

Celebrating Undergraduate Research
and Creative Achievements



Michael D. Wilson

Symposium

Wednesday
May 4, 2011

University of Maine
Farmington

Welcome to the Michael D. Wilson Symposium!

On this day when we showcase the independent creative research and scholarly works of our students, it is a pleasure once more to acknowledge the naming of Symposium Day in honor of Michael D. Wilson, Class of 1976.

Michael was a Special Education major who took great pleasure in helping others to succeed. In tribute to Michael's life-changing friendship, UMF's good friend Michael Angelides and his wife Susan have made possible significant enhancements to our celebration of student achievement.

This day is full of the wonderful results of persistence, learning, creativity, hard work, cooperation, and mentoring. Empowering students and helping them realize their potential — that's what UMF is all about. At the Michael D. Wilson Symposium Day you can see the results.

Theodora J. Kalikow

President



First held in February 1999, the UMF Symposium has grown into a wonderful tradition. Each spring we take a day off from classes and from our normal routines to share in the exciting work of faculty and students—mainly students.

In showcasing their scholarly and creative projects through papers, performances, poster sessions, etc., we are honoring our most deeply felt values as a public liberal arts college—specifically, active and engaged learning, academic rigor, student-faculty collaboration, and service to promote the common good. I find it particularly exciting that Symposium provides an opportunity for everyone—from beginning students to seniors who are completing an exciting capstone project—to share their work in a public venue.

I congratulate all the presenters along with their teachers and mentors. In addition, special thanks to the donors and organizers who have made this exciting day possible.

Allen H. Berger,

Provost and Vice President for Academic Affairs

Symposium Day is a wonderful opportunity for students to showcase their scholarly and creative work. During the academic year they pursue their interests through individual projects, group projects, and working in collaboration with faculty mentors. Symposium Day provides them with the stage to share their work with peers, friends, faculty, and staff. We send our congratulations to the students, and we also thank the faculty and staff who have helped the students achieve what they have today.

Kathy Yardley, *Associate Provost and Dean of Education*

Rob Lively, *Associate Provost and Dean of Academic Services*

This Symposium is organized by the University Culture Committee:

Paul Stancioff, Associate Professor of Physics

Paul Gies, Associate Professor Mathematics, Chair

Marisela Funes, Assistant Professor of Spanish

Dan Jackson, Associate Professor of Mathematics

Linda Beck, Associate Professor of Political Science

Theresa Overall, Assistant Professor of Secondary/Middle Education

Burton Pusch, Assistant Professor of Rehabilitation Services

Table of Contents

Welcome to the Michael D. Wilson Symposium!.....	1
UMF Trustee Professorship.....	5
Special Venue I, Lincoln Auditorium, Wilson Scholar Presentations I and Trustee Professor Lecture	6
Special Venue II, C23 Roberts, Wilson Scholar Presentations II	11
Special Venue III, Lobby of Lincoln Auditorium, Wilson Scholar Posters	15
Venue 1, Art Gallery, Senior Art Exhibition	16
Venue 2, CR 123, Miscellaneous--English, Philosophy, Education, Psychology	17
Venue 3, North Dining Hall C, History, then Math/Computer Science.....	21
Venue 4, Ed. Ctr. 103, Geography (morning), Business Economics (afternoon)	26
Venue 5, Ed. Ctr. 112, Miscellaneous -- Sociology, Political Science, Psychology	31
Venue 6, The Landing, Readings -- Creative Writing, Poetry, Spanish, Joyce.....	36
Venue 7, Thomas Auditorium, Aft Award for Chemistry, Biology.....	38
Venue 8, Ricker 115, Computer Science	45
Venue 9, Ricker 217, Psychology.....	45
Venue 10, Nordica Auditorium and M26, Music.....	46
Venue 11, The "Beach", Exhibit, Multimedia Display.....	47
Venue 12, Ed. Ctr Lobby and Hallway, Main Poster Session	48
Michael D. Wilson Research Fellows and Scholars	55
A Tribute to Michael D. Wilson	59
List of Contributing Students	60
List of Faculty Sponsors.....	61
Campus Map	62

Program at a Glance

- Wilson Scholar Presentations I and Trustee Professor Jeffrey Thomson – Lincoln Auditorium, 9:00 – 3:20, (starting on page 6)
- Wilson Scholar Presentations II – C23 Roberts, 9:00 – 3:20, (starting on page 11)
- Wilson Scholar Posters – Lobby of Lincoln Auditorium 10:00 – 11:00 and 1:00 – 2:00, (page 15)
- Main Program – Various Venues, 8:45 – 5:20, (page 16)
- Main Poster Session* – Education Center Lobby and Hallway 10:00 – 11:00, (page 48)
- Lunch – South Dining Hall**

*Please note that poster presenters are expected to be present to explain their work and answer questions for a one hour period, either from 10:00 to 11:00 am or from 1:00 to 2:00 pm

** Please note that if you wish to have lunch in South Dining Hall, you may sign in with the cashier and pay a reduced fare \$3.00 for lunch (aka NQAFL.) Students with meal plans should use their cards.

UMF Trustee Professorship

Symposium is a day to honor the value of scholarly and creative endeavor at UMF. Toward that end, we have chosen Symposium as an opportunity, not only to showcase the work of our students, but also to bestow the university's most prestigious award for scholarship to a faculty member. The Trustee Professorship is given each year to one UMF faculty member in recognition of her/his distinguished record of scholarly or creative work. The Trustee Professor receives a cash stipend, a professional development allowance, and a half-time reassignment for an academic year in order to focus on a scholarly or creative project.

Each year at Symposium we invite the current Trustee Professor to deliver a public lecture. This year's Scholar, Dr Jeffrey Thomson, from the creative writing program, will be lecturing on his project, "Landscape with Human Figure," at 11:20 in Lincoln Auditorium. All students, faculty and staff are invited.

Each year at Symposium we also announce the Trustee Professor for the upcoming academic year. The announcement will be made at the beginning of the Trustee Lecture at 11:20 in Lincoln Auditorium.

Congratulations to all of our faculty and student scholars.

Allen Berger, Provost

2010-2011 Trustee Professor

Dr. Jeffrey Thomson

Landscape with Human Figure

11:20 -12:00 Lincoln Auditorium

The project I have been working on, a prose memoir called "Landscape with Human Figure," attempts to engage with the two most complicated entities that we encounter on a daily basis: language and the natural world. Each is intricate, almost beyond comprehension, and yet each presents itself to us in chunks of articulation that allow us to believe in our ability to grasp and command these forces. This book attempts to address and balance these two elemental forces in a series of blended, lyric narratives that operate separately as fragmented pieces, yet in many ways speak to each other's concerns and themes and set up a field of resonance within their oppositions.

Specifically, the collection explores my time in the neotropics of Costa Rica and Peru, my near-death experience white-water rafting in Alaska, fragility in the geography of the American West, and the way memory effects and defines the experience of the landscapes of Europe. Overlaying these narratives about place are several different, quasi-independent pieces that reflect on science (through the periodic table), chaos theory, metaphor and image, the nature of environmental poetry (particularly the elegy and the pastoral) and the structures of thought and myth that drive the poetic response.

Past UMF Trustee Professors

Spring 1999 – Mark McPherran

1999 – 2000 – Ron Butler

2000 – 2001 – Jennifer Reid

2001 – 2002 – Chris Magri

2002 – 2003 – Dan Gunn

2003 – 2004 – Ming-Ming Pu

2004 – 2005 – David Daniel

2005 – 2006 – Mike Muir

2006 – 2007 – Tiane Donahue

2007 – 2008 – Paul Outka

2008 – 2009 – Drew Barton

2009 – 2010 – David Gibson

Special Venue I, Lincoln Auditorium

Wilson Scholar Presentations I and Trustee Professor Jeffrey Thomson

9:00 - 9:20

Combat Trauma and Religious/Spiritual Beliefs: Paradigm Shifts in Combat Veterans of the US Military

Dovey L. Balsam

The purpose of this study is to examine some of the spiritual challenges presented to US service members after serving in a war zone. Often, when confronting the traumatic aftermath of battle, there is a shift in religious and spiritual paradigms that occur during the process of reconciling the reality of combat and prior beliefs systems. Through the use of personal interviews with veterans, this research project explores how the shifts in paradigm affect the lives of veterans. *(Faculty Sponsor: Kristina Wolff)*

9:20 - 9:40

America: The Way Life Should Be?

Megan Ferland

The American Dream, the idea that anyone can achieve anything despite their circumstances, has long been a drawing appeal of our country. My study seeks to see how this dream is defined in our current culture and if it differs based on affiliations of religion, politics, and class identity. The project seeks to identify how peoples' perceptions of the American Dream influences behaviors. Through the use of surveys this study seeks to determine trends in American attitudes and ideals based on the national myth of the American Dream. *(Faculty Sponsor: Kristina Wolff)*

9:40 - 10:00

When Intent and Reality Clash: An Examination of Press Freedom and Civil Rights Legislation

Sarah B. Gauvin

The press is intended to function in society as a means to public idea exchange and discourse. My research project examines some of the discrepancies that exist between ideology and the actual practices behind measures intended to protect "free" press through secondary data analysis of newsprint, legislation, and the constitutions of eleven countries, including the United States and Uganda. In 2010, I conducted research in Kampala, Uganda regarding the country's media independence, gathering first-

hand testimonial from members of its press community, and this project utilizes those voices to show the struggle less-industrialized countries face to exert their human rights under developing government powers. *(Faculty Sponsor: Kristina Wolff)*

10:00 - 10:20

Exploring Environmental Imagination Through Creative Nonfiction Multimedia

Emma Deans

What is the artist's role in today's environmental movement? This project analyzes the use of creative nonfiction art forms in promoting ecological understanding and action. How can the environmental imagination find middle ground between romantic nature writing and fact-driven science? I have used words, photos, sounds, and video clips to address these questions, drawing upon my upbringing in Maine and travel experiences in the U.S. and abroad. Come find out how landscapes drive stories and how a "sense of place" contributes to the happiness of our people and the health of our planet. *(Faculty Sponsor: Gretchen Legler)*

10:20 - 10 :40

BREAK -- REFRESHMENTS AVAILABLE

10:40 - 11:00

Penelope Lapham: The Rise of the New Woman in 19th Century Literary Culture

Michelle Kew

In this presentation, I will discuss William Dean Howells' characterization of Penelope in his 1885 novel *The Rise of Silas Lapham*. I argue that she represents his idea of a new type of woman that was emerging in the late 1800s. Educated and independent minded, Penelope is presented outside of typical female stereotypes of her time. Using additional evidence including magazines, newspapers and etiquette books of the era, I will show that his portrayal of Penelope was part of a wider ongoing literary discourse about the changing roles of women in nineteenth century America. *(Faculty Sponsor: Sabine Klein)*

11:00 - 11:20

Creating Eliza: An Honors Thesis

Kelsey Lowe

This is the result of a three-semester Honors Thesis exploring the relationship between readers, characters, the writer, and plot. This was explored through the writing of a novella and careful examination and analysis of the "working parts" of the fiction writing process. The analysis of this process

as well as discussion of other findings will be presented. The presentation will be followed by a brief reading of an excerpt from the final text. (*Faculty Sponsor: Jeffrey Thomson*)

11:20 -12:00

Landscape with Human Figure

Trustee Professor Jeffrey Thomson

The project I have been working on, a prose memoir called “Landscape with Human Figure,” attempts to engage with the two most complicated entities that we encounter on a daily basis: language and the natural world. Each is intricate, almost beyond comprehension, and yet each presents itself to us in chunks of articulation that allow us to believe in our ability to grasp and command these forces. This book attempts to address and balance these two elemental forces in a series of blended, lyric narratives that operate separately as fragmented pieces, yet in many ways speak to each other’s concerns and themes and set up a field of resonance within their oppositions.

Specifically, the collection explores my time in the neotropics of Costa Rica and Peru, my near-death experience white-water rafting in Alaska, fragility in the geography of the American West, and the way memory effects and defines the experience of the landscapes of Europe. Overlaying these narratives about place are several different, quasi-independent pieces that reflect on science (through the periodic table), chaos theory, metaphor and image, the nature of environmental poetry (particularly the elegy and the pastoral) and the structures of thought and myth that drive the poetic response.

LUNCH BREAK, 12:00 TO 1:00

1:00 - 1:20

Geometric Properties of Free Products with Amalgamation

Garret Laforge

Given a group G , we wish to define a certain geometric invariant of the group, denoted $\Sigma^1(G)$. We need two objects related to G to do so. The first is a graph Γ , called the Cayley graph of G , where the elements of G correspond to the vertices of Γ and the edges of Γ reflect the structure of G . The other is the real vector space $\text{Hom}(G, \mathbb{R})$, which consists of all homomorphisms from G into the additive reals. Given two groups G and H sharing an isomorphic subgroup K , we can construct the free product of G and H with amalgamation K , denoted $G *_K H$. This talk will examine the above structures for free products of groups with amalgamation. (*Faculty Sponsor: Nicholas Koban*)

1:20 - 1:40

Native American Reactions, Resistance, and Engagement with Colonial Economy

Hayden Golden

In 2008, Foxwoods Casinos was ranked one of the largest employers in Connecticut. The Mashantucket Pequot's enterprising success represents an innate ability to adapt to the shifting economic sphere of American capitalism. In other places, Native Americans remain impoverished and disenfranchised. This presentation will consider the origins of Native American adaptations to imposed economy, too often mistaken for assimilation. Using colonial New England as my base, I will lay the foundation for a consideration of constructions of Native economic personhood and how Natives reacted, resisted, and engaged colonial economy and how such actions reverberate in our contemporary world. *(Faculty Sponsor: Sabine Klein)*

1:40 - 2:00

"Did your father ever talk about Germany?": Exploring Family Narratives of the Holocaust

Cecelia Totten

Often times as Americans, we remember the Holocaust in numerous ways, whether through public memorials and museums, books, movies, etc. These ways of remembering are open to the American public, and instead allow us as citizens to formulate the ways in which we choose to remember the Holocaust. These forms of recollection differ greatly from the private narratives and stories told within the families of survivors. This oral presentation focuses on the stories, oral histories, and narratives of second and third generation Holocaust survivors and how exactly they diverge from the public memory of the Holocaust in American culture. *(Faculty Sponsor: Sabine Klein)*

2:00 - 2:20

Miltown and the American Public

Carolyn Young

"Miltown and the American Public" focuses on the development of the tranquilizer Miltown and its rise to popularity in the mid to late 1950s in America. This paper looks at the role of popular magazines such as Life, Cosmopolitan, and Time, word of mouth advertising and the aspects of the decade allowed Miltown to become so widely used so quickly. *(Faculty Sponsor: Christopher O'Brien)*

2:20 - 2:40

BREAK -- REFRESHMENTS AVAILABLE

2:40 - 3:00

Pocahontas Chamberlain and Powhatan Blaine: How Joshua L. Chamberlain Sacrificed His Political Career To Prevent Violence in Augusta

Drew McLaren

In 1879, the Maine election hung on the meaning of the word “majority” and only Gen. Joshua Chamberlain, his level head and unmatched oratorical skill prevented Augusta from erupting in warfare. Maintaining peace in the capital, however, was Chamberlain's political undoing. In the process, he alienated James G. Blaine, who effectively controlled the Republican Party in the state and, arguably, in the nation. Chamberlain's independence of the party though critical for the task at hand, insured that he would never again be elected to high office. *(Faculty Sponsor: Christopher O'Brien)*

3:00 - 3:20

Maine Surgeons During the Civil War: 1861-1865

Jack Karn

“Maine Surgeons During the Civil War: 1861-1865” critically examines the roles and experiences of surgeons and doctors who served the State of Maine during the conflagration. From deficiencies in education before the war, to the gruesome operations taking place behind the frontlines of devastating battles, Maine surgeons demonstrated leadership and effectiveness while up to their ankles in gore. *(Faculty Sponsor: Christopher O'Brien)*

Special Venue II, C23 Roberts

Wilson Scholar Presentations II

9:00 - 9:20

Graphic Novel: “The Grand Exploration”

Kristen Bisson

Wilson Scholar Kristen Bisson will be presenting her Honors Creative Project, a graphic novel conceived, written and drawn over the course of the last semester. This work focuses on the mundane in a medium that usually emphasizes the spectacular and heroic. The plot follows a young woman struggling through contradictory desires and questioning the meaning of her physical image. Kristen Bisson weaves the mundane with moments of wonder and surprise. Pocket-sized, the story becomes an intimate experience between the reader and the character. There will be a copy of the graphic novel available for the public to view. *(Faculty Sponsor: Dawn Nye)*

9:20 - 9:40

Backcountry Ramblings and Mountain Top Solipsism: A Solution to Epistemic Loneliness

Thomas Ferland

In consideration of the contemporary socialized individual attempting to exist freely, it is possible to reach the conclusion that people are becoming increasingly alienated from the natural world, from others, and from themselves. This predicament has the potential to isolate the individual even from personal meaning. I plan to explain a means, and perhaps a universal solution, by which one can paradoxically reconnect with the broader world around them through solitude in nature, where through self reliance one can access unity with all things, from which this sense of epistemic loneliness has alienated them. *(Faculty Sponsor: George Miller)*

9:40 - 10:00

“I Want My Country Back!”: College Students’ Reactions to the Tea Party Movement

Jeffrey Lees

Shortly after the election of Barack Obama in November of 2008, small groups of disgruntled Americans embraced the new “Tea Party” movement as a political response to perceived government excess and fiscal irresponsibility. The central purpose of the present student is to explore college students’ reactions to the Tea Party movement and other political ideologies. Of special interest is the possibility that sympathy with the Tea Party will predict support for fictional candidates who identify themselves with

this movement, regardless of anything else the candidate has to say. *(Faculty Sponsor: Steven Quackenbush)*

10:00 - 10:20

That Instant is Our Goal

Markeith Chavous

“That Instant is Our Goal” is a synchronized video triptych in the historical tradition of painting. The work explores themes of spiritual awakening and emotional convergence. For the past 6 months I have traveled extensively throughout New England filming its cityscapes and landscapes: from Boston to Portland, to the mountains of Vermont, and the trails and seascapes along the Maine coast. These shifting horizons are coupled with impassioned human gestures. Together they mark varying perspectives that indelibly affect one another. In this work moments of connectedness are sought amongst seemingly dissonant vantage points and relationships. *(Faculty Sponsor: Katrazyna Randall)*

10:20 - 10 :40

Break

10:40 - 11:00

Peer Interactions Facilitated by the iPad

Kiley Gendron

Apple’s iPad can be used as an aide to people with disabilities. Individuals with various disabilities sometimes do not have the ability to verbally communicate. Although their expressive language is limited, usually their receptive language is not as limited. This project is based on using Apple's iPad as an augmentative alternative communication device. The research took place with a student who is non-verbal and had no peer interactions in school. This research suggests that by using applications on an iPad, a person with limited expressive language can take part in interactions and communications with peers. *(Faculty Sponsor: Loraine Spenciner)*

11:00 - 11:20

Background music in advertising: Differing levels of influence as consumers grow

Sean Chase

This presentation will focus on the effects of background music in advertising on second graders, ninth graders, and undergraduates. While the influence of advertising is expected to decrease as media literacy increases with age and experience, adolescents may actually be more strongly affected by the use of

background music in advertising than other age groups. In adolescence, the more active limbic system (which is responsible for emotional responses) may mean that teens are more influenced by implicit emotional cues in background music. This presentation discusses the results of my 2011 research which tested that hypothesis. *(Faculty Sponsor: Alison Terry)*

LUNCH BREAK, 12:00 TO 1:00

1:00 - 1:20

The Effect of Background Music on the Math Performance of Gifted and Talented Students

Katie VanDerburgh

Recent research has focused attention on the use of background music as a tool for increasing efficiency and academic success in the classroom. Support for the use of background music exists for students with special needs but has produced limited results for students specifically in a gifted and talented setting. This study used background music in both typical and gifted and talented classrooms in order to establish a positive correlation between music and math task performance allowing for comparison when using developmentally appropriate materials. *(Faculty Sponsor: Alison Terry)*

1:20 - 1:40

Characterizing and Predicting Mixing Events in High-elevation Mountain Ponds in Maine

Benjamin Engel

This study investigates high-resolution water temperature data from nine sub-alpine ponds across western Maine. We seek to understand the mixing behavior of these ponds and how they may respond to climate change. There are conspicuous differences in bottom temperatures, timing of mixing events, and overall mixing behavior between study sites. The data show simultaneous events at multiple locations, indicating that they are likely a response to a regional wind event. Characterization of these mixing behaviors based on location, pond depth, basin shape, and clarity may help to explain the pattern of events and to predict the behavior of other ponds. *(Faculty Sponsor: Julia Daly)*

1:40 - 2:00

A newly discovered fault system, Bald Mountain, west-central Maine

Jacob Hansen

Bald Mountain, a popular hiking spot in the Wilton-Weld area, is composed of alternating beds of sandstone and schist (“cooked mud”), initially deposited in a submarine fan setting. During the geologic mapping of the mountain, we discovered repetitions of rock layers that require thrust faults. The origin of

these faults is uncertain: they could be related to slumping or tectonic in origin, and the sediments may have been either soft (sand and mud) or lithified (already turned to rock). The collective evidence to date suggests that wet sediments were deformed upon entering the final deformation front of the Appalachian Mountains. *(Faculty Sponsor: Douglas Reusch)*

2:00 - 2:20

Effects of resource and trematode (*Echinostoma trivolvis*) exposure gradients on the biomass of a first intermediate snail host (*Helisoma trivolvis*).

Skylar Hopkins

The addition of phosphorous and nitrogen to aquatic ecosystems from agricultural and urban runoff causes a suite of problems, including changing host-parasite interactions between trematodes and their declining amphibian hosts. During a summer REU internship in 2010, I performed a 3x4 factorial experiment in which I manipulated parasite egg input and nutrients in order to examine the potential effects of eutrophication on the host-parasite interactions between a trematode (*Echinostoma trivolvis*) and its first intermediate snail host (*Helisoma trivolvis*). Snail biomass was affected by nutrient levels and the interactions between nutrients and trematode exposure. *(Faculty Sponsor: Daniel Buckley)*

2:40 - 3:00

Charging through Hell: The First Maine Heavy Artillery and the Battle of the Crater

Matthew Kuchinski

The research project which I am about to present is about the First Maine Heavy Artillery, their role in the battle of the Crater in Petersburg, VA, and a deeper look into the psyche of many members of the regiment. I wanted to understand how this regiment, which was one of the best to serve in the Union Army of the Potomac, could make a charge that lasted for 15 to 20 minutes and resulted in the almost total annihilation of the entire regiment. The presentation will be of a power point and it will compromise all of my research. *(Faculty Sponsor: Walter Sargent)*

2:20 - 2:40

BREAK -- REFRESHMENTS AVAILABLE

3:00 - 3:20

WikiLeaks: Freedom of the Press in the Digital Age

Matthew Allen

This project will prove the legality of the WikiLeaks organization by use of the First Amendment of the Constitution of the United States. The legal precedents set in the Pentagon Papers case and in the recent Snyder v. Phelps case will be used to apply the challenges of the opposition and the most recent First Amendment decision to a possible WikiLeaks trial case. The paper will make the case that digital press organizations still have the immunity as the physical press organizations. (*Faculty Sponsor: Christopher O'Brien*)

Special Venue III, Lobby of Lincoln Auditorium

Wilson Scholar Posters

Wilson Poster #1

Further Notes on a Family of Continuous, Nowhere Differentiable Functions

James McCollum

We examine a family of functions F with parameter a , all of which are continuous and some of which are nowhere or almost nowhere differentiable, and we explore the behavior of F' and F'' almost everywhere for different values of a , focusing on specific questions regarding the differentiability of F for certain values of a . (*Faculty Sponsor: Daniel Jackson*)

Wilson Poster #2

Isolation and Detection of Pharmaceuticals From Local Watershed

Sean Raph

The purpose of this research is to detect pharmaceuticals that may be present in the Farmington watershed, the target drug is acetaminophen. Acetaminophen is used as a pain and fever reducer, but when used improperly or in excess it can cause liver tissue damage. It is important for communities to know if any pharmaceuticals are inadvertently present in their watershed and at what amounts so that they can prevent any harm to the people who utilize this resource. If any pharmaceuticals are present they will be isolated using solid phase extraction and detected with a HPLC/UV-Vis (*Faculty Sponsor: Mariella Passarelli*)

Wilson Poster #3

The effects of Hyperoxia on the muscle fiber composition in the neonatal rat diaphragm

John Leso

This study sought to elucidate the effects hyperoxia may have on the muscle fiber composition in the neonatal rat diaphragm. Neonatal rats were exposed to continuous 60% oxygen levels post birth and were subsequently sacrificed at intervals of 4, 7, 14 and 28 days post-birth. The diaphragms were harvested, separated by diaphragm section (Crural, Ventral and Medial costal) and examined immuno-histochemically for MHC composition. Hyperoxia was found to increase the expression of embryonic MHC in all 3 areas of the diaphragm. These results were significant overall and significant specifically to the 4 and 7 day old specimens in the ventral tissue sections as well. (*Faculty Sponsor: Richard Robinson*)

Venue 1, Art Gallery

Senior Art Exhibition

2:00 - 2:30

Senior Thesis Exhibition: "Line"

Giselle Scherle, Annah Mueller and Kristen Bisson

"Line," the senior thesis exhibition, contains a dynamic array of artworks ranging from animation to installation. Artists Kristen Bisson, Giselle Scherle, and Annah Mueller will be giving artists talks and discussing their work in the gallery. Kristen's work investigates the construction of contemporary identity, and explores feminism, cyborg theory, the physical and virtual self, and the meaning of image. Giselle's work investigates futility, absurdity, and the quirky, revealing the poetic moments in life, with an aesthetic that embraces roughly drawn gestures. Annah uses advertisement language to create interactive typographic pieces that emphasize the charge of written language in society. (*Faculty Sponsor: Katrazyna Randall*)

Venue 2, CR 123

Miscellaneous -- English, Philosophy, Education, Psychology

9:00 - 9:20

The Other Women

Kelsey Lowe

By closely examining the primary texts of Roger Williams's "Key Into the Language of America" and Alvar Nunez Cabeza de Vaca's "Relacion", this paper attempts to examine the unique qualities of the Othering process that occurred for women native to the Americas. Contrary to the depictions of 16th and 17th century women published at the time, Native Women were described as strong, capable, and all but Amazonian in their abilities. Rather than subvert the traditional views of European women and inspire an influx of feminism, the descriptions of women by these male explorers further separated them from their overseas counterparts. *(Faculty Sponsor: Sabine Klein)*

9:20 - 9:40

The Language of Apotheosis: First Contact in North America and Papua New Guinea

Michael Angelides

How does the language of apotheosis differ within the context of disparate time periods, sociopolitical realities and cosmological worldviews? Multiple layers of interpretation must be considered when analyzing early encounters and their implications; inter-cultural interpretations regarding linguistic, ideological and religious terminology are all important to the contextual analysis of first contact experiences. Comparing two distinct cases of native first contact with Europeans (Papua New Guinea and New France in the 20th and 17th centuries, respectively) I will discuss how factors of social structure, cultural perception and historical contingency affect the experience of first contact and the interpretive language of Apotheosis. *(Faculty Sponsor: Sabine Klein)*

9:40 - 10:00

Martin Frobisher and the Icy Passage to Colonialism

Timothy Jones

The discovery of the fictional Northwest Passage, a direct shipping route from Europe to Asia, motivated intense exploration in the 15th and 16th centuries. Such exploration resulted in the accidental first encounters between European explorers and the Inuit living in the coastal areas of the Arctic. Martin Frobisher was one of the many unsuccessful navigators trying to find the Northwest Passage as he attempted, and failed, three times to discover the hidden shipping route. Each exploration for Frobisher

led to a new encounter with the local Inuit tribes. What began as simple trading between the two groups ended in bloodshed. How did Frobisher's first contact, like so many before his, ruin the relationship between the Natives and the Europeans? *(Faculty Sponsor: Sabine Klein)*

10:00 - 10:20

Immanuel Kant on How the Objects of Science are Constructed and Understood

Jeffrey Lees, Wilson Underkuffler, Silas Lunetta and Matthew Towle

Newtonian physiology suggests that your sensory experiences are organized, orderly, and coherent because they are produced by, and faithfully represent, an ultimate (physical) reality that is similarly organized, orderly, and coherent. Kant comes to an astonishingly different conclusion: sensory objects never defy the most fundamental laws of physics only because any object that might defy those laws is ruled out as an object of possible experience. Simply put, the next table-, chair-, or planet-experience you have will have the flavor it had to have to take place at all. Reality itself may be more completely chaotic, lawless, and out of control than your wildest dreams and you will never know it. *(Faculty Sponsor: Frank Underkuffler)*

10:20 - 10 :40

BREAK -- REFRESHMENTS AVAILABLE

10:40 - 11:00

One Shot to Start Over: Disability Studies within Chuck Palahniuk's Invisible Monsters

Stephanie Lennon

Applying the disabilities studies insights of Rosemarie Garland-Thomson to literary analysis, this paper looks at the representation of disability in Chuck Palahniuk's *Invisible Monsters*. The main character of the novel is a beauty queen who has been shot in the face, leaving her disfigured and incapable of speech. She no longer feels beautiful and stops receiving the positive attention that she is used to. With a close look at the research put forth by Garland-Thomson, this paper explores how the narrator's sudden disfigurement helps her to reconsider how she lives her life. *(Faculty Sponsor: Michael Johnson)*

11:00 - 11:20

Staring at the Disabled: An interpretation of Kim Edward's "The Memory Keeper's Daughter" based in the work of Rosemarie Garland-Thomson

Elizabeth Buckingham

It is important that we look at popular literature through the lens of Disability Studies because it reveals that literary representation of the body is a coded, controlled entity that has, historically, represented those with disabilities as freaks. Analyzing texts that do not stigmatize disabled characters in such a way is a step toward accommodating those with bodily difference into society. "The Memory Keeper's Daughter" is one such text that does not stigmatize the disabled body, but instead supports an accommodating society, while examining both its historical and social obstacles. *(Faculty Sponsor: Michael Johnson)*

LUNCH BREAK, 12:00 TO 1:00

1:00 - 1:20

A Collection of Faces and Names: My Life in Sports Cards

David Bersell

David Bersell owns a million baseball cards. Collecting cards melded two of his dad's greatest loves, which also became his own, reading and sports. David grew up on Wiffle ball and slam dunk contests, Jordan sneakers and imaginary game-winning shots. A decade later, he returned to his cards in an attempt to reexamine his childhood. He wanted to know what happened to his love of sports. He tried to come to terms with his parent's divorce. He searched for answers at the National Sports Collectors Convention in Baltimore, MD. When that didn't work, he stayed up all night writing. He organized every card. David will be reading from his nonfiction essay about these experiences. *(Faculty Sponsor: Gretchen Legler)*

1:20 - 1:40

Examining the Research-to-Practice Gap in Education

Benjamin Villeneuve

The research-to-practice gap in education describes the disconnect between teachers practicing in schools and the scientific progress made by researchers. One practice meant to help close the research-to-practice gap requires educators to take advantage of professional development opportunities. In order to determine the reasons for the gap, we surveyed education professionals and para-professionals in several states about how they prefer to meet their professional development needs, how their schools see professional development, and how they implement what they learn during professional development. *(Faculty Sponsor: Tiana Povenmire-Kirk)*

1:40 - 2:00

The Mystery of Multisyllabic Words: Does Syllable Length Affect Primacy and Recency in Recall?

Sarah Gordon

Can word syllable length affect primacy and recency? Subjects were tested in either a four syllable condition or a one syllable condition; they were given 21 words to recall. There was a significant difference in the number of words recalled in the primacy condition; conversely recency didn't show a significant difference in the quantity of words recalled. Subjects in the single syllable group were able to recall more words (9.23%) than those in the four syllable group. The conclusion of this research is that word syllable length affects primacy as well as the total number of words recalled per group. *(Faculty Sponsor: Marilyn Shea)*

2:00 - 2:20

Socialistic Aristocracy: A Utopia in the Making?

Ryan Lounsbury, Travis Cyr, Lindsay Trafton, Jennifer Brann and Ian Luker

Current status of today's world makes us wish that a perfect society absent of poor education, poverty and economic downfall could exist. This brings us to a thought experiment based on the theoretical development of a socialistic aristocracy as a Utopia to explore potential remedies for current social problems. Exploring collectively the basis of developing a true utopian society in all aspects from social, economical, governmental, educational, religion, and development beyond thought. With the perfect balance of Socialism and Aristocratic government a true utopian society can be upheld which would change the societal views of the world. *(Faculty Sponsor: Marilyn Shea)*

2:20 - 2:40

BREAK -- REFRESHMENTS AVAILABLE

2:40 - 3:40

Mortality

Carolyn Clafin, Keeley Cronin, Kinda Karkos-Lilly, and Jessamyn Morales

What does it mean to our day-to-day activities that our lives on this planet have stages, and have a limit -- that nothing human will last forever, and that not much will last for long? Carolyn Clafin, Keeley Cronin, Kinda Karkos-Lilly, and Jessamyn Morales will present writing concerning works from the Western Canon that bear on the issue of mortality. *(Faculty Sponsor: Matthew Freytag)*

Venue 3, North Dining Hall C

History, then Mathematics/Computer Science

9:00 - 9:20

Team Effort: The Desegregation of the SEC 1954-1968

Michael Gingras

The narrative of Civil Rights in America includes a diverse field of pioneers, including the student-athletes of the SEC. By coordinating their effort with the NAACP, the fight to integrate the conference follows the familiar trajectory of the movement: from using the courts to pry open access to efforts, to quickly proving themselves once given the chance to do so. The student athletes of the SEC paved the way for justice not only on the hardwood but in America's consciousness as well. *(Faculty Sponsor: Christopher O'Brien)*

9:20 - 9:40

The Rise of the Maine Law and the Opposition that Plagued It

Danielle Bernier

As is well known to historians and many locals, the Maine Law, prohibiting the sale of intoxicating liquor, was first adopted in 1851 and stayed on the books until 1933. This law found favor for many reasons; among them issues of religious, class and immigration control. Prohibition, however, was opposed by businessmen profiting from alcohol and also by those who believed it was not the role of law to control the "cultures" and "habits" of man. This paper argues that while this law appeared to be successful and widely supported, it was actually very much opposed and was not heavily enforced. By examining the voices opposing temperance, this paper serves as a corrective to the popular idea of a dry Maine. *(Faculty Sponsor: Christopher O'Brien)*

9:40 - 10:00

Bigger than Bugs Bunny: a Social critique of Postwar American Society, 1945-1955

Samantha Divece

Bigger than Bugs Bunny offers an insightful view of postwar America through Looney Tunes cartoons. This research explores the cultural ideology of American society from 1945-1955 through the animation of Chuck Jones, Friz Freleng, and Bob McKimson. Their cartoons offer a critical narrative of American society, life, and its foibles. *(Faculty Sponsor: Christopher O'Brien)*

10:00 - 10:20

Kitten Whiskers and Monkey Nipples: Public Perception and the MPAA Rating System

Jacob Goodness

American public morality and American behavior often exist in tension. Thus, while society changed during the 1960s, popular moralizers who held a low opinion of Hollywood, coupled with an outdated means of self-censorship, prevented directors from making films representative of this social transformation. This paper argues that the 1968 rating system of the Motion Picture Association of America was a tool designed to work around this issue by abandoning the Production Code and bypassing the moralizers and censorship boards through direct appeal to the film consumer. (*Faculty Sponsor: Christopher O'Brien*)

10:20 - 10 :40

BREAK -- REFRESHMENTS AVAILABLE

10:20 - 10:40

How Collective Memory Shapes and Preserves Kennedy's Legacy

Kasey McPhail

If popular image is to be believed, John F. Kennedy is one of the greatest presidents ever. This paper argues that the media, whether through film, television or magazines, plays a vital role in constructing the collective memory of the 35th president. Thus, rather than judge JFK for what he accomplished or failed to accomplish in office, most Americans know him as the “young,” “vibrant” and “charming” man of Hollywood fictionalizing. By exploring the workings of collective memory about the man, we can see how popular “history” is often more image than facts (*Faculty Sponsor: Christopher O'Brien*)

10:40 - 11:00

Gardiner's Jewish Heritage: A look at some of the factors that led to the rise, decline and dispersion of a small Maine community.

Christine Sirois

The historiography of Jewish immigration in the Northeast tends to focus on urban communities. Recently, historians have begun expanding the overview to include rural areas and smaller towns. This paper highlights the economic and social factors that led to the rise, decline and dispersion of the Jewish community in Gardiner. It argues that the community, built originally by peddlers and grocers, played an important role in the town, but perpetually struggled with the idea of maintaining a separate religious and ethnic identity. *(Faculty Sponsor: Christopher O'Brien)*

11:00 - 11:20

The 20th Maine: War on the Home Front

Christopher Davis

On July 2nd, 1863 Joshua Chamberlain and the men of the 20th Maine Volunteer Regiment solidified their place in American history at the Battle of Gettysburg. The war brought these men together from across the state of Maine, from Presque Isle and Bangor, to the midcoast region of Wiscasset and Rockland. The bonds that war had formed between the men were not permanent though, and were undone by the politics and rhetoric surrounded the regiment in the last decades of the 19th century and caused long lasting fractures between former comrades in arms. *(Faculty Sponsor: Christopher O'Brien)*

LUNCH BREAK, 12:00 TO 1:00

1:00 - 1:20

“Music to Kill Yourself Too”: How Goths Became a Focus of a Moral Panic

Malynda Bickford

In “Music to Kill Yourself Too”: How Goths Became a Focus of a Moral Panic, I argue that the 1999 Columbine shooting resulted in a brief and entirely misplaced hysteria that equated the murderers with a cultural subgroup to which they did not belong. The paper attempts to unravel how, even in the face of overwhelming evidence to the contrary, the media tagged members of the Goth subculture as dangerous deviants. *(Faculty Sponsor: Christopher O'Brien)*

1:20 - 1:40

Sugarloaf: Why was the resort able to succeed in its remote location

Patrick Pozzetti

Tucked into the wilderness far from any urban environment, it troubles researchers with a simple question: Why go to the Loaf? Most ski resorts are within two hours of a major city and good snow alone is not sufficient to explain the draw of the mountain. Looking at archival data, this paper argues that people made the trek to Carrabassett Valley because Sugarloaf offered a variety of features that could be found nowhere else in New England. *(Faculty Sponsor: Christopher O'Brien)*

1:40 - 2:00

Stewards of the Wetlands

Zachary Siener

In "Stewards of the Wetlands" I argue that cranberry growers have somehow become lost in the study of the industry. Two events: the creation of Ocean Spray in 1930 and the rise of social and labor history in the 1970s secured the historical niches of both the company and the workers in the field. This paper fills a gap in current historiography by historicizing the role of the cranberry farmer, without whom neither of the other stories would work. *(Faculty Sponsor: Christopher O'Brien)*

2:00 - 2:20

Romancing Society: An Analysis of American Values Present in Early Spanish American War Films

Ashley Simpson

In 1898, the first motion pictures revolutionized the way the American public viewed media and entertainment. Around the same time, tensions were rising as the United States joined forces with Cuba as the Cuban people fought Spain for their independence. Early film companies produced reenactments about wartime events that raise questions about the objectives of the filmmakers. What were the motives of the filmmakers? How do they frame the subject matter? How did the American public react to these films? This presentation will examine the values of American culture and feelings about the Spanish-American War present in these early propaganda tools. *(Faculty Sponsor: Walter Sargent)*

2:20 - 2:40

BREAK -- REFRESHMENTS AVAILABLE

2:40 - 3:00

Native Video Processing in a Mobile Environment

Kieran Nichols

Over the past two semesters I have worked on creating a native video editor for use on mobile devices running Google's Android operating system. For this project to come together successfully I needed to take what I already knew about programming in the Android environment and mix it with three new topics that I had never explored before. These topics included learning how to use a very popular audio/video library called FFmpeg (written in C), the Java Native Interface (JNI -- an intermediate language used to provide communication between Java and C/C++), and OpenGL ES (a 3D graphics programming library). All of these required a significant amount of research to learn how to integrate them into a viable solution in a platform that generally is constrained to code in the Java language. *(Faculty Sponsor: Christopher Bennett)*

3:00 - 3:20

UMF Student Retention - An Analysis of UMF Admissions Data

John Ochira

At a time when UMF is faced with difficult and mounting economic challenges, identifying optimal recruitment and retention strategies is a crucial part of University planning. This project uses data provided by the UMF Admissions Office to look at patterns of retention of first-year students to their second year based on data collected at the time of admission. *(Faculty Sponsor: Sarah Hardy)*

3:20 - 4:20

Mathematical Giants

MAT100 Students

Introduction to Mathematics students will give a brief and selective history of mathematics by focusing upon the contributions, mathematical and otherwise, of twelve mathematical giants. Presentations will span the past 2500 years and include some well-known mathematicians such as Archimedes and Gauss, and others not usually remembered for their mathematical contributions, such as Florence Nightingale and Lewis Carroll. *(Faculty Sponsor: Peter Hardy)*

4:20 - 5:20

Calculus in Action

MAT142 Students

Calculus II students will present examples of the use of calculus in the modern world. Some of the topics presented include fluid pressure and dam design, harmonic motion of springs, radioactive decay and its application to determining the age of the Earth, rates of change of the deer population in the state of Maine and the optimal size and shape of a can of soup. (*Faculty Sponsor: Peter Hardy*)

Venue 4, Ed. Ctr. 103

Geography (morning), Business Economics (afternoon)

9:00 - 9:20

Human Migration to Williams County, North Dakota Due to Increased Oil Development

Henry Armstrong

The reasons that contribute to human migration may vary among individuals but the search for employment and economic opportunities tend to be a driving factor of human migration. With current unemployment rates in the United States the search for jobs has never been so difficult since the great depression. The question this research will consider is, Has recent oil development in Williams County, North Dakota served as some inducement to attract migrants there for employment opportunity, during the 2009-2011 period of recent oil industry expansion there? (*Faculty Sponsor: Brad Dearden*)

9:20 - 9:40

The Distribution and Health of *Micropterus dolomieu* Throughout Hancock County Maine

John Fernald

The movement of invasive species throughout the state may be attributed to both natural and anthropogenic causes. This study's objective is to determine the range and health of invasive *M. dolomieu* in downeast Maine, and some of the possible effects they have on native brook trout, and salmon populations. The average weight and size of *M. dolomieu* in different aquatic environments were compared to each other. These measurements were then compared to previously recorded measurements taken from salmon and brook trout. (*Faculty Sponsor: Brad Dearden*)

9:40 - 10:00

Economic Ramifications of Squaw Mountain Resort on the Greenville, Maine Economy

Richard Matthews

Some Maine ski areas such as the Saddleback Resort in Rangeley, are undergoing significant expansion, driving increased tourism and economic growth in their surrounding region. Other areas such as Big Squaw in Greenville are closing their slopes indefinitely. This report seeks to uncover the factors leading to the demise of the Squaw Mountain Resort area in Greenville, and assess the economic impact on the Greenville region as the ski area has declined from one of the most successful areas in the state, to an idle, deteriorating property. *(Faculty Sponsor: Brad Dearden)*

10:00 - 10:20

Titcomb Mountain: An assessment of the current infrastructure in place and its ability to support a proposed small scale expansion

Russell Schmelzer

Titcomb Mountain, located in Farmington ME, relies on artificial snowmaking for over 70 % of its terrain. With such heavy reliance on artificial snowmaking, this research assesses whether Titcomb Mountain is able to sustain a small scale proposed expansion under its current infrastructure of water reserves, snowmaking costs, and water usage as related to water reserves, as well as proposing zones where such water usage might have possible environmental implications. State GIS data and data collected by interview with officials at Ticomb Mountain will serve as a basis for assessing the plausibility of Titcomb to expand under current infrastructure. *(Faculty Sponsor: Brad Dearden)*

10:20 - 10 :40

BREAK -- REFRESHMENTS AVAILABLE

10:20 - 10:40

Laysan Albatross Health in Relation to Human Garbage Consumption

Sarah O Blenes

The Laysan Albatross resides in the Hawaiian Archipelago, center to the Pacific Oceanic Currents. Due to the geography of the islands and the currents, human garbage is known to float along currents and wash up on land. For the past couple of decades, scientists have been gathering data that suggest an increase in human garbage consumption of the Laysan Albatross. This research will be examining eight albatross boluses in connection with public policy that may or may not be affecting the health of these birds. *(Faculty Sponsor: Brad Dearden)*

10:40 - 11:00

Deer Population: The Case of Northern versus Southern Maine

Timothy Huggins

The deer population in northern Maine over the past few years has been on a drastic decline, while the population in southern Maine has been booming. Objectives of this study include: recognizing just how drastic the shift of deer population in Maine has been through the collection of secondary data, finding out what policies or actions are being taken towards restoring the deer population in northern Maine, and what is being done to control the deer population in southern Maine. *(Faculty Sponsor: Brad Dearden)*

11:00 - 11:20

Walkability: Integrating Recreational Areas and Walkable Neighborhoods

Tyler Wilson

Farmington, Maine has an extensive sidewalk network in the downtown and ending not too far away. The Farmington community has walkable neighborhoods, areas where individuals have access to sidewalks for transportation. The sidewalks have not been extended, only maintained for some time. What is the potential to have the current sidewalk infrastructure to extend to recreational areas? By using tools such as conducting a focus group, collecting graphical data and using Geographic Information Systems, I will analyze integrating recreational areas, into walkable neighborhoods. *(Faculty Sponsor: Brad Dearden)*

LUNCH BREAK, 12:00 TO 1:00

1:00 - 1:20

The Gaming Industry: MGM Resorts International Company Analysis

Christopher McLoughlin and William Griffiths

Our presentation is about MGM Resorts International. it will be analyzing a variety of aspects of this multibillion dollar company; including the history of the company, brands within the company, financial data, business strategy, SWOT analysis, how Michael Porter's Five Forces apply to MGM Resorts International, competitive advantages, and the corporate social responsibility of MGM. A competitor analysis will also be outlined, also looking at Macau and Singapore impact on the gambling world providing an excellent analysis of MGM Resorts International and the gaming industry. *(Faculty Sponsor: Thomas Maroney)*

1:20 - 1:40

Cabela's: History of the Mail-Order Success

Daniel Wright and Stephan Kelleher

This presentation will center on the outdoor/sportswear industry, with a particular focus on Cabela's. This presentation will review the outdoor/sportswear industry and company aspects of the business; also we will include a history of the company, with regard to the current CEO's and board of directors. Furthermore we will discuss the company's overall strategy, core competencies, SWOT analysis, values, mission, and vision. Lastly we will discuss the international and global strategy which Cabela's uses when building market share over competitors. *(Faculty Sponsor: Thomas Maroney)*

1:40 - 2:00

Disney: an Industry Analysis

Grace Williams and Allisia Macdonald

The purpose of this presentation will be to examine the entertainment industry in regards to theme parks and recreation utilizing Disney as a paradigm. Throughout the presentation, Disney's Theme Parks, their largest market sector, will be analyzed from a financial and business perspective including but not limited to their past economic performance, SWOT analysis, Benchmarking, target market, competitor analysis, and strategic alliances as well as other aspects of their strategy. *(Faculty Sponsor: Thomas Maroney)*

2:00 - 2:20

Accessible Luxury: Coach a Company and Industry Analysis

Kristi Geaumont

This presentation concerns itself with high end luxury industry using Coach Leatherwear through a company and industry analysis. This presentation will examine Coach's target market, competitor analysis, distinct and core competencies, SWOT analysis, benchmarking, past economic performance, its industry forces and drivers, and other strategic measures in order to establish its position in the industry and its outlook for the future. The future holds several challenges for the company including expanding international presence, reaffirming their men's collection, and using their "accessible luxury" price point to win customers in all markets. *(Faculty Sponsor: Thomas Maroney)*

2:20 - 2:40

BREAK -- REFRESHMENTS AVAILABLE

2:40 - 3:00

Netflix

Nathan Swan and Tut Wale

This presentation entails an evaluation of the video entertainment segment within the Music and Video Store Industry, in relation to Netflix. As the complexities of globalization, diversification, and technology create volatility in the entertainment sector, the battles for the market leader position between top players perpetually elevates. An overview of Netflix's competitive position is examined through a balanced scorecard and the following strategic management tool analyses: internal and external, value and supply chain, benchmarking, and a SWOT analysis. Through these analyses and a historical review of the company's position, we establish a broad deduction of Netflix and the company's future. *(Faculty Sponsor: Thomas Maroney)*

3:00 - 3:20

McDonald's Corporation: Business Operation and Competitive Environment Analysis Presentation

Roy Burdin and Shane Tracy

McDonald's Corporation: Business Operation and Competitive Environment Analysis Presentation consists of: a strategic analysis of McDonald's past, present and future operations through in-depth research of their annual reports, balance sheets, income statements, mission and vision statements. It assesses the importance of the current environmental and social climate on McDonald's strategic approach. It will apply business tools such as Value Chain Analysis, SWOT analysis and Balanced Score Card approach to determine the competitive advantages they exploit to become a leader in the extremely competitive fast food industry. *(Faculty Sponsor: Thomas Maroney)*

3:20 - 3:40

Diageo Plc's Position within the Global Alcohol Industry

Brandy Wheeler and Victoria Labree

The global alcohol industry is dominated by only a few companies. This presentation will give an overview of the global alcohol industry itself, followed by a more in-depth look at Diageo plc's position within it. The company's history, strategy, competencies, capabilities, corporate social responsibility, competitive position, and financial performance will be examined via such instruments as business model analysis, SWOT analyses, internal and external analyses, supply chain and value chain analyses. A comparison of Diageo to its closest competitor, Pernod Ricard SA demonstrates how much the industry is dominated by just these two entities. *(Faculty Sponsor: Thomas Maroney)*

3:40 - 4:00

Industry Application Analysis: Pfizer and the Pharmaceutical Industry

Marc Relford and Tessa Rockwood

The focus of this presentation involves the complete strategic analysis of the pharmaceutical industry in relation to Pfizer. A global analysis of the competitive environment through implementation of indicative financial instruments, as well as the application of strategic performance evaluation techniques, has enabled us to articulately elaborate upon the efficiencies and efficacy of Pfizer and the industry as a whole. By focusing on Pfizer's competitive advantages, weaknesses, opportunities, and threats, we are able to accurately portray the strategic and financial position of Pfizer in relation to its respective operational environment. This facilitates a comprehensive interpretation of Pfizer's past, present, and future performance. *(Faculty Sponsor: Thomas Maroney)*

Venue 5, Ed. Ctr. 112

Miscellaneous -- Sociology, Political Science, Sociology, Psychology

9:00 - 9:20

An Assessment of Maine's Welfare Policy

Nancy Varin

The goal of this research project is to assess the current state of Maine's social welfare system, Temporary Aid for Needy Families (TANF), in order to determine if changes should be made that would provide support to those in financial need while simultaneously allowing them to work their way off state-sponsored social programs. It will also delve into the political philosophies that frame the debate around social programs such as TANF while seeking to establish which philosophy is most consistent with modern attitudes towards welfare. The presentation will conclude with the researcher's recommendations for TANF reform in Maine. *(Faculty Sponsor: James Melcher)*

9:20 - 9:40

Internship with Senator Snowe's Regional Office

David Gerrish

Throughout the spring semester, I've been an intern at Senator Olympia Snowe's Regional Office in Auburn, Maine. Over the course of the last five months, I've gained valuable experience as an administrative assistant and in case work. As an intern, my job consisted mostly of answering phones, speaking with constituents and colleagues in other regional offices and in Washington, D.C. I think it's

important for me to share these experiences in hopes that others will pursue some sort of public service, whether it be at the local, state, or federal level. *(Faculty Sponsor: James Melcher)*

9:40 - 10:00

Self-deception and subjective well-being: a phenomenon in search of causation

Travis Cyr

To deceive one's self, to literally lie to your consciousness, has long been an area of interest in the fields of philosophy and psychology due to its inherent paradoxical nature. Despite such logical inconsistencies, the phenomenon of self-deception is established as empirical fact. What has remained ambiguous, however, is the reason self-deception would be adaptive. The present study will attempt to elaborate on a potential answer to this question; in so doing, the causal relationship (or lack thereof) between self-deception and subjective well-being will be examined. *(Faculty Sponsor: Alison Terry)*

10:00 - 10:20

Modeling Community Gardening: From Theory to Practice

Jacquelyn Murphy

When we advocate for community gardening we have little to offer but anecdotes heartfully explaining the associated benefits. Unfortunately, public policy is more responsive to numbers. What has become necessary is a monetization of the costs and benefits so as to accurately assess community gardening in a more concrete sense. This project looks at community gardening through an economic lens, developing a model that provides insight into its complexities. The result is a tool for thinking about community gardening that is concrete, explanatory, and thus influential. *(Faculty Sponsor: John Messier)*

10:20 - 10 :40

BREAK -- REFRESHMENTS AVAILABLE

10:40 - 11:00

Woof-Chicka-Meow-Meow: Why do UMF students have pets?

Rebecca Lynn Dukette

Humans have coexisted with animals for centuries, establishing bonds with them and changing society's perception of their value in our lives. Today, millions of homes have pets that are companions and considered members of the family. People primarily use pets for companionship, identity, and service/therapy. Through the use of a survey, this study explores the reasons why UMF students have pets. (*Faculty Sponsor: Kristina Wolff*)

11:00 - 11:20

BRAND ME: THE IMPACT OF CAPITALISM ON TATTOOS

Tamra-Jo M. Parker

In recent years there has been a rise in the occurrence of corporate logo tattoos. These corporate symbols are not only being used to display brand loyalty but also to represent a lifestyle that these individuals feel they can relate to. Through the use of surveys, my study explores individual's perceptions on these kinds of tattoos as well as flash and original designs. My main goal is to see if there is a trend in the occurrences of corporate tattoos and the ways in which the wearer and viewer of the tattoo interpret its meaning in relationship to identity. (*Faculty Sponsor: Kristina Wolff*)

LUNCH BREAK, 12:00 TO 1:00

1:00 - 1:20

Doing Becomes Believing : Psychological Tools Used in U.S. Military Recruitment and Training.

Jade Forester

Many young Americans today join the military for economic reasons, to help pay for college, or learn skills for future employment, and as public support of the wars in Iraq and Afghanistan is declining, the military has more incentive than ever to make "better" soldiers. Through the use of cadences, intellectual and academic exercises, and physical training, recruits, beliefs in the military's reasons for going to war become stronger, demonstrating the effect of "saying becomes believing." Many people believe that attitudes precede behavior (that one acts because of preexisting beliefs) but social psychological theory and research demonstrate the opposite is true, and that people will believe something because of action they've taken. I believe this is a core reason newly trained military personnel are required to work in recruitment offices; by promoting their particular branch of the military, a recruit's belief in what (s)he is saying will become stronger. Similarly, "boot camp" is designed to turn civilians into soldiers, and employs distinct psychological tools to that end. The goal of my senior thesis is to highlight the psychological tools

used by the US military to enhance recruits' commitment and support of military action at home and overseas. *(Faculty Sponsor: Karol Maybury)*

1:20 - 1:40

Midwives: Between Nature and Medicine

Jillianne Valeriani

When an American woman discovers she is pregnant, she is faced with several options for her prenatal care. One of these options is to use a midwife; however within the last hundred years the number of midwives in the United States has decreased substantially. This along with the growth of modern medicine, created a stigma that midwives are not a viable or safe option. Today, some women do not even know midwives exist within the United States or have misconceptions about the profession. The goal of this project is to increase awareness and understanding of this profession through the eyes of Maine midwives through personal interviews. *(Faculty Sponsor: Kristina Wolff)*

1:40 - 2:00

Militarism in the Media

Nicole Moreau

The purpose of my study is to look at the impact of militarism in popular culture and mass media and how it shapes perceptions about war. Through the use of a survey my study explores the media consumption of both pop culture and mass media of students. The main goal of the study is to see if there is a pattern between the utilization of media in the students here at UMF and their opinions on the wars in Iraq and Afghanistan. *(Faculty Sponsor: Kristina Wolff)*

2:00 - 2:20

Enacting a Sensible Charter School Policy for Maine

Geoffrey Cyr

Maine remains as one of just 10 states without a charter school program. While several proposals for charter schools have been presented before the legislature, no such program has ever been approved. Charter schools emerged as a hot-button issue in the 2010 gubernatorial campaign as part of the discussion on education reform, and it now seems as though Governor Paul LePage is poised to pass a bill through the new Republican-controlled legislature. Toward that end, the purpose of this presentation will be to explore the ways in which states have enacted charter schools to work toward a sensible solution for Maine. *(Faculty Sponsor: James Melcher)*

2:20 - 2:40

BREAK -- REFRESHMENTS AVAILABLE

2:40 - 3:00

A Return To Dire Straits: The Future of Political Relations Between China and Taiwan

Jeffrey Willis

The Taiwan Strait is a natural barrier between two political entities, China and Taiwan, which for roughly sixty years have shared in extremely contentious relations with one another. With the 2008 election of Taiwanese President Ma Ying-jeou, the political relationship between China and Taiwan has become as cordial as it has ever been, and many have begun to question whether the generally bitter cross-strait rivalry has reached a point of permanent détente. By analyzing historical precedent and current cross-strait trends, my research seeks to show that, unfortunately, this is not the case. *(Faculty Sponsor: Linda Beck)*

3:00 - 3:20

China and North Korea: a Problematic Relationship Between “Last Leninists”

Geoffrey Cyr

The unusually punitive actions by China in response to North Korea's May 2009 underground nuclear test suggested that the Communist state might be reconsidering its tradition of defending the belligerent North before the international community. Yet, in response to the North's latest act of aggression against the South at Yeonpyeong Island, China issued a stern warning against the planned military exercises by the U.S. and South Korea. What is to be made of these twists and turns in Chinese foreign policy? In this presentation, I will briefly outline how China formulates its foreign policy and the challenges North Korea poses to that policy. *(Faculty Sponsor: Linda Beck)*

3:20 - 5:20

Making the World a Better Place Through Leadership in Our Community

Students from PSY247, Psychology of Leadership

Members of the PSY247 Psychology of Leadership course were asked to make the world a better place by being leaders in our community. The group presentations will discuss the triumphs and pitfalls of their efforts to fundraise for the Maine Make- A -Wish program, raise awareness about domestic violence, encourage physical fitness and fun with regional elementary schools, assist the local public library, and partner with the United Way to raise student participation in community service. *(Faculty Sponsor: Alison Terry)*

Venue 6, The Landing

Readings -- Creative Writing, Poetry, Spanish

9:00 - 9:20

The Totally Credible Zine Emporium: The Nonfiction Show of the Century (Free Food)

Emma Nelson, Breanna Deluca, Shannah Cotton, Renald Lefebvre, Matthew Banning, Noelle Dubay, Connor Lofink and Ashley Smith

The wave of the publishing future (and a blast from the publishing past) has hit Farmington, Maine! Join students from this spring's beginning nonfiction workshop as they read essays (in forms you might never have imagined!) from their self-published ZINES. *(Faculty Sponsor: Gretchen Legler)*

9:20 - 10:20

Poemas, prosa, y tapas: Readings by students in SPA 377, Creative Writing in Spanish

Max Eyes, Laura Cowie, Noelle Moulton, Jacob Gomberg, Jamie Phillips, Ashley Smith and Casey Tanner

Students from SPA 377, Creative Writing in Spanish, will read selections of prose and poetry they have composed this semester. All selections will be in Spanish. A sampling of Latin American snacks will add to the cultural experience. Yes, this means free food. *(Faculty Sponsor: Linda Britt)*

10:20 - 11:20

First Year Writers Read Their Writing

Students from ENG 100

Students from 'Writers on Writing' read their writings that take listeners to the stories of all our lives. Come and be startled, surprised, and reminded that words can do more than actions to move us forward. *(Faculty Sponsor: Elizabeth Cooke)*

LUNCH BREAK, 12:00 TO 1:00

1:00 - 2:20

Writing the Other: Poems from ENG 311

Cary Babcock, Laura Cowie, Matthew Daigle, Emma Deans, Cassandra Fredrickson, Thomas Gagnon, Renald Lefebvre, Connor Lofink, Ellen Marlow, Ryan Ouimet, Rebecca Park, Emily Pottle and Darren Smart

This will be a reading by the students in Advanced Poetry. They will be reading work that they have completed this semester on the subject of Writing the Other. *(Faculty Sponsor: Jeffrey Thomson)*

2:20 - 2:40

BREAK -- REFRESHMENTS AVAILABLE

2:40 - 3:40

The Dance of Words: Readings by the Senior Seminar in Writing

Abraham Beane, Emma Deans, Kelsey Lowe, Ellen Marlow, Nicholas Berry, Abby Brostek, Sarah Gauvin, Jada Molton, Benjamin Gray and Natasha Nelson

BFA students in the Senior Seminar in Writing will read from their work. Ten students will read poetry, fiction, nonfiction and scripts, for five minutes each. Prepare to be amused, frightened, moved, surprised, and pleased. *(Faculty Sponsor: Patricia O'Donnell)*

3:40 – 4:30

Who's Afraid of Joyce's *Ulysses*?

Ian Davis, Daniel Gunn, Kyle Morison

A reading and panel discussion of excerpts from the “Cyclops” episode of James Joyce’s *Ulysses* (1922), focusing on the exuberant comic energy of the text. *Ulysses* is often characterized as difficult and intimidating—but it is actually a richly comic novel, shot through with parody, pastiche, and playful stylistic exaggeration. The panelists will shed light on this aspect of Joyce’s novel by reading and discussing selected passages from “Cyclops.” Copies of the passages will be available at the session. No previous knowledge of *Ulysses* is necessary!

Venue 7, Thomas Auditorium

Aft Award for Chemistry, Biology

8:45 - 9:00

The Harvey Aft Award for Excellence in Chemistry

Chemistry Faculty

Each year the chemistry faculty recognizes a student who has excelled in upper-level chemistry courses, has outstanding general scholarship, has demonstrated interest in chemistry, and projects a good attitude toward the field. Please join us when we announce the winner and present the award. (*Faculty Sponsor: Mariella Passarelli*)

9:00 - 9:20

Production of ROS (reactive oxygen species) in Striped Bass (*Morone saxatilis*)

Kathleen Kelley

Many cold-blooded animals, including invertebrates and fishes, are able to withstand a range of environmental (body) temperatures. For the animals to persist in varying thermal environments, a number of physiological and biochemical modifications are necessary. Common responses to low body temperatures include an increase in polyunsaturated fatty acid contents in (in order to keep cellular membranes fluid at cold temperatures), and an increase in the content of mitochondria, the primary source of reactive oxygen species including free radicals. This study investigates the effect of acclimation temperature on the production of reactive oxygen species by mitochondria from striped bass. (*Faculty Sponsor: Jean Doty*)

9:20 - 9:40

Fitness cost of ampicillin resistance in *E.coli* under optimal growing conditions and temperature stress.

Skylar Hopkins

The evolution of antibiotic resistance is one of the greatest challenges currently facing the medical field. It was originally assumed that because the evolution of resistant genotypes comes at a fitness cost to individuals, resistance would disappear from populations due to competition from susceptible individuals when antibiotic stress was removed. Recent studies have shown that low fitness costs and the evolution of fitness compensation prevent reversion to antibiotic susceptibility in some situations. The purpose of this study was to evaluate the potential fitness cost associated with ampicillin resistance in *Escherichia coli* under optimal growth conditions and temperature stress conditions. *(Faculty Sponsor: Jean Doty)*

9:40 - 10:00

Testing the Eurasian Milfoil Population of Messelanskee Lake for Hybridization

Dmitriy Skoog

Eurasian watermilfoil is among the most costly and prolific invasive plants in North America. It has been known to hybridize with the native Northern watermilfoil and these hybrids are known to be resistant to the milfoil weevil (*Euhrychiopsis lecontei*), a non-chemical and highly specific method of biocontrol of milfoil. Samples of milfoil collected from one site in the most heavily infested part of Messalonskee Lake were broken down to isolate the ITS sequence of the nuclear ribosomal DNA. The ITS sequences were amplified and sent to a lab for sequencing. The resulting data were used to determine if hybridization has occurred. *(Faculty Sponsor: Jean Doty)*

10:00 - 10:20

Dirty Money: Bacteria Found on Various Currencies

Candace Iba, Melani St Pierre and Samantha Webster

This project is designed to display the various types of prokaryotic organisms found on a specific penny from 1916, one dollar bills, two dollar bills and twenty dollar bills and compare these findings with types of bacteria found on other forms of currency, such as credit cards and debit cards, to determine their harmful effects as well as preventative methods. To demonstrate these findings, isolated bacteria will be analyzed and tested for antibiotic resistance. The research will inform the audience of the currencies' magnitude of contamination and provide insight on the more hygienic form of exchange, if any. *(Faculty Sponsor: Jean Doty)*

10:20 - 10 :40

BREAK -- REFRESHMENTS AVAILABLE

10:20 - 10:40

Possible Unwanted or Unexpected Effects of Genetically Altered Vegetation

Emily Littlefield

This project is meant to answer the question, “Is genetically altered foods really have a longer shelf life?” Genetically altered foods in our supermarkets are more apparent every year to meet the demands for more and better quality produce. Some would argue that organic and natural foods are better because genetic alternations worry consumers, who think that genetically altered foods will introduce potentially harmful DNA into our bodies. This project will determine whether genetically altered foods are indeed more resistant to decomposition, addressing one of the major reasons cited for this type of modification. *(Faculty Sponsor: Jean Doty)*

10:40 - 11:00

The Effect of Triclosan on Tooth Development and the Expression of *dlx2b* in *Danio rerio*

Enrico Ross, Ashley Soucy, Daniel Poulin and Carleton Neil

With the increase in demand for sterility, the chemical triclosan has emerged as a near-ubiquitous tool in hand sanitizers, soaps, deodorants, and toothpastes. While proven effective at controlling bacterial growth, triclosan affects physiological development processes as an endocrine disruptor. Our study examines the effect of triclosan on tooth development in zebrafish and the expression of *dlx2b*, the gene in zebrafish which codes for such development. Tooth development will be examined across various test concentrations of triclosan modeled after amounts found in consumer products, and results from gel electrophoresis will determine if triclosan altered expression of *dlx2b*. *(Faculty Sponsor: Jean Doty)*

11:00 - 11:20

Expression of Human Growth Hormone in Transformed *E. coli*.

Gabriel Williams, Sean Raph and Sean Lisk

This experiment tests the expression of human growth hormone in *E. coli* transformed by a synthetic plasmid. The plasmid containing the hGH gene will also contain a lac blue and ampicillin resistance expression markers. The expression markers are designed to identify and isolate colony forming units of transformed *E. coli* for analysis of hGH expression. An immunosorbent assay for hGH will be used to test expression. The samples from the assay will produce a standard curve of optical density versus hGH concentration. The expression of human genes by prokaryotes is essential for the large-scale production of pharmaceutical proteins like insulin. (*Faculty Sponsor: Jean Doty*)

LUNCH BREAK, 12:00 TO 1:00

1:00 - 1:20

Antimicrobial and Antibiotic Cross-Resistance in Bacteria

Katherine Watson

This project investigates the theory that extended use of antimicrobial chemicals leads to decreased bacterial susceptibility and that this resistance can confer resistance to particular antibiotics. Possible gene transfer mechanisms will be discussed in a hypothesis exploring reasons behind this cross-resistance. This experiment is designed to isolate triclosan-resistant bacterial populations from the environment and test for subsequent antibiotic resistance using the Kirby-Bauer Method. Understanding cross-resistance can provide insight to horizontal gene transfer mechanisms and experimental findings of resistance can aid in disease control in medical centers and in worldwide public health. (*Faculty Sponsor: Jean Doty*)

1:20 - 1:40

The effects of equal containing aspartame on in vitro *Danio rerio* development

Kelsey Greenier and Emily McGee

This project is designed to test the developmental toxicology of zebra fish (*Danio rerio*) in the presence of trace levels of Aspartylphenylalanine-methyl-ester, otherwise referred to as aspartame (APM), in vitro. Aspartame is a low-calorie sweetener, commonly used as an additive, found in many flavorings, preservatives, and dietary supplements. Since the use of aspartame in food products was accepted by the Food and Drug Administration (FDA) in 1974 there has been both political and medical controversy surrounding its wide spread usages. While many studies negate immediate mal-effects of ingesting this substance, its chemical breakdown includes many chemicals known to be bodily toxins. This project searches to elucidate the effects of ingesting APM, through the observation of in vitro *D. rerio* tissues and

development. Hopefully this project may serve to increase knowledge about this potentially harmful everyday chemical. (*Faculty Sponsor: Jean Doty*)

1:40 - 2:00

Teratogenic effects of ethanol and attenuation of oxidative stress on zebrafish (*Danio rerio*)

Laura Crowley

This project assesses the effects of ethanol on the embryos of zebrafish by phenotypically observing the degree of altered musculoskeletal development after trials of exposure to varying concentrations of ethanol at increasing intervals post-fertilization; then exposing the embryos to vitamins C or E to test for oxidative stress reduction. Ethanol is an inhibitor of the Hedgehog Signaling Pathway, regulating cell differentiation and proliferation. Though the specific mechanism by which this happens is unknown, the applicability of understanding it is wide and valuable. This experiment might shed some light on what the mechanism is and show the developmental stage at which it is most potent. (*Faculty Sponsor: Jean Doty*)

2:00 - 2:20

Riley: Is he or she?

Sarah Bunch and Sarah Mueller

This project involves the extraction of *Canis familiaris* chromosomes, specifically those of Riley Bunch, to compare his sexual phenotype to his chromosomal genotype. This will be accomplished by isolating his chromosomes: finding buccal cells that are undergoing metaphase I in Mitosis and identifying the 39 pairs of chromosomes to create a complete karyotype. This project will reveal the answer to the question: is Riley is a male or an intersexual? (*Faculty Sponsor: Jean Doty*)

2:20 - 2:40

BREAK -- REFRESHMENTS AVAILABLE

2:40 - 3:00

The Effect of pH on the Growth of *S. mutans*

Courtney Burns

The development of dental plaque involves the coating of tooth enamel with several proteins, bacterial cell debris, and sialic acid. A bacterium commonly associated with the formation of dental caries, *Streptococcus mutans*, is a high producer of acid by-products (Koo, Xiao, Klein, 2009) in the presence of sucrose, fructose, and glucose. The increased production of acid in the mouth can decrease the buffering

capability of body's salivary system and lead to increased probability of dental caries (Forssten, Bjorklund, Ouwehand, 2010). This experiment tests the effect of pH on the growth of *S. mutans*. (Faculty Sponsor: Jean Doty)

3:00 - 3:20

Small Scale Bio-Remediation by Indigenous Microbes

Karen Collins and Marie Doucette

Oil Spills are an increasingly common problem in the world today. Very little research has been done on spills on a small, backyard scale. We studied bio-remediation of motor oil in native soil samples to determine whether the soil had strains of petroleum degrading microorganisms. We also wondered if the addition of nutrients would increase the ability of native organism to degrade oil faster. This information will allow us to recommend a protocol for dealing with motor oil spills on a small scale in order to minimize their impact on the local environment. (Faculty Sponsor: Jean Doty)

3:20 - 3:40

Various types of bacteria concentrated on three different forms of currency-bills, coins, and debit/credit cards

Samantha Webster and Melani St Pierre

Paper currency has been shown to carry bacteria, feces and residues of illegal drugs. We were curious to find out what types of bacteria are present and the potential for money to transmit infection. In this study bacteria was isolated from various forms of currency to determine the different types of bacteria present not only on paper money, but coins and credit or debit cards, too. Should you wash your hands after handling money? Through our research and experimentation, we have discovered a variety of bacteria that could potentially be pathogenic, and our presentation gives insight to just what people are touching and passing along with their daily interactions with money. (Faculty Sponsor: Jean Doty)

3:40 - 4:00

Lactose Intolerance and the use lactaid versus probiotics

Savanna Hagerthy

The purpose of this project is to investigate the effectiveness of two types of lactose digestion medications commonly consumed by lactose intolerant individuals. The first type of medication that will be investigated is lactaid, which is lactase in a pill form. The other type of medication that will be investigated is a probiotic with *Lactobacillus acidophilus*, which is a bacteria that digests lactose. Lactase separates lactose into two different sugars: glucose and galactose. *Lactobacillus acidophilus* is known to

also produce lactase, this can replace the lack of intestinal lactase (Mombelli and Gismondo, 2000).
(Faculty Sponsor: Jean Doty)

4:00 - 4:20

Bacterial Altruism: Shared Antibiotic Resistance Via Chemical signaling

Elizabeth Hassett and Aaron Simpson

Recent studies have revealed that the typical methods for the transfer of antibiotic resistant genes through horizontal or vertical gene transfer may not be the only mechanisms used by bacteria in order to confer resistance to antibiotics. Through this experiment we aim to elucidate a new discovery that enables bacteria that are non-resistant to survive in the presence of an antibiotic through the newly discovered phenomenon known as quorum sensing. (Faculty Sponsor: Jean Doty)

4:20 - 4:40

Growth of Zebrafish Embryos when exposed to Aspartame

Kelsey Greenier and Emily Mcgee

This project is designed to test the developmental toxicology of zebra fish (*Danio rerio*) in the presence of trace levels of Aspartylphenylalanine-methyl-ester, otherwise referred to as aspartame (APM), in vitro. Aspartame is a low-calorie sweetener, commonly used as an additive, found in many flavorings, preservatives, and dietary supplements. Since the use of aspartame in food products was accepted by the Food and Drug Administration (FDA) in 1974 there has been both political and medical controversy surrounding its wide spread usages. While many studies negate immediate mal-effects of ingesting this substance, its chemical breakdown includes many chemicals known to be bodily toxins. This project searches to elucidate the effects of ingesting APM, through the observation of in vitro *D. rerio* tissues and development. Hopefully this project may serve to increase knowledge about this potentially harmful everyday chemical. (Faculty Sponsor: Jean Doty)

4:40 - 5:00

You're Dirty! A demographic of Staphylococcus on the skin of women throughout life

Sarah Mueller and Hilary Harkins

Staphylococcus is a bacterium that can cause many infections and diseases including skin infections, pneumonia, food poisoning, toxic shock syndrome, and blood poisoning (National Library of Medicine, 2010). The purpose of this study is to conclude whether women of a certain age group (pre-menses, menses, and post-menses) have more of this bacterium on their skin than another age group. There will be a range of ages in the female population that partake in this study ranging from four to 65 or older (15 participants from each group, 45 participants total). Participants will be swabbed on the forearm and the

sample will be placed in a culture dish with a mannitol agar and left to grow for 24-48 hours. The data will then be qualitatively analyzed and counted. This will show how bacterial concentration changes throughout the life span and clue us in on how that may affect immunology with age. (*Faculty Sponsor: Jean Doty*)

Venue 8, Ricker 115

Computer Science

9:00 - 10:20

Database Applications

Timothy Doyle, Cooper Archard, Kieran Nichols, Jordan Legrand, Steven Landry, Jesse Mitchell, Alexander Michael Hall and Stacy Dubuc

COS 455 (Database Systems) students will present their semester long projects. Each student has chosen an application for a database. The student has designed the collection of tables, table attributes and the relationships among these tables. The student has used SQL (Structured Query Language) to create the tables. Using SQL or PHP the student has inserted data into the tables, making sure the constraints between tables are satisfied. Then the student has designed appropriate SQL queries to answer important questions using the database. Finally the student has designed a web front end and used PHP for user interaction. (*Faculty Sponsor: Gail Lange*)

Venue 9, Ricker 217

Psychology

9:00 - 11:20, 1:30 - 4:30

PSY 400 Research Methods in Psychology

Students from PSY 400, Research Methods

Thirty-two Psychology and Business Psychology majors will present their original, semester-long research projects. Students' projects include the following topics, and many others: how a person's ethnicity influences hiring decisions; how fans (vs. non-fans) evaluate a public figure's deviant behavior; whether intoxicated men and women are perceived differently; whether a professor's religion influences student ratings; whether musical mnemonics improve recall of new information; how rap, country, and classical music aficionados are perceived; and how individuals with tattoos are privately evaluated. Join us to learn

about these and many other intriguing topics related to human emotion, cognition, and behavior. (*Faculty Sponsor: Karol Maybury*)

Venue 10, Nordica Auditorium and M26

Music

1:00 - 2:15

Beethoven and the Romantic Rebellion

Daniel Smith, Matthew Houston, Melissa Tarbox and Kiley Gendron, Christian Desrochers, David Carr

Beethoven's music reflects the cultural, political, and artistic changes in Europe from the Napoleonic period through the 1820s. In this session, students from the Fall '11 Beethoven Course will read excerpts from their papers addressing topics ranging from the music business during Beethoven's time to the composer's interest in Kant. A short work by Beethoven will be performed; the session will close with an open discussion. (*Faculty Sponsor: Steven Pane*)

Venue 11, The "Beach"

Exhibit, Multimedia Display

All Day

Essaying the (Vi)(Ra)di(e)o

Nicholas Berry, Richard Coombs, Benjamin Gadberry, Joana Hill, Brittany Kashar, Callie Koenig, Kristin Lewis, Kelsey Moore, Sarah Moore, Alyssa Neptune, Katherine Thompson, Elizabeth Walk, Martin Wigall, Alison Osborne and David LaForge

What happens when you combine the WORD with SOUND and IMAGE? Students in the advanced nonfiction workshop in creative writing have experimented this semester with the radio and video essay - giving a centuries-old form of literature a distinctly 21st century twist. Drop by their multi-media poster session to see and hear their work. *(Faculty Sponsor: Gretchen Legler)*

All Day

Photographs of England and Spain

Students enrolled in LIA 135, Digital Photography, during the 2009 and 2010 May terms.

This new exhibition presents images taken by UMF students enrolled in the May term digital photography classes in 2009 and 2010. While on a 2-1/2 week field trip to England and Spain, students photographed many sites and events including: Stonehenge at sunset, Stratford-upon-Avon, the Medieval Festival at Warwick Castle, crew races at Oxford University, Roman Baths, the Queen's birthday parade in London, Gaudi's Sagrada Familia cathedral in Barcelona, the Corpus Christi festival and the Fishermen's Festival in a Spanish village, the Saturday market in Girona, and much more. *(Faculty Sponsor: Ralph Granger)*

Venue 12, Ed. Ctr Lobby and Hallway

Poster Session

(Please note that poster presenters are expected to be present to explain their work and answer questions for a one hour period, either from 10:00 to 11:00 am or from 1:00 to 2:00 pm)

poster #1

Sustainable Campus Coalition's Contributions to UMF 2010-2011

Students from The Sustainable Campus Coalition

The Sustainable Campus Coalition will demonstrate its 2010-2011 activities to the campus community. SCC has been active with a variety of events: Trash Day, the Recycled Sledding Contest, showing the film "Oceans," and a 350 Day panel on energy needs in our community, including a fundraiser. Further energy saving and carbon reduction initiatives include Green's List visits to residence halls and offices, Energy Challenge in the halls, Creative Writing House audit, signage for the Ed Center. Students will present a slideshow of photos of their activities, bringing hands-on materials demonstrating their projects and being on site to discuss their contributions individually. *(Faculty Sponsor: Andrew Barton)*

poster #2

Ethanol: who wins who losses?

Karen Henderson

Recently Congress has passed a bill to increase the ethanol percentage from 10% to 15 % in gasoline and diesel fuel. The purpose of this project will be to answer questions regarding ethanol and its role with in our economy. I intend to investigate the process of ethanol production, the role of agribusiness in the U.S., corn subsidies, effects in food costs and the contribution to greenhouse gas and subsequently climate change. *(Faculty Sponsor: Cathleen McAnney)*

poster #3

Geochemical composition of meta-sedimentary rocks of west-central Maine

Samantha Burk and Jacob Hansen

This project focuses on a geochemical investigation of west-central Maine meta-sedimentary rocks in the Farmington, Strong, Fairbanks and Weld areas. Samples were collected from roadside outcrops of Devonian aged Carrabassett, Day Mountain and Temple stream formations, as well as a sample previously collected from Bald Mountain. These samples were analyzed using x-ray fluorescence (XRF) spectrometry

to determine their elemental abundances and identify any distinctive geochemical variations that might be used to categorize these rocks. *(Faculty Sponsor: David Gibson)*

poster #4

Geochemical investigation of granite weathering

Scott Pelletier and Patrick Martin

When rocks are exposed at the earth's surface they are subjected to weathering. This affects their chemical composition to varying degrees, with elements being mobile during weathering and others not. In this project we will assess element mobility during weathering by comparing the compositions of fresh and weathered granite samples from the Prospect quarry in the Mt. Waldo granite. The fresh granite is a grey color and is relatively strong whereas the weathered samples are a reddish brown color and crumble easily. Geochemical data will allow us to assess which elements have migrated during this surface process. *(Faculty Sponsor: David Gibson)*

poster #5

Insulation within the snowpack: the effect of depth on temperature

Sarah Lavorgna, Jacob Hansen, Joseph Arsenault, Carlee Knox, Bailey Nyren and Stephen Squiers

This project was designed to analyze the impact of burial depth on temperature within the snowpack. Temperature data loggers were placed in snowpack at three elevations on Bald Mountain in Weld, Maine from late January to mid-March, 2011. Loggers were placed near the bottom and top of each snow pit with an air temperature logger nearby. The depth within the snow pits affected the scale and timing of temperature changes. The deeper loggers displayed a greater delay and lesser magnitude in temperature change. The air temperature has a direct correlation to snow temperature that decreases with increasing depth. *(Faculty Sponsor: Julia Daly)*

poster #6

Origin of magmatic enclaves in the Mt. Waldo pluton coastal Maine.

Alexander Cyr, Myles Felch and Natasha Manuel

The 371 Ma Mount Waldo Pluton (MWP) is located within the Coastal Maine Magmatic Province. It is a coarse grained, seriate to porphyritic granite containing abundant intermediate to felsic enclaves and some mafic schlieren. This study will examine the enclaves to determine whether they are the products of magma mixing. Geochemical data will be used to assess the end member compositions involved in this mixing and the degree to which this process was the driving force behind the formation of the enclaves. *(Faculty Sponsor: David Gibson)*

poster #7

Origin of Schlieren in the Mt. Waldo Pluton

Sara Adams and Megan Whitman

Schlieren are melanocratic granitoid rocks of varying forms, rich in mafic and accessory minerals. There are various competing mechanisms pertaining to their formation, e.g the sheering of enclaves or mineral sorting and collection within a dynamic magma chamber. In this project we present analyses of schlieren from the 371 Ma Mt. Waldo granite pluton. Using geochemical data we will compare the major and trace element chemistry of the schlieren to the host Mt Waldo granite and its enclaves in an attempt to illuminate their origin. *(Faculty Sponsor: David Gibson)*

poster #8

Snow stratigraphy at multiple sites on Bald Mountain

Dustin Colbry, Alexander Cyr, Taylor Kemp, Roger Leclair, Shawn Menard and Michelle Young

Snow pits were dug: one at the bottom, middle and top of Bald Mountain in Weld, ME. Data loggers were placed at specific depths in these snow pits. A profile of the snow and ice layers was described for each pit twice, once in late January and once in mid-March. Data was used for comparison to find possible trends in snow stratigraphy at three different elevations, and to evaluate the evolution of the snowpack at different elevations. *(Faculty Sponsor: Julia Daly)*

poster #9

Snowpack temperature records from Bald Mountain in Weld, Maine: 2009 vs. 2011

Skylar Hopkins, Abigail Berlin, Myles Felch, Sammantha Rowland, Blake Shelley and Laura Szczesny

February temperature data were collected using dataloggers buried in three snow pits along an elevation gradient (1000 ft) on Bald Mountain in Weld, Maine. We compared these temperature records to similar data from 2009 and local temperature records from the Weld weather station. Mean February snowpack temperatures were different between 2009 and 2011, where the snowpack temperatures at the low and middle sites decreased and the temperature at the high site increased. Mean February air temperatures at the Bald Mountain sites and the Weld station were the same, and the mean February temperature in Weld did not differ between years. *(Faculty Sponsor: Julia Daly)*

poster #10

The geochemistry and origin of felsic dikes, Penobscot, Maine

Ada Blossom Webb

At Penobscot Narrows near Bucksport, Maine, a number of thin felsic dikes intruded the dark meta-shales of the Penobscot formation. Field relations suggest that there are two sets of cross cutting dikes. Samples from both sets of dikes were analyzed so that they could be compared. In addition, the geochemistry of the felsic dikes is compared to that of the nearby Mt Waldo granite and the older Wallamatogus granite (which outcrops a few kms to the east across the Penobscot River) to evaluate possible sources. *(Faculty Sponsor: David Gibson)*

poster #11

The phosphorus biogeochemical cycle: key to life past and future?

Ada Blossom Webb

Phosphorus, a limiting nutrient in many ecosystems, is a non-renewable resource. As with fossil fuels, peak production is near or passed. Phosphorus is utilized faster than replenishment from the rock reservoir and the phosphorus cycle has been thrown out of balance. To determine the consequences of such disruption by humans, a computer box model illustrating amounts of P bearing minerals, and transfers, was constructed. Phosphorus is at the heart of our fertilizing practices and its limited resources may affect food production in the future. Phosphorus cycling also bears on the critical issues of rare earth minerals and nuclear waste disposal *(Faculty Sponsor: Douglas Reusch)*

poster #12

Analysis of sediments deposited near varying land use patterns in the Rangeley Lakes area

Samantha Burk, Morgan Cousins, Dmitriy Skoog and Gabriel Williams

Sediments from several sample sites representing different land use patterns in the Rangeley Lakes area were collected and analyzed. Sediment characteristics determined were percent organic content by loss on ignition (LOI), size fraction, major and trace element content by X-ray fluorescence (XRF) spectrometry, as well as qualitative analyses. Results were compared to type of land use near the sample site to assess any possible relationship. *(Faculty Sponsor: David Heroux)*

poster #13

Utopia

Roberta Briggs, Timothy Englert, Salena Sykes, Justin Clark, Christina Troiano and Jay Binnion

A hypothetical abstraction on our perceived ideal Utopia. *(Faculty Sponsor: Marilyn Shea)*

poster #14

Victim denigration and hindsight bias in observers of classroom bullying

Heustis Whiteside

In this study, participants watched a two-minute video clip depicting a scene of classroom bullying, and were then asked to fill out a questionnaire. The results support previous findings that personal characteristics of bullying targets affect observers' attribution of blame in bullying situations, and that hindsight bias plays a significant role in observers' evaluations of victims' misfortune, especially in cases of suicide. Also, diffusion of responsibility was demonstrated in the significant difference between observers' desire for others to defend the victim and agreement with the statement that they themselves would have intervened. *(Faculty Sponsor: Karol Maybury)*

poster #15

Corrective Rape: From South Africa to Global Persecution

Justine Woodman

Ignorance surrounding the Lesbian, Gay, Bisexual and Transgendered (LGBT) community has led to a homophobic backlash endangering populations in every country throughout the world. In South Africa, the country with the highest rate of sexual assault per capita, a new epidemic facing the perceived LBT women is known as corrective or curative rape. This stems from the misconception that these women can somehow be corrected back into mainstream heterosexuality through the act of exemplifying gender roles via rape. This presentation is intended to raise awareness of this spiraling discrimination. *(Faculty Sponsor: Denise Boothby)*

poster #16

Mud and Snow and Pinecones and Trash, Oh My!: Making Art from the Natural World

Lauren Bickmore, Brandon Doughty, Tyler Farrington, Michael Foley, Elizabeth Gregory, Lauren Kennison, Samantha Lamonda, Samuel Leal, Samuel Ricker, Heather Ross, Bryan Sherman, Anya Staszko and Alexandria Valente

In the documentary "Rivers and Tides," environmental artist Andy Goldsworthy creates art from rocks, the fleece of sheep, leaves, and powered iron. His work reflects his effort to know himself and how he fits

into the flow of life in the place he lives. In order to better understand their relationship to THIS place--the woods, mud, ice, rocks, hills and trees of western Maine--students in the First Year Writing Seminar "Thinking Green" engaged in the process of making their own environmental art. Their interesting and nuanced work gives voice to a new generation's complex relationship to the natural world. *(Faculty Sponsor: Gretchen Legler)*

poster #17

Tourism in Maine 2011

Edward Flaherty, Kelly Greene, Jason Tuthill and Natasha Varney

This poster session provides an overview of tourism in Maine, including its impact on state employment and revenues, opportunities and challenges in the current economic climate, the role of outdoor recreation as a vital aspect of the tourism sector, competitive strategies for the sector. *(Faculty Sponsor: Frank Engert)*

poster #18

Geometric Art

Students in MAT104 sections 3 and 4

Students in MAT104 combined mathematics and art when they used some of the basics of motion geometry to create 2 different types of geometric art. For the first project, 3 different Escher-like tessellations were created and for the second, repetitive patterns were used to create a work of art that is reminiscent of Islamic art. *(Faculty Sponsor: Pamela Mitchel)*

poster #19

Rangeley Sustainability Project: Assessing Conservation Works! Ten Years Later

Students from ECO228, Environmental and Natural Resource Economics, and GEO304, GIScience

The environment has been a key component in sustaining Maine's economy. Students studying environmental economics and geographic information science will present posters that explore the connections between environment and economy through a case study of the Rangeley lakes region. Using a 2001 community-driven report as a baseline, this poster session will examine economic, demographic and land use changes in the Rangeley area over the past decade, while highlighting the importance of key outdoor recreations sectors such as snowmobiling, fishing, hunting, hiking, and skiing. *(Faculty Sponsor: Wendy Harper and Matthew McCourt)*

poster #20

Alternative Vehicles, Alternative Energy

Students of PHY 110 (The Physics of Cars)

With the long-awaited hybrid-electric Chevrolet Volt making its first appearance this year, it's a good time to look at the technology behind cars and energy generation. Groups of students have carried out term projects on alternative fuels, alternative vehicles, and alternative modes of providing the electrical energy that might power those alternative vehicles; these groups will present their projects in poster form. Topics include hybrid-electric vehicles, tidal and wave power, small-scale wind power, hydrogen fuel-cell vehicles, nuclear fusion, and renewable/alternative energy in New England. (*Faculty Sponsor: Christopher Magri*)

Michael D. Wilson Research Fellows and Scholars

The Michael D. Wilson Scholars and Fellows represent some of UMF's best students from across all disciplines. The program recognizes UMF students' tremendous creativity, and expands UMF's commitment to undergraduate research and faculty mentoring. Each student was awarded funding to help underwrite an original undergraduate research or creative project.

The program has been providing single-semester support for research, scholarship and creative projects at UMF since the fall of 2006. It was expanded in the fall of 2007 to include two full-year Wilson Research Fellow awards to support even more substantive research projects. In the years since its inception, the Wilson program has supported the investigative research and creative activities of almost 150 students at UMF. During this time, over 50 UMF faculty members have developed strong mentoring relationships with individual scholars, providing guidance with proposal development, research methodology and continuing pre-professional and post graduate opportunities.

The awards are funded by a generous gift of Michael and Susan Angelides, in honor of their good friend, and UMF alumnus, Michael D. Wilson, class of 1976. The students were nominated by a UMF faculty mentor and, after a competitive selection process, were chosen by the UMF Undergraduate Research Council.

2010-2011 Wilson Research Fellows

Kieran Nichols, *Video Processing in Resource Constrained Environments*.

Faculty Sponsor: Dr. Chris Bennett

Jacob Hansen, *A Structural Analysis of Bald Mountain, Washington Township, Maine*.

Faculty Sponsor: Dr. Douglas Reusch

Benjamin Engel, *Temperature Variation and Turnover Events in Maine High-elevation Ponds*.

Faculty Sponsor: Dr. Julia Daly

Fall 2010 Wilson Research Scholars

Hayden Golden, *Reactions, Resistance, and Engagement: Native American Responses to Imposed Economy*.

Faculty Sponsor: Dr. Sabine Klein

Michelle Kew, *If I Was a Young Man, I Would Belong to Twenty Clubs: The Wit of Penelope Lapham*.

Faculty Sponsor: Dr. Sabine Klein

Ashley Simpson, *The Beginnings of Film: The Spanish American War and Propaganda Through Motion Pictures*.

Faculty Sponsor: Dr. Walter Sargent

Benjamin Villeneuve, *The Research to Practice Gap: Disconnects Between Research and Professional Development for PK-12 Teachers*.

Faculty Sponsor: Dr. Tiana Povenmire-Kirk

Heustis Whiteside, *Hindsight Bias and Evaluations of Bullying Victims: An Analysis of Observers' Reactions of Victims' Characteristics*.

Faculty Sponsor: Dr. Karol Maybury

Jacquelyn Murphy, *Modeling Community Gardening: From Theory to Practice*.

Faculty Sponsor: Dr. John Messier

Drew McLaren, *Joshua Chamberlain and the Maine Gubernatorial Election of 1879*.

Faculty Sponsor: Dr. Chris O'Brien

John Leso, *Effects of Hyperoxia on Muscle Fiber Composition in the Neonatal Rat Diaphragm*.

Faculty Sponsor: Dr. Mary Schwanke

Garret LaForge: *An Investigation of the Geometric Invariants of Free Products with Amalgamations*.

Faculty Sponsor: Dr. Nic Koban

James McCollum, *Critical Properties of a Family of Continuous, Non-differentiable Functions*.

Faculty Sponsor: Dr. Dan Jackson

Spring 2011 Wilson Research Scholars

Matthew Allen, *WikiLeaks and the First Amendment in the Digital Age*.

Faculty Sponsor: Dr. Chris O'Brien

Dovey Balsam, *The Effects of Combat Trauma on Religious Beliefs on US Military Service Members*.

Faculty Sponsor: Dr. Kristina Wolff

Kristen Bisson, *The Grand Exploration*.

Faculty Sponsor: Dawn Nye, M.F.A.

Markeith Chavous, *That Instant is Our Goal*.

Faculty Sponsor: Katrazyna Randall, M.F.A.

Emma Deans, *Exploring Environmental Imagination Through Creative Nonfiction Multimedia*.

Faculty Sponsor: Dr. Gretchen Legler

Sarah Gauvin, *When Intent and Reality Clash: An Examination of Press Freedom and Civil Rights Legislation in Relation to National Development.*

Faculty Sponsor: Dr. Kristina Wolff

Megan Ferland, *The American Dream Machine: Implications and Effects of the American Dream.*

Faculty Sponsor: Dr. Kristina Wolff

Thomas Ferland, *Backcountry Ramblings and Mountain Top Solipsism.: A Solution to Epistemic Loneliness.*

Faculty Sponsor: Dr. George Miller

Kiley Gendron, *Developing Peer Interactions Facilitated by the iPad.*

Faculty Sponsor: Dr. Loraine Spenciner

Skylar Hopkins, *How Do Resource and Echinostoma Trivolvis Miracidia Exposure Gradients Affect Mortality, Growth, Fecundity, and Per Capita Cercarial Output in Helisoma Trivolvis?*

Faculty Sponsors: Dr. Ron Butler and Dr. Dan Buckley

Jack Karn, *Maine Surgeons During the U.S. Civil War 1861-1865.*

Faculty Sponsor: Dr. Chris O'Brien

Matthew Kuchinski, *Fighting in Hell: The First Maine Heavy Artillery and the Battle of the Crater.*

Faculty Sponsor: Dr. Walter Sargent

Jeffrey Lees, *I Want My Country Back!: College Students' Reactions to the Tea Party Movement.*

Faculty Sponsor: Dr. Steven Quackenbush

Jordan LeGrand, *The Generalized Euler Phi Function and its Applications to Mathematical Music Theory.*

Faculty Sponsor: Dr. Lori Koban

Sean Raph, *Detection and Quantification of Acetaminophen in Farmington's Watersheds.*

Faculty Sponsor: Dr. Mariella Passarelli

Cecelia Totten, *Did Your Father Ever Talk About Germany? Exploring Trauma, Devastation and the Dissonance Between Personal and Public Memory of the Holocaust.*

Faculty Sponsor: Dr. Sabine Klein

Carolyn Young, *Milltown and the American Public.*

Faculty Sponsor: Dr. Chris O'Brien

Announcing the 2011-2012 Michael D. Wilson Research Scholar and Fellow Program

Do you have an interesting and original research or creative project in mind? Would you like to receive financial support to pursue your idea? Contact a faculty member and begin developing a proposal for next year's Wilson Program.

The fall of 2011 will mark the 11th semester of the Michael D. Wilson Research Scholar and Fellow Program. The program is intended to directly support students conducting original research, scholarship and creative activities. For Scholars the project that the funding covers is expected to be finished by the end of the funding semester (but the project may be part of a larger program of research that extends beyond the semester). The Fellow program is designed to support substantive year-long projects. The process is competitive and students are recognized as 'Wilson Research Scholars' or 'Wilson Research Fellows.'

**The fall application deadline is
5pm, Friday, September 23, 2011**

A late January 2012 deadline will be announced at a later time for spring or summer award applications

The Wilson Scholar and Fellow program is facilitated by UMF's Undergraduate Research Council whose mission is to further develop and implement the goal of institutionalizing undergraduate research.

2010-11 URC Membership:

Dan Buckley, *Professor of Biology*

Mellisa Clawson, *Associate Professor of Early
Childhood Education*

Jennifer Eriksen, *Assistant Director of University
Advancement*

David S. Heroux, *Chair, Associate Professor of
Chemistry*

Nic Koban, *Assistant Professor of Mathematics*

Rob Lively, *Associate Provost and Dean of Academic
Services*

John Messier, *Assistant Professor of Economics*

Katrazyna Randall, *Assistant Professor of Art*

Frank Roberts, *Director, Mantor Library*

Loraine Spenciner, *Professor of Special Education*

Walter Sargent, *Associate Professor of History*

Clarissa Thompson, *Associate Professor of Secondary
and Middle Education*

***According to UMF's Undergraduate Research Council
"undergraduate research is a student-faculty
collaboration or student work under the guidance of
faculty to examine, create, and share new knowledge
or works in ways commensurate with practices in the
discipline."***

*The URC encourages applications from
all academic disciplines.*

For more information go to ur.umf.maine.edu

A Tribute to Michael D. Wilson

Michael D. Wilson graduated from UMF in 1976. He loved teaching, helping children grow and develop. He reached out to help people whenever he could. He also had a deep love for the beauty and serenity of the wilderness where he felt a deep sense of connection.

Michael chose to live his life in a manner that was true to his beliefs. Many people remember him as a special person and a good friend. He died in a tragic accident in 1977, just as he was preparing to begin a new teaching position in a small town in Aroostook County.

Michael D. Wilson Symposium Day is made possible by a gift from Michael and Susan Angelides, who remember Michael with gratitude.

Index of Contributing Students

- Adams, Sara, 50
Allen, Matthew, 15, 56
Angelides, Michael, 17
Archard, Cooper, 45
Armstrong, Henry, 26
Arsenault, Joseph, 49
Babcock, Cary, 37
Balsam, Dovey L., 6
Banning, Matthew, 36
Beane, Abraham, 37
Berlin, Abigail, 50
Bernier, Danielle, 21
Berry, Nicholas, 37, 47
Bersell, David, 19
Bickford, Malynda, 23
Bickmore, Lauren, 52
Binnion, Jay, 52
Bisson, Kristen, 11, 16, 56
Brann, Jennifer, 20
Briggs, Roberta, 52
Brostek, Abby, 37
Buckingham, Elizabeth, 19
Bunch, Sarah, 42
Burdin, Roy, 30
Burk, Samantha, 48, 51
Burns, Courtney, 42
Chase, Sean, 12
Chavous, Markeith, 12, 56
Clark, Justin, 52
Colbry, Dustin, 50
Collins, Karen, 43
Coombs, Richard, 47
Cotton, Shannah, 36
Cousins, Morgan, 51
Cowie, Laura, 36, 37
Crowley, Laura, 42
Cyr, Alexander, 49, 50
Cyr, Geoffrey, 34, 35
Cyr, Travis, 20, 32
Daigle, Matthew, 37
Davis, Christopher, 23
Deans, Emma, 7, 37, 56
Deluca, Breanna, 36
Doucette, Marie, 43
60
Doughty, Brandon, 52
Doyle, Timothy, 45
Dubay, Noelle, 36
Dubuc, Stacy, 45
Dukette, Rebecca Lynn, 33
Engel, Benjamin, 13, 55
Englert, Timothy, 52
Eyes, Max, 36
Faculty, Chemistry, 38
Farrington, Tyler, 52
Felch, Myles, 49, 50
Ferland, Megan, 6, 57
Ferland, Thomas, 11, 57
Fernald, John, 26
Flaherty, Edward, 53
Foley, Michael, 52
Forester, Jade, 33
Fredrickson, Cassandra, 37
Gadberry, Benjamin, 47
Gagnon, Thomas, 37
Gauvin, Sarah, 37, 57
Gauvin, Sarah B., 6
Geaumont, Kristi, 29
Gendron, Kiley, 12, 46, 57
Gerrish, David, 31
Gingras, Michael, 21
Golden, Hayden, 9, 55
Gomberg, Jacob, 36
Goodness, Jacob, 22
Gordon, Sarah, 20
Gray, Benjamin, 37
Greene, Kelly, 53
Greenier, Kelsey, 41, 44
Gregory, Elizabeth, 52
Griffiths, William, 28
Hagerthy, Savanna, 43
Hall, Alexander Michael, 45
Hansen, Jacob, 13, 48, 49, 55
Harkins, Hilary, 44
Hassett, Elizabeth, 44
Henderson, Karen, 48
Hill, Joana, 47
Hopkins, Skylar, 14, 39, 50, 57
Houston, Matthew, 46
Huggins, Timothy, 28
Iba, Candace, 39
Jones, Timothy, 17
Karn, Jack, 10, 57
Kashar, Brittany, 47
Kelleher, Stephan, 29
Kelley, Kathleen, 38
Kemp, Taylor, 50
Kennison, Lauren, 52
Kew, Michelle, 7, 55
Knox, Carlee, 49
Koenig, Callie, 47
Kuchinski, Matthew, 14, 57
Labree, Victoria, 30
LaForge, David, 47
Laforge, Garret, 8
Lamonda, Samantha, 52
Landry, Steven, 45
Lavgorgna, Sarah, 49
Leal, Samuel, 52
Leclair, Roger, 50
Lees, Jeffrey, 11, 18, 57
Lefebvre, Renald, 36, 37
Legrand, Jordan, 45
Lennon, Stephanie, 18
Leso, John, 16, 56
Lewis, Kristin, 47
Lisk, Sean, 41
Littlefield, Emily, 40
Lofink, Connor, 36, 37
Lounsbury, Ryan, 20
Lowe, Kelsey, 7, 17, 37
Luker, Ian, 20
Lunetta, Silas, 18
Macdonald, Allisia, 29
Manuel, Natasha, 49
Marlow, Ellen, 37
Matthews, Richard, 27
McCollum, James, 15, 56
Mcgee, Emily, 44
Menard, Shawn, 50
Molton, Jada, 37
Moore, Kelsey, 47
Moore, Sarah, 47
Morales, Jessamyn, 20
Moreau, Nicole, 34
Moulton, Noelle, 36
Mueller, Annah, 16
Mueller, Sarah, 42, 44
Murphy, Jacquelyn, 32, 56
Neil, Carleton, 40
Nelson, Emma, 36
Nelson, Natasha, 37
Neptune, Alyssa, 47
Nichols, Kieran, 25, 45, 55
Nyren, Bailey, 49
Ochira, John, 25
Osborne, Alison, 47
Ouimet, Ryan, 37
Park, Rebecca, 37
Parker, Tamra-Jo M., 33
Pelletier, Scott, 49
Phillips, Jamie, 36
Pottle, Emily, 37
Poulin, Daniel, 40
Pozzetti, Patrick, 24
Raph, Sean, 15, 41, 57
Relford, Marc, 31
Ricker, Samuel, 52
Rockwood, Tessa, 31
Ross, Enrico, 40
Ross, Heather, 52
Rowland, Sammantha, 50
Scherle, Giselle, 16
Schmelzer, Russell, 27
Shelley, Blake, 50
Sherman, Bryan, 52
Siener, Zachary, 24
Simpson, Aaron, 44
Simpson, Ashley, 24, 56
Sirois, Christine, 23
Skoog, Dmitriy, 39, 51
Smart, Darren, 37

Smith, Ashley, 36
Smith, Daniel, 46
Soucy, Ashley, 40
Squiers, Stephen, 49
St Pierre, Melani, 39,
43
Staszko, Anya, 52
Swan, Nathan, 30
Sykes, Salena, 52
Szczesny, Laura, 50
Tanner, Casey, 36
Tarbox, Melissa, 46
Thompson, Katherine,
47

Totten, Cecelia, 9, 57
Towle, Matthew, 18
Tracy, Shane, 30
Trafton, Lindsay, 20
Troiano, Christina, 52
Tuthill, Jason, 53
Underkuffler, Wilson,
18
Valente, Alexandria,
52
Valeriani, Jillianne, 34
VanDerburgh, Katie,
13
Varin, Nancy, 31

Varney, Natasha, 53
Villeneuve, Benjamin,
19, 56
Wale, Tut, 30
Walk, Elizabeth, 47
Watson, Katherine, 41
Webb, Ada Blossom,
51
Webster, Samantha,
39, 43
Wheeler, Brandy, 30
Whiteside, Heustis,
52, 56
Whitman, Megan, 50

Wigall, Martin, 47
Williams, Gabriel, 41,
51
Williams, Grace, 29
Willis, Jeffrey, 35
Wilson, Tyler, 28
Woodman, Justine, 52
Wright, Daniel, 29
Young, Carolyn, 9, 57
Young, Michelle, 50

List of Faculty Sponsors

Andrew Barton
Linda Beck
Christopher Bennett
Denise Boothby
Linda Britt
Daniel Buckley
Elizabeth Cooke
Julia Daly
Brad Dearden
Jean Doty
Frank Engert
Matthew Freytag
David Gibson
Ralph Granger

Daniel Gunn
Peter Hardy
Sarah Hardy
Wendy Harper
David Heroux
Daniel Jackson
Michael Johnson
Sabine Klein
Nicholas Koban
Gail Lange
Gretchen Legler
Christopher Magri
Thomas Maroney
Karol Maybury

Cathleen McAnneny
Matthew McCourt
James Melcher
John Messier
George Miller
Pamela Mitchel
Dawn Nye
Christopher O'Brien
Patricia O'Donnell
Steven Pane
Mariella Passarelli
Tiana Povenmire-
Kirk

Steven
Quackenbush
Katrzyzna Randall
Douglas Reusch
Richard Robinson
Walter Sargent
Marilyn Shea
Loraine Spenciner
Alison Terry
Jeffrey Thomson
Frank Underkuffler
Kristina Wolf



UNIVERSITY of MAINE
FARMINGTON



UNIVERSITY BUILDINGS BY NUMBER			● Emergency Call Boxes ☒ Student Health Center	[P] Designated Parking Areas DECAL / LOT	RED DECAL 1-6/9/18/21/22/26/28/31	YELLOW DECAL 10-15/31	BLACK DECAL [First Year] 18/21/22/26	VISITORS 18/21/22/26
1. Merrill Hall	7. Preble Hall	13. Creative Writing House		19. Art Gallery	25. Scott Hall	31. Recycling Building	37. 112 Maguire Street	
2. Alumni Theater	8. Mantor Library	14. Brinkman House		20. Public Safety	26. Mallett Hall	32. Computer Center		
3. Dearborn Gymnasium	9. Olsen Student Center	15. 149 Quebec Street		21. Franklin Hall	27. Purington Hall	33. Fitness & Recreation Center		
4. Ricker Hall	10a. Roberts Learning Center	16. Look House		22. 101 South Street	28. Stone Hall	34. Honors Center		
5. Ricker Addition	10b. Roberts: Lincoln Aud. & C23	17. Ferro Alumni Center		23. 120 Prescott Street	29. Lockwood Hall	35. Psychology		
6. Thomas Auditorium	12. Education Center	18. Admissions		24. Frances Allen Black Hall	30. Dakin Hall	36. President's House		

PUBLIC BUILDINGS BY LETTER		A. American Legion	B. Baptist Church	C. Catholic Church	D. Community Center	E. Congregational Church	F. Farmington Public Library	G. University Credit Union
----------------------------	--	--------------------	-------------------	--------------------	---------------------	--------------------------	------------------------------	----------------------------

NOTES



Established in 1864 as Maine's first public institution of higher education, the University of Maine at Farmington is Maine's selective public liberal arts college, offering quality programs in teacher education, human services and the arts and sciences.

246 Main Street, Farmington, Maine 04938
(207) 778-7050 -- (207) 778-7275 tdd

Undergraduate Research Highlights

by Liz Dunn '13, international/global studies and business major

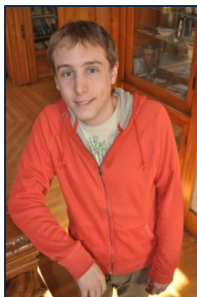
Kiley Gendron '12 is a **Michael D. Wilson Scholar** working on a project to teach a student who is nonverbal to use the iPad as a communication device. Kiley, majoring in early childhood special education, uses an application called Proloquo2Go, which allows the student to push icons to have the iPad speak for him. Kiley's research is helping to further knowledge of how the iPad can be used as assistive technology to support people with disabilities in school and in daily life.



Kiley visits a local high school regularly to work with the student and familiarize him with the iPad application, which is customized to his own interests. She teaches him how to answer a variety of questions by pressing illustration on the touch screen. She uses the application to teach him basic social skills and how to interact with his peers. Kiley receives guidance throughout her endeavors from her faculty sponsor, Loraine Spenciner, professor of special education.

"It's providing me with a lot of opportunities to advance my knowledge in assistive technology," said Kiley. "I can take what I've learned and share it with other people who could benefit greatly." Kiley hopes to present her case study at the Council for Exceptional Children's National Conference in Washington D.C. Kiley thinks her **Michael D. Wilson Scholar** project will benefit her in her future career. "The knowledge I have gained will help me immensely in my work with children with disabilities—especially with children who don't have speech."

In his junior year, Ben Engel '11, environmental science major, embarked on an independent study project to measure and compare temperature change in high elevation ponds along Maine's Appalachian Trail. Now, in his senior year as a **Michael D. Wilson Fellow**, his research has become more focused as he examines the data from a climate change perspective. Ben's goal is to better understand the processes at work and be able to make predictions for future impacts on pond ecosystems.



His project entails extensive work in the field, hiking and kayaking to place temperature loggers in various ponds and gathering the data to compare it to past years. He meets with his faculty sponsor, Julia Daly, associate professor of geology, on a regular basis to analyze his findings. "It's nice to be able to work alongside my professor and learn from each other," said Ben. "She's discovering right along with me."

Due to the competitive selection process, Ben feels fortunate that the **Michael D. Wilson Scholar & Fellow Program** accepted his project. "It's definitely an honor," said Ben. "It's given me a lot of practical experience in the scientific world and made me realize that this is what I want to do as a career." Ben's project helped him complete his honors senior thesis and gain acceptance to the University of Vermont, where he will pursue his master's degree in natural resources.

Video Processing in Resource Constrained Environments. A Structural Analysis of Bald Mountain, Washington Township, Maine. Temperature Variation and Turnover Events in Maine High-elevation Ponds. Reactions, Resistance, and Engagement: Native American Responses to Imposed Economy. If I Was a Young Man, I Would Belong to Twenty Clubs: The Wit of Penelope Lapham. The Beginnings of Film: The Spanish American War and Propaganda Through Motion Pictures. The Research to Practice Gap: Disconnects Between Research and Professional Development for PK-12 Teachers. Hindsight Bias and Evaluations of Bullying Victims: An Analysis of Observers' Reactions of Victims' Characteristics. Modeling Community Gardening: From Theory to Practice. Joshua Chamberlain and the Maine Gubernatorial Election of 1879. Effects of Hyperoxia on Muscle Fiber Composition in the Neonatal Rat Diaphragm. An Investigation of the Geometric Invariants of Free Products with Amalgamations. Critical Properties of a Family of Continuous, Non-differentiable Functions. WikiLeaks and the First Amendment in the Digital Age. The Effects of Combat Trauma on Religious Beliefs on US Military Service Members. The Grand Exploration. That Instant is Our Goal. Exploring Environmental Imagination Through Creative Nonfiction Multimedia. When Intent and Reality Clash: An Examination of Press Freedom and Civil Rights Legislation in Relation to National Development. The American Dream Machine: Implications and Effects of the American Dream. Backcountry Ramblings and Mountain Top Solipsism: A Solution to Epistemic Loneliness. Developing Peer Interactions Facilitated by the iPad. How Do Resource and Echinostoma Trivolvis Miracidia Exposure Gradients Affect Mortality, Growth, Fecundity, and Per Capita Cercarial Output in Helisoma Trivolvis? Maine Surgeons During the U.S. Civil War 1861-1865. Fighting in Hell: The First Maine Heavy Artillery and the Battle of the Crater. I Want My Country Back!: College Students' Reactions to the Tea Party Movement. The Generalized Euler Phi Function and its Applications to Mathematical Music Theory. Detection and Quantification of Acetaminophen in Farmington's Watersheds. Did Your Father Ever Talk About Germany?: Exploring Trauma, Devastation and the Dissonance Between Personal and Public Memory of the Holocaust. Milltown and the American Public. A New View on Ayatollah Khomeini. Inherit, Collect, Catalogue: My Childhood in Sports Cards. Regional Economic Impact of the Atlantic and St. Lawrence Railroad. What My Mama Taught Me: The Sociological Study of College Etiquette. A Rational Association: The Cold War in the Middle East 1967-1973. The Strong Armed Men: An Examination of the Humanity Lost and Found in the 1942 Bracero Agreement. Consumerism, Militarism, and the Media: An Analysis of Media Coverage of War and the Economy. The Mozart Effect: Canceling the Ceiling Effect for High Achievers in the Classroom. Solve-it-Yourself Version of a Murder Mystery. A Petrographic and Geochemical Investigation of the Rome - Norridgewock Pluton, West-central Maine. Thirteen Seconds of Irreversible Damage: An Analysis of Acute Stress Reactions to the Kent State University Shootings. Passing as 'Other' and 'Straight Acting' within Social Spaces: An Analysis of the Historical and Contemporary Approaches to Gendering Across Sexual Spheres. Dream of a Place Called Home: A Study of American Patriotism and Nationalism. Music and Advertising: Music's Effect on



see more research highlights at ur.umf.maine.edu