeling of S-N Bond Breaking in an Aromatic Sulfilimine*

Author(s): Dr. Stacey Stoffregen, Jacob Brunsvold and Katrina Hanson

Faculty Mentor(s): Dr. Stacey Stoffregen, Chemistry

This project utilizes computational chemistry methods to model the photochemical scission of the S-N bond of an aromatic sulfilimine, resulting in the formation of thiophene and a nitrene. The resulting energy data indicates which excited states provide energetically feasible pathways to the production of the products observed in the lab.

Hefty, Lauren
Poster

*Promoting Intercultural Connection on the UWRF Campus*

Author(s): Camille Howerton, Molly Prahl, Lauren Hefty, Edson de Castro and Felipe Barreto

UWRF Spring RSCA Day 2014
This is to give a description on bringing intercultural communications to UWRF campus!

Hettrick, Tom
Poster

*Adobe Systems, Inc. Online Communication Information Report*

Author(s): Jonathan Reid and Tom Hettrick

Faculty Mentor(s): Dr. Grace Coggio, Communication Studies and Theatre Arts

Adobe’s communication is effective on every level. The primary means of fluid, audience interaction takes place through short message social media accounts such as twitter and Facebook. Adobe protects its brand image through quick responses to consumer complaints both directly through replies (such as on Amazon.com reviews) and indirectly through formal blog posts. Informal communication remains strong through the use of forums tailored to each specific product and service Adobe provides. This report will outline and document various channels of Adobe’s online communication and conclude with recommendations for improvement.

Hobbs, Matthew
Poster

*East China Sea Conflict*

Author(s): Matthew Hobbs

Faculty Mentor(s): Dr. Sooh-Rhee Ryu, Political Science

It is commonly believed that the East China Sea is one of the last places to contain a significant amount of oil and natural gas. While the exact amount has often been debated, it is commonly accepted that the resources do exist. The issue to be addressed in this research is, what explains the conflict between Japan and China over the East China Sea? Why do both China and Japan claim sovereignty over these potentially game changing resources?
Promoting Intercultural Connection on the UWRF Campus

Author(s): Camille Howerton, Molly Prahl, Lauren Hefty, Edson de Castro and Felipe Barreto

Faculty Mentor(s): Diane Jacobson, English and Steve Phalen, Communication Studies and Theatre Arts

This is to give a description on bringing intercultural communications to UWRF campus!

Ikeri, Julian
Poster

Student attitudes toward chemistry as they progress in a typical science major course sequence

Author(s): Dr. Jamie L. Schneider, Julian Ikeri and Marcus Engle

Faculty Mentor(s): Dr. Jamie L. Schneider, Chemistry

We will present student attitudes in two different science major chemistry sequences. Student attitudes were measured using a previously published 8-item Likert scale instrument titled Attitude toward the Subject of Chemistry Inventory Version 2 (ASCI V2). This instrument consists of two factors (intellectual accessibility and emotional satisfaction). We first validated that the survey factored similarly to the previously published work. Then, average factor scores were measured for students at the beginning of the course sequence and at the end of each course in the chemistry sequences. Average factor scores will be compared and contrasted for each sequence of courses.

Ikeri, Julian
Poster

Chemistry self concept changes as students progress through two different science major chemistry course sequences

Author(s): Dr. Jamie Schneider, Marcus Engle, Julian Ikeri

Faculty Mentor(s): Dr. Jamie Schneider, Chemistry

The chemistry department has been collecting survey data in the first two years of two different chemistry curricular sequences using a published survey titled Chemistry Self-concept Inventory (CSCI). The CSCI survey focuses on how students perceive their knowledge in the area of chemistry. The original survey contained the following five self-concept factors: chemistry, math, academic, academic enjoyment, and creativity. We reduced the survey items to only
include those related to chemistry and academic self-concepts. As part of a UWRF Summer Scholars project and a Undergraduate Stipends and Expenses Grant, we analyzed multiple semesters of data from each course. We will present exploratory factor analysis data and reliability data supporting that our modified version of the published Likert survey is functioning in a similar way to previously published work. We will also compare and contrast average student chemistry and academic self-concepts as they progress through two different chemistry course sequences.

Jones, Rory
Poster

Fabrication of the Control and Analog Circuits of a Scanning Tunneling Microscope

Author(s): Rory Jones and Andrew Puyleart

Faculty Mentor(s): Dr. Lowell McCann, Physics

In this project, we developed a digital signal processor based control circuit to regulate the gap between the tip and the sample of a scanning tunneling microscope. In addition, two analog circuits were built: the first circuit measures the distance between the tip and sample, and the second circuit controls the movement of the STM’s tip across the sample.

Kaczor, James
Poster

Isolation and characterization of novel Arthrobacter phages from soil

Author(s): Students: Megan Archambault, Jessica Dahlke, Sarah DeGroote, James Kaczor, Elizabeth Kriese, Emily Lehmann, Emilee Plautz, Noah Stueven, Zachary VonBerg, representing students in the BIOL 160/195 courses; Teaching Assistants: Stephen Aiken, Bobbi Kelling

Faculty Mentor(s): Dr. J. Alfred Bonilla, Biology and Dr. Karen Klyczek, Biology

Several phages infecting a new bacterial host, Arthrobacter, were isolated from soil. Complete DNA sequences of two phages, TymAbreu and Toulouse, were annotated. These phages have extremely small genomes compared to known phages, with only 25-26 genes. Current experiments will yield information about their multiplication and other biological characteristics.
Karlen, Kyle
Poster

Detection of Phorid Fly Parasite in Wisconsin Honey Bees

Author(s): Samuel Barton, Theodore Cummins, Zachary De Moulin, Kyle Karlen, Mark Martinez and Michaela Wildes

Faculty Mentor(s): Dr. Brad Mogen, Biology and Dr. Kim Mogen, Biology

The honey bee, Apis mellifera, is important for its ability to pollinate food and forage crops. Nationwide, the population is in critical decline. We looked at a potential contributor, the parasite Apocephalus borealis, and determined it is not a threat to Wisconsin honey bees. Other contributors are discussed.

Kent, Jake-Ryan
PowerPoint presentation

Freaks, Fags, and Ferocious Feminists

Author(s): Jake-Ryan Kent

Faculty Mentor(s): Dr. Greta Gaard, English

Animal imprisonment has long been a topic of contention between the public and those in direct benefit from the zoological parks. In order to establish the evidence highlighting current issues with the state of animals in captivity this paper will compare the issues faced by the GLBT community and women today. It will also provide a basic history of zoological parks and where the business of animals as entertainment spilled over to include and ridicule human beings. Finally, this paper will seek to provide insight into what it means to participate in the grandiose shows that are zoological parks and the mindset that continues to shape a national world view.

Khang, Xia
Poster

Promoting Intercultural Connection on the UWRF Campus

Author(s): Xia Khang, Cassandra Turner, Alyssa Caturia, Rebecca Tarrago and Jose Luiz Dos Santos Manfio

Faculty Mentor(s): Diane Jacobson, English and Steve Phalen, Communication Studies and Theatre Arts
Kim, Bonghwan
Poster

*Promoting Intercultural Connection on the UWRF Campus*

Author(s): Stephanie Gianforte, Yejin Kwun, Bonghwan Kim, Katherine Smaglik and Aimee Dusek

Faculty Mentor(s): Diane Jacobson, English and Steve Phalen, Communication Studies and Theatre Arts

With an increasing amount of international students on campus as a result of UWRF’s initiative to develop a strong global presence, UWRF students have a unique opportunity to take advantage of the creative and professional opportunities afforded through intercultural collaboration. This project is a collaboration between one section of COMS 213 -- Intercultural Communication and ESL 322 - Advanced Oral Communications to develop strategies for promoting intercultural connections on campus to foster an environment that welcomes diversity.

Klamm, Rachel
Poster

*Promoting Intercultural Connection on the UWRF Campus*

Author(s): Jennifer Deiss, Rachel Klamm, Paige Nelson, Felice Maciel Azevedo and Rodrigo Lanzarin

Faculty Mentor(s): Diane Jacobson, English and Steve Phalen, Communication Studies and Theatre Arts

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Kriese, Elizabeth
Poster

*Isolation and characterization of novel Arthrobacter phages from soil*

Author(s): Students: Megan Archambault, Jessica Dahlke, Sarah DeGroote, James Kaczor, Elizabeth Kriese, Emily Lehmann, Emilee

UWRF Spring RSCA Day 2014
Plautz, Noah Stueven, Zachary VonBerg, representing students in the BIOL 160/195 courses; Teaching Assistants: Stephen Aiken, Bobbi Kelling

Faculty Mentor(s): Dr. J. Alfred Bonilla, Biology and Dr. Karen Klyczek, Biology

Several phages infecting a new bacterial host, Arthrobacter, were isolated from soil. Complete DNA sequences of two phages, TymAbreu and Toulouse, were annotated. These phages have extremely small genomes compared to known phages, with only 25-26 genes. Current experiments will yield information about their multiplication and other biological characteristics.

Kwun, Yejin
Poster

**Promoting Intercultural Connection on the UWRF Campus**

Author(s): Stephanie Gianforte, Yejin Kwun, Bonghwan Kim, Katherine Smaglik and Aimee Dusek

Faculty Mentor(s): Diane Jacobson, English and Steve Phalen, Communication Studies and Theatre Arts

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Lanzarin, Rodrigo
Poster

**Exploring Chicago Popular Culture Literacy**

Author(s): Grazielle Maia, Victor Marlem, Talitha Pereira, Rodrigo Lanzarin, Bruno Paiao and Igor Tenreiro

Faculty Mentor(s): Conan Kmiecik, English

The project had an objective learning component to recognize and understand about the popular culture and its importance for us.
Lehmann, Emily
Poster

*Isolation and characterization of novel Arthrobacter phages from soil*

Author(s): Students: Megan Archambault, Jessica Dahlke, Sarah DeGroote, James Kaczor, Elizabeth Kriese, Emily Lehmann, Emilee Plautz, Noah Stueven, Zachary VonBerg, representing students in the BIOL 160/195 courses; Teaching Assistants: Stephen Aiken, Bobbi Kelling

Faculty Mentor(s): Dr. J. Alfred Bonilla, Biology and Dr. Karen Klyczek, Biology

Several phages infecting a new bacterial host, Arthrobacter, were isolated from soil. Complete DNA sequences of two phages, TymAbreu and Toulouse, were annotated. These phages have extremely small genomes compared to known phages, with only 25-26 genes. Current experiments will yield information about their multiplication and other biological characteristics.

Lisowe, Jenna
Poster

*Promoting Intercultural Connection on the UWRF Campus*

Author(s): Jessie Lundberg, Jenna Lisowe, and Christopher Adam

Faculty Mentor(s): Diane Jacobson, English and Steve Phalen, Communication Studies and Theatre Arts

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Ludvigsen, Angela
Poster

*Sizing Optically Trapped Water Droplets Using Cavity Enhanced Raman Spectroscopy*

Author(s): Angela Ludvigsen
An aerosol droplet’s diameter was determined from the spectrum of the light emitted by the droplet. I will present the spectra of a droplet illuminated by a high intensity LED and explain how to calculate the droplet’s diameter.

**Lund, Justin**  
Short Film  
*The Kansas City Chiefs and River Falls: Big Team Little City*  
Author(s): Justin Lund, Producer and Director  
Faculty Mentor(s): Erik Johnson, Communication Studies and Theatre Arts - Digital Film and Television  

The Kansas City Chiefs and River Falls: Big Team Little City, is a very brief overview of the nine years the Kansas City Chiefs spent their summer training camp on the campus of the University of Wisconsin - River Falls.

**Lundberg, Jessie**  
Poster  
*Promoting Intercultural Connection on the UWRF Campus*  
Author(s): Jessie Lundberg, Jenna Lisowe, and Christopher Adam  
Faculty Mentor(s): Diane Jacobson, English and Steve Phalen, Communication Studies and Theatre Arts  

With an increasing amount of international students on campus as a result of UWRF’s initiative to develop a strong global presence, UWRF students have a unique opportunity to take advantage of the creative and professional opportunities afforded through intercultural collaboration. This project is a collaboration between one section of COMS 213 -- Intercultural Communication and ESL 322 - Advanced Oral Communications to develop strategies for promoting intercultural connections on campus to foster an environment that welcomes diversity.

**Lynch, Jordan**  
Music Video  
*Wrecking Ball*  
Author(s): Jordan Lynch and Maddie Berg
Faculty Mentor(s): Erik Johnson, Communication Studies and Theatre Arts - Digital Film and Television

A music video assignment for a class.

Maciel Azevedo, Felice
Poster

*Promoting Intercultural Connection on the UWRF Campus*

Author(s): Jennifer Deiss, Rachel Klamm, Paige Nelson, Felice Maciel Azevedo and Rodrigo Lanzarin

Faculty Mentor(s): Diane Jacobson, English and Steve Phalen, Communication Studies and Theatre Arts

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Maia, Grazille
Poster

*Exploring Chicago Popular Culture Literacy*

Author(s): Grazielle Maia, Victor Marlem, Talitha Pereira, Rodrigo Lanzarin, Bruno Paiao and Igor Tenreiro

Faculty Mentor(s): Conan Kmiecik, English

The project had an objective learning component to recognize and understand about the popular culture and its importance for us.

Malaikah, Naif
Poster

*Promoting Intercultural Connection on the UWRF Campus*

Author(s): Tina Bergstrom, Brian Uitdenbogerd, Scott Nielsen and Naif Osama Malaikah
With an increasing amount of international students on campus as a result of UWRF's initiative to develop a strong global presence, UWRF students have a unique opportunity to take advantage of the creative and professional opportunities afforded through intercultural collaboration. This project is a collaboration between one section of COMS 213 -- Intercultural Communication and ESL 322 - Advanced Oral Communications to develop strategies for promoting intercultural connections on campus to foster an environment that welcomes diversity.

**Marlem, Victor**

*Poster*

*Exploring Chicago Popular Culture Literacy*

Author(s): Grazielle Maia, Victor Marlem, Talitha Pereira, Rodrigo Lanzarin, Bruno Paiao and Igor Tenreiro

Faculty Mentor(s): Conan Kmiecik, English

The project had an objective learning component to recognize and understand about the popular culture and its importance for us.

**Marthaler, Amanda**

*Poster*

*Islamic Art and Patterns: Extending Traditional Islamic Art Patterns Using Modular Arithmetic and Fibonacci Sequences*

Author(s): Amanda Marthaler

Faculty Mentor(s): Dr. Laurel Langford, Mathematics

This project observes and analyzes the patterns within modular arithmetic and modular generalized Fibonacci sequences, and how they relate to shapes found in Islamic art.

**Martinez, Mark**

*Poster*

*Detection of Phorid Fly Parasite in Wisconsin Honey Bees*

Author(s): Samuel Barton, Theodore Cummins, Zachary De Moulin, Kyle Karlen, Mark Martinez and Michaela Wildes
The honey bee, *Apis mellifera*, is important for its ability to pollinate food and forage crops. Nationwide, the population is in critical decline. We looked at a potential contributor, the parasite *Apocephalus borealis*, and determined it is not a threat to Wisconsin honey bees. Other contributors are discussed.

**McDuffie, Shandelle**  
Artwork (Loom Demonstration)  
*Double Weave*  
Author(s): Shandelle McDuffie; Double Weave by Jennifer Moore  
Faculty Mentor(s): Morgan Clifford, Art

I will be hooking up and showing the process of weaving with a more complex pattern hook-up to the loom. All the threads are hand dyed and each thread is individually hooked through the loom. The pattern I will be hooking up is called a double weave meaning their is essentially 2 separate weavings intertwining together.

**Mediger, Abigail**  
Poster  
*The Building Blocks of Fun*  
Author(s): Abigail Mediger, Joseph Opseth and Heather Snyder  
Faculty Mentor(s): Dr. Kathy Tomlinson, Mathematics

We developed two metrics to determine the best coach in a variety of college sports. We synthesized our knowledge of statistics and applied four different mathematical software packages to analyze coaching data and create appropriate metrics.

**Mellberg, Lora**  
Poster  
*A Spatial Analysis of Health Care in Minneapolis and St. Paul: Neighborhood Profiles of Income and Population*  
Author(s): Lora Mellberg  
Faculty Mentor(s): Dr. Matthew Dooley, Geography and Mapping Sciences
Investigating the role of conservatism in brand preference.

Author(s): Samuel Minor, Julia Chous and Coleman Sandstrom

Faculty Mentor(s): Dr. Travis Tubre, Psychology

Recent research by Khan, Misra, and Singh (2013) found that two behavioral markers of conservatism (i.e., Republican voting and worship attendance) predicted purchase patterns for brand-name products over generic products. Drawing on prior work (e.g., Graham, Haidt, & Nosek, 2009; Jost, Glaser, Kruglanski, & Sulloway, 2003), the authors suggested that conservative tendencies reflect traits such as conscientiousness and openness to experience that affect preferences for established products. However, Khan et al.’s data were aggregate, population-level numbers on voting patterns, worship attendance, and product sales. Consequently, they lack individual-level, and trait-level measures. Our study extends their findings by replicating their hypotheses in a controlled research setting. We had 134 college students taste and rate both Mountain Dew and a generic alternative. Participants were randomly assigned to either a congruent condition (correct product labeling) or an incongruent condition (incorrect product labeling). To replicate and extend Khan et al.’s findings, participants also completed measures of conscientiousness, openness to experience, worship attendance, and Republican voting. Our taste test results indicated no significant differences in actual preferences for the products. Rather, participants preferred what they thought was brand-name soda, even when they were actually tasting generic soda in a brand-name bottle. To test our hypotheses, we constructed a difference score by subtracting the participant rating for Mountain Dew from that for the generic alternative. Looking at the correlations showed that both trait measures were significant predictors of preference for the brand-name product. Openness to experience was strongly and negatively correlated with brand-name preference ($r = -0.28, p >.01$). Conscientiousness was moderately and positively correlated with brand-name preference ($r = 0.20, p < .05$). However, neither behavioral marker significantly predicted brand-name preference. Neither worship attendance ($r = 0.07, p > .05$) nor Republican voting ($r = 0.08, p > .05$) was significantly correlated with brand-name preference. We verified our correlational results in a simultaneous multiple regression analysis. In contrast to Khan et al. (2013), we did not find evidence that the specific
behavioral markers of conservatism they examined predicted brand-name preference for soda. Interestingly, however, we did find support for their theoretical suggestion that personality traits associated with conservatism predict brand-name preferences. Specifically, study participants higher in conscientiousness and lower in openness to experience indicated stronger preferences for the brand-name over the generic soda. One potential explanation for the differences in our results may be that the narrow bandwidth measures are not as salient to college students as they may be to members of the general population. In conclusion, our findings add to the understanding of how conservatism is expressed in everyday life.

Muella Peixoto, Plinio
Poster

*Promoting Intercultural Connection on the UWRF Campus*

Author(s): Candace Anderson, Katrinna Dodge, Plinio Honorato Muella Peixoto, Rafael Rodrigues Da Siwa and Kimberly Evert

Faculty Mentor(s): Diane Jacobson, English and Steve Phalen, Communication Studies and Theatre Arts

With an increasing amount of international students on campus as a result of UWRF’s initiative to develop a strong global presence, UWRF students have a unique opportunity to take advantage of the creative and professional opportunities afforded through intercultural collaboration. This project is a collaboration between one section of COMS 213 -- Intercultural Communication and ESL 322 - Advanced Oral Communications to develop strategies for promoting intercultural connections on campus to foster an environment that welcomes diversity.

Nelson, Teddy
Poster

*Neutrophil – Inflammation Relationship During Zebrafish Caudal Fin Regeneration*

Author(s): Teddy Nelson and Dr. Cheng-chen Huang

Faculty Mentor(s): Dr. Cheng-chen Huang, Biology

Zebrafish have an amazing ability to regenerate their caudal fins and even other parts of their body after amputation. During the regeneration process of the caudal fin there are many key components that contribute to a full healing of the wound. One of the most interesting factors is the contribution that
inflammation provides to the healing process, which is typically stimulated by neutrophils. This project is meant to study the role of neutrophils in regeneration by taking advantages of the transgenic Zebrafish that express green fluorescent protein (GFP) in neutrophils. Neutrophils were seen at the amputation at 36 hours post amputation (HPA). It is interesting to observe that neutrophils appear in the middle and gradually spread to the dorsal and ventral sides. Neutrophils disappeared from the regenerating fin by 60 HPA. However, the fin continued to regenerate which indicated that neutrophils are only involved in the early phases of regeneration. Using quantitative RT-PCR, we found that the expression of the pro-inflammation gene cox-2 was induced to high level from 36-60 HPA but decreased to normal level by 7-8 Days Post Amputation. These results have begun to uncover how neutrophils and inflammation contribute to the regeneration of caudal fins in Zebrafish.

Nelson, Paige  
Poster  
*Promoting Intercultural Connection on the UWRF Campus*  
Author(s): Jennifer Deiss, Rachel Klamm, Paige Nelson, Felice Maciel Azevedo and Rodrigo Lanzarin  
Faculty Mentor(s): Diane Jacobson, English and Steve Phale, Communication Studies and Theatre Arts  
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Nielsen, Scott  
Poster  
*Promoting Intercultural Connection on the UWRF Campus*  
Author(s): Tina Bergstrom, Brian Uitdenbogerd, Scott Nielsen and Naif Osama Malaikah  
Faculty Mentor(s): Diane Jacobson, English and Steve Phalen, Communication Studies and Theatre Arts
With an increasing amount of international students on campus as a result of UWRF's initiative to develop a strong global presence, UWRF students have a unique opportunity to take advantage of the creative and professional opportunities afforded through intercultural collaboration. This project is a collaboration between one section of COMS 213 -- Intercultural Communication and ESL 322 - Advanced Oral Communications to develop strategies for promoting intercultural connections on campus to foster an environment that welcomes diversity.

Nordeen, Patrick
Poster

*Progress Towards the Synthesis of Piperodione*

Author(s): Patrick Nordeen and Dr. Karl Peterson

Faculty Mentor(s): Dr. Karl Peterson, Chemistry

Piperodione is a rare amide alkaloid that is extracted from the fruits of Piper retrofractum also called cabe jawa. These fruits are used in an Indonesian natural medicine called Jamu and have been used for the treatment of asthma, bronchitis, fever and abdominal pain. Piperodione was found to enhance the neurite outgrowth of NGF-mediated PC12 cells, which demonstrates potential as a treatment of neurodegenerative diseases such as Alzheimer’s disease. The purpose of this research is to synthesize the rare natural product piperodione from readily available materials. A total synthesis of piperodione that is efficient and economical has been proposed. The strategy employs the alkylation of methyl cyanoacetate by a beta-halopropiophenone derivative, followed by a Cul-catalyzed aerobic oxidation to achieve the 1,2,5-tricarbonyl structure. This total synthesis would make piperodione readily available for further research into treating neurodegenerative diseases such as Alzheimer’s disease.

O'Brien, Nicholas
Poster

*Crime Mapping and Spatial Analysis: Hudson, WI 2009-2013*

Author(s): Nicholas O'Brien

Faculty Mentor(s): Dr. Matthew Dooley, Geography and Mapping Sciences

This project will be exploring crime mapping using the popular technique of "hot spot" mapping. It will also explore spacial analysis of the crime data using
alternate mapping techniques as well. The goal is to see what if any patterns exist.

**Opseth, Joseph**  
**Poster**  
_The Building Blocks of Fun_  
Author(s): Abigail Mediger, Joseph Opseth and Heather Snyder  
Faculty Mentor(s): Dr. Kathy Tomlinson, Mathematics

We developed two metrics to determine the best coach in a variety of college sports. We synthesized our knowledge of statistics and applied four different mathematical software packages to analyze coaching data and create appropriate metrics.

**Paiao, Bruno**  
**Poster**  
_Exploring Chicago Popular Culture Literacy_  
Author(s): Grazielle Maia, Victor Marlem, Talitha Pereira, Rodrigo Lanzarin, Bruno Paiao and Igor Tenreiro  
Faculty Mentor(s): Conan Kmiecik, English

The project had an objective learning component to recognize and understand about the popular culture and its importance for us.

**Patzke, Daniel**  
**Poster**  
_Examining the Migration of Guest Workers across National Borders within the European Union, 2002-2012_  
Author(s): Daniel Patzke  
Faculty Mentor(s): Dr. Matthew Dooley, Geography and Mapping Sciences

This project examines the movement of guest workers in the European Union, specifically looking at how the dates of accession to the EU, unemployment rates, and average income affect the numbers of people migrating to other EU member countries.
**Pereira, Talitha**  
*Poster*  
*Exploring Chicago Popular Culture Literacy*  
Author(s): Grazielle Maia, Victor Marlem, Talitha Pereira, Rodrigo Lanzarin and Igor Tenreiro  
Faculty Mentor(s): Conan Kmiecik, English  
The project had an objective learning component to recognize and understand about the popular culture and its importance for us.

**Peterson, Danielle**  
*Poster*  
*Predation Behavior in Freshwater Amphipods*  
Author(s): Lyndsay Hage and Danielle Peterson  
Faculty Mentor(s): Dr. Joseph Gathman, Biology  
Amphipods are common components of benthic communities. They are usually classified as detritivores whose diet largely consists of decaying vegetation, plus dead or injured animals. Few researchers have investigated the possibility of predatory behavior in amphipods, but at least one species has been found to attack and consume live invertebrates. We used randomized-block laboratory-microcosm experiments to determine to what extent these amphipods prey upon invertebrates by looking at their predation rates over time. We used replicated experimental arenas in several chilled, flow-through aquaria to mimic natural stream conditions with various treatments of potential prey or food sources. We found that amphipods readily prey upon midge larvae (Chironomidae) and mayfly nymphs (Ephemeroptera: Baetidae). We also ran an experiment in which amphipods were offered a choice of mayflies and pieces of well-conditioned detritus in one treatment, versus a control treatment with mayflies and pieces of paper towel, to see if the presence of detritus would cause amphipods to reduce their predation rates on live mayfly nymphs. We found that the presence of detritus did not significantly alter the rate of amphipod predation on mayfly nymphs, suggesting that they do not prefer detritus to live invertebrate prey.

**Philippi, Alec**  
*Short Film*  
*UWRF in Germany Study Abroad Video*  
Author(s): Alec Philippi and Jonathan Reid
High school students deciding on a college to attend increasingly rely on internet research. To cater to a new generation of students with short attention spans, visual presentation is critical. The UWRF in Germany: Study Abroad Promotional Video will be an exciting and relatable visual representation of the cultural similarities and differences between German students and American students. The main goal of the video is to encourage students to expand their global perspectives and investigate studying abroad during their time at the University of Wisconsin-River Falls (UWRF). A secondary goal is to use the video as Undergraduate Research and Creative Scholarly Activity (URSCA) promotional material.

The three to four minute video will be filmed as a joint effort between UWRF students and students at the RheinMain University of Applied Sciences (HSRM) in Wiesbaden, Germany. Students Jonathan Reid (Professional Writing major, Digital Film & Television minor) and Alec Philippi (Digital Film & Television major, Journalism minor), along with faculty mentor Erik Johnson (tenure-track Assistant Professor), will travel to Wiesbaden, Germany during spring break 2014 to learn about the German culture, gather footage, and collaborate with German students in the HSRM Media Management department.

**Philippi, Alec**

Short Film

*UWRF Adult Degree Completion Program*

Author(s): Mark Rolseth and Alec Philippi

Faculty Mentor(s): Erik Johnson, Communication Studies and Theatre Arts - Digital Film and Television

The video was produced to be displayed at the 2014 Board of Regents meeting at UWRF, highlighting the Adult Degree Completion Programs at the university.

**Philippi, Alec**

Short Film

*UWRF Dairy Pilot Plant*

Author(s): Mark Rolseth and Alec Philippi

Faculty Mentor(s): Erik Johnson, Communication Studies and Theatre Arts - Digital Film and Television
The video was produced to be displayed at the 2014 Board of Regents meeting at UWRF, highlighting the Dairy Pilot Plant at the university.

Plautz, Emilee  
Poster  

*Isolation and characterization of novel Arthrobacter phages from soil*  
Author(s): Students: Megan Archambault, Jessica Dahlke, Sarah DeGroote, James Kaczor, Elizabeth Kriese, Emily Lehmann, Emilee Plautz, Noah Stueven, Zachary VonBerg, representing students in the BIOL 160/195 courses; Teaching Assistants: Stephen Aiken, Bobbi Kelling  
Faculty Mentor(s): Dr. J. Alfred Bonilla, Biology and Dr. Karen Klyczek, Biology  

Several phages infecting a new bacterial host, Arthrobacter, were isolated from soil. Complete DNA sequences of two phages, TymAbreu and Toulouse, were annotated. These phages have extremely small genomes compared to known phages, with only 25-26 genes. Current experiments will yield information about their multiplication and other biological characteristics.

Prahl, Molly  
Poster  

*Promoting Intercultural Connection on the UWRF Campus*  
Author(s): Camille Howerton, Molly Prahl, Lauren Hefty, Edson de Castro and Felipe Barreto  
Faculty Mentor(s): Diane Jacobson, English and Steve Phalen, Communication Studies and Theatre Arts  

This is to give a description on bringing intercultural communications to UWRF campus!

Puyleart, Andrew  
Poster  

*Fabrication of the Control and Analog Circuits of a Scanning Tunneling Microscope*  
Author(s): Rory Jones and Andrew Puyleart  
Faculty Mentor(s): Dr. Lowell McCann, Physics
In this project, we developed a digital signal processor based control circuit to regulate the gap between the tip and the sample of a scanning tunneling microscope. In addition, two analog circuits were built: the first circuit measures the distance between the tip and sample, and the second circuit controls the movement of the STM’s tip across the sample.

**Ranee, Skinner**  
*Poster*  
"Free Energy": Building Solar Cells from Recycled Materials  
Author(s): Ranee Skinner  
Faculty Mentor(s): Dr. Lowell McCann, Physics

Solar cells are built into a functioning panel utilizing primarily recycled electronics to provide the lowest cost solar panel possible. This serves as a proof of concept that the design could be functional for use in developing countries with excessive electronic waste.

**Reid, Jonathan**  
*Short Film*  
**UWRF in Germany Study Abroad Video**  
Author(s): Alec Philippi and Jonathan Reid  
Faculty Mentor(s): Erik Johnson, Communication Studies and Theatre Arts - Digital Film and Television

High school students deciding on a college to attend increasingly rely on internet research. To cater to a new generation of students with short attention spans, visual presentation is critical. The UWRF in Germany: Study Abroad Promotional Video will be an exciting and relatable visual representation of the cultural similarities and differences between German students and American students. The main goal of the video is to encourage students to expand their global perspectives and investigate studying abroad during their time at the University of Wisconsin-River Falls (UWRF). A secondary goal is to use the video as Undergraduate Research and Creative Scholarly Activity (URSCA) promotional material.

The three to four minute video will be filmed as a joint effort between UWRF students and students at the RheinMain University of Applied Sciences (HSRM) in Wiesbaden, Germany. Students Jonathan Reid (Professional Writing major, Digital Film & Television minor) and Alec Philippi (Digital Film & Television major, Journalism minor), along with faculty mentor Erik Johnson (tenure-track...
Assistant Professor), will travel to Wiesbaden, Germany during spring break 2014 to learn about the German culture, gather footage, and collaborate with German students in the HSRM Media Management department.

**Reid, Jonathan**

*Poster*

*Adobe Systems, Inc. Online Communication Information Report*

Author(s): Jonathan Reid and Tom Hettrick

Faculty Mentor(s): Dr. Grace Coggio, Communication Studies and Theatre Arts

Adobe’s communication is effective on every level. The primary means of fluid, audience interaction takes place through short message social media accounts such as twitter and Facebook. Adobe protects its brand image through quick responses to consumer complaints both directly through replies (such as on Amazon.com reviews) and indirectly through formal blog posts. Informal communication remains strong through the use of forums tailored to each specific product and service Adobe provides. This report will outline and document various channels of Adobe's online communication and conclude with recommendations for improvement.

**Robinson, Jesse**

*Poster*

"Comparative Modeling of Breast Cancer Metastasis in Fibroblastic Versus Adipogenic Artificial Stromal Tissues."

Author(s): Jesse Robinson, Rebecca Haugen, Charlotte Stanford, Eric Valder, Kevin Rixmann, Peter Dahlberg M.D., Ray Haselby D.O., Alexander Chibalin Ph.D., Juleen Zierath Ph.D., Timothy Lyden Ph.D.

Faculty Mentor(s): Dr. Timothy Lyden, Biology

A significant relationship has been established in the literature between breast cancer development/potentiation and obesity or diabetes in a patient. Although there has been a statistical relationship establish by these studies, it is not yet clear what role adipose or stromal tissues play in terms of direct cellular effects and/or signaling that impacts breast ductal cells and results in cancer development/potentiation. In this communication, we report on a series of studies that are ongoing in our laboratory which focus on the 3D development and testing of artificial stromal and breast cancer tissues. Through the application of natural 3D scaffolding materials, we have previously...
shown that very complex artificial tissues can be developed from standard cell culture lines. In this study, we are employing these culture tools to generate 3D artificial fibroblastic and adipogenic tissues using the 3T3-Swiss and 3T3-L1 cell lines. Once established, the 3T3-L1 tissues (adipogenic) will be induced to generate mature adipose-like tissues. These tissues will then be exposed to MCF-7 breast adenocarcinoma cell-derived spheroid cultures that effectively model tumor metastasis. Comparative SEM and confocal microscopy studies will examine the relative differences and similarities of tumor cell/spheroid attachment and the subsequent spreading/invasion process in this model system. This current study will expand and enhance data already gathered on MCF-7 spheroid and 3T3-Swiss or L1 artificial tissue interactions. However, in this new study the addition of differentiation induction within the 3T3-L1 samples will provide a significant new perspective on this critical cancer cell related invasive behavior.

**Rodrigo, Lanzarin**  
*Poster*  
**Promoting Intercultural Connection on the UWRF Campus**  
Author(s): Jennifer Deiss, Rachel Klamm, Paige Nelson, Felice Maciel Azevedo and Rodrigo Lanzarin  
Faculty Mentor(s): Diane Jacobson, English and Steve Phalen, Communication Studies and Theatre Arts

With an increasing amount of international students on campus as a result of UWRF's initiative to develop a strong global presence, UWRF students have a unique opportunity to take advantage of the creative and professional opportunities afforded through intercultural collaboration. This project is a collaboration between one section of COMS 213 -- Intercultural Communication and ESL 322 - Advanced Oral Communications to develop strategies for promoting intercultural connections on campus to foster an environment that welcomes diversity.

**Rodrigues Da Siwa, Rafael**  
*Poster*  
**Promoting Intercultural Connection on the UWRF Campus**  
Author(s): Candace Anderson, Katrinna Dodge, Plinio Honorato Muella Peixoto, Rafael Rodrigues Da Siwa and Kimberly Evert
Faculty Mentor(s): Diane Jacobson, English and Steve Phalen, Communication Studies and Theatre Arts

With an increasing amount of international students on campus as a result of UWRF’s initiative to develop a strong global presence, UWRF students have a unique opportunity to take advantage of the creative and professional opportunities afforded through intercultural collaboration. This project is a collaboration between one section of COMS 213 -- Intercultural Communication and ESL 322 - Advanced Oral Communications to develop strategies for promoting intercultural connections on campus to foster an environment that welcomes diversity.

Rodriguez, Rufino
Poster

*Modeling Artificial Skeletal Muscle Development in 3D Culture using C2C12 Myoblast Cells*

Author(s): Rufino S. Rodriguez, Brianna Jacques, Rijada Suldic, Kathryn Overby, Juleen Zierath, Ph.D., Alexander Chibalin, Ph.D. and Timothy Lyden, Ph.D.,

Faculty Mentor(s): Dr. Timothy Lyden, Biology

Recently, our lab has been focused on the application of a standard mouse myoblast cell line, C2C12, as a tool to produce artificial skeletal muscle tissues in-vitro. These studies have focused on exploring the developmental cell behaviors, population dynamics and resulting artificial tissue (AT) structures produced by this cell line on 3D natural scaffolding materials. Since AT generation represents a potential model for skeletal muscle development and repair, we report here on the morphological and molecular evaluation/comparison of specific C2C12 cells in 2D monolayer and 3D scaffold cultures. To date, our SEM examination has identified that C2C12 does indeed respond to our 3D matrix material and the associated culture geometries by rapid outgrowth and colonization of the scaffolds followed by significant differentiation and organization of the cells into distinctive early to middle myotubes. In addition, our morphological analysis suggests possible formation of satellite cell populations associated with the myotube structures. In order to determine the state of differentiation and confirm the presence of a stem cell population on our scaffold, we performed western blot experiments to analyze the protein composition. Early differentiation markers, myogenin and Myo-D, are elevated from their respective controls following treatments that induce early tissue development. In comparison to monolayer cultures, scaffold samples maintain the expression of these markers over a longer period. Later
differentiation markers, MyCH II and desmin, are also elevated from their control scaffolds. The expression of desmin exhibits no statistically significant difference from the induction monolayer, while MyCH II is expressed at a lower level. These differentiation markers indicate the scaffolds are likely undergoing a more gradual rate of differentiation than is seen in monolayer cultures. This pattern of differentiation is more typical of natural development. Interestingly, the expression of PAX-3 was significantly elevated in the scaffold samples, suggesting the presence of an actively proliferating population of satellite cells. The combination of the described molecular data and the morphological data strongly supports our hypothesis that 3D scaffold cultures develop differentiated artificial tissues that are closer to native tissue than monolayer cultures.

Rolseth, Mark
Short Film

UWRF Adult Degree Completion Program

Author(s): Mark Rolseth and Alec Philippi
Faculty Mentor(s): Erik Johnson, Communication Studies and Theatre Arts - Digital Film and Television

The video was produced to be displayed at the 2014 Board of Regents meeting at UWRF, highlighting the Adult Degree Completion Programs at the university.

Rolseth, Mark
Short Film

UWRF Dairy Pilot Plant

Author(s): Mark Rolseth and Alec Philippi
Faculty Mentor(s): Erik Johnson, Communication Studies and Theatre Arts - Digital Film and Television

The video was produced to be displayed at the 2014 Board of Regents meeting at UWRF, highlighting the Dairy Pilot Plant at the university.

Sandstrom, Coleman
Poster

Investigating the role of conservatism in brand preference.

Author(s): Samuel Minor, Julia Chous and Coleman Sandstrom
Faculty Mentor(s): Dr. Travis Tubre, Psychology
Recent research by Khan, Misra, and Singh (2013) found that two behavioral markers of conservatism (i.e., Republican voting and worship attendance) predicted purchase patterns for brand-name products over generic products. Drawing on prior work (e.g., Graham, Haidt, & Nosek, 2009; Jost, Glaser, Kruglanski, & Sulloway, 2003), the authors suggested that conservative tendencies reflect traits such as conscientiousness and openness to experience that affect preferences for established products. However, Khan et al.’s data were aggregate, population-level numbers on voting patterns, worship attendance, and product sales. Consequently, they lack individual-level, and trait-level measures. Our study extends their findings by replicating their hypotheses in a controlled research setting. We had 134 college students taste and rate both Mountain Dew and a generic alternative. Participants were randomly assigned to either a congruent condition (correct product labeling) or an incongruent condition (incorrect product labeling). To replicate and extend Khan et al.’s findings, participants also completed measures of conscientiousness, openness to experience, worship attendance, and Republican voting. Our taste test results indicated no significant differences in actual preferences for the products. Rather, participants preferred what they thought was brand-name soda, even when they were actually tasting generic soda in a brand-name bottle. To test our hypotheses, we constructed a difference score by subtracting the participant rating for Mountain Dew from that for the generic alternative. Looking at the correlations showed that both trait measures were significant predictors of preference for the brand-name product. Openness to experience was strongly and negatively correlated with brand-name preference (r = -.28, p > .01). Conscientiousness was moderately and positively correlated with brand-name preference (r = .20, p < .05). However, neither behavioral marker significantly predicted brand-name preference. Neither worship attendance (r = .07, p > .05) nor Republican voting (r = .08, p > .05) was significantly correlated with brand-name preference. We verified our correlational results in a simultaneous multiple regression analysis. In contrast to Khan et al. (2013), we did not find evidence that the specific behavioral markers of conservatism they examined predicted brand-name preference for soda. Interestingly, however, we did find support for their theoretical suggestion that personality traits associated with conservatism predict brand-name preferences. Specifically, study participants higher in conscientiousness and lower in openness to experience indicated stronger preferences for the brand-name over the generic soda. One potential explanation for the differences in our results may be that the narrow bandwidth measures are not as salient to college students as they may be to members of the general population. In conclusion, our findings add to the understanding of how conservatism is expressed in everyday life.
Shen, Yudie
Poster

*Promoting Intercultural Connection on the UWRF Campus*

Author(s): Jessica Adams, Kari Wasielewski, Yudie Shen and Zihan Chen

Faculty Mentor(s): Diane Jacobson, English and Steve Phalen, Communication Studies and Theatre Arts

With an increasing amount of international students on campus as a result of UWRF's initiative to develop a strong global presence, UWRF students have a unique opportunity to take advantage of the creative and professional opportunities afforded through intercultural collaboration. This project is a collaboration between one section of COMS 213 -- Intercultural Communication and ESL 322 - Advanced Oral Communications to develop strategies for promoting intercultural connections on campus to foster an environment that welcomes diversity.

Sjolander, Jason
Poster

*Youth Hockey Movement and it's Impact on the Sport Across America*

Author(s): Jason Sjolander

Faculty Mentor(s): Dr. Matthew Dooley, Geography and Mapping Sciences and Dr. John Heppen, Geography and Mapping Sciences

Youth Hockey Movement and it's Impact on the Sport Across America looks at the reasons for an increase in youth participation numbers and the impact those numbers have on the sport as a whole. Data from USA Hockey will be used to show visuals on the outcome of our analysis.

Skelly, Rebecca
Poster

*Promoting Intercultural Connection on the UWRF Campus*

Author(s): Carl Ballman, Briton Tomasko and Rebecca Skelly

Faculty Mentor(s): Diane Jacobson, English and Steve Phalen, Communication Studies and Theatre Arts

With an increasing amount of international students on campus as a result of UWRF's initiative to develop a strong global presence, UWRF students have a
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Smaglik, Katherine
Poster

Promoting Intercultural Connection on the UWRF Campus

Author(s): Stephanie Gianforte, Yejin Kwun, Bonghwan Kim, Katherine Smaglik and Aimee Dusek

Faculty Mentor(s): Diane Jacobson, English and Steve Phalen, Communication Studies and Theatre Arts

With an increasing amount of international students on campus as a result of UWRF's initiative to develop a strong global presence, UWRF students have a unique opportunity to take advantage of the creative and professional opportunities afforded through intercultural collaboration. This project is a collaboration between one section of COMS 213 -- Intercultural Communication and ESL 322 - Advanced Oral Communications to develop strategies for promoting intercultural connections on campus to foster an environment that welcomes diversity.

Snyder, Heather
Poster

The Building Blocks of Fun

Author(s): Abigail Mediger, Joseph Opseth and Heather Snyder

Faculty Mentor(s): Dr. Kathy Tomlinson, Mathematics

We developed two metrics to determine the best coach in a variety of college sports. We synthesized our knowledge of statistics and applied four different mathematical software packages to analyze coaching data and create appropriate metrics.

Stephens, Nikolai
Poster

The Anti-Viral Properties of Propolis
Propolis, a natural, sticky material honey bees use to line their hives, has antimicrobial properties and has been proposed to reduce viral loads in colonies. In collaboration with UMN, we tested the levels of three honey bee viruses to determine the correlation between the amount of propolis and viral loads.

**Stueven, Noah**  
*Poster*  
*Isolation and characterization of novel Arthrobacter phages from soil*  

Author(s): Students: Megan Archambault, Jessica Dahlke, Sarah DeGroote, James Kaczor, Elizabeth Kriese, Emily Lehmann, Emilee Plautz, Noah Stueven, Zachary VonBerg, representing students in the BIOL 160/195 courses; Teaching Assistants: Stephen Aiken, Bobbi Kelling  

Faculty Mentor(s): Dr. J. Alfred Bonilla, Biology and Dr. Karen Klyczek, Biology  

Several phages infecting a new bacterial host, Arthrobacter, were isolated from soil. Complete DNA sequences of two phages, TymAbreu and Toulouse, were annotated. These phages have extremely small genomes compared to known phages, with only 25-26 genes. Current experiments will yield information about their multiplication and other biological characteristics.

**Tarrago, Rebecca**  
*Poster*  
*Promoting Intercultural Connection on the UWRF Campus*  

Author(s): Xia Khang, Cassandra Turner, Alyssa Caturia, Rebecca Tarrago and Jose Luiz Dos Santos Manfio  

Faculty Mentor(s): Diane Jacobson, English and Steve Phalen, Communication Studies and Theatre Arts

**Tenreiro, Igor**  
*Poster*  
*Exploring Chicago Popular Culture Literacy*
The project had an objective learning component to recognize and understand about the popular culture and its importance for us.

**Toftness, Alexander**

*Poster*  

*How Perceived Difficulty and Actual Difficulty Affect Metacognition and Recall*

Author(s): Alexander Toftness and Dr. Lisa Isenberg (Faculty Sponsor)  
Faculty Mentor(s): Dr. Lisa Isenberg, Psychology

This psychological research examines the relationship between what a person thinks they know (metacognition) and what they actually know (recall performance) by manipulating the circumstances surrounding the learning of a word list.

**Tomasko, Briton**

*Poster*  

*Promoting Intercultural Connection on the UWRF Campus*

Author(s): Carl Ballman, Briton Tomasko and Rebecca Skelly  
Faculty Mentor(s): Diane Jacobson, English and Steve Phalen, Communication Studies and Theatre Arts

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**Tomesh, Colin**

*Poster*  

*Geography of Breweries in Wisconsin and the United States*
Author(s): Colin Tomesh
Faculty Mentor(s): Dr. Matthew Dooley, Geography and Mapping Sciences

My poster will show maps of the breweries of Wisconsin and the United States. I will have descriptions of these maps and what the relevance of my research is. I will have more generalized maps of the US breweries and more detailed information on the breweries of Wisconsin.

**Tomesh, Colin**

**Poster**

*Global Treeline Migration, Antarctic Glacial Ice Melt, Shifts in Midwestern Animal Habitat and Migration*

Author(s): Colin Tomesh
Faculty Mentor(s): Dr. Ruth Baker, Geography and Mapping Sciences

I have three different research projects that will be shown on one poster. They are all related to global climate change and represent different ways that our planet is changing.

**Turner, Cassandra**

**Poster**

*Promoting Intercultural Connection on the UWRF Campus*

Author(s): Xia Khang, Cassandra Turner, Alyssa Caturia, Rebecca Tarrago and Jose Luiz Dos Santos Manfio
Faculty Mentor(s): Diane Jacobson, English and Steve Phalen, Communication Studies and Theatre Arts

**Uitdenbogerd, Brian**

**Poster**

*Promoting Intercultural Connection on the UWRF Campus*

Author(s): Tina Bergstrom, Brian Uitdenbogerd, Scott Nielsen and Naif Osama Malaikah
Faculty Mentor(s): Diane Jacobson, English and Steve Phalen, Communication Studies and Theatre Arts

With an increasing amount of international students on campus as a result of UWRF's initiative to develop a strong global presence, UWRF students have a
unique opportunity to take advantage of the creative and professional opportunities afforded through intercultural collaboration. This project is a collaboration between one section of COMS 213 -- Intercultural Communication and ESL 322 - Advanced Oral Communications to develop strategies for promoting intercultural connections on campus to foster an environment that welcomes diversity.

**VonBerg, Zachary**  
*Poster*  
*Isolation and characterization of novel Arthrobacter phages from soil*

**Author(s):** Students: Megan Archambault, Jessica Dahlke, Sarah DeGroote, James Kaczor, Elizabeth Kriese, Emily Lehmann, Emilee Plautz, Noah Stueven, Zachary VonBerg, representing students in the BIOL 160/195 courses; Teaching Assistants: Stephen Aiken, Bobbi Kelling  
**Faculty Mentor(s):** Dr. J. Alfred Bonilla, Biology and Dr. Karen Klyczek, Biology

Several phages infecting a new bacterial host, Arthrobacter, were isolated from soil. Complete DNA sequences of two phages, TymAbreu and Toulouse, were annotated. These phages have extremely small genomes compared to known phages, with only 25-26 genes. Current experiments will yield information about their multiplication and other biological characteristics.

**Walek, Stephanie**  
*Poster*  
*Evaluation of Fatty Acid Profiles Among Field Pennycress (Thlaspi arvense L.) Ecotypes*

**Author(s):** Stephanie Walek, Ross Jilk and Jeff Rosenthal  
**Faculty Mentor(s):** Dr. Ross Jilk, Chemistry

Field pennycress (Thlaspi arvense L.) seeds contain high oil content, a property that makes them a viable contender as the next biofuel. Extraction of the oil is necessary so other compositional properties, such as fatty acid profiles, can further be analyzed. In this seminar, the oil extraction method, conversion of the oils to fatty acid methyl esters (FAMEs) and FAME analysis by mass spectrometry will all be discussed. Early analysis indicates especially high levels of the fatty acids docosenoic acid and linoleic acid.
Wasielewski, Kari
Poster

*Promoting Intercultural Connection on the UWRF Campus*

Author(s): Jessica Adams, Kari Wasielewski, Yudie Shen and Zihan Chen

Faculty Mentor(s): Diane Jacobson, English and Steve Phalen, Communication Studies and Theatre Arts

With an increasing amount of international students on campus as a result of UWRF's initiative to develop a strong global presence, UWRF students have a unique opportunity to take advantage of the creative and professional opportunities afforded through intercultural collaboration. This project is a collaboration between one section of COMS 213 -- Intercultural Communication and ESL 322 - Advanced Oral Communications to develop strategies for promoting intercultural connections on campus to foster an environment that welcomes diversity.

Wendland, Lyz
Poster

*Improving Critical Thinking Verbally*

Author(s): Lyz Wendland

*Excellence in Teaching and Learning* grant

The study is intended to investigate how student research on contemporary art and artists will improve analytical and critical thinking skills. My hypothesis is that if a student references an established contemporary artist in relation to the student’s own work, they will develop a critical and conceptual vocabulary to place themselves and their work within a contemporary drawing field while being able to communicate this verbally.

Wickland, Michael
Poster

*Scotch Whiskey Differentiation*

Author(s): Michael Wickland

Faculty Mentor(s): Dr. Charles Rader, Geography and Mapping Sciences

I will be presenting the geography of Scotch whiskey. This includes the locations of the Scotch distilleries, where the different scotch regions are in
Scotland, what factors impact the different flavors being distilled and what are the distinctions between the Scotch regions.

Wickland, Michael
Poster

*Permafrost Shift/ Effects on Marine life by Ocean Acidity/ Greenland Glacier Melt*

Author(s): Michael Wickland
Faculty Mentor(s): Dr. Ruth Baker, Geography and Mapping Sciences

I will be presenting 3 small projects on one poster in regards to climate change. The first one will be on how permafrost is a major cause to global warming and the northward shifting of habitats and the treeline. The second one will be on how carbon dioxide emissions from the ocean are aiding in the rise of ocean acidity. This issue is affecting marine life by either slowly killing them off or pushing them away from their natural habitats. Finally, my third topic focuses on the glacial ice melt of Greenland. The ice melt is gradually advancing. This adds to the sea level and will potentially lead to flooding in major cities.

Wildes, Michaela
Poster

*Detection of Phorid Fly Parasite in Wisconsin Honey Bees*

Author(s): Samuel Barton, Theodore Cummins, Zachary De Moulin, Kyle Karlen, Mark Martinez and Michaela Wildes
Faculty Mentor(s): Dr. Brad Mogen, Biology and Dr. Kim Mogen, Biology

The honey bee, Apis mellifera, is important for its ability to pollinate food and forage crops. Nationwide, the population is in critical decline. We looked at a potential contributor, the parasite Apocephalus borealis, and determined it is not a threat to Wisconsin honey bees. Other contributors are discussed.

Zafke, Victor
Poster

*Climate Change and Tornado Alley*

Author(s): Victor Zafke and Dr. Ruth Baker
Faculty Mentor(s): Dr. Ruth Baker, Geography and Mapping Sciences
I will interpret the shifting effect climate change has on tornado alley.

Zaske, David
Poster

**CO2 Laser Ventilation Project**

Author(s): David Zaske and Dr. Lowell McCann

Faculty Mentor(s): Dr. Lowell McCann, Physics

The goal of this project was to design a better way to remove the gas that is produced by a CO2 laser used to cut materials from CAD designs. I designed a platform that both holds the material and exhausts the gases, and am in the process of building it.
Finding a stable money demand relationship has been a major concern among economists for many years now. Many economists have developed equations to try to estimate the demand for money. The money demand function historically has been estimated by looking at the relationship between real money, nominal interest rates, and a measure of economic output. Recent studies suggest that old ways of calculating money demand is inferior do a change in the measure of money. Using our money demand function we tested different time periods and also used different measures in attempts to find the most accurate measure.
Buchanan, Amanda
Poster

*Phillips Curve*

Author(s): Amanda Buchanan, Derek Staley, Jacquelyn Trepanier and Brendan Weise

Faculty Mentor(s): Dr. John Walker, Economics

We estimated a Phillips Curve to determine whether or not there is a stable inverse relationship between inflation and unemployment using the time period 1993-2013.

Dalbec, Andrew
Poster

*Money Demand*

Author(s): Benjamin Barrett, Justin Lemmons, Andrew Dalbec and Joel Anderson

Faculty Mentor(s): Dr. John Walker, Economics

Finding a stable money demand relationship has been a major concern among economist for many years now. Many economists have developed equations to try to estimate the demand for money. The money demand function historically has been estimated by looking at the relationship between real money, nominal interest rates, and a measure of economic output. Recent studies suggest that old ways of calculating money demand is inferior do a change in the measure of money. Using our money demand function we tested different time periods and also used different measures in attempts to find the most accurate measure.

Edstrom, Kayla
Poster

*Black-White Male Earnings Differential*

Author(s): Kayla Edstrom, Kelsey Peterson, Mark Schultenover and Matthew Shutey

Faculty Mentor(s): Dr. John Walker, Economics

This research uses the Mincer Model for Human Capital Earnings to look at the wage gap between black and white males before and after the Great Recession. It looks into if the differential between Black-White wages has changed from before the recession to after it; as well as what might explain the
differential in each time period, by looking at the human capital of workers from each group. This research could impact the way that we work to decrease the wage differential.

**Haas, Michael**
Interactive Computer Simulation
*The Falcons Group - Desire to Achieve Project*

Author(s): Tyler Rasmussen, Luke Vang, Michael Haas, Tammy Kelly
Faculty Mentor(s): Dr. Arpan Jani, Computer Science and Information Systems

The online tutoring application was created and submitted to a contest to create something that mattered. The tutoring application helped the student communicate with the tutor via a real time interactive web based mechanism. Additional features include the ability for student to choose interacting medium (chat, whiteboard, etc), extra credit, frequent questions and certifications.

**Hafer Ph.D., Jennifer**
Poster
*Why is Economics so Scary? An exploration of student perceptions and feelings of anxiety*

Author(s): Dr. Jennifer L. Hafer, Economics
Excellence in Teaching and Learning Series

The purpose of the study is to investigate the attitudes of students towards economics and understand factors that influence student apprehension and anxiety for the principles of economics course.

**Kelly, Tammy**
Interactive Computer Simulation
*The Falcons Group - Desire to Achieve Project*

Author(s): Tyler Rasmussen, Luke Vang, Michael Haas, Tammy Kelly
Faculty Mentor(s): Dr. Arpan Jani, Computer Science and Information Systems

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communicate with the tutor via a real time interactive web based mechanism. Additional features include the ability for student to choose interacting medium (chat, whiteboard, etc), extra credit, frequent questions and certifications.

**Lemmons, Justin**  
**Poster**  
**Money Demand**  
Author(s): Benjamin Barrett, Justin Lemmons, Andrew Dalbec and Joel Anderson  
Faculty Mentor(s): Dr. John Walker, Economics  

Finding a stable money demand relationship has been a major concern among economist for many years now. Many economists have developed equations to try to estimate the demand for money. The money demand function historically has been estimated by looking at the relationship between real money, nominal interest rates, and a measure of economic output. Recent studies suggest that old ways of calculating money demand is inferior do a change in the measure of money. Using our money demand function we tested different time periods and also used different measures in attempts to find the most accurate measure.

**Peterson, Kelsey**  
**Poster**  
**Black-White Male Earnings Differential**  
Author(s): Kayla Edstrom, Kelsey Peterson, Mark Schultenover and Matthew Shutey  
Faculty Mentor(s): Dr. John Walker, Economics  

This research uses the Mincer Model for Human Capital Earnings to look at the wage gap between black and white males before and after the Great Recession. It looks into if the differential between Black-White wages has changed from before the recession to after it; as well as what might explain the differential in each time period, by looking at the human capital of workers from each group. This research could impact the way that we work to decrease the wage differential.

**Rasmussen, Tyler**
Interactive Computer Simulation

*The Falcons Group - Desire to Achieve Project*

Author(s): Tyler Rasmussen, Luke Vang, Michael Haas, Tammy Kelly

Faculty Mentor(s): Dr. Arpan Jani, Computer Science and Information Systems

The online tutoring application was created and submitted to a contest to create something that mattered. The tutoring application helped the student communicate with the tutor via a real time interactive web based mechanism. Additional features include the ability for student to choose interacting medium (chat, whiteboard, etc), extra credit, frequent questions and certifications.

**Schultenover, Mark**

*Poster*

*Black-White Male Earnings Differential*

Author(s): Kayla Edstrom, Kelsey Peterson, Mark Schultenover and Matthew Shutey

Faculty Mentor(s): Dr. John Walker, Economics

This research uses the Mincer Model for Human Capital Earnings to look at the wage gap between black and white males before and after the Great Recession. It looks into if the differential between Black-White wages has changed from before the recession to after it; as well as what might explain the differential in each time period, by looking at the human capital of workers from each group. This research could impact the way that we work to decrease the wage differential.

**Schutey, Matthew**

*Poster*

*Black-White Male Earnings Differential*

Author(s): Kayla Edstrom, Kelsey Peterson, Mark Schultenover and Matthew Shutey

Faculty Mentor(s): Dr. John Walker, Economics

This research uses the Mincer Model for Human Capital Earnings to look at the wage gap between black and white males before and after the Great Recession. It looks into if the differential between Black-White wages has changed from before the recession to after it; as well as what might explain the
differential in each time period, by looking at the human capital of workers from each group. This research could impact the way that we work to decrease the wage differential.

Sieh, Thomas
Poster

*Does a nation's level of inequality inhibit or encourage economic growth? To answer this question, Michael Tryon, Thomas Sieh, and Michael Spillman gathered data from 70 different nations to investigate the relationship between inequality and economic growth.*

Author(s): Michael Spillman, Michael Tryon and Thomas Sieh

Faculty Mentor(s): Dr. John Walker, Economics

Does a nation's level of inequality inhibit or encourage economic growth? To answer this question, Michael Tryon, Thomas Sieh, and Michael Spillman gathered data from 70 different nations to investigate the relationship between inequality and economic growth. Their research covered the effect variables such as the Gini Index, total fertility rate, per capita GDP, female to male literacy ratio, the level of democracy and the level of development, have on average annual real GDP growth rate. Through their statistical analysis they found a significant negative relationship between inequality and economic growth.

Spillman, Michael
Poster

*Does a nation's level of inequality inhibit or encourage economic growth? To answer this question, Michael Tryon, Thomas Sieh, and Michael Spillman gathered data from 70 different nations to investigate the relationship between inequality and economic growth.*

Author(s): Michael Spillman, Michael Tryon and Thomas Sieh

Faculty Mentor(s): Dr. John Walker, Economics

Does a nation's level of inequality inhibit or encourage economic growth? To answer this question, Michael Tryon, Thomas Sieh, and Michael Spillman gathered data from 70 different nations to investigate the relationship between inequality and economic growth. Their research covered the effect variables such as the Gini Index, total fertility rate, per capita GDP, female to male literacy ratio, the level of democracy and the level of development, have on average annual real GDP growth rate. Through their statistical analysis they
found a significant negative relationship between inequality and economic growth.

**Staley, Derek**  
*Poster*  
*Phillips Curve*  

Author(s): Amanda Buchanan, Derek Staley, Jacquelyn Trepanier and Brendan Weise  
Faculty Mentor(s): Dr. John Walker, Economics  

We estimated a Phillips Curve to determine whether or not there is a stable inverse relationship between inflation and unemployment using the time period 1993-2013.

**Trepanier, Jaquelyn**  
*Poster*  
*Phillips Curve*  

Author(s): Amanda Buchanan, Derek Staley, Jacquelyn Trepanier and Brendan Weise  
Faculty Mentor(s): Dr. John Walker, Economics  

We estimated a Phillips Curve to determine whether or not there is a stable inverse relationship between inflation and unemployment using the time period 1993-2013.

**Tryon, Michael**  
*Poster*  

*Does a nation's level of inequality inhibit or encourage economic growth? To answer this question, Michael Tryon, Thomas Sieh, and Michael Spillman gathered data from 70 different nations to investigate the relationship between inequality and economic growth.*  

Author(s): Michael Spillman, Michael Tryon and Thomas Sieh  
Faculty Mentor(s): Dr. John Walker, Economics  

Does a nation's level of inequality inhibit or encourage economic growth? To answer this question, Michael Tryon, Thomas Sieh, and Michael Spillman gathered data from 70 different nations to investigate the relationship between inequality and economic growth. Their research covered the effect
variables such as the Gini Index, total fertility rate, per capita GDP, female to male literacy ratio, the level of democracy and the level of development, have on average annual real GDP growth rate. Through their statistical analysis they found a significant negative relationship between inequality and economic growth.

**Vang, Luke**
Interactive Computer Simulation  
*The Falcons Group - Desire to Achieve Project*

Author(s): Tyler Rasmussen, Luke Vang, Michael Haas, Tammy Kelly
Faculty Mentor(s): Dr. Arpan Jani, Computer Science and Information Systems

The online tutoring application was created and submitted to a contest to create something that mattered. The tutoring application helped the student communicate with the tutor via a real time interactive web based mechanism. Additional features include the ability for student to choose interacting medium (chat, whiteboard, etc), extra credit, frequent questions and certifications.

**Weise, Brendan**
Poster  
*Phillips Curve*

Author(s): Amanda Buchanan, Derek Staley, Jacquelyn Trepanier and Brendan Weise
Faculty Mentor(s): Dr. John Walker, Economics

We estimated a Phillips Curve to determine whether or not there is a stable inverse relationship between inflation and unemployment using the time period 1993-2013.
Conrad, Quincy

Poster

*Use of iPad to Facilitate Peer-Peer Interaction in Child with EEC Syndrome*

Author(s): Quincy Conrad and Dr. Lori Swanson, CCC-SLP

Faculty Mentor(s): Dr. Lori Swanson CCC-SLP, Communicative Disorders

The effects of a speech generating device (SGD) on peer interaction skills of a young child (E) with Ectrodactyly Ectodermal Dysplasia Clefting Syndrome (EEC) were examined. E (CA: 5 yrs.) used speech, manual signs, and an iPad (SGD) to communicate. E’s speech was unintelligible and his manual signs were idiosyncratic due to missing digits. His kindergarten teacher reported a lack of peer interactions. It was hypothesized that E and his same age peers would show greater ability to communicate when using an iPad versus not using an iPad. E participated in a single play session with each of eight typically developing (TD) same age peers who had been exposed to smart devices. For 30 minutes of each session the iPad was present; during the remaining 30 minutes it was not present. Only a traditional communication board was available in the iPad not present condition. Each session consisted of six groups of toys. Variability across the eight dyads was observed with no significant difference in communicative effectiveness measured between iPad present versus not present conditions. There was a trend, however, for more use of the iPad than the traditional communication board by E and the TD peers. The traditional communication boards were rarely used. The iPad was used by E in each of the eight sessions and by his peers in two of the eight sessions. Although the iPad was used, it was not always used for communicative purposes. TD peers need some instruction to use a SGD effectively for communicative purposes. Prior to each session, the TD child was simply told that “E” used an iPad to communicate. In a future study, E could introduce himself to the TD peer using his iPad or the TD child could be coached to send messages using the iPad. Social interactions were influenced less by presence of the SGD and more by personality of the participants. The demeanor of the peer appeared to influence the amount, type, and success of verbal and non-verbal communication and social interaction. Peers must be carefully selected...
to include children who are outgoing, flexible, and comfortable with children who have disabilities. Finally, this study showed that certain activities promote verbal and nonverbal interaction. E appeared to be especially confident playing with balls and this allowed him to initiate interaction with the unfamiliar peer. In summary, this study provides information on the communication skills of one child with EEC, a rare genetic disorder. Although he used speech and idiosyncratic signs to communicate with family, E had difficulty communicating with peers. Educators must make SGD$s available to children who struggle to be understood. The iPad has the potential to foster social communication, if the peers are carefully selected and trained.

Laramy, Lindsay
Poster

*Developmental Outcomes in Premature Infants: A Literature Review*

Author(s): Lindsay Laramy

Faculty Mentor(s): Dr. Sharyl Samargia, Communicative Disorders

The objective of this project is to conduct a comprehensive literature review to identify the current state of the evidence of the predictive ability of gestational age and APGAR scores on developmental outcomes in premature infants.

Lucas, Emily
Poster

*Impact of Nature Exploration on Children's Learning*

Author(s): Emily Lucas, Molly Gerrish and Dr. Gay Ward

Faculty Mentor(s): Molly Gerrish, Teacher Education and Dr. Gay Ward, Teacher Education

This project explored the impact of nature on children's learning. During the fall semester of 2013, the University Preschool playground was reconstituted as part of an approved University Initiative. This study was designed to determine if the learning and developmental needs of preschool students are better met through a nature exploration area than through more traditional plastic playground apparatus. This playground transformation was based on a significant body of research demonstrating that children that are given ample opportunity for nature exploration and outdoor play benefit cognitively, physically, socially, and emotionally. In addition, problem solving that is invited in an outdoor classroom promotes resiliency, creativity, and reduces stress.
Swanson Ph.D., Lori

Poster

_Student Learning During Social Skills Module in COMD 362_

Author(s): Dr. Lori Swanson, Communicative Disorders

Social justice for children with language differences and disorders is an important issue for all educators. It is well documented that these children are often the victims of teasing and bullying. School administrators, principals, classroom teachers, and speech-language pathologist need to advocate for the rights of these youngsters. In this study, I focused on the training of speech-language pathologists to be aware of bullying and the need for swift action to stop it. In a recent study (Blood, Robins, Blood, Boyle, & Finke, 2011), speech-language pathologists (SLPs) indicated that they perceive physical, verbal, and cyber bullying as a serious problem and worthy of intervention. In contrast, these same SLPs perceived relational bullying (social exclusion, rejection) as less serious and “not very likely” to “somewhat likely” to need intervention. The researchers concluded that speech-language pathologists need to receive better education on the impact of relational bullying. In addition, they needed to view themselves as individuals who can stop bullying, including the more subtle form of relational bullying.

In my undergraduate course, COMD 362: Language Appraisal and Intervention, I train undergraduate students to assess and intervene with children who have language impairments. My struggle with the instruction of undergraduate students is providing them with an understanding of the impact of the language difference/disorder on the whole child. As SLPs we tend to package language differences/disorders into sterile components (syntactic, semantic, and/or pragmatic issues), which are void of social and emotional ramifications. In doing so, we are doing a dis-service to the child. As SLPs, we must face the harsh reality that language differences/disorders affect the child’s entire being. These children function in educational, community, and recreational settings at an extreme disadvantage compared to their age-mates. When they are victims of bullying, their feelings of self-worth and ability to learn are diminished.

In Spring 2014, I examined whether the participation in book discussions, a circle of friends activity, and character building events increases the awareness of undergraduates to the social plight of children with language differences/disorders and methods of intervention. Each student read one book (e.g., Wonder by Palacio, 2012) from an approved reading list which
addresses the social-emotional issues of children with language differences/disorders. They completed a book review and participated in a small group discussion with others who have read the same book. Each student created a circle of friends for one child. In addition, each student participated in one character building event at an elementary school in the River Falls School District.

As outcomes to this project, I want each student in COMD 362 1) to recognize all forms of bullying, 2) to label all forms of bullying as serious, and 3) to identify proper ways to intervene. In Blood and coworkers’ study, the speech-language pathologists identified very “modest” intervention methods for relational bullying (e.g., teach victim to blend in, educate victim to ignore bully). I would like every student to realize that they must be advocates for children with language differences/disorders in ALL instances of bullying. Intervention strategies must protect the victims rather than silencing and immobilizing them. As a final outcome, I want each student to understand the relationship between a language difference/disorder and the child’s social skills. As speech-language pathologists, we can support the child’s development of age-appropriate social skills and prevent the child from becoming overly reticent and/or aggressive.

In summary, I sought to determine whether book discussions, a circle of friends activity, and participation in local character building activities increases the ability of undergraduate students to see language differences and disorders as conditions which impact the child’s sense of self. If successful, this would have an impact on the way these students educate children as well as their willingness to serve as advocates against bullying.