



HONORS COLLEGE

The University of Texas at Arlington

HONORS RESEARCH SYMPOSIUM PRESENTATION ABSTRACTS

APRIL 15, 2016

ELIZABETH 'ELLIE' BROWN, GEOLOGY

Title: *Constraining the Timing and Provenance of Cenozoic Fluvial Sandstone in South Texas Using Detrital Zircon U-Pb Geochronology*

Faculty Mentor: Dr. Majie Fan

This study applies detrital zircon U-Pb geochronology to constrain the timing and provenance of seven Oligocene-Pliocene sandstone samples in south Texas. Maximum depositional ages based on a cluster of youngest U-Pb ages of detrital zircons constrain the depositional ages of the Oligocene samples, but are too old for the Miocene and Pliocene samples. A total of 1386 zircon grains consist of a 20-42 Ma population, which represents the zircon source of ignimbrite flare-ups in western and southwestern North America, and populations of 60-150 Ma, 151-708 Ma, 948-1326 Ma, 1332-1816 Ma, and 1825-3314 Ma, which were originally formed in different magmatic provinces, and recycled into the Cenozoic sedimentary rocks by eroding the Phanerozoic strata in the drainage of the rivers.

WHITNEE BROYLES, BIOLOGY

Title: *Predator Driven Evolution of Brain Size across Three Predation Intensities in Natural Populations*

Mentor: Dr. Matthew Walsh

Vertebrates exhibit extensive variation in brain size, but why such diversity exists has been an area of interest for decades. Recent selection experiments showed that the evolution of larger brains enhances survival in the presence of predators; increased predation should thus favor larger brains. This project tested the influence of predator-induced mortality on the evolution of brain size by exploring Trinidadian killifish (*Rivulus hartii*) from communities that vary in predation intensity for differences in brain size. This work showed that male (but not female) *Rivulus* from sites that lack predators exhibited significantly larger brains than males from sites with large piscivorous fish capable of eating adult *Rivulus*. Brain size did not differ between sites that varied in the presence of a gape-limited predator of *Rivulus*. These results argue that increased male brain size is favored in less risky environments due to fitness benefits of higher cognitive function.

SHRADHA CHAULAGAIN, INFORMATION SYSTEMS

Title: *Social Networks ~ Understanding the Behavior of Individuals on Facebook*

Faculty Mentor: Dr. Sridhar P. Nerur

Billions of people in today's contemporary world utilize social networking sites. This research explores the relationship between use of Facebook, a popular social networking site, and the formation of social capital. To assess the use of the site, 46 friends (N=46) completed a survey that looked for demographic and behavioral patterns. Facebook created a chance to recognize how people attracted each other and influenced others with whom they communicated with. The graphical network analysis inferred who is influential and who is not, while statistical analysis provided a deeper knowledge into the personalities of people. Results indicated that friends use Facebook approximately 58 minutes throughout the day as part of their daily routine. They used Facebook mainly for social interaction, primarily with their close friends, like old high school friends and current classmates, with whom they had pre-established relationship offline. Implications of research and practice are also discussed.

JENNIFER L. DAVIS, NURSING

Title: *Characteristics of Nursing Mentors in a Healthcare Setting*

Faculty Mentor: Dr. Susan M. Baxley

Several studies have shown that the mentoring of nurses in the healthcare setting is beneficial for involved nurses. There is little research considering what mentoring characteristics nurses need to help them reach their goals. The purpose of this study was to determine characteristics of a mentor that are important to nurses in a healthcare setting and if age, gender, ethnicity, nursing position, and mentoring experience have an influence on preferred mentoring characteristics. This descriptive study used a quota sample and an electronic survey was used to collect responses. A statistically significant difference between genders was noted related to the characteristic of caring ($p=0.002$) and listens ($p=0.008$). Males most frequently preferred mentoring traits of knowledge, competency, and resourcefulness. Females most frequently preferred mentor characteristics of knowledge, competency, and supportiveness. There were no differences in preferred mentor characteristics according to participant age, nursing position, or race/ethnicity of the participant.

STEPHEN GROVE, BIOCHEMISTRY

Title: *Determination of Binding Constants via Wave-Guide Light Mode Technology*

Faculty Mentor: Dr. Frank Foss

The objective of this research is to determine whether the binding of a substrate to a target peptide sequence can be effectively detected by Wave-guide light mode technology. The substrate may be a potential drug or lead molecule for medical research. Wave-guide light mode technology demonstrates the ligand-protein binding interactions by detecting the change in refracting angle of a laser that shines on the surface. The test ligand used in this experiment is Vancomycin, whose binding to the specific tri-peptide sequence *L-Lys-D-Alanine-D-Alanine* (K-A-A) is known to be a network of 5 hydrogen bonds between it and the growing peptide wall. Upon performing the necessary chemical synthesis on the instrument plate, we handed off the project to our collaborator's lab to gather and analyze the data. The interpretation of these results may correlate with the species' dissociation constant K_d , a measurement that is critical to the early evaluation of potential drugs.

KALEISHA HAYNES MILLER, CIVIL ENGINEERING

Title: *An Investigation of Chlorate and Perchlorate in Onsite-Generated Hypochlorite*

Faculty Mentor: Dr. Andrew Kruzic

This investigation evaluated the occurrence and concentration of chlorate and perchlorate in two low-strength onsite-generated hypochlorite systems in the DFW Metroplex, and attempted to correlate their concentrations to operating conditions and input materials of the generation process. Chlorate and perchlorate are disinfectant byproducts found in drinking water treated with hypochlorite and are known to pose potential health problems. Hypochlorite samples were quenched to remove chlorine and then analyzed using ion chromatography to determine the byproduct concentration. Results showed a correlation between byproduct concentration and chlorine concentration as well as with the mass flow rate of the brine solution during generation. Other factors, such as pH, did not appear to significantly affect the byproduct concentration. The measured levels of chlorate and perchlorate are currently not high enough to pose serious health effects, but future federal regulation may require water treatment facilities to take an active approach to limit the contaminants.

ALISSA D. HENDRICKS, BIOMEDICAL ENGINEERING

Title: *Interchangeable Arsenic Filter for Individual Use*

Faculty Mentors: Dr. George Alexandrakis and Dr. Kytai Nguyen

Millions live without safe water despite modern technology. For those living in first world countries, access to large-scale water purification or bottled water is common. However, problems arise for those living in villages where ground water is contaminated with Arsenic (As). While large-scale processes can remove As, there are not portable, affordable devices that can remove the contaminant. Our portable As filter is not only affordable, but it is also interchangeable. The interchangeability allows for a decrease in waste of filter material, an important fact given the cost of As filters is higher than other filters. Through ICP testing we were able to show the efficacy of our device and the importance of variable filter heights. The designed filter is able to remove As from as high as 100 ppb and low as 50 ppb to safe WHO and EPA approved levels with minimal waste of filter material.

MAYRENA ISAMAR HERNANDEZ, ATHLETIC TRAINING

Title: *Core Stability and Hip Range of Motion Changes Using Three Different Short-Term Interventions Aimed at Muscle Flexibility and/or Motor Control Strength*

Faculty Mentor: Dr. Cynthia Trowbridge

A link between hip range of motion restrictions and trunk muscle weakness has been hypothesized. Therefore, the purpose of this study was to assess the acute effects of three different therapeutic intervention programs (6 visits) on hip range of motion (ROM), trunk stability, functional movement, and self-reported function in patients with hip range of motion restrictions and decreased trunk stability. Fourteen subjects completed the randomized control trial with repeated measures. Three therapeutic intervention groups were tested: Myofascial release, Motor control/trunk strengthening, or a Combination. Subjects were evaluated with a pre-test, post-test, and a residual post-test 1-week later. For all interventions, trunk stability improved from pre to post ($p < 0.05$) and ROM improved from pre to post and pre to residual ($p < 0.05$). There is no difference between the three interventions but our results provide further evidence for a link between the hip and the spine.

WENDY HURTADO, ARCHITECTURE

Title: *Intervention within the Urban Fabric of Fort Worth*

Faculty Mentor: Dennis Chiessa

Gaps within an urban fabric both detach and isolate communities. These spaces, deprived of human activity, continue to increase throughout cities. In general, cities must take action to lower the number of vacant spaces, not simply because of the negative effects they take on their neighbors, but also for the excessive expenses they force. Interventions in these gaps are of great benefit to their surroundings by helping create a social impact and decrease the number of vacant spaces. My project focused in the city of Fort Worth and its current underutilized resources, either vacant spaces or abandoned buildings that attract crime, trash, and more importantly isolate communities. Analysis was done to investigate the amount of vacant spaces, their locations and surroundings in the city. My final intervention, affordable housing, was determined according to its surroundings and the idea for it to serve as a future prototype for any location.

JULIA JOHNSON, BIOLOGY

Title: *Investigation of the Nrf2- Oxidative Stress Response Pathway in Python Bivittatus, Crotalus Viridis and Nerodia Rhombifer Species*

Faculty Mentor: Dr. Todd Castoe

Oxidative stress causes various cancers and tumors to arise in cells. These cause many mutations in normal cellular functions such as abnormal apoptosis and cell proliferation. To combat oxidative stress, Nrf2 factor helps by increasing antioxidants and reducing ROS (reactive oxygen species) and free radicals. Genes such as KEAP1, NQO1, GST and RXRa regulate Nrf2 by repression and activation. Expression of these four genes were observed in three reptilian species in the heart, kidney, liver and small intestine organs. In the *Python bivittatus*, KEAP1 and GST had significantly high gene expression. In *Crotalus viridis* NQO1 and GST were significantly high. In *Nerodia rhombifer* RXRa had highest gene expression. This study can serve as an important factor in understanding oxidative stress, its relation to Nrf2 factor and the numerous genes that help regulate this pathway in living organisms.

ROOPAK KARULKAR, MECHANICAL ENGINEERING

Title: *General Mobility Assistant Sit and Lift*

Faculty Mentor: Dr. Raul Fernandez

Rising from a chair is one of the most mechanically intensive tasks performed daily by the body. As people grow old, their muscles lose the ability to support the body and therefore the need for external assistance arises. There are several products in the market that assist people in sitting and standing, however they are bulky and expensive. The goal of this project is to develop a safe, portable and cost efficient alternative. To achieve this goal the team had to carry out biomechanics research as well as research adequate materials to achieve the objectives. After several design iterations a design with a tilting seat was finalized. The seat is mounted on a steel frame and tilted using a linear actuator. This assembly is capable of lifting a person of up to 250 lbs. This is verified using analysis software and the team is working on a full scale prototype.

JASMINE LUCERO, INDUSTRIAL ENGINEERING

Title: *Airbus Helicopter Blade Installation Cell Redesign*

Faculty Mentor: Dr. Jamie Rogers

Airbus Helicopter is a global company with European roots located in Grand Prairie, TX. They customize helicopters for private customers, such as tourism agencies, law enforcement, and hospitals, as well as assemble the helicopters, install the blades and perform test flights. With the numerous amount of customers they service, there is a need to decrease the cycle time for the blade installation process and make it safer and more efficient. One way to target this problem is by relocating blade storage closer to its point of use. Another way is to redesign Airbus's blade installation cell into a portable station that will accommodate five common helicopters and uphold the safety and comfort of the employees in charge of installation. The DMAIC approach as well as other Six Sigma and decision analysis tools are used to help present a feasible solution by April 2016 that Airbus can implement and, if successful, expand to other locations.

KEVIN LUCIANI, BIOLOGY

Title: *Drug Discovery ~ Novel Compounds for the Treatment of Alzheimer's Disease*

Faculty Mentors: Dr. Frank Foss and Dr. Walter Schargel

Alzheimer's disease (AD) is a neurological condition that accounts for 60 to 70% of dementia. The neurotransmitter acetylcholine is thought to play a fundamental role in the propagation of memory and is a neurotransmitter of great importance in AD. Another neurotransmitter involved in the treatment of AD is glutamate via the NMDA receptor. While cholinergic medications and NMDA antagonists are available for the treatment of AD there remains a need to develop different medications that are more effectual for certain individuals. My objective is to design pharmacologically active molecules to treat AD by utilizing knowledge of neuropharmacology, computational techniques, and the literature in order to generate molecules that have applications to better treat Alzheimer's disease by modifying functional groups to increase receptor efficacy and affinity. Computational models demonstrated greater receptor affinity compared to currently available AD drugs. This shows that these compounds might be potentially useful in treating AD.

LORENZO MARCONI, BROADCAST COMMUNICATION

Title: *Canterbury on the Airwaves ~ Anglican Radio Broadcasting in the United States*

Faculty Mentor: Dr. Andrew M. Clark

Most literature on Christian radio focuses on Evangelicals and Roman Catholics; however, Anglicans have been on the airwaves longest. Despite this, Anglican radio is much rarer than Evangelical or Catholic radio, historically and currently. There is little academic literature to establish why this is the case. Using in-depth interviews with Anglican clergy who currently broadcast, or who have broadcast on the radio, this thesis examines reasons for the lack of Anglican radio and what it would take to increase its presence. Findings indicate the main causes of Anglican radio's scarcity are Anglicans' overall lack of interest in radio, a lack of funds, and the fact that the local parish, rather than mass communications, is the primary way of passing on the Anglican faith. The best way to expand Anglican radio is by building on currently established programming and by utilizing Internet radio and podcasting.

APRIL MARTINEZ, NURSING

Title: *Alarm Fatigue ~ Nurses' Perspective*

Mentor: Dr. Deborah Behan

Alarm fatigue is the desensitization of healthcare providers to the sound of hospital alarms (Tanner, 2013). The problem is the frequency of alarms being set off in hospitals may cause the nurses' to be desensitized to alarm sounds. The purpose of this mixed study was to explore alarm fatigue by first observing the types of alarms and recording how long alarms sounded before they were silenced, and to obtain nurses' feedback on their thought processes related to their decisions regarding the alarms. A tool was devised to record observations of type of alarm and time the alarm. The majority of alarms that sounded were cardiac monitor alarms (47%). No nurses participated in the focus group to discuss their thoughts about the prioritization of alarms sounding. In conclusion, Cardiac alarms can be controlled in a central monitoring area to help nurses in an attempt to prevent alarm fatigue.

SARAH MERCHANT, PSYCHOLOGY

Title: *Endorsing Forced Sexual Contact but Denying Rape ~ A Bewildering Discrepancy*

Faculty Mentor: Dr. Daniel S. Levine

One in five women becomes a victim of sexual assault while in college; the effects of which are devastating, systemic and diminishes the sense of safety on campus. Previous research found 45% of men endorsed raping a woman if they could get away with it, with 32% endorsing force but not rape, highlighting a discrepancy in some men's minds between forced sexual contact and rape as a crime. The current study sought to replicate and extend these findings by examining a larger, more diverse sample. One-hundred-fifty-five male participants completed an online survey about attitudes towards sex and women, as well as cultural identification. Approximately 24% of men in our sample similarly endorsed willingness to rape, with 13% endorsing force but not rape. Results indicated no differences between American and non-American endorsements of sexual aggression. Further research is needed to examine the motivation behind endorsing force but denying rape.

ALI MOHAMEDI, BIOLOGY

Title: *Determination of Mitochondrial Toxicity and Potential Apoptotic Pathways of Ruthenium Polypyridyl Complexes [(phen)₂Ru(tatpp)]Cl₂ AND [(phen)₂Ru(tatpp)Ru(phen)₂]Cl₄*

Faculty Mentor: Dr. Frederick MacDonnell

Cancer has seen a rise in resistance to current chemotherapeutics, like cisplatin. As a result, alternative metal pharmaceuticals, such as ruthenium complexes, have been sought after. Many have shown increased cytotoxicity towards malignant cells and low side effects. Complexes in the Macdonnell lab [(phen)₂Ru(tatpp)]Cl₂ (MP²⁺) and [(phen)₂Ru(tatpp)Ru(phen)₂]Cl₄ (P⁴⁺) have shown to affect mitochondria in some ways. MP²⁺ and P⁴⁺ were tested to see if they are mitochondrial toxins and if the mitochondria are the site of action. The investigation included insight into the Warburg effect. The p-53 deficient lung cancer, H358, was used in Promega's Mitochondrial ToxGlo multiplex assay. We measured the degree of membrane permeability and ATP decoupling by the complexes. Due to this data being unpublished, only control data was discussed. Oligomycin, digitonin, and DIP matched their literature toxicity profiles validating the experiment and helped to elucidate a deeper look into the mechanism of P⁴⁺ and MP²⁺.

HUSSAIN ALI MUCKLAI, SOFTWARE ENGINEERING

Title: *Industrial RGB-D Camera*

Faculty Mentor: Dr. Christopher McMurrough

Computer vision has seen dramatic advances over the past few years, yet most industrial 3D-color cameras still cost multiple thousand dollars, and there remains a gap in the market for a mid-range priced product (~\$500). This work presents the research done in the design and development of such a device. The industry standards which must be met in order to succeed can be categorized as hardware and software. We show that by taking advantage of inexpensive, mass-produced hardware, as well as 3D printing, hardware costs can be cut-down. By leveraging the open-source community to its utmost limit, software costs can be eliminated entirely. We therefore prove that a functioning 3D-color camera can be produced which is able to withstand harsh environments and comply with most industry-wide standards at a much more reasonable cost.

OLUFUNKE OGUNJOBI, ECONOMICS

Title: *Depreciation of the Naira against the Dollar*

Faculty Mentor: Dr. William Crowder

Over the years, the value of Nigerian currency, the naira, has declined against the United States dollar by over 50% and has impacted the Nigerian people, sometimes negatively. There are several different possible reasons why the naira has depreciated against dollar. In an attempt to identify potential causes, historical data will be used to estimate an empirical model. The empirical model is based on three important long-run equilibrium relationships in international economics, purchasing power parity (PPP), uncovered interest parity (UIP) and stable money demand. The evidence presented suggests an important role for the Nigerian income, United States money supply and United States interest rate. Of less importance are inflation rates, United States income, Nigerian money supply and Nigerian interest rates.

MICHAEL PEREZ, PSYCHOLOGY

Title: *Aggression, Gender, Feasibility, and Brainstorming Factors in Relation to Perceived Novelty and Enjoyment*

Faculty Mentor: Dr. Jared Kenworthy

The purpose of this study was to analyze aspects of brainstorming and qualities of ideas that affect the novelty and enjoyment of generated ideas. Participants generated ideas for a new sport onto an online message board. They then met on Skype in 4-person groups to select and elaborate on a single, final sport idea. Three coders rated these ideas for feasibility, enjoyment, and aggressiveness. A linguistic analysis of these ideas was also conducted. Message board activity was analyzed by counting the number of posted ideas and the number of replies to those ideas. Gender of the individual who proposed the accepted, final sports idea was also identified. Results showed feasibility and novelty were negatively related. Novelty was related to the number of replies within groups but was unrelated to gender. Enjoyment was positively related to aggressiveness and to the number of ideas within the group, but negatively correlated with feasibility.

GRANT PHAM, BIOLOGY

Title: *Wave Energy Measurement of Copper Oxide Nanoparticles for Singlet Oxygen Production*

Faculty Mentor: Dr. Wei Chen

Current tumor treatments are costly and indirect. This work presents the possibility of using Copper Oxide (Cu₂O) nanoparticles to destroy tumor cells with minimal collateral damage. Nanoparticles are a proven concept; they are used in many everyday products such as sunscreen and pharmaceutical treatments. Our goal is to synthesize and excite (using wave energy) Cu₂O nanoparticles to produce heat that will convert molecular oxygen to singlet oxygen species. In addition, molecular oxygen is virtually found in all cells. The basic reaction of fabricating particles begins with a nucleophilic reaction. Next, the particles are purified in a centrifuge to separate solutes. Then, the particles are dried and identified using X-ray diffraction (XRD). Finally, the particles are analyzed for excitability using wave energy ranging from 200 nm to 1200 nm. The results showed that the particles are excitable across the spectrum. Overall, the Cu₂O nanoparticles can be used to generate singlet oxygen.

MITI RUPANI, BIOLOGY

Title: *Celiac and Other Autoimmune Bowel Diseases ~ Is Gluten Intolerance or Urbanization the Main Culprit?*

Faculty Mentor: Dr. Malgorzata Wilk-Blaszczka

Over two million Americans claim to be affected with an autoimmune disorder called Celiac disease, with the majority of this group embracing a gluten-free diet. The question this study poses is how gluten, present in staple foods that have sustained society for thousands of years, has suddenly become so threatening. The central focus of this research is in reviewing what other components in today's world, aside from gluten, could cause the immune system to attack the body triggering gastrointestinal problems. Techniques such as meta-analysis, graphical readings and compiling data from previous studies showing gluten being the cause of celiac disease, in addition to those who have found that other environmental issues may be the main root cause of this disease. Results of this study suggest that environmental factors are much better supported as the main cause of a flare-up in celiac patients, rather than gluten causing or worsening the disorder.

KAUSTUBH SHINDE, ELECTRICAL ENGINEERING

Title: *Comprehensive Performance Evaluation of a Wireless Grip Strength Measurement System for Telemedicine*

Faculty Mentor: Dr. George Kondraske

Many daily functions require involvement of the flexor musculature of the forearms and hands; i.e., the muscles that produce grip strength. Grip strength is commonly used as measure to track general wellness, disease progression, and effects of therapeutic interventions. Most dynamometers simply show grip force generated on a display and lack data capture ability. As part of a more comprehensive, self-administered, web-based human performance measurement capability, a grip strength module is being developed. This project focuses on the design performance evaluation of a system which incorporates a self-contained handheld device interfaced wirelessly via Bluetooth to a local PC. The PC serves as a web-based client to a remote server containing a database to store results. A thorough performance evaluation of the system is done at every step of the process. When fully developed, users can perform self-administered tests at home and have a clinician review data remotely.

JACOB SMITH, POLITICAL SCIENCE

Title: *The Relationship between Terrorism and its Sponsors ~ A Case Study of Syria*

Faculty Mentor: Dr. Mark Cichock

Terrorism is not a new phenomenon, but over the past ten years has taken a dangerous turn. Terrorist groups have become more powerful than ever before, rising to have the resources to rival states. This can be largely attributed to the failing of traditional state governments to maintain control of their territory and people. The resulting chaos creates an environment for terrorists to thrive. My research focused on Syria and its fall to see if the terrorist practices tolerated or endorsed by the Assad regime were to blame. Historical terrorist actions linked to the Assad regime were analyzed to see how they affected attitudes. Then, recent events in the Syrian Civil War were studied. My research lends support that the violence utilized by the Assad regime as a means to an end ultimately created a culture of accepted terror that undermined the government and allowed the country to topple.

RYAN A. STEVENS, BIOLOGY

Title: *Bumetanide Demonstrates Amelioration of Learning and Memory Deficits Induced by Ketamine Administration in a Neonatal Rat Model*

Faculty Mentor: Dr. Qing Lin

Ketamine, a widely used anesthetic, has been reported to demonstrate persistent deficits in learning and memory. Neonatal γ -aminobutyric acid (GABA) is excitatory, rather than its mature action of neuronal inhibition. This is due to greater expression of the chloride-importing $\text{Na}^+\text{-K}^+\text{-2Cl}^-$ co-transporter (NKCC1) in the neonatal cell membrane. Thus, bumetanide - an NKCC1 inhibitor - may prevent intracellular chloride accumulation and excitation. Therefore, we hypothesized that bumetanide might serve as a neuroprotectant via interfering with NKCC1 to minimize ketamine-induced neuro-excitotoxicity. Seven-day-old rats were administered bumetanide with ketamine or vehicle. Three weeks following treatment, the groups were tested for spatial learning and memory abilities using the Morris Water Maze. Deficits were noted in animals only administered ketamine. However, the bumetanide co-treatment group showed abilities similar to the control. Thus, these results suggest a mechanism by which neonatal ketamine-induced learning and memory deficits can be alleviated through reducing hyperactive GABAergic-excitatory neonatal synaptic signaling.

NICHOLAS WATSON, INTERNATIONAL BUSINESS

Title: *Specialty Coffee ~ How Special is Coffee to Global Consumers?*

Faculty Mentor: Dr. Jorge F. Jaramillo

Gaining insight into the wants and needs of coffee consumers in a global market are important when serving a diverse population of domestic and international buyers whose needs vary due to culture and background. This work surveyed 200 coffee customers in Dallas and Fort Worth coffee shops. Subjects were given surveys that asked about their coffee drinking habits and satisfaction with recent coffee experiences. Open-ended responses gave insight into buying preferences. The main findings showed that buyers from both domestic and international backgrounds rated taste and customer service as the most important elements in their coffee buying experiences as well as the ethical sourcing of products as the least important element in their coffee buying experiences. Findings also showed that buyers were most dissatisfied with price in their recent coffee buying experiences. Coffee vendors should ensure quality standards on taste and customer service while gauging price sensitivity of local buyers.

D. AIDAN WRIGHT, INTERDISCIPLINARY STUDIES

Title: *The Ides of Richard Lawrence, or How to Be a King ~ History Applied Creatively; A Thoroughly Researched Historical-Play in Progress*

Faculty Mentors: Dr. Donna Akers and Dr. Dennis Maher

The Ides of Richard Lawrence, or How to Be a King is a work-in-progress which applies the historian's tools to the rewarding task of playwriting. The final product is a two-act play that is firmly rooted in a strong understanding of the history of the early 19th century to interpret the events leading up to the assassination attempt on President Andrew Jackson in 1835. The characters are period-appropriate and yet lively in their appearance on the page. The project consists of the play itself and a process paper. The paper will explain much of the means of turning primary and secondary sources (plus narrative accounts) into a full length play. Additionally it will note where artistic license has been used and where reasonable deductions have been made by the author. Little was invented; scenes for the play were merely selected from the multitude of dramatic events that transpired.
