Honors Students Symposium 2014

arts business education engineering sciences

UNIVERSITY of DAYTON

Honors Program

The thesis component of the Honors Program
consists of a three-semester, six-credit-hour project
that culminates in a significant research contribution,
performance, or body of creative work.

The Honors thesis project involves a collaboration
with one or more faculty members
who help direct and focus the student's original thesis topic.

The University Honors Program
sponsors the Honors Students Symposium
as an opportunity for the students to present their theses
to the University community, family and friends.

UNIVERSITY of DAYTON

University Honors Program

presents the

Honors Students Symposium 2014

March 21, 2014
1:00 to 5:00 p.m.
Kennedy Union

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special awards

The Patrick F. Palermo Honors Program Founders Fund

provides support for substantive Honors thesis projects "that involve international research, service and leadership in the community, or which advance the realization of a just society."

The awardee for 2013-14 is Laura K. Huber

The Berry Summer Thesis Institute

engages a cohort of mid-career Honors students with records of academic success and an interest in research in a 10-week on-campus program. Thesis students present their research-in-progress at the Honors Students Symposium during their junior year and their final projects as seniors.

The members of the 2013 cohort are Jessica L. Beebe, Timothy L. Cutler, Madison N. Irwin, Taylor V. Kingston, Danielle D. Kloke, Ryan M. Krisby, Hailey J. Kwon, Kathryn C. Oehlman, Peter J. Ogonek, Kathryn L. Schwaeble and Mary A. Willard

1:00 p.m.

Erin T. Filbrandt

1:00 p.m., Room 312

PreMedicine

Karolyn M. Hansen, Ph.D., Thesis Advisor
Biology Department

Sex-Dependent Electrophysiological Response of Lucilia sericata *to Concentration Gradient of Indole*

Lucilia sericata, a species of blowfly, is one of the first species to arrive on a dead body and is therefore forensically important in estimating time of death. Indole is a compound that is experimentally proven to attract *L. sericata*. In high concentrations, indole has a strong fecal odor but in low concentrations, it has a flowery odor and is often used in perfumes. Due to differing dietary needs, males and females respond to volatile organic compounds differently. My goal is to determine if the concentration of indole affects level of attraction in males, non-gravid females and gravid females. Attraction is quantified using the electroantennogram, a machine that measures electric impulses in the given specimen. Establishing levels of attraction across a concentration gradient of indole provides information that can help us hypothesize what attracts the flies to the body and when, leading to a more accurate estimation for time of death.

Katherine A. Liutkus

1:00 p.m., Room 222

PreMedicine

Daniel C. Fouke, Ph.D., Thesis Advisor
Philosophy Department

Dayton's Food System: Current Access to Food in Dayton and Future Possibilities

Downtown Dayton and its surrounding areas are considered to be a food desert by the USDA, which means there is limited access to healthy foods within a .5 mile radius. The implications of this include driving further for groceries or turning to convenience stores for highly processed foods. This has created health concerns for the residents of Dayton, including obesity and diabetes. The purpose of this study was to understand the food system issues, their complexity and implications, and to understand what groups are currently doing to support the food system, and determine what is necessary to push the issues forward and make positive progress. The research was done through interviews with the various people, groups, and organizations involved in the food system. This research will provide suggestions for further actions with the goal of bringing healthy, local foods to all those in the area.

Margret F. Reuter

1:00 p.m., Room 207

International Studies and Spanish

Simanti Dasgupta, Ph.D., Thesis Advisor
Sociology, Anthropology and Social Work Department

Free Trade as Neocolonialism: CAFTA, the United States and Guatemala

In today's world, free trade is seen as a forgone conclusion in the march towards economic development. The origin of free trade agreements rests in the neoliberalist surge of the twentieth century based upon finding a middle ground between central planning and laissez-faire capitalism. As the twentieth century progressed, neoliberalism and the ideas associated with it fell more to the side of laissez-faire capitalism. Free trade agreements between developed and developing countries demonstrate a play of power on behalf of the developed countries that seems unfair. There are stories that are not told about free trade agreements. Economic data analysis in the years since the implementation of the Central America Free Trade Agreement (CAFTA) demonstrates the inequality that exists in the creation of free trade agreements between developed countries—in this case the United States—and developing countries like Guatemala.

Gail K. Susdorf

1:00 p.m., Room 211

Psychology and Spanish

Roger N. Reeb, Ph.D., Thesis Advisor
Psychology Department

The Community Service Self-Efficacy Scale: A Further Examination of Validity and the Application to Service-learning and Engaged Scholarship

As a University Psychology student shaped by the University of Dayton's mission to "link learning and scholarship with leadership and service" the critical link among these components must be explored in order to move forward as a civically responsible graduate. The purpose of this project is to provide a necessary reflection upon graduation about the effectiveness a University education could potentially have within the greater community context. In doing so this study will examine the validity of the Community Service Self-Efficacy Scale, a psychometric instrument used to measure the theoretical construct of self-efficacy, in a University of Dayton Psychology course centered on service-learning in a local homeless shelter. The results will then be discussed in relation to the importance of service-learning, engaged scholarship and the purpose of universities to foster the development of civic minded graduates.

1:20 p.m.

Lauren E. Banfield
Visual Communication Design

1:20 p.m., Room 222
John V. Clarke, M.F.A., Thesis Advisor
Department of Visual Arts
Kathy Kargl, Thesis Advisor
Department of Visual Arts

Creating Identities: Semiotic Theory as Applied to Visual Messages

Brand identity is about recognition, visibility, and expressed quality in a world where there are endless options. At the heart of branding is the perception of meaning and how that meaning is understood. Focus has been placed on the development and implementation of comprehensive brand identities, through work with multiple clients with distinct perspectives. The components contained within the brands' systems have been determined by the needs of each organization, and have included: logos, business cards, letterhead, marketing or promotional materials, poster designs, social media elements, and invitations to events. Exploration and analysis of the development of the brand strategy for a recent local company will be discussed as a case study, including both perspective from the client and a design analysis of the solution. These different standpoints will facilitate comparison, allowing a broad and diverse view of brand identity.

Chin Yi Chen
Anthropology and International Studies

1:20 p.m., Room 207
Karen Abney Korn, Ph.D., Thesis Advisor
Sociology, Anthropology and Social Work Department

Examining Acculturative Stressors of the International Student: Following Study Abroad Students in South Korea and Morocco

International students, particularly students studying abroad for a limited period of time, face certain challenges in entering and adjusting to a new cultural environment. This research focuses on different barriers to adjustment including language, differences in nonverbal communication, discrimination and academic pressure. By comparing and contrasting the perspectives of various students with the researcher's experience, this research provides insight into the lived experience of international students and the researcher through on-site fieldwork and interviews conducted over a year on university campuses in South Korea and Morocco. It also discusses the results of the undertaken research and offers suggestions for resolving or minimizing these acculturative challenges.

Andrew M. Steffensmeier
PreMedicine

1:20 p.m., Room 311
Amit Singh, Ph.D., Thesis Advisor
Biology Department

Novel Neuroprotective Function of Apical-Basal Polarity Gene Crumbs in Amyloid Beta 42 (aβ42) Mediated Neurodegeneration

Alzheimer's disease (AD) is a progressive neurodegenerative disorder of the central and peripheral nervous system found primarily among the elderly. AD is characterized by cognitive dysfunction of learning and memory due to selective atrophy of the hippocampus and the frontal cerebral cortex. Generation of amyloid-beta plaques in the brain is one of the causes for cytotoxicity observed in AD. There is no cure available for AD, which is the sixth largest killer disease in U.S. The fruit fly, *Drosophila melanogaster*, serves as a genetically tractable model with an array of genetic techniques and tools. *Drosophila* eye serves as an excellent tool to model neurodegenerative diseases. I use the *Drosophila melanogaster* eye model to perform a chemical drug screen as well as a genetic screen, looking for modifiers of the Amyloid-beta 42 (AD) phenotype. A novel function of the apical-basal polarity gene, Crumbs, has been identified to affect the AD phenotype.

1:40 p.m.

Timothy L. Cutler
1:40 p.m., Room 311

PreMedicine

Amit Singh, Ph.D., Thesis Advisor
Biology Department

Role of Transcriptional Co Activator CREB Binding Protein in Amyloid Beta 42 Mediated Neurodegeneration

Alzheimer's disease, a common progressive neurodegenerative disorder has no known cure. Its symptoms include a gradual decline in cognitive function, resulting in impaired functionality, and is prevalent in the aging population. Using the *Drosophila melanogaster* eye as a model, misexpression of Amyloid Beta 42 (Aβ42) in the developing eye, causes accumulation of extracellular amyloid plaques, which leads to induction of neurodegeneration. Previous studies have shown that one of the many diverse functions of the CREB-binding protein (CBP) is neuroprotection. Our data shows that CBP has a neuroprotective role in neurodegeneration caused by accumulation of Aβ42 plaques in Alzheimer's disease. I have performed a structure function analysis of CBP protein to discern its role in preventing Aβ42 mediated neuroprotection. These studies will allow us to identify the domains of CBP crucial for preventing neurodegeneration and will have significant bearings on understanding the genetic basis of AD neuropathology.

Alexandra E. Jacob
1:40 p.m., Room 312

Biology

Karolyn M. Hansen, Thesis Advisor
Biology Department

The Role of the Arista on Lucilia sericata *in Sensing Wind and Airflow, Relative Humidity and Volatile Compounds*

The arista are small feather-like extensions near the antennae of the blowfly *Lucilia sericata*. The function of the arista is not completely known, but they may play a role in sensing wind, airflow, relative humidity, and volatile compounds. This investigation sought to explore the role the arista play in helping the fly sense its environment by removing the structures and examining behavioral changes. A greater understanding of how *Lucilia sericata* senses its environment may have important implications to forensic science.

Jasmine R. Jordan
1:40 p.m., Room 207

International Studies and Political Science

Jason L. Pierce, Ph.D., Thesis Advisor
Political Science Department

As Stable as the Dollar Stretches: The Links Between Foreign Aid and Social Stability in Jordan, a Case Study

After the fall out of the Arab Spring in 2010, most of the countries in the Middle East and North Africa region suffered from extreme political, social, and economical instability. Usually, the citizens of these counties were revolting against the authoritarian regimes that have held power for decades. Jordan stands as the only obvious exception. How has Jordan maintained relative economic stability where others have failed? I have found that it is hard to judge the economic or social stability of Jordan without recognizing the large amounts of foreign aid Jordan has received from the US. Using the Gulf War Crisis in 1991 as a starting point, this thesis asks what the relationship exist between developmental US foreign aid and political stability in Jordan between 1991 and today. The basic argument is that foreign aid affects the economic, social, and governmental structure in a country, which decreases unrest in the population and increases political stability. This thesis looks at the relationship between these factors and their influence on each other. I will also look at future proposals of improving the Jordanian economic and social environment.

Taylor V. Kingston
1:40 p.m., Room 222

Education, English and Psychology

John P. McCombe, Ph.D., Thesis Advisor
English Department

Quasi-Plagiarism vs. Human Universality in the Dystopian Genre

Dystopian literature characteristically addresses the plight of the "everyman" as he copes with the oppression imposed by a totalitarian regime. Touchstone writers of the genre known for novels including Nineteen Eighty-Four, Brave New World and Anthem have, however, been scrutinized for creating uncannily similar plots. While scholars have linked the writers' ideas back to a Russian predecessor, the novel We, this research explores how a charge of quasi-plagiarism is a shallow explanation. The great question being explored in any dystopian novel is whether government can save mankind from itself by eradicating individual will. The commonalities among that individual will dictate the appearance of a world without it. I assert that it is because of human universals such as love, family and a desire for knowledge that these dystopian novels focus on the prevention of love through the regulation of sex, communal rearing of children, and thought-level censorship of ideas.

Kathryn C. Oehlman
1:40 p.m., Room 310

PreMedicine and Psychology

Panagiotis A. Tsonis, Ph.D., Thesis Advisor
Biology Department

Characterization of Differences in the p53 Signaling Pathway of Dorsal and Ventral Iris During Lens Regeneration in the Red-Spotted Newt

The red spotted newt, *Notophthalmus viridescens*, is commonly used to study organ regeneration. Newts are capable of lens regeneration from iris pigment epithelial cells. Following removal of the original lens, the lens is replaced entirely from the dorsal iris cells and never from the ventral. It is thought that genes upregulated in the ventral iris prevent regeneration. Previous studies have been able to induce ventral lens regeneration through the manipulation of several pathways. Recently, we have identified differential gene expression in members of the p53 tumor suppressor pathway in dorsal versus ventral iris following lentectomy. The objective of this study is to determine how the p53 pathway is regulated within dorsal and ventral iris and the outcome will help in understanding a potential new role of p53 and its signaling partners during lens regeneration.

Kelly C. Vogeler
1:40 p.m., Room 331

Mechanical Engineering

Kevin P. Hallinan, Ph.D., Thesis Advisor
Mechanical and Aerospace Engineering Department

Community Residential Energy Reduction

This research evaluates the effectiveness of residential energy reduction programs aimed at cost effective, collective action. One of these energy reduction programs is Dropoly.com, an online game developed by the University of Dayton that aims to connect neighbors and allow them to compete against one another. The guiding question behind the research addresses how to reduce energy consumption in a community. My research presumes that effective community engagement is a central factor in achieving success and evaluates a variety of energy reduction programs based on certain criteria. The chosen criteria assess the programs' effectiveness by focusing on different means of engaging the community. Results of this evaluation indicate the most successful programs at community engagement and opportunities for improvement.

2:00 p.m.

Bryan A. Baker
PreMedicine

2:00 p.m., Room 312
Mark G. Nielsen, Ph.D., Thesis Advisor
Biology Department

Convergent Evolution of the Beta 2 Tubulin Amino Acid Sequences Required for D. melanogaster *Spermtail Function*

Proteins that are critical to organism function are less able to evolve compared to proteins that perform non-essential tasks. Such proteins are intolerant to mutational change, and the rate of heritable mutation rather than the competition among variants dictates their evolutionary rate. Previous structure/function testing of Beta 2 tubulin, which supports the *Drosophila melanogaster* spermtail axenome, found that every amino acid change made to Beta 2 resulted in a non-functional protein. This raises the question, how did Beta 2 evolve to its present state? To reconstruct its evolutionary history, we cloned Beta 2 tubulin from the blowfly Phormia regina and the deerfly Tabanidae chrysops, which shared their most recent common ancestor with *Drosophila* 110 and 130 mya respectively. A genealogical analysis indicates that each of these Beta 2 tubulins evolved independently from Beta 1 tubulin ancestors. This convergence in Beta 2 tubulin evolution is highly unexpected given the stringency in its structure/function relationship, and suggests gene duplication and strong positive selection drive convergence in Beta 2 tubulin evolution.

Jessica L. Beebe
Biology

2:00 p.m., Room 310
Panagiotis A. Tsonis, Ph.D., Thesis Advisor
Biology Department

Dorsal-Ventral Differences in Expression of Genes Related to the Wnt Signaling Pathway in the Red-Spotted Newt

Humans cannot regenerate damaged tissues which causes loss of tissue function. However, amphibians have the ability to regenerate a variety of organs. Among them, the red spotted newt regenerates the lens after complete removal. Natural regeneration does not occur in the ventral iris, which serves as the control. Previous studies have concluded that the Wnt Signaling pathway plays a role in tissue regeneration. The aim of our study is to examine genes of the Wnt Signalling pathway in order to discover their roles in the dorsal and ventral iris during regeneration. Understanding the mechanism of lens regeneration in newts could potentially be used in regenerating tissues in humans. Studying the Wnt signaling pathway could give rise to therapeutic approaches in treating human injuries.

Stephen Brown
English

2:00 p.m., Room 222
Susan L. Trollinger, Ph.D., Thesis Advisor
English Department

Centering the Right: Mapping out Focus on the Family's Queer Discourse

Religious Right organizations like Focus on the Family have been known for their vitriolic discourse when it comes to the Lesbian, Gay, Bisexual, and Transgender (LGBT) community. The ways in which they discuss gay rights depict the LGBT community as a threat to society, militarized, and sinful. Specifically targeting Focus on the Family, this paper looks at the overall discursive techniques used when discussing gay rights. The argument will reflect a shift in discursive practices, in which the LGBT community is portrayed in a more sympathetic light, though still problematic. The purpose of this paper will be to map out the different moves in discourse that Focus on the Family has employed over the years in order to better understand the Religious Right's strategy and motives.

Laura K. Huber
International Studies, Political Science and Spanish

2:00 p.m., Room 207
Natalie F. Hudson, Ph.D., Thesis Advisor
Political Science Department / Human Rights Studies Program

Power in Numbers? The Impact of UN Female-Formed Police Units on Women's Empowerment

Advocates hailed the UN's deployment of female formed police units (FFPUs), or all-female units, in peacekeeping missions as a groundbreaking achievement for women's empowerment. Three FFPUs have been deployed to Liberia, Timor-Leste, and Haiti. Many supporters of FFPUs claim that female police are better peacekeepers, less prone to violence, better able to interact with local women, more concerned about sexual violence, and act as role models, challenge gender stereotypes, and encourage local women to participate in the security sector. However, little systematic research has been conducted to evaluate these claimed practical impacts of the units. This thesis evaluates the effects of these units on women in local communities based on empirical and anecdotal evidence and using the current unit deployed in Liberia as a case study to determine the nature and sustainability of any impacts on women's empowerment.

Mark S. Pleasants
Environmental Geology

2:00 p.m., Room 331
Umesh K. Haritashya, Ph.D., Thesis Advisor
Geology Department

Glacial Ice Velocity Determination and Correlation from Different Mountain Ranges Using ASTER Imagery

Mountain glaciers make good indicators of even slight changes in climatic conditions because of their sensitivity to temperature and other environmental changes. Due to the inaccessibility of most mountain glaciers, field based measurements of glacier dynamics, especially ice velocities, has proved to be difficult and unrealistic. Because of this, evaluation of satellite imagery has become useful in the determination of glacial ice velocities and production of ice flow models. The calculation and comparison of ice velocities from three glaciated regions is presented here. This study was completed to establish the accuracy and global applicability of the method of precise orthorectification, co-registration, and correlation using the software Cosi-Corr and in-house filtering techniques. We chose glaciers from different mountain ranges that present different dynamics to establish a specific ice velocity method.

Hayleigh E. Raiff

2:00 p.m., Room 211

Exercise Physiology

Lloyd L. Laubach, Ph.D., Thesis Advisor
Health and Sport Science Department
Anthony S. Leicht, Ph.D., Thesis Advisor
James Cook University Institute of Sport and Exercise Science

The Acute Effects of Aerobic and Resistance Exercise on Cardiovascular Function and Arterial Stiffness

This study investigated how long the cardiovascular effects of aerobic and resistance exercise propagate after completion of exercise in healthy males. Cardiovascular function was closely monitored to observe changes in arterial stiffness before exercise and during recovery. Parameters used to monitor vascular function include central and peripheral blood pressure, heart rate, velocity of blood flow, and blood biomarkers of vascular function. The study required participants to complete an aerobic, resistance and control exposure. Measures of the parameters were taken at rest and at specified intervals after completion of each protocol. These measurements were analyzed to determine the acute effects of each exposure on the blood vessels' functioning, how long these effects last and how the vascular responses differed between the exercise modalities. This experiment served as a pilot study in developing exercise protocol for patients with Peripheral Artery Disease (PAD).

Lauren E. Shewhart

2:00 p.m., Room 311

Biology

Ryan W. McEwan, Ph.D., Thesis Advisor
Biology Department

*Impact of Amur Honeysuckle (*Lonicera maackii*) Leachate on* Culex pipiens *Life History Attributes*

Mosquitos are a nuisance to human beings and also vector some of the most deadly pathogens on Earth. One important mosquito in Ohio is Culex pipiens which is found in many urban areas and is a known vector of West Nile virus. Mosquitos could be influenced by the highly invasive shrub, Amur honeysuckle (*Lonicera maackii*). *L. maackii* is quickly outcompeting native plants across the Eastern and Mid-Western United States. *L. maackii* is known to leach chemicals and nutrients into aquatic habitats. I hypothesize that this leaching may affect mosquito populations. During my thesis, I investigated the effects of *L. maackii* leachate on several life history traits of *C. pipiens* larvae: pupation rate, emergence, growth rates, and survivorship. Leachates were made from naturally senesced leaves of *L. maackii*, sycamore (*Platanus occidentalis*), and sugar maple *(Acer saccharum)* collected in the Fall of 2012 and honeysuckle flowers collected in the Spring of 2013.

2:20 p.m.

Mary C. Alwan

2:20 p.m., Room 207

Political Science, Human Rights Studies and Women's and Gender Studies

Natalie F. Hudson, Ph.D., Thesis Advisor
Political Science Department / Human Rights Studies Program

The Role of Gender in Alison Brysk's Global Good Samaritan Theory

How do gender equity practices, laws, and norms impact a nation's foreign policy? In a comprehensive study of middle power states, political scientist and global governance expert Alison Brysk examined what made a state invest time, treasure, and human capital into a foreign policy agenda focused on human rights. However, in this analysis, Brysk does not fully take into account the status of women in regards to Global Good Samaritan states' control over reproductive rights, productive rights, and national security policy. By examining the status of women within these countries, this study seeks to better ascertain how domestic policy, international policy, and global governance practices regarding gender equity influence a state's likelihood of becoming a moral superpower and vehement supporter of human rights within the international system.

Anna L. Demmitt

2:20 p.m., Room 222

English

Stephen Wilhoit, Ph.D., Thesis Advisor
English Department

Tissi

My thesis is a collection of short stories. The stories depict the lives of four children living in South Sudan trying to survive the genocide. One young girl has been brutally raped. A young boy is taking on the responsibility of raising his younger siblings. The third story shows a young boy who has been kidnapped and forced to be a child soldier. The fourth story is a story of hope. These stories are designed to show the chaos of genocide, and the difference that even a little assistance could make to the lives of the people in South Sudan.

Danielle D. Kloke

2:20 p.m., Room 211

Sport Management

Peter J. Titlebaum, Ph.D., Thesis Advisor
Health and Sport Science Department

Premium Food & Beverage Trends in Sport Venues

Industry venue professionals shared premium food and beverage trends and best practices. Interviews covered pricing, ordering procedures, and serving sizes, as well as what changes the industry is looking to add or embrace in the next five years. Trends discovered a push to include technology in the food and beverage experience, either to simplify the ordering process or to market items offered. There is also a movement to create additional, all-inclusive tickets which will streamline ordering procedures. Ordering has taken a new direction with an emphasis on menus including local brands and home grown products. Industry professionals must find a balance among consumer preferences, corporate needs, and local and national sponsors. The bottom line and the key for success is to provide quality service while meeting the needs of today corporate world with a premium experience.

Kathleen M. Sellick

PreMedicine

2:20 p.m., Room 310

Jayne D. Robinson, Ph.D., Thesis Advisor
Biology Department

Examination of Host Range of Pseudomonas aeruginosa *Phages UT1, SN-T and PEV2 for Treatment of Bacterial Biofilms in Fuels*

Biofilms are slimy substances made up of bacteria that attach to surfaces. They can be found in natural settings (rocks in streams) and man-made environments (hospital catheters, pipelines). Biofilms are also found in aviation fuel tanks, causing physical issues such as clogging in fuel lines and changing the chemical makeup of the fuel via bacterial metabolism. Bacterial viruses, known as phage, show potential for reducing biofilms through phage therapy. The goal is to find a phage or combination of phage with a broad host range that would be most effective in reducing the biofilms of bacteria isolated from fuel tanks. Known phages UT1, SN-T, and PEV2 will be tested against these biofilms, both individually and in combination. Biofilms will be assayed for biomass (crystal violet staining) and colony-forming units (CFU) in the presence of phage or combination of phages to determine the amount of biofilm reduction.

Bryan L. Sigward

Chemical Engineering

2:20 p.m., Room 331

Amy R. Ciric, Ph.D., Thesis Advisor
Chemical Engineering Department

Heat Transfer Coefficient Correlations for Pumparound Sections of Petroleum Fractionation Towers

Petroleum is the single largest source of energy in the US, and practically all petroleum has to pass through a refinery to be processed into usable products such as gasoline, diesel, and aviation fuel. The initial separation of crude oil into different fractions that become these products takes place in a special distillation column known as a fractionation tower. The goal of this thesis was to evaluate the validity of several correlations for estimating the heat transfer coefficient for a specific section within a fractionation tower known as a pumparound. The correlations were evaluated by comparing the predicted performance of atmospheric and vacuum fractionation towers at 9 refineries around the world to their actual performance based on operating data. This presentation will cover not only my work on this thesis, but also an overview of how a refinery turns crude oil into useable products such as gasoline.

Jordan E. Vellky

Biology

2:20 p.m., Room 311

Thomas M. Williams, Ph.D., Thesis Advisor
Biology Department

Red Light, Green Light: A Novel Approach to Study Interactions Between Enhancers and Gene Promoters

The human genome has over 3 billion base pairs, but only ~2% of this genetic information is recognized as a functional protein coding sequence. The remaining 98% was considered to be “junk DNA” that lacked functional elements. Recently, this assumption was replaced by an understanding that the non-coding genome contains many functional elements involved in gene regulation, including promoters and enhancers. Promoters are the gene region where expression is initiated under the control of enhancers. The distance between these elements is often substantial in animal genomes. My thesis research developed a transgenic system to track the communication between enhancers and promoters in the fruit fly species *Drosophila melanogaster,* which can be used to map functional gene regulatory sequences. Because promoters and enhancers are general components of animal genomes, the system developed here can be applied to other organisms, including humans.

2:40 p.m.

Kaitlin E. Boyd

Psychology

2:40 p.m., Room 211

Erin O'Mara, Ph.D., Thesis Advisor
Psychology Department

Effects of Moral Licensing on High-Cost and Low-Cost Helping Behavior

The present study examines the role of cost to self in moral licensing. Previous research shows that people who recall past moral behavior become morally licensed. That is, they are less likely to engage in future high-cost helping behaviors because they feel morally affirmed (Conway & Peetz, 2012). However, these findings are limited to contexts in which participants are asked their likelihood to engage in helping behaviors that are rather costly to the self (e.g., buying someone lunch). Thus far, research has not studied the effect of moral licensing on helping that is low in cost to the self (e.g., giving someone a few cents). Consistent with past research, it is predicted that moral licensing will lead to less helping in high-cost situations. Additionally, we are interested in whether the recall task also reduces helping in low-cost situations, or when the cost-to-self is low.

Thomas A. DeCastra

Operations Management

2:40 p.m., Room 207

Stephen R. Hall, M.S., Thesis Advisor
MIS, Operations Management and Decision Sciences Department
Raymond Fitz, S.M., Ph.D.
Political Science Department

Job Design: A Human Approach through Catholic Social Teaching and Job Design Theories

Job design theories outline jobs that help a company design jobs that are efficient and productive for a laborer to do. Catholic Social Teaching enlightens humanity that above all it is important to respect human dignity. Do Catholic Social Teaching and job design theories agree or are they at odds with each other? “Job Design: A Human Approach” looks at the story of each starting with Fredrick Taylor in 1911 and Pope Leo XIII in 1891 and identifies similarities and differences. Finally, the thesis uses the stories of each to look forward into the modern world of the jobs yet to be designed.

Joseph M. Ebersole

Biology

2:40 p.m., Room 310

Jayne D. Robinson, Ph.D., Thesis Advisor
Biology Department

Effects of Commensal Gut Microbiota on Alzheimer's Protein Amyloid Beta in Drosophila melanogaster

By sterilizing the gastrointestinal tracts of *Drosophila melanogaster* flies that express an Alzheimer's protein in their eyes, we examine the effects of commensal gut microbiota upon the Alzheimer's phenotype. In an aim to better understand the effects of gut microbes, the addition of microbes to the gastrointestinal tracts of sterile flies is observed for phenotypic rescue.

Kaitlyn R. Francis

2:40 p.m., Room 311

Exercise Physiology

Thomas M. Williams, Ph.D., Thesis Advisor
Biology Department

Identifying the DNA Sequence Requirements for a Synergistic Interaction Between Two Cis-Regulatory Elements

My thesis research studies the genetic material that is the blue print to make animal life. In animals, a key type of genetic material is sequences collectively referred to as cis-regulatory elements (CREs). These sequences control the expression of genes; more specifically they instruct when to turn “ON” or “OFF” the production of a gene’s functional product. My research investigates the interaction between the two CREs, the Anterior Element and Dimorphic Element of the fruit fly species *Drosophila melanogaster.* These two CREs act synergistically to produce a pattern of expression for the bab1 and bab2 genes that differs between male and female flies. As synergistic CRE interactions have seldom been reported, my research has sought to identify the necessary sequences for this interaction. Learning more about CRE functions in fruit flies will facilitate a better understanding as to how CREs function in our own genetic material.

Ryan M. Krisby

2:40 p.m., Room 222

English and Philosophy

Joseph R. Pici, M.A., Thesis Advisor
English Department

Airships, Automatons, and Amazing Things: An Examination of the Hero's Journey through Creative Prose

That cretin of a head librarian Geoffrey made a huge mistake humiliating Darren in front of the entire staff. Darren's only fifteen, but he got his hands on some magic. He just wishes the magic came with a few disclaimers:

1. May spontaneously ignite gaslights
2. Ensure all nearby friends are properly secured
3. Possession by a powerful demon will occur, handle with care

The demon is a particular problem, especially when Darren's plan for revenge backfires and he loses control over the magic, landing one of the other apprentices in the infirmary. Unless Darren finds a way to tame the demon, it'll slowly consume him from the inside out.

Having the demon inside him also makes Darren one of the most powerful magicians in Balnibarbi. And according to the laws of magic, anyone who wants the demon's power just has to carve up Darren's heart.

Crossing paths with a power-hungry magician spells even more trouble for Darren and he learns magicians will burn and kill everything in their path to get what they want.

And what this magician wants is Darren's magic.

THE SEAL OF SOLOMON is a young adult fantasy with steampunk elements that explores Joseph Campbell's Hero's Journey.

Gregory H. Versteeg

2:40 p.m., Room 312

Biochemistry

Shawn M. Swavey, Ph.D., Thesis Advisor
Chemistry Department

Photoreactions of a Water-Soluble Poly-Isoquinolpyrrole and Plasmid DNA within the Photodynamic Therapy Window

Photodynamic Therapy (PDT) is a treatment method for a variety of ailments, including different cancers. It involves light activation of a molecule (photosensitizer) which then reacts with molecular oxygen to destroy tumor cells. Porphyrins are commonly used as photosensitizers due to their light absorption properties and their ability to concentrate in tumor cells but not healthy cells. Unfortunately, porphyrins suffer from poor excitation when irradiated with visible light in the photodynamic therapy window (600-800nm). The photodynamic window is optimal due to the depth of penetration the light reaches and the lack of absorption from naturally occurring compounds in the body. This project involves the synthesis and characterization of a new type of photosensitizer with the goal of creating new molecules that are activated by low energy light.

Caroline E. Wise

2:40 p.m., Room 331

Chemical Engineering

Donald A. Comfort, Ph.D., Thesis Advisor
Chemical Engineering Department

Purification and Biochemical Characterization of a Cellulolytic Glycoside Hydrolase from Caldicellulosiruptor saccharolyticus

In response to the current global energy crisis, biofuels have become a viable renewable energy solution and require a carbohydrate source to begin their production. One such carbohydrate source option is biomass, which is comprised of complex sugars that can be broken down into simple sugars and then fermented for the production of bioethanol. The bacterium called *Caldicellulosiruptor saccharolyticus* contains many glycoside hydrolase enzymes that have the potential for metabolizing the complex sugars in several carbohydrate sources, including those in biomass. This project is focused on the cloning of the Csac_2410 gene from *C. saccharolyticus*, expression of the gene as a protein, purification of the protein, and biochemical characterization of the protein. The biochemical characterization determines the substrate specificity, pH optima and temperature optima of Csac_2410, and the results are used to determine the effectiveness of Csac_2410 in metabolizing complex sugars for the upstream processing of biofuels.

3:00 p.m.

Katharine M. Ellis

3:00 p.m., Room 211

Psychology and Spanish

Erin O'Mara, Ph.D., Thesis Advisor
Psychology Department

Related Self-Motives? Examining the Association Between Self-Handicapping and Self-Verification

This research examines the association between self-verification and self-handicapping. Self-verification theory states that people tend to seek information verifying how individuals see themselves. Individuals seek verifying feedback about traits or attributes when they are certain about that attribute, regardless of whether the attribute is positive or negative. However, when individuals are uncertain about a particular trait, they tend to engage in a self-presentational strategy called self-handicapping. Self-handicapping is a self-protecting behavior that mitigates the effect of a potential failure that would otherwise be perceived as threatening to one's sense of self by providing pre-emptive excuses for poor performances. Using data obtained from a series of questionnaires, this research addresses the question: Given that self-verification occurs when individuals are certain about their self-concept and self-handicapping occurs when they are uncertain, do self-handicappers avoid self-verification?

Alexander L. Fred

3:00 p.m., Room 222

Philosophy

Danielle Poe, Ph.D., Thesis Advisor
Philosophy Department

Subjectivity, Art and Politics: A Phenomenological Analysis of The Last Man, The Absurd Man and the Übermensch as a Dialect of Subjectivity

Starting from Albert Camus's theory of the *Absurd and Revolt* and Friedrich Nietzsche's theory of the herd, last man and the Übermensch, this essay creates a dialect describing the last man as a socially created "herd animal," or Ünmensch, as thesis; the Absurd Man, or Mensch, as antithesis; and the Übermensch as synthesis. Using Maurice Merleau-Ponty, Theodor Adorno and Emmanuel Levinas, this complex dialectic exposes the Ünmensch as incapable of art and the Übermensch as the only true artist and a subjective state of being temporarily embraced whenever an individual creates a piece with love, enjoyment and a truly subjective perception. The political ramifications of this theorized dialectic that the Ünmensch as a herd animal will create, willingly comply and likely demand fascism; that the Absurd Man will embrace whatever politics that exist without complaint or support; and that the Übermenschen society will be one that revolts against the Ünmenschen fascism that ends in a pseudo-transcendental anarchist utopia. An appendix will include fictional and poetic pieces that relate to the topics of this thesis.

Hailey J. Kwon

3:00 p.m., Room 310

Biology and Philosophy

Madhuri Kango-Singh, Ph.D., Thesis Advisor
Biology Department

Investigation of the Genetic Interactions Between the Hippo-Signaling Pathway and Drosophila *C-terminal Src Kinase (d-Csk)*

Emerging evidence suggests organ growth is regulated by cell-to-cell communication among several signaling pathways, including Hippo. Diminished Hippo signaling leads to tissue overgrowth, and is detected in several human cancers including liver and colorectal. Remarkably, the function of Hippo pathway is conserved in vertebrates and invertebrates. Therefore, we can use the fruit fly *Drosophila* as a model system to investigate how Hippo pathway interacts with *Src* oncogenic pathway. *Src* is normally suppressed in healthy cells and its activation is also implicated in liver and colorectal cancers. Activation of *Src* is caused by reduction of *C-terminal Src kinase* (*csk*), a genetic modifier of *warts* (*wts*) which is a core tumor-suppressor gene in Hippo pathway. Given that *d-Csk*, the fly *csk* equivalent, regulates growth and modifies *wts*, we hypothesized that *d-Csk* regulates growth via Hippo pathway. Here we present multiple lines of data suggesting *d-Csk* is an upstream regulator of Hippo pathway.

Peter J. Ogonek

3:00 p.m., Room 331

Civil Engineering

Denise G. Taylor, Ph.D., Thesis Advisor
Civil and Environmental Engineering Department

Phosphorus Adsorption Using Local Low-Cost Media

Nutrient pollution of waterways can cause algal blooms, which deprive indigenous aquatic life of oxygen and creates what is known as a "dead zone." Agricultural runoff, including fertilizer and other wastes, can contribute significant amounts of phosphorus, a known component of algal blooms, to water systems. Through adsorption, a basic wastewater treatment process, this study provides a screening of environmentally friendly low-cost materials that could be utilized to reduce phosphorus runoff from agricultural pollution. Using a batch experiment set-up, corn residue, cork, and sawdust were tested in a phosphate solution and measured for their capacity to adsorb phosphates from water. While initial screening tests revealed that the untreated media were unable to effectively adsorb phosphorus, studies have shown that processes such as a common heat treatment or chemical treatments with inexpensive materials such as bleach would greatly increase adsorptive capacities of organic media. Further research will be conducted in finding inexpensive, efficient methods to create effective phosphorus adsorbents from local low-cost media for agricultural purposes.

Connor J. Ratycz

3:00 p.m., Room 312

Biology

Carissa M. Krane, Ph.D., Thesis Advisor
Biology Department

Epinephrine Regulates Aquaglyceroporin HC-3 Expression and Subcellular Localization in Cultured Erythrocytes from the Freeze-Tolerant Treefrog, Hyla chrysoscelis

Cope's gray treefrog, *Hyla chrysoscelis*, distributes and collects glycerol as a cryoprotectant to survive sub-freezing temperatures through a process of freeze tolerance. It is hypothesized that HC-3, a protein water channel similar to one found in mammals, facilitates movement of glycerol and water through the plasma membrane in *H. chrysoscelis* red blood cells, and that chemical messengers act through receptor-mediated cell signaling pathways during cold-acclimation to control the location and abundance of HC-3 protein. In this study, red blood cells isolated from *H. chrysoscelis* were cultured and exposed to different chemical messengers and enzyme inhibitors for various amounts of time. Cells treated with the stress hormone epinephrine showed increased expression of native and glycosylated HC-3, and enhanced membrane localization when compared to control cells. Pre-treatment with Calphostin C, a PKC inhibitor, resulted in no HC-3 membrane localization and diminished HC-3 protein abundance. These results indicate that epinephrine initiates a PKC-dependent mechanism leading to HC-3 membrane localization, increased expression and heightened glycosylation in red blood cells. These data establish a direct connection between epinephrine, a stress hormone triggered during cold-acclimation, and the cellular response to support transmembrane glycerol permeability and cellular freeze tolerance.

Samantha J. Stringer

3:00 p.m., Room 311

PreMedicine

Thomas M. Williams, Ph.D., Thesis Advisor
Biology Department

Determining the Transcription Factor Genes Populating a Fruit Fly Pigmentation Gene Network and Their Regulatory Connections

Morphological traits for organism result from the concerted action of numerous genes that are interconnected into a gene network at the level of transcriptional regulation. In each network, transcription factors control the spatial, temporal, and even sex-specific patterns of gene transcription. To better understand how a gene network operates during development, I investigated the network controlling a male-specific pattern of *Drosophila melanogaster* abdomen pigmentation. Using RNA interference, I reduced the expression of 550 transcription factor genes to identify those needed for normal pigmentation by the occurrence of aberrant pigmentation patterns. From this, I identified 28 genes, which include several that are known to play major roles in establishing animal body plans and that regulate chromatin structure. With this new wealth of known network genes and the diversity of pigmentation patterns among fruit fly species, my thesis supports future studies into the gene network basis for trait development and evolution.

Molly R. Winslow

3:00 p.m., Room 207

Sociology

Theo J. Majka, Ph.D., Thesis Advisor
Sociology, Anthropology and Social Work Department

Resettled: A Portrait of Bhutanese Refugees in Dayton, Ohio

Over 75 Bhutanese refugees have been resettled in the Dayton area since 2010. This research examines how this specific refugee population has adapted to life in Dayton. This was done through interviews with people who work directly with Bhutanese refugees and an intensive case study with one extended Bhutanese family living in Dayton. The findings show three main barriers to integration. These include difficulty finding adequate employment, poor English language acquisition, and religion as both an internal community builder and an isolating factor. The goal is for the study to be utilized by the city of Dayton to improve refugee services.

3:20 p.m.

Leigha R. Brisco

3:20 p.m., Room 331

Civil Engineering

Kimberly E. Bigelow, Ph.D., Thesis Advisor
Civil and Environmental Engineering Department

Designing and Evaluating Playground Equipment for ADA Compliance

The need for accessible playgrounds is more prevalent than ever before, with approximately 3 million children having disabilities and health issues that limit their ability to partake in play and school. The Americans with Disabilities Act (ADA) recently provided, for the first time, specific accessible design standards for playgrounds. All playgrounds must now comply with these rules that went into place on March 15, 2012. As it is vital that playgrounds undergo the necessary changes to come up to compliance, there is an opportunity to develop an accessible playground design which satisfies all ADA playground standards and requirements. The objective of this project is to design, develop, and evaluate an accessible play structure for future construction. This project will utilize the engineering design process and civil engineering knowledge to develop computer aided drawings of the structures, structural analyses, complete construction plans, material lists, and cost analyses.

Stephen P. Crum

3:20 p.m., Room 211

PrePhysical Therapy

Thomas O. Farnsworth, S.M., Ph.D., Thesis Advisor
Psychology Department

Discrimination Against Disabled Persons in Malawi and the United States: A Comparative Study

In Malawi, Africa and the United States many disabled individuals experience hardships that are more severe than the general public. With regards to education, there is a lower school attendance rate among disabled individuals in each country. With regards to employment, both disabled Malawians and Americans experience lower employment rates and lower annual incomes. This study aimed to discern what factors contributed to these educational and employment deficits in both countries. Possible factors for the deficit may include a discriminatory attitude, a lack of resources available for accessibility, or the severity of the physical or cognitive limitation. A survey was administered at the University of Dayton and at the University of Livingstonia in Malawi aiming to discover if any subtle biases were projected unfavorably upon individuals pictured in wheelchairs. The survey also sought to evaluate whether ample resources were perceived to be available to disabled individuals in each country.

Daniel R. Esposito

Physics and Mathematics

3:20 p.m., Room 311

Robert J. Brecha, Ph.D., Thesis Advisor
Physics Department

Exploring Data-Driven Electricity Feedback on Energy Conservation Behavior in the University of Dayton Student Neighborhood

In general, homeowners do not have a concrete idea of how much energy their houses are using at any given moment. This energy "invisibility" is thought to be a barrier toward people adopting more sustainable behaviors. This study involves installing energy monitors in houses in the University of Dayton student neighborhood to analyze two important questions: whether the monitors teach students about the relationship between their activities and energy consumption, and whether the monitors influence students to adjust their household behaviors. Ideally, conclusions will be drawn from quantitative data collected from the monitors and the university's energy provider as well as from qualitative data acquired through the distribution of questionnaires. The results could have direct policy implications for the university, such as informing whether it would be worth investing in energy monitors for all student neighborhood properties.

Madison N. Irwin

Biology

3:20 p.m., Room 310

Amit Singh, Ph.D., Thesis Advisor
Madhuri Kango-Singh, Ph.D.
Biology Department

Drosophila *Eye Model to Understand the Role of Signaling Pathways in Aβ42 Mediated Neurodegeneration*

Alzheimer's Disease (AD), a progressive neurodegenerative disorder without a cure, is characterized by accumulation of Aβ42 peptides, which are toxic and result in neurodegeneration. We employ a *Drosophila* eye model to misexpress the human Aβ42 protein which results in neurodegeneration due to the activation of a highly conserved c-Jun amino-terminal (NH2) kinase (JNK) Signaling pathway. A highly conserved Hippo signaling pathway has been shown to regulate growth and cell death to regulate organ size. However, its function in Aβ42 mediated neurodegneration is yet to be studied. Our studies show that blocking Hippo pathway activity can rescue the Aβ42 neurodegenerative phenotype. Furthermore, when levels of JNK pathway members are modulated, the Hippo pathway is affected. Our data suggests that Aβ42 mediated neurodegeneration involves activation of Hippo signaling by the JNK signaling pathway. We have determined the epistatic relationships between the two pathways to generate mechanistic insights into Aβ42 mediated neurodegeneration.

Alexandria Lueke

English

3:20 p.m., Room 222

Laura J. Vorachek, Ph.D., Thesis Advisor
English Department

The Disney Evolution: Princesses as Positive Role Models for Girls

The Disney Princess films are some of the most popular in the world as they have been translated into several different languages with fans sprawling across the globe. The Disney Entertainment Corporation has strategically reached families worldwide and, as a result, have had an impact on children in most countries. Because of their iconic popularity, these works have been discussed and analyzed in great detail by many scholars. Many have criticized the films for their seemingly sexist and oppressive gender messages and find fault in having the princesses serve as role models for young girls; they argue the oppressive characteristics and ideas that are presented in the popular Disney Films. They see these works as roadblocks to gender equality and advocate for awareness of their stance. However, when one closely examines the works and notes the characteristics of the women in relation to the progressive female of the time they can clearly see the value in these films. The interactions between the female protagonists and the animals in the stories showcase the princesses' positive characteristics present and highlight the ways in which these individuals may be seen as reputable women who set a good example for young girls. In fact, one may argue that these women are model citizens of their respective periods who advocate for equality on their own spectrum while promoting healthy, functional relationships and pursing happiness.

Ryan A. Spear

Biochemistry

3:20 p.m., Room 312

Kevin Church, Ph.D., Thesis Advisor
Chemistry Department

Synthesis and Purification of a Nucleoside Platinum Complex that Promotes DNA Cross-Linking

Description

Cancer is a deadly and ever present disease in humans and its treatment has become a focus of many types of research. This project was designed to synthesis a platinum complex that will cross-link DNA and in turn cause cell death for rapidly dividing cells (usually cancer cells). This new compound had strongly resembled the structure of a nucleic acid, thymidine. Further, nucleic acids are extremely important to cell life and cell membranes have transporters specific for them. Therefore, the purpose to exploring this new platinum complex was to create compound that a cell can easily transport inside its cell and nuclear membranes. With an end product structure in mind, a series of six reactions were attempted in the lab in order to create this compound. Upon purification by column chromatography, each intermediate was tested for structure and purity using nuclear magnetic resonance spectroscopy (NMR) and thin-layer chromatography (TLC).

Alexandra M. Van Loon

International Studies and Spanish

3:20 p.m., Room 207

Theo J. Majka, Ph.D., Thesis Advisor
Sociology, Anthropology and Social Work Department

Linguistic Factors Affecting the Socioeconomic Status of Hispanic Immigrants in Dayton, Ohio

Using a sociolinguistic methodology, based on surveys and interviews, I will analyze how the social status of Dayton's Spanish-speaking immigrants correlates with their levels of English. My research will benefit the Dayton Hispanic community in that it will identify the dominant linguistic factors that contribute to the definition of their social status. This information will empower the Hispanics with the knowledge of what hinders them linguistically as well as offer the community tools to better integrate them, which is the overall goal of the recently adopted Welcome Dayton plan — an effort to inspire immigrants to invest and remain in the indebted city in hopes their efforts would augment the economy.

3:40 p.m.

Ashley M. Berding
Medicinal Pharmeceutical Chemistry

3:40 p.m., Room 311
Shawn M. Swavey, Ph.D., Thesis Advisor
Chemistry Department

Synthesis, Characterization, and DNA Photocleavage Studies of a Tetra-Ruthenated Naphthylbiliverdin

A new naphtylbiliverdin compound has been synthesized which offers intense absorption with the photodynamic therapy window (600 nm – 850 nm). The compound has been characterized by proton NMR, high resolution electrospray mass spectrometry, elemental analysis, and UV/vis spectroscopy. Coordination of four ruthenium(II) polypyridyl complexes was accomplished by standard procedures. The new tetra-ruthenated naphthylbiliverdin was characterized by elemental analysis. Cyclic voltammetry measurements reveal that all four ruthenium moieties are coordinated to the pyridyl groups of the biliverdin compound. DNA photocleavage studies were performed by irradiating samples containing plasmid DNA and the ruthenated compound, filtering out high energy light. Gel electrophoresis studies indicate that the compound is capable of photonicking the plasmid DNA when irradiated with light indicating this compounds potential use as a photodynamic therapy agent.

Julie A. Iuliano
Early Childhood Education

3:40 p.m., Room 312
Susan M. Ferguson, M.S., Thesis Advisor
Center for Catholic Education

The Themes of Catholic Social Teaching Integrated into the work of UD's Center for Catholic Education's (CCE) Urban Child Development Resource Center (UCDRC)

Schools today are challenged to meet the mental health concerns of students due to an emphasis on academic testing and a lack of communication within schools to identify and treat the needs of the students. The needs of the student travel beyond the classroom into the non-academic barriers to learning. The University of Dayton's Urban Child Development Resource Center (UCDRC), works in five local schools in the Dayton area and strives to help students cope with these non-academic barriers to learning. This study focuses on three of the Seven Themes of Catholic Social Teaching as stated by the United States Conference of Catholic Bishops: Call to Family, Community, and Participation; Option for the Poor and Venerable; Life and Dignity of the Human Person; and how UCDRC implements these three themes into its program.

Michael A. Ryan
Biochemistry

3:40 p.m., Room 310
Matthew E. Lopper, Ph.D., Thesis Advisor
Chemistry Department

Investigating Repair Processes in Bacterial DNA: Can D. rad *PriA load* D. rad *DnaB onto DNA Forks with a Leading Strand Gap?*

My research focused on repair of damaged DNA. The bacteria *Deinococcus radiodurans* (*D. rad*) is able to survive extreme levels of DNA damage with no detriment to its health because it is very efficient at repairing damaged DNA. In replicating (copying) bacterial DNA, damaged DNA will cause the replication to stop. This requires that the DNA replication be restarted in order for the replication to be completed and the bacteria to avoid cell death. In most bacteria the proteins that function to restart DNA replication at points of DNA damage are fairly well conserved from bacteria to bacteria; however the *D. rad* bacteria lacks many of those proteins, and some of the proteins in *D. rad* have potentially significant structural differences. I investigated the interactions between several of these proteins in *D. rad* bacteria, resulting in a clearer understanding of how these proteins interact.

Kathryn L. Schwaeble
Political Science and Criminal Justice Studies

3:40 p.m., Room 207
Grant W. Neeley, Ph.D., Thesis Advisor
Political Science Department

Effect of State Policy on Prison Population

States often follow trends when enacting sentencing policy. After a trend of get tough on crime policy which placed more and more offenders in prison, many states are turning to justice reinvestment policies, a reversal of these policies. If a state passes a justice reinvestment policy, there is expected to be a decrease in the prison population. Data was collected for every state's sentencing policy, prison population, and crime rate between 1979 and 2011. Using a regression test, it can be concluded that there is a negative correlation between justice reinvestment policies and prison population, indicating that the presence of a policy may cause a decrease in prison population. Those who influence sentencing policy at the state level have to consider the precarious balance between community safety and the financial burden of prison terms. This research demonstrates the effectiveness of particular sentencing policies, which can help with this decision-making process.

Vincent E. Spahr
Civil Engineering

3:40 p.m., Room 331
Deogratias Eustace, Ph.D., P.E., P.T.O.E., Thesis Advisor
Civil and Environmental Engineering Department

Operational Performance and Safety Comparison of Roundabouts vs. Traditional Signalized and Unsignalized Intersections

As roundabouts become increasingly popular in Ohio, this study assesses their performance as a safe and functional alternative to traditional intersections. Focusing on three roundabout locations in Dublin, Ohio, the study compares accident reports with traditional intersections in the area as well as with the traditional intersections that existed before the roundabouts were installed.

Olivia J. Ullery
English

3:40 p.m., Room 222
Laura J. Vorachek, Ph.D., Thesis Advisor
English Department

A Hero's Journey: Aegean's Destiny

A young woman named Aegean is summoned by the Oracle of her village to go on a journey to defeat an evil civilization at the center of the Three Villages. Though Aegean is independent, strong-willed, and assertive, she does not know her way. With the accompaniment of Maeve, a woman warrior, and Fumito, a cloistered sage, Aegean has a model of femininity and a model of masculinity to guide her in creating her own identity. They face perils on their quest, such as deadly creatures, private struggles – even death. Yet, while they travel they learn about the history of the ancient evil that resides in the Center and the battle that awaits them at the end of their hero's journey.

4:00 p.m.

Jacob T. Boone
Biochemistry

4:00 p.m., Room 310
Matthew E. Lopper, Ph.D., Thesis Advisor
Chemistry Department

Classifying the Functionality of Primosome Protein A in Deinococcus radiodurans

Deinococcus radiodurans (*D. rad*) is an extremophile bacterium with the capacity to survive tremendous exposure to DNA damaging factors including heat, dehydration, and radiation. *D. rad*, like all organisms, has developed a way to fix DNA damage by using a series of damage correcting proteins. While many organisms share similar damage correcting proteins, the role of the sub-class called primosome proteins in the *D. rad* bacterium is unknown. This research isolated the Primosome A (PriA) protein and conducted experiments to classify *D. rad* PriA function. The ability of *D. rad* PriA to bind DNA, bind to Adenosine Triphosphate (ATP), and hydrolyze ATP was investigated. The three abilities are hallmark characteristics of helicase proteins in standard bacteria models, which unwind double strands of connected DNA. *D. rad* PriA showed ability to bind to DNA, but did not bind to or hydrolyze ATP. The protein was classified as a fossilized helicase, the results indicating the evolution of *D. rad* over time has favored the loss of PriA helicase function.

Jasminder Grewal
Biochemistry

4:00 p.m., Room 311
Shawn M. Swavey, Ph.D., Thesis Advisor
Chemistry Department

Synthesis and Characterization of a Mono-metallic Lanthanide Compound

A single metallic compound was created using a lanthanide metal, bridging ligands, and antenna ligands. Then, the compound's fluorescence,as well as temperature dependent fluorescence, was looked at to determine the effect temperature has on the compound. The compounds were also made into crystals to determine the structure.

Sara J. Hardman
Civil Engineering

4:00 p.m., Room 331
Deogratias Eustace, Ph.D., P.E., P.T.O.E., Thesis Advisor
Civil and Environmental Engineering Department

Transit as an Alternative Mode of Transportation: A Case Study of its Usage, Availability, Patterns and Value for Non-Commuter Trips

The thesis is a case study of three Dayton area malls and the Dayton RTA bus system that travels around them. The study looks at the location of the bus stops closest to the mall as well as the routes that make stops in these areas and the layout of each of the malls. Based on observed traffic and bus ridership patterns, design recommendations for each mall as well as the RTA routes in the area were made based on the principles of compact design and transit-oriented development. The goal of these recommendations is to increase transit usage for shopping trips.

Michaela E. Herrick
Sociology and Philosophy

4:00 p.m., Room 207
Jeanne A. Holcomb, Ph.D., Thesis Advisor
Sociology, Anthropology and Social Work Department
Danielle Poe, Ph.D., Thesis Advisor
Philosophy Department

Evaluating Teacher Beliefs and Attitudes in High School Education

Teachers are powerful agents of socialization to the students whom they instruct. Extensive research has been done on the impact of certain teaching styles, methods and educational perspectives. However, lacking in many of these studies is the investigation of the relationship between a teacher's educational beliefs and his or her personal beliefs, behaviors and his or her ethical leanings. An evaluation of this relationship was undertaken through the use of survey research conducted in the Montgomery County Public School System of Ohio with full-time high school instructors. Schools from Montgomery Country Public Schools were selected using simple random sampling techniques. This survey ascertains how a teacher views the classroom setting and students, basic demographic information, educational background of the instructor, and behavioral questions that approximate ethical tendencies. Frequency analysis of responses indicates high occurrences of a feminist care ethic and of a deontological ethic in teacher perceptions. Analysis also reveals that respondents view their job as an educator is to be a facilitator to actively engaged students who possess a strong work ethic.

Erick C. Von Sas
Music Education

4:00 p.m., Room 222
Patrick A. Reynolds, Thesis Advisor
Music Department

Story Telling: A Comparative Analysis of Three Works by Colgrass, Schwantner and Finney

In this research project, I intend to examine music by 20th century American composers Michael Colgrass, Joseph Schwantner, and Ross Lee Finney in order to compare how different composers present an aural conception to their audience through the wind ensemble medium. An aural conception is the subject upon which the music is commenting; sight (subject) through sound. The project will involve an analysis of these "soundscapes," a collection of sounds that form an acoustic representation of an action or object, in works created by Colgrass, Schwantner, and Finney. This will involve a formal analysis, analysis of orchestration, and analysis of the text, or story, about which the composer is writing. Based on my analyses of the works, interviews with conductors and composers, and an examination of other works by each composer, I will discover, compare, and contrast how a unique soundscape is created in each work.

Mary A. Willard

Exercise Physiology

4:00 p.m., Room 211

Kurt J. Jackson, Ph.D., P.T., G.C.S., Thesis Advisor
Doctor of Physical Therapy Program

The Use of a Compact Elliptical Trainer in an Individual with Chronic Stroke: A Case Study

Over 795,000 people in the United States suffer a stroke each year. As a result, stroke is one of the leading causes of long-term disability. Individuals with chronic stroke typically start their rehabilitation in physical and occupational therapy settings. In formal therapy settings, equipment modifications such as handrails, benches for transfers, and extra steps leading to pieces of equipment allow better access and increase safety. However, adapting equipment for home use to promote long-term fitness is more difficult and less common. Therefore, the purpose of this pilot investigation is to evaluate the use of a new commercially available compact elliptical trainer on ankle motion and muscle activity. One male with chronic stroke was tested. The subject used the compact elliptical trainer without resistance under six different conditions for 30 seconds each. Measures include surface electromyography (EMG), 3D motion analysis for joint range of motion, and the NASA Task Load Index.

Erin M. Yacovoni

Middle Childhood Education

4:00 p.m., Room 312

Mary Kay Kelly, Ph.D., Thesis Advisor
Teacher Education Department

Improving Female Science Scores Through STEM Curriculum

Currently in education there is a stress on career readiness. Specifically in science education, teachers are expected to educate their students not only on science concepts but also careers that involve Science, Technology, Engineering, and Mathematics (STEM). According to the United States Department of Education (2013), the United States is falling behind on mathematics and science education, ranking 25th and 17th in the world. These numbers must increase in order to prepare students for success in STEM fields as they graduate. One approach teachers use to ensure that students are well versed in the STEM fields is STEM education. In STEM education, students are taught using a method that focuses on real world application and engineering. This study focuses specifically on how middle-school females are affected by STEM education. Female success in science under the STEM method of teaching has been observed through a review of literature and a survey.

4:20 p.m.

Julie A. Fitz

Biochemistry

4:20 p.m., Room 310

Angela Mammana, Ph.D., Thesis Advisor
Chemistry Department

Design and Characterization of Photoresponsive Supramolecular Aggregates

A supramolecular assembly is a complex of molecules held together by noncovalent interactions. The process by which supramolecular assemblies are formed is called “molecular self-assembly”, during which the molecules spontaneously aggregate in a specific manner, acquiring new properties. Incorporating photoisomerizable molecules into supramolecular assemblies offers considerable opportunities in developing new smart materials. Using UV-Vis and CD spectroscopy, we explored the propensity for a dicarboxylic acid derivatized azobenzene photoswitch (ADA) to form supramolecular aggregates and investigated the photochemical behavior of the system. ADA was shown to undergo *cis-trans* isomerization when irradiated in aqueous solution with visible and UV light. Upon reduction of the pH, the *trans* form of ADA aggregates in a chiral fashion. Homo-aggregation of the *trans* form of ADA was shown to prevent photoisomerization to the *cis* form. The feasibility of forming supramolecular heteroaggregates between ADA and other molecules, including water soluble porphyrins and poly (glutamic acid), was explored.

Alexandra N. Hill

Early Childhood Education

4:20 p.m., Room 312

Stephen B. Richards, Ed.D., Thesis Advisor
Teacher Education Department

Preparing Pre-Service Teachers to Work with English Language Learners

English Language Learners (ELLs) can be mis-identified as students with special needs. When they may be struggling with their language delay. To be identified as needing special education services, these students undergo assessments; however, these are created for students who speak English, putting ELLs at a further disadvantage. If placed in a special education program, the student rarely receives the language instruction needed, and they continue to fall further behind in their education. To prevent this problem, pre-service teachers need to gain experience with ELLs so that they can give them the support they need. Not all pre-service teachers have ELL experience, therefore instructors turn to video case studies that show authentic footage, assessments, and work of an ELL. The goal of this study is to determine the effects of video case studies on pre-service teachers, and what questions were generated as a result of the in class clinical experience.

Jenna L. Maffei

Economics and International Studies

4:20 p.m., Room 207

Barbara H. John, M.A., Thesis Advisor
Economics and Finance Department
Christopher S. Agnew, Ph.D., Thesis Advisor
History Department

Disney's Adventure in Foreign Direct Investment: A Case Study of Hong Kong Disneyland

This thesis is a case study of the Walt Disney Company's foreign direct investment in the Hong Kong Special Administrative Region. There are both costs and benefits associated with this joint venture in which Disney introduced a large service product innovated in the home country (the USA) into a new location (the host market Hong Kong), a special administrative region (SAR) of the People's Republic of China. To penetrate the Chinese market, Hong Kong Disneyland had to translate the experience to a multilingual audience; but the greater challenge was adapting the product (the Disney experience) to the tastes and preferences of (predominantly) Asian customers. Success was not and is not assured. The very metric — success — has to be evaluated from multiple perspectives: that of the firm, Disney; the home nation, USA; and the host, Hong Kong.

Elliott M. Mazur

Geology and Physics

4:20 p.m., Room 311

Daniel Goldman, Ph.D., Thesis Advisor
Geology Department

Population Variation in Fossil Graptolites: A Quantitative Study Based on Single Species Assemblages

Graptolites were colonial, planktonic organisms that lived in the poorly-circulated Early Paleozoic oceans. Graptolite fossils are often found in black mud rocks and shales, and are commonly well preserved because the low oxygen predators were scarce. Graptolites are hemichordates and include the modern pterobranchiate, Rhabdopleura. Most graptolites (the Graptoloida) were free-swimming zooplankton and their fossils can be found in Early Paleozoic mud rocks worldwide, and are considered to be a significant index fossil for Ordovician and Silurian strata. Index fossils are fossil organisms that are especially good for ordering rock units into a superpositional sequence and making time correlations between units in different locations. Graptolite morphology changed dramatically during their evolutionary history and hence, they are also textbook examples of organisms that exhibit evolutionary trends in the fossil record. The study of graptolites and their evolution is instrumental to the development of the geologic timescale and to our understanding of fossil zooplankton.

Ann M. Michalica

Religious Studies

4:20 p.m., Room 222

Gloria Dodd, Ph.D., Thesis Advisor
International Marian Research Institute
Jana A. Bennett, Ph.D., Religious Studies Department

An Undivided Heart: How Mary Unites What Sin Divides According to John Paul II's Theology of the Body

Today, personhood is often threatened by the tendency to divide the human person into two contrasting parts: body and soul. Many times, this causes the human person to be reduced to a disembodied spiritual being or a disposable object rather than a whole person called to love and be loved. In his teachings known as Theology of the Body, John Paul II uses a personalistic approach to illuminate the human person as the integration of body and soul. Scripturally based, Theology of the Body is the study of God's reflection in the human body and human sexuality. Using John Paul II's Theology of the Body and the Catholic Church's four Marian dogmas, this thesis will illustrate how the Blessed Virgin Mary gives humanity knowledge of the body as a personalistic integration of flesh and spirit intended for a self-giving relationship with both God and man.

Claire M. Shaw

Adolescent to Young Adult Education and English

4:20 p.m., Room 211

Treavor Bogard, Ph.D., Thesis Advisor
Teacher Education Department

Upper Grade Level Literacy: Instructional Strategies for Struggling Readers

Education research has shown that a quarter of eighth-grade students perform below basic reading proficiency. Despite this, reading instruction often ceases after eighth grade while text structure and content area language become more difficult. This research project focuses on studying strategies used for struggling readers in seventh through twelfth grade and includes a case study of a struggling reader in order to identify some of the characteristics and needs of struggling readers. This research synthesizes ideas from previous studies, analyzes teacher interviews for literacy instruction strategies, and, in the case study, uses observation, primary source study, and reading assessments.

4:40 p.m.

Megan R. Abbate

4:40 p.m., Room 222

English and
Adolescent to Young Adult Education

Thomas L. Morgan, Ph.D., Thesis Advisor
English Department

Developing Social Consciousness through Multicultural Young Adult Literature

In this study, the novels *We Were Here* and *Mexican Whiteboy* by Matt de la Pena and *The Absolutely True Diary of a Part-Time Indian* by Sherman Alexie, works which feature male protagonists struggling to locate their multicultural identities, will be analyzed. This research will legitimize the use of multicultural young adult literature, specifically these three texts, in the classroom, despite the presence of controversial themes. This research will demonstrate the value of these texts due to their potential to foster social consciousness and aid the establishment of identity within a global context. This thesis will demonstrate ways in which young adult literature can promote social change through both recognition of commonalities and respect for differences.

Jamie L. Dell

4:40 p.m., Room 312

Early Childhood Education

Joni L. Baldwin, Ed.D., Thesis Advisor
Teacher Education Department

Literacy Instruction in Early Childhood Education: Ohio's Third Grade Reading Guarantee

This qualitative study's purpose was to research effective literacy instruction in three separate primary classrooms. Three teachers were observed and interviewed as to how they are delivering best instruction in their respective classrooms. These observations were then compared with Gail Tompkins' (2011) effective literacy educator statements as well as other best practice techniques. Once all of the data was collected, the primary investigator traced similarities throughout the three teachers and made five new additions to the collection of effective literacy educator statements by Gail Tompkins. Implications of this study include the impending Ohio's Third Grade Reading Guarantee which is an unfunded mandate for the state of Ohio. It requires a third grade reading level for all students leaving that grade or they face retention. Literacy is a crucial part of life which is why having effective literacy instruction in the early grades is so important.

Amy N. Timmerman

4:40 p.m., Room 207

English and Political Science

Michelle C. Pautz, Ph.D., Thesis Advisor
Political Science Department
Daniel R. Birdsong, Ph.D., Thesis Advisor
Political Science Department

Party Building: Factors to Encourage Third Party Support Amongst 18-24 Year Olds

My thesis will examine the potential political third parties have in gaining popular support that would bring them into equal competition with the Republican and Democratic parties. Third parties have remained on the fringes of our political system for years, never gaining the ultimate political success of winning the presidency. Yet, third parties abound within the American political system, so why have they had so little success or widespread support? This thesis endeavors to determine whether third parties have a pathway to viability in our political climate. Through past examples and a survey of registered 18-24 year old voters I examine the reasons people choose to support or not support third parties. This research begins to help answer the question of why third parties have struggled on the national stage and offers answers to ways they can build organizations that will appeal to the youngest block of voters.

advisors

Advisor	Department
Agnew, Christopher S., Ph.D.	History
Baldwin, Joni L., Ed.D.	Teacher Education
Benbow, M. Eric R., Ph.D.	Biology
Bennett, Jana A., Ph.D.	Religious Studies
Bigelow, Kimberly E., Ph.D.	Mechanical and Aerospace Engineering
Birdsong, Daniel, Ph.D.	Political Science
Bogard, Treavor, Ph.D.	Teacher Education
Brecha, Robert J., Ph.D.	Physics
Church, Kevin, Ph.D.	Chemistry
Ciric, Amy R., Ph.D.	Chemical Engineering
Clarke, John V., M.F.A.	Visual Arts
Comfort, Donald A., Ph.D.	Chemical Engineering
Dasgupta, Simanti, Ph.D.	Sociology, Anthropology and Social Work
Dodd, Gloria, Ph.D.	International Marian Research Institute
Eustace, Deogratias, Ph.D., P.E., P.T.O.E.	Civil and Environmental Engineering
Farnsworth, Thomas O., S.M., Ph.D.	Psychology
Ferguson, Susan M., M.S.	Center for Catholic Education
Fitz, Raymond, S.M., Ph.D.	Political Science
Fouke, Daniel C., Ph.D.	Philosophy
Goldman, Daniel, , Ph.D.	Geology
Hall, Stephen R., M.S.	MIS, Operations Management and Decision Sciences
Hallinan, Kevin P., Ph.D.	Mechanical and Aerospace Engineering
Hansen, Karolyn M., Ph.D.	Biology
Haritashya, Umesh K., Ph.D.	Geology
Holcomb, Jeanne A., Ph.D.	Sociology, Anthropology and Social Work
Hudson, Natalie F., Ph.D.	Political Science / Human Rights Studies
Jackson, Kurt J., Ph.D., P.T., G.C.S.	Doctor of Physical Therapy Program
John, Barbara H., M.A.	Economics and Finance
Kango-Singh, Madhuri, Ph.D.	Biology
Kargl, Kathy W.	Visual Arts
Kelly, Mary Kay, , Ph.D.	Teacher Education
Korn, Karen Abney, Ph.D.	Sociology, Anthropology and Social Work
Krane, Carissa, M, Ph.D.	Biology
Laubach, Lloyd, L., Ph.D.	Health and Sport Science
Leicht, Anthony, S., Ph.D.	James Cook University Institute of Sport and Exercise Science
Lopper, Matthew, E., Ph.D.	Chemistry
Majka, Theo J., Ph.D.	Sociology, Anthropology and Social Work
Mammana, Angela, Ph.D.	Chemistry
McCombe, John P., Ph.D.	English
McEwan, Ryan W., Ph.D.	Biology
Morgan, Thomas L., Ph.D.	English
Neeley, Grant W., Ph.D.	Political Science
Nielsen, Mark G., Ph.D.	Biology
O'Mara, Erin, Ph.D.	Psychology
Pautz, Michelle C., Ph.D.	Political Science
Pici, Joseph R., M.A.	English
Pierce, Jason L., Ph.D.	Political Science
Poe, Danielle, Ph.D.	Philosophy
Reeb, Roger N., Ph.D.	Psychology
Reynolds, Patrick A.,	Music
Richards, Stephen B., Ed.D.	Teacher Education
Robinson, Jayne D., Ph.D.	Biology
Singh, Amit, Ph.D.	Biology
Swavey, Shawn M., Ph.D.	Chemistry
Taylor, Denise G., Ph.D.	Civil and Environmental Engineering
Titlebaum, Peter J., Ph.D.	Health and Sport Science
Trollinger, Susan L., Ph. D.	English
Tsonis, Panagiotis A., Ph.D.	Biology
Vorachek, Laura J., Ph.D.	English
Wilhoit, Stephen, Ph.D.	English
Williams, Thomas M., Ph.D.	Biology

presenters

Presenter	Room and Session time
Abbate, Megan R.	Room 222, 4:40 p.m.
Alwan, Mary C.	Room 207, 2:20 p.m.
Baker, Bryan A.	Room 312, 2:00 p.m.
Banfield, Lauren E.	Room 222, 1:20 p.m.
Beebe, Jessica L.	Room 310, 2:00 p.m.
Berding, Ashley M.	Room 311, 3:40 p.m.
Boone, Jacob T.	Room 310, 4:00 p.m.
Boyd, Kaitlin E.	Room 211, 2:40 p.m.
Brisco, Leigha R.	Room 331, 3:20 p.m.
Brown, Stephen	Room 222, 2:00 p.m.
Chen, Chin Yi	Room 207, 1:20 p.m.
Crum, Stephen P.	Room 211, 3:20 p.m.
Cutler, Timothy L.	Room 311, 1:40 p.m.
DeCastra, Thomas A.	Room 207, 2:40 p.m.
Dell, Jamie L.	Room 312, 4:40 p.m.
Demmitt, Anna L.	Room 222, 2:20 p.m.
Ebersole, Joseph M.	Room 310, 2:40 p.m.
Ellis, Katharine M.	Room 211, 3:00 p.m.
Esposito, Daniel R.	Room 311, 3:20 p.m.
Filbrandt, Erin T.	Room 312, 1:00 p.m.
Fitz, Julie A.	Room 310, 4:20 p.m.
Francis, Kaitlyn R.	Room 311, 2:40 p.m.
Fred, Alexander L.	Room 222, 3:00 p.m.
Grewal, Jasminder	Room 311, 4:00 p.m.
Hardman, Sara J.	Room 331, 4:00 p.m.
Herrick, Michaela E.	Room 207, 4:00 p.m.
Hill, Alexandra N.	Room 312, 4:20 p.m.
Huber, Laura K.	Room 207, 2:00 p.m.
Irwin, Madison N.	Room 310, 3:20 p.m.
Iuliano, Julie A.	Room 312, 3:40 p.m.
Jacob, Alexandra E.	Room 312, 1:40 p.m.
Jordan, Jasmine R.	Room 207, 1:40 p.m.
Kingston, Taylor V.	Room 222, 1:40 p.m.
Kloke, Danielle D.	Room 211, 2:20 p.m.
Krisby, Ryan M.	Room 222, 2:40 p.m.
Kwon, Hailey J.	Room 310, 3:00 p.m.
Liutkus, Katherine A.	Room 222, 1:00 p.m.
Lueke, Alexandria	Room 222, 3:20 p.m.
Maffei, Jenna L.	Room 207, 4:20 p.m.
Mazur, Elliott M.	Room 311, 4:20 p.m.
Michalica, Ann M.	Room 222, 4:20 p.m.
Oehlman, Kathryn C.	Room 310, 1:40 p.m.
Ogonek, Peter J.	Room 331, 3:00 p.m.
Pleasants, Mark S.	Room 331, 2:00 p.m.
Raiff, Hayleigh E.	Room 211, 2:00 p.m.
Ratycz, Connor J.	Room 312, 3:00 p.m.
Reuter, Margret F.	Room 207, 1:00 p.m.
Ryan, Michael A.	Room 310, 3:40 p.m.
Schwaeble, Kathryn L.	Room 207, 3:40 p.m.
Sellick, Kathleen M.	Room 310, 2:20 p.m.
Shaw, Claire M.	Room 211, 4:20 p.m.
Shewhart, Lauren E.	Room 311, 2:00 p.m.
Sigward, Brian L.	Room 331, 2:20 p.m.
Spahr, Vincent E.	Room 331, 3:40 p.m.
Spear, Ryan A.	Room 312, 3:20 p.m.
Steffensmeier, Andrew M.	Room 311, 1:20 p.m.
Stringer, Samantha J.	Room 311, 3:00 p.m.
Susdorf, Gail K.	Room 211, 1:00 p.m.
Timmerman, Amy N.	Room 207, 4:40 p.m.
Ullery, Olivia J.	Room 222, 3:40 p.m.
Van Loon, Alexandra M.	Room 207, 3:20 p.m.
Vellky, Jordan E.	Room 311, 2:20 p.m.
Versteeg, Gregory H.	Room 312, 2:40 p.m.
Vogeler, Kelly C.	Room 331, 1:40 p.m.
Von Sas, Erick. C.	Room 222, 4:00 p.m.
Willard, Mary A.	Room 211, 4:00 p.m.
Winslow, Molly R.	Room 207, 3:00 p.m.
Wise, Caroline E.	Room 331, 2:40 p.m.
Yacovoni, Erin M.	Room 312, 4:00 p.m.

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