

Wayne State College

Wayne State College Honors Program
Student Abstracts, Spring 2010 Honors Colloquium

Brittany Cody

“C-KIT SIGNALING AND THE REGULATION OF RETINAL
STEM CELLS”

Instructor: Dr. Douglas Christensen

Monday, May 3, 2010; 2:30 p.m.; Carhart Science Building, Room 122

Abstract

Retinal degeneration is one of a number of blinding diseases for which there is currently no cure. Research into the regulation of retinal stem cells has shown promise to this end. The c-kit protein is part of an important pathway within stem cells that is thought to help maintain a proliferative state. To determine the effect of the perturbation of this pathway in vivo, rapamycin, a drug that inhibits another protein within the pathway, was injected into one-day old rats. Subjects were sacrificed at three, five and seven days, and the retinas were dissected and used in for RT-PCR and immunohistochemistry analysis to determine the effect of the perturbation.

Thomas Dahlseid

“DRAWING IN THREE DIMENSIONS”

Instructor: Mr. Steven Elliott

Monday, May 3, 2010; 3:00 p.m.; Peterson Fine Arts, Room 204

Abstract

I have always been interested in the duality of nature because I think there are both positive and negative sides to everything. For my work it depends on how the viewer chooses to interpret it. In this body of work created for my honors project, I began with the concept of isolation. At first I wanted to show the negative aspects of isolation, so I began by making caged forms out of steel and barbed wire, which can be associated with containment. As I continued with this idea I started making small, more manageable wire forms. These have come to symbolize the same idea of protection, but I also see them representing a small world in and of themselves. Additionally these sculptures use line in a gestural manner and sharp, jagged texture to create an overall organic form. The cages and dark empty space in which they exist can be interpreted as an escape from the negative aspects of the outside world similar to natural forms of shelter. Regarding the formal aspects, there is a strong separation between positive and negative spaces

enhancing the emotional qualities of the subject matter. There is an intense feeling of gestural line implying weight, power, and a sense of confinement. Building these sculptures is much like drawing in three-dimensional space.

Katherine Fitzgerald “THE ABSENCE OF A LEGACY: A HISTORICAL ANALYSIS
OF WOMEN AND LEADERSHIP”

Instructor: Dr. Ronald Whitt

Wednesday, April 28, 2010; 10:00 a.m.; Humanities Student Lounge

Abstract

Today, women earn more than half of all bachelors' degrees and masters' degrees and serve as presidents of prestigious institutions, including Harvard and MIT. However, it must be noted that these outstanding accomplishments are preceded by a history of immense struggle and hardship. As we have now entered the second decade of the new millennium the trends suggest that women will persistently obtain more authority and leadership roles, and provide a chronological review through the incorporation of several communication theories corresponding to watershed events.

Marisa Hingst “SUSTAINABILITY THROUGHOUT THE MIDWEST: A
REVIEW OF THE DISCONNECTS, ISSUES, AND PROMISES
FOR A GREENER FUTURE”

Instructor: Dr. Randy Bertolas

Wednesday, April 28, 2010; 3:30 p.m.; Connell Hall, Room 131

Abstract

This research project highlights the obstacles current Agra-industries face, in the race to a 'greener future' by examining the issues which plague this ever-changing industry. Throughout the review of government sector and private industry literature, an increasing awareness became prominent as the evolution of industrial agriculture was heavily assessed. This paper examines the roles of government intervention within the industry, the lack of formal or scientific education programs, and the natural and man-made influences which impact the adoption of sustainable farming practices within the Nebraska region of the past to current day. Within each of these three areas, an assessment of the disconnects as well as proposed recommendations to mend this disjointed industry will be reviewed, with the intention of broadening the awareness and the urgency needed, for adopting sustainable for adopting best management practices within the industry.

Joshua Hohnholt “INFLUENTIAL CITIES OF AN INFLUENTIAL TIME: THE
CULTURAL IMPORTANCE OF CORINTH, EPHEBUS AND
PHILIPPI IN ANCIENT HISTORY”

Through the process of exploration and a wide range of mixed media I have been working on transforming the human figure and bringing it to a new light. Originally, I was very inspired by new literature and story lines that involved abstracted creatures that still retained a partial human appearance. Through color and application I transformed the normal human figure into something eerie and unsettling. My research revolving around these creatures soon sparked inspiration on another level. I began to focus my research and art in the direction of the space that a human figure can occupy and the interaction that can occur. With more research I became interested in not only the human figure within a space, but the molecular processes that go on in the human body such as disease, development and even death. When I began my research I was exploring mixed media in the two-dimension, now my media has evolved to primarily work with different fabrics and textiles, creating three-dimensional forms that would invade the viewer's space. These invasive objects take over a space just as events and moments often take over my life and my mind, emotionally and physically. The last phase of my research is to bring the human interaction back to nature. Using bold colors and luscious texture, I am bringing the viewer's attention to an area they may not have noticed before. Working spontaneously and intuitively, I developed organic forms to be temporarily installed into the nature found here on Wayne State College's campus.

Joshua Riesberg

“THE ORIGINS OF DEMOCRATIC GOVERNMENT:
COMPARING THE ANCIENT ATHENIAN DEMOCRACY TO
THE DEMOCRATIC REPUBLIC OF THE UNITED STATES
OF AMERICA”

Instructor: Dr. Randy Bertolas

Wednesday, April 28, 2010; 4:30 p.m.; Connell Hall, Room 131

Abstract

Two powerful democratic nations, Athens ca. 500 BC and the United States of America, were formed 2,300 years apart. Interested scholars look for comparisons in the creation of these similar governments in search of a model that can explain the successful transition to a democratic state. By reading primary documents from Ancient Athens (specifically the Athenian Constitution) as well as early United States political documents (i.e., Declaration of Independence, the Constitution, and the Bill of Rights) five ideas appear strongly correlated with the birth of democracy. This paper describes support for the conclusion that these democracies originated because of (a) persecution that leads to rebellion, (b) education of the common gentry in the workings of government, (c) a leadership base willing to share its power, (d) a written constitution guaranteeing citizen's rights, and (e) a citizen base willing to participate in the government.

Eva Rosberg

“BLACK AND WHITE WEALTH INEQUALITY: RACE
THROUGH THE WHITE LENS”

Instructor: Dr. Monica Snowden

Thursday, April 29, 2010; 3:30 p.m.; Connell Hall, Room 131

Abstract

Although discrimination based on race has been outlawed for decades in America, significant gaps between Blacks and Whites in measures of social well-being are prevalent. For instance, Blacks lag behind Whites in their acquisition of wealth and are overrepresented in prisons and in the welfare system. After a comprehensive literature review to explore this problem, many policy suggestions to help remedy the racial inequality that still exists became apparent.

However, research also shows that Whites are unlikely to support policies that take race into account. To understand this dichotomy, I did a qualitative study of white college students' perceptions of race in America today. I did a series of three focus groups asking a series of questions to understand three main aspects of how White students perceive problems associated with racial inequality and how they might be addressed within our society.

First, White students' perspective of the role race plays in the life chances and outcomes of minorities are examined. Second, White students' racial identity is explored. Finally, White students' attitudes regarding policies that seek to correct racial inequality are described. To analyze my data, I applied Lawrence Bobo's (1996) concepts of laissez faire racism and the colorblind society. This research is important in understating obstacles for policy adoption and also in developing new directions for policy suggestions.

Sarah Salisbury

“THE QUANTUM-CHEMICAL STUDY OF
PYRAZINACENES: AZA ANALOGUES OF ACENES”

Instructor: Dr. Paul Karr

Tuesday, April 27, 2010; 2:00 p.m.; Carhart Science Building, Room 122

Abstract

A series of edge-sharing condensed oligopyrazine analogues of acenes, the pyrazinacenes, are synthesized and characterized by our colleagues¹. The species of interest was optimized to a stationary point on the Born-Oppenheimer surface. Next, frequency calculations were run to confirm optimization to a minimum. Finally, the UV/VIS spectrum were computed using TD-DFT with the B3LYP/6-31 G(df, p), and B3LYP/6-31G (3df,p) model chemistries. The spectra at the various model chemistries were then graphed using an in house developed method and compared to the experimentally measured spectrum. The species of interest was selected due to its potential use as an organic thin film transistor.

¹Pyrazinacenes: Aza Analogues of Acenes; Gary J. Richards, Jonathan P. Hill, Navaneetha K. Subbaiyan, Francis S'Souza, Paul A. Karr, Mark R. J. Elsegood, Simon J. Teat, Toshiyuki Mori, and Katsuhiko Agiga, *J. Org. Chem.*

Blair Sommerfeld

“THE APPLICATION OF MEDIEVAL THEATRE IN
CONTEMPORARY SOCIETY”

Instructor: Dr. Gwen Jensen

Monday, April 26, 2010; 4:30 p.m.; Wayne State College Willow Bowl (in case of inclement weather location will be the Black Box Theatre, Peterson Fine Arts Building)

Abstract

While medieval theatre may seem antiquated and out of date, it is applicable to today's society. The lessons taught by medieval theatre are still relevant today. Following research in medieval staging it was found that of all the medieval staging types Cornish round would be the most relevant to use since Wayne State has the Willow Bowl. The other two staging types of the mansion and plateau and the pageant wagon, were not so easily accommodated into today's theatre. Most medieval plays written were meant to be traveled and, because of this, were performed outdoors. Therefore, performing a play outside in a Cornish round would be the most sensible way to stage a medieval play.

Brianna Twohig

“LENIN AND STALIN: THE GROWTH AND SPREAD OF 20TH CENTURY COMMUNISM”

Instructor: Dr. Randy Bertolas

Wednesday, April 28, 2010; 3:00 p.m.; Connell Hall, Room 131

Abstract

Communism is a form of government that deserves to be explored because of the impact that it has had over nations. Whether it is right or wrong is not the issue discussed in this paper, which seeks to provide a core understanding of what empowers this form of government that becomes so influential over people and their culture. This paper will assess Marx's original theory and investigate how two men, Lenin and Stalin, evolved the theory to run a nation and change lifestyles. This paper will then investigate Communism a step further to understand how this powerful government, during the time of Lenin and Stalin, came to affect and impact other surrounding nations, especially the United States.

Jamie Tworek

“AN ETHNOGRAPHIC APPROACH TO ELDERLY PATIENT AND PROVIDER COMMUNICATION”

Instructor: Dr. Deborah Whitt

Wednesday, April 28, 2010; 10:30 a.m.; Humanities Student Lounge

Abstract

Patient satisfaction should be one of the number one concerns of a health care provider. However, one of the main pathways to achieve this is often overlooked by physicians. This pathway is determined by the communication skills used by the provider to inform the patient. This satisfaction is important because it captures the patients' experience of health care outside of direct effects on health and acknowledges the role of the patient as a partner in health care, and reflects the patient-centeredness of care (Institute of Medicine 2001). Communicating health information correctly to elderly patients is a growing difficulty, as physicians are not sufficiently educated to relate to these individuals. This study is composed of actual observations of elderly patient-provider interactions and face to face interviews at a retirement community in Omaha, Nebraska. After reviewing the information gathered, elderly patients expressed a need for increased involvement in healthcare decisions, as well as better approaches from healthcare providers to communicate options. As the elderly population continues to grow, future healthcare

providers will need to learn the proper approaches, and communication techniques that are needed to provide enhanced care.

Megan Zavorka

“STUDIES IN NATURAL PIGMENTATION BASED PAINTS:
AN INVESTIGATION OF THE INTERACTION OF SELECTED
PIGMENTS WITH A TRADITIONAL CASEIN-BASED
BINDER”

Instructor: Dr. Mary Ettel

Thursday, April 29, 2010; 2:00 p.m.; Carhart Science Building, Room 130

Abstract

In the movement to become more environmentally friendly, natural pigments were examined to determine their stability in various environments in hopes to provide an alternative to synthetic pigments and paints. Casein binder was made using milk and vinegar and curdling it under heat. The curdled protein was filtered out and mixed with a small portion of natural pigment. The pigments focused on this research were cochineal, ferric oxide, turmeric and indigo. Alkalis or water were mixed with the binder and pigment to make the substance more viscous to a paint consistency; each sample was painted onto a medium in various environments. The pigment cochineal was the most stable of tested pigments and can be used on most surfaces. Natural pigments could be used as alternatives to synthetic pigments and would be safe for the environment and the consumer.