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**ACF 2013 October - December Presentations**

**Amity, Rachel**

October – December FY13

National Conference of Peer Tutoring in Writing

"Talking the Talk: Linguistic Face Theory in the Writing Center"

Writing consultants simultaneous identities as peers and tutors can sometimes pull them in different directions: on one hand, they are specially trained, semi-professionals; on the other, they are young adults with the same challenges and stressors as the students with whom they work. One way for tutors to balance and synthesize these identities is to apply linguistic face theory to their consultations. In linguistics, face refers to ones public self-image. Everyone has face, and though we may not realize it, we constantly and unconsciously respond to face in our everyday interactions. Knowing about face allows us to communicate more effectively and to negotiate social power dynamics more efficiently. This is especially true in the Writing Center, as tutors often construct, balance, and share power through their discourse with students. This presentation combines published literature, original naturalistic observations, and feedback from tutors to investigate the various face-saving and face-threatening acts that tutors can use to not only help students become better writers, but also to help tutors themselves feel more clear and confident about their identities in the Writing Center.

**Austin, Lisa**

October – December FY13

Midwest Modern Language Association

"Awful Doubt or Faith so Mild: Skepticism and Environmental Morality in Percy Bysshe"

As he gazes over the landscape of the Chamonix Valley, Percy Bysshe Shelley explains how the vista engenders a sentiment of ecstatic wonder, not unallied to madness (Shelley, History of a Six Weeks Tour 151-2). Though he is captivated by Nature, and in awe of its power, Shelley does not regard it within a conventional or static mindset. For instance, Shelleys contemporary William Wordsworth describes Nature with language that imbues the landscape with divine significance. However, Shelley regards Nature skeptically, and is uncomfortable with the notion that it is a symbol of divinity. He is unconvinced of the idea that a deity created the earth for humanity. Thus in my paper, I argue that Shelley crafts "Mont Blanc" in response to the dominionist attitude toward Nature often associated with the Bible, and that "Mont Blanc" is in conversation with Wordsworth's "Tintern Abbey," a poem that posits the human imagination as fundamentally in harmony with the natural world. I also examine Shelley's skepticism as potentially corrective to the dominionist mindset. In lieu of both conventionally religious and secular visions of humanitys transcendence with respect to the natural world, Shelleys Mont Blanc initiates a radically materialist understanding of our species role, status, and place within a world of indeterminacy, chance, and dynamic change .

**Belmonte, Paul**

October – December FY13

22nd Annual Argonne Symposium

"Synthesis of Novel Antimicrobial Agents Containing Peptide Bonds"

Antibiotics, produced naturally by microorganisms, have been used for decades in the battle against pathogenic microbes. Bacterial resistance to antibiotics is an ongoing medical issue throughout the world. In an effort to produce novel synthetic antimicrobial agents, amide bond synthesis techniques were used to affix an aliphatic carbon chain and an amino acid residue to an aromatic scaffold. Solution phase organic synthesis was utilized. Thin layer and column chromatography were used to determine reaction completion and purify products, respectively. Infrared and 1H NMR spectroscopy were employed to characterize the structure of the molecules. The synthesized compounds were assayed for antimicrobial activity using E. coli (gram-negative) and S. aureus (gram-positive) bacteria. For multiple compounds, bioassay data suggested antimicrobial activity against gram-positive bacteria, and further analysis suggested one compounds low affinity for binding to human serum proteins. Further synthesis is targeted at dipeptide bond synthesis in an attempt to increase this compounds zone of inhibition.

**Crabtree, Kathryn**

October – December FY13

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"Reading in the Digital Age: When Reading and Writing Intersect in the Writing Center"

Effective reading comprehension entails that readers engage their texts, but the digital medium tends to discourage active reading strategies. This presentation discusses how tutors can help students while researching, particularly with reading texts on-screen rather than on-paper. Participants will learn how to adapt active reading strategies to the digital environment.

**Darbyshire, Paige**

October – December FY13

Annual Michigan Art Education Association Conference 2012

"Identity at Risk"

This presentation will begin with a short description of what our chapter does as an

organization. Then, we will proceed to describe a workshop we did in collaboration with the organization PALS at Grand Valley State University. This will include the explanation of two separate projects done with at risk children and their mentors which focused on the concept of identity. A lesson plan will be provided for each project.

**Durston, Mary**

October – December FY13

2012 American Society of Cell Biology (ASCB) Annual Meeting

"Identifying a regulatory role for the tumor metastasis suppressor gene KAI1/CD82 in metastatic prostate cancer cell lines"

KAI1/CD82, a metastasis prostate tumor suppressor gene expression is lost when the cancer progresses from a primary to a metastatic stage. CD82 has also been shown to be down-regulated in cancers of the gastrointestinal tract, colon, cervix, breast, lung, pancreas, skin, thyroid and liver etc. As a member of the tetraspanin family of proteins, CD82 interacts with proteins and may act as a master regulator of membrane organization at the cell surface. Even though some of the interacting proteins have been identified, the significance of these associations and its role in metastasis prevention is unclear. By reintroducing CD82 into highly metastatic prostate cells (PC3), we have shown CD82 to regulate c-Met (phosphorylation) and activation. Currently we are focused on studying the exact mechanism by which CD82 regulates c-Met. CD82 does not seem to associate with c-Met nor does it seem to down-regulate c-Met. Preliminary indications are that as a tetraspanin and thus as a molecular organizer it may be redistributing c-Met on the cell surface. It is also highly possible that it may bring a c-Met specific phosphatase (such as DEP-1) to the surface to dephosphorylate and deactivate c-Met. We are currently exploring both possibilities. Even though we have identified c-Met protein to be regulated by CD82, we have reason to believe that there may be more proteins regulated by CD82. Microarray studies done on CD82 (+/-), on both tumor and normal prostate cells suggests that CD82 may be regulating genes involved in cell cycle, growth, and metastatic suppression. To validate the results, we have utilized Q-PCR assays, investigating genes specifically involved in metastasis suppression and growth. These genes include: CXCR4, CXCR7, RUNX3, TFF-3, and MMP10. CXCR4 and CXCR7 are chemokine receptors, RUNX3, a tumor suppressor gene, and MMP10, which encodes the matrix metalloproteinase 10 needed for invasion and continuation of metastasis. Two of the genes involved in metastasis (TFF-3, RUNX-3) have been quantified and the data correlates with the microarray data. MMP10, CXCR4, and CXCR7 are currently being validated. Identifying the proteins regulated by CD82 and deciphering the downstream signaling mechanisms involved in this regulation is the focus of our future studies.

**Ebert, Justin**

October – December FY13

Association for the Advancement of Sustainability in Higher Education (AASHE) 2012: Investing in the Future

"Sustainable Impact: The Challenges of Creating Courses on Food, Food Systems, and Food Justice to Empower Students to Action"

When looking to de-silo the often-segregated, triple-bottom line of sustainability, food seems the ideal course subject to broaden understanding. The class was formulated with a three-tiered structure where our food comes from, the choices we make, and the waste and excess the class was designed to explore food systems locally, regional, nationally, and globally; and investigated the environmental, economical, and cultural aspect of each of the three areas. Over the course of two semesters, these students began to see the Herculean tasks involved with understanding our food systems. From readings to dialogues, from projects to papers, from watching films to cooking meals, the class attempted to explore an enormous range of issues. Engaging with traditional in-class lectures, service-learning activities, movie nights, and cooking together; high-impact practices and experiential learning were pivotal to the methodology and success of the course as was the active partnership with the universitys sustainability office. From the impact on their diet, to the way they handle waste, to their greater involvement with sustainability initiatives both on and off campus, this class engaged students both in and out of the classroom and had a campus-wide impact. This presentation openly discusses all aspects good, bad, and ugly of this incredible journey from the perspectives of the faculty member that envisioned the course, the students who took it, and the sustainability project manager that facilitated a variety of opportunities, in hopes that others will develop similar courses to move toward a more sustainable future.

**Formsma, Kevin**

October – December FY13

Meaningful Play 2012

"ParabolaX: Learner Engagement with Serious Games"

Video games continue to be a growing and vibrant industry. With the popularity of mobile devices, casual games such as Angry Birds are reaching out to an ever growing audience. These games have an unprecedented ability to persuade their players to overcome gameplay challenges. Many researchers argue that playing games is inherently a learning experience for the players [1] [2] [3]. Some have claimed that games make their players better people[4]. In the classroom learners are much different today than just 10 years ago. Digital devices ¬ mobile phones, tablets, computers and game consoles are providing fundamentally different experiences during a child's development than in past generations. As educators struggle to motivate their learners, games provide a great opportunity to enrich the education curriculum. ParabolaX is a Serious Game designed to teach principles of quadratic function concepts to high school mathematics learners [5]. Preliminary results with ParabolaX showed that 95% of learners either agree or strongly agree that the game helped them understand quadratic functions. Learners also found the game to be enjoyable and interesting. Many learners indicated they would be interested in using Serious Games in the class room [5]. However, researchers have criticized that engagement isn't driven by the Serious Game content but rather by the new and unique experience of using a game in the classroom [6] [7]. To address and investigate these concerns three distinct versions of ParabolaX are be developed with growing inclusion of gamification techniques and features. The basic version will feature limited scoring and graphics. The more advanced version will include dynamic feedback and high scoreboards. Student engagement will be measured and compared between these three game versions. Engagement will evaluated using measures recorded in game, such as time spent playing and number of attempts per level, in addition to a self-assessment survey. Hopefully the results of this forthcoming study will help resolve some criticism of the use of games in the classroom. [1] J. P. Gee, "Good Video Games and Good Learning," Phi Kappa Phi Forum, pp. 33-37, Summer 2005. [2] M. Prensky, "Digital Game-Based Learning," ACM Computers in Entertainment, vol. 1, no. 1, 2003. [3] B. Winn, "The Design, Play and Experience Framework," in Handbook of Research on Effective Electronic Gaming in Education, Hershey, PA, IGI Global Publication, 2008. [4] J. D. Sutter, "Games 'tap into the best version of yourself'," CNN, 12 April 2012. [Online]. Available: http://whatsnext.blogs.cnn.com/2012/04/12/games-tap-into-the-best-version-of-yourself/. [Accessed 14 April 2012]. [5] A. Montoya, "Using Handheld Touch Screen Enabled Devices and Persuasive Game Mechanics to Teach Quadratic Functions," Technical Library, 2011. [6] D. Bavelier, C. S. Green and M. W. Dye, "Children, Wired: For Better and for Worse," Neuron, pp. 692-701, 2010. [7] J. Teixeira and T. P., "Zun - A Math Exergame," in Videojogos 2011, 2011.

**Furner, Jennifer**

October – December FY13

Society for the Study of American Women Writers (SSAWW) Conference 2012: Citizenship and Belonging

"Cold War Containment in Shirley Jackson's "Flower Garden"

The societal restrictions white Americans placed on themselves in the Cold War era were psychologically damaging for many citizens, and Shirley Jackson underscored the absurdities of containment and the social ills it caused in much of her fiction. People find her most anthologized work The Lottery shocking, but her short story Flower Garden, a less-appreciated but much more subtle depiction of the times, dramatizes the idea of Cold War containment. Flower Garden and The Lottery both depict small towns that turn their backs on one of their own because they fear change. While neither Mrs. MacLane nor Tess Hutchinson, respectfully, may have been actual threats, their communities sacrificed them in order to uphold their perceived sense of security against exposure to nuclear war, communism, and segregation. My paper will show how the fiction of Shirley Jackson aptly faces the fears of Cold War America, reveals the truth about suburbia living, and explains the painstaking efforts one makes in order to be a good citizen.

**Gemmen, Heather**

October – December FY13

National Conference of Peer Tutoring in Writing

"Reading in the Digital Age: When Reading and Writing Intersect in the Writing Center"

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**Gilewski, Carlene**

October – December FY13

2012 Geological Society of America (GSA) Annual Meeting and Exposition

"Constraints on P-T Conditions during Deformation within the Terrane Bounding Chunky Gal Mountain Fault, Central Blue Ridge, North Carolina"

The terrane bounding Chunky Gal Mountain Fault (CGMF) in the Southern Appalachian Central Blue Ridge lies adjacent to the Buck Creek-Chunky Gal mafic-ultramafic complex (BCC), an ocean crustal fragment that experienced peak (Taconian) conditions of ~ 825 oC, 1.2 GPa. Mylonitic amphibolites, garnet-biotite, and sillimanite-garnet-biotite gneisses from the fault zone preserve complex physical and chemical textures that may help constrain the emplacement history of the BCC.

In the type exposure, the CGMF separates BCC amphibolite from biotite gneisses and includes several focused shear zones. A compositionally layered amphibolite mylonite (11J1A) from the main fault zone shows apparent normal shear and includes a hornblende-rich domain with biotite-plagioclase-sphene, a scapolite-rich domain with epidote-sphene, and a biotite-rich ultramylonite with garnet, epidote, and plagioclase porphyroclasts. Garnet shows complex zoning.

A nearby biotite gneiss ultramylonite (11L3) with sinistral asymmetry includes asymmetric garnet, K-feldspar, plagioclase, and muscovite porphyroclasts. Garnet zoning suggests preservation of outward prograde zoning (increasing Mg/decreasing Ca). Increased Ca and Mn with decreasing Mg toward the rims is distinctive.

Large garnets from biotite mylonites with a shallow sillimanite lineation in the nearby Jake Ridge outcrop (JR22) preserve 3 distinct garnet growth periods. Inclusion rich, high Ca/high Mg cores are surrounded by inclusion-free zones with distinctly lower Ca, and slightly higher Mg. Symmetrical triangular tails include fibrous sillimanite and preserve a distinct increase in Ca with decreasing Mg.

Preliminary use of TWQ, Theriak-Domino, and Hb-Pl thermometry suggests minimum peak temperatures of ~ 750 oC, and matrix deformation conditions of ~ 600 oC. Pressure estimates are more complex. Garnet growth zoning in both JR22 and 11L3 are similar to zoning reported for large garnets at Winding Stair gap, where peak granulite facies are documented. However, in these two samples, we see an additional sharp increase in Ca toward the rims that has not been previously reported. This may indicate a relatively late increase in pressure at reasonably high (sillimanite-stable) temperature conditions within the Chunky Gal Mountain Fault.

**Gillett, Kelli**

October – December FY13

Society for Neuroscience Annual Meeting: Neuroscience 2012

"Protracted withdrawal from ethanol and the enhanced responsiveness to mild stress: Regulation via the dynorphin/kappa opioid receptor system"

Withdrawal is one of the defining characteristics of alcohol dependence, and is often characterized by impaired physiological function and enhanced negative affect. These alterations in mood can be long-lasting in nature, as abstinent alcoholics show symptoms of anxiety for months and even years after their last drink. When examined under animal models of alcoholism, laboratory animals with a history of ethanol dependence show an enhanced responsiveness to mild stressors and alterations in neurobiological stress systems for weeks after they are no longer given access to ethanol. The biological mechanisms underlying these changes, however, have yet to be fully explored. Recent evidence suggests that the dynorphin (DYN)/kappa opioid receptor (KOR) system may be a key mediator in the negative affect often associated with drugs of abuse. The objective of the present experiments was to determine the role of the kappa opioid system in the regulation of anxiety-related behaviors during protracted withdrawal from ethanol. Male Wistar rats ( n=76) were fed an ethanol or control liquid diet for 28 days. Six weeks after removal of the diet, rats were exposed to a mild stressor (20 minutes of immobilization), and the ability of the KOR antagonist nor-BNI to attenuate increases in anxiety-like behavior in the elevated plus maze was investigated. A comparison study was also conducted following direct activation of the DYN/KOR system. Six weeks after removal of the liquid diet, rats received injections of U50,488 (0.1 or 1.0 mg/kg, i.p.) or saline10 minutes prior to testing in the elevated plus maze. Rats with a history of ethanol dependence showed a significant decrease in open arm exploration compared to controls when exposed to the mild stressor, an effect that was blocked by nor-BNI. Interestingly, injections of U50,488, which has previously been shown to enhance stress-related behaviors in laboratory animals, did not lead to an anxiety-like response in rats with a history of dependence. There were no effects of treatment on locomotor activity. These results suggest that preventing KOR activation may be sufficient in attenuating the enhanced responsiveness to stress observed during long-term withdrawal from ethanol. However, the KOR/DYN system may not be necessary in producing this anxiety-like state. Further investigation will aid in clarifying the role of the kappa opioid receptor system in protracted abstinence from ethanol. Supported by: R15 AA018213 from NIAAA.

**Haapala, Michelle**

October – December FY13

Annual Michigan Art Education Association Conference 2012

"Identity at Risk"

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organization. Then, we will proceed to describe a workshop we did in collaboration with the organization PALS at Grand Valley State University. This will include the explanation of two separate projects done with at risk children and their mentors which focused on the concept of identity. A lesson plan will be provided for each project.

**Harp, Robert**

October – December FY13

Council of Administrators of Special Education (CASE) Conference

"The Use of Student Achievement Data In Special Education Teacher Performance"

Research has revealed that the effectiveness of a teacher directly impacts the achievement of the students they teach. The highly effective teacher impacts school improvement by improving the success of their students in the skill areas being taught. Many states have recently mandated performance evaluation systems that establish approaches to the measurement and use of data on student growth as a significant factor in teacher performance evaluations. An exploration of the research on effective measurement of teacher performance has aided in the development of a performance evaluation tool to be used with teachers of students with low incidence disabilities that incorporates the functional and academic areas of instruction appropriate for these students with moderate to severe cognitive disabilities. An effective student growth measurement tool must acknowledge the variety of ways a student can show growth in the special education setting while maintaining the standards required in the performance evaluation of teachers. The student growth model developed addresses the varying skills upon which special education teachers focus instruction and the assessments available to show student growth in these areas. Additionally, the tool combines the need to focus on Common Core standards for all students with the equally compelling need for focus on functional skills as dictated by the individualized education plan for each student with a disability.

**Hillman, Tamara**

October – December FY13

The Wildlife Society 19th Annual Conference

"Study of a reintroduced American marten population using noninvasive hair snares"

Prior to European settlement, the American marten (Martes americana) ranged throughout most of northern North America. Colonization and logging led to large scale habitat loss, and in combination with over-trapping of the fur bearing species led to extirpation of marten in many areas of their native range. Years of more conservative logging and land use practices resulted in forest regeneration and made reintroductions of marten possible in several regions. Michigan's northern Lower Peninsula is an example of an area historically part of marten range that has performed marten reintroductions, and will be the focus of this study. Marten were last sighted in the Lower Peninsula in 1911, then were later reintroduced in the mid-1980s in two areas; the Pigeon River Country State Forest (n=49, sex ratio 1:1), and the Manistee National Forest (n=36, sex ratio 1.4 M :1 F). Little is known about the current status of the marten populations in these regions, and the goal of this study will be to gain insight into the Manistee National Forest (MNF) population. The objectives of this research are to use noninvasive hair snares to collect hair from marten and use population genetics techniques to assess genetic diversity, relatedness, distribution, and estimate population size. This will be accomplished by deploying 100 single sampling hair snares throughout areas of suitable marten habitat in the MNF. The results of this research should provide a view of the current marten population status in the MNF, and assess feasibility of hair snare methods for future monitoring and ongoing management of marten in other regions, as well as similar species such as fisher (M. pennanti). This study will take place beginning this summer, 2012 and continue through spring of 2014.

**Horne, Nicole**

October – December FY13

4th American Society of Microbiology (ASM) Conference on Beneficial Microbes

"Removal Efficacy of Harmful Microbes and Contaminants in Biosand Filter Microcosms"

Freshwater is a shrinking resource in large parts of the Earth, with overuse and contamination in underdeveloped countries further rendering the available supply of water unsafe. An inexpensive remedy is the use of Biosand filters of 60-100 L volume (BSFs) in every household, classroom, and hospital, delivering safe potable water a UN Millennium goal. Whereas physical filtration of particulate impurities through graded sand is well known, there is poor understanding of the effectiveness of the microbial biofilm within BSFs in ridding water of harmful contaminants. To address this void, we investigated the efficacy of BSFs in filtering harmful contaminants: total coliforms, E. coli, arsenic, and microcystin-LR in a 3-phase study, using self-designed microcosm syringes of 60 mL volume micro scale analogs of BSFs. Muskegon Lake, a mesotrophic urban lake in Michigan, served as the source water. In Phase I, filters exhibited significant pathogen removal from source water, upon biofilm maturity. Over a 3-day period, a reduction of total coliforms from 12.2 6.3 MPN/100mL in input water to 1.0 - <1 MPN/100mL in output water was observed a 92 - 86% removal efficiency (RE). Concurrently, E. coli was reduced from 7.5 5.2 MPN/100mL in input water to 1.0 - <1 MPN/100mL in output water an 87 - 83% RE. In a repeated experiment, over a 6-day period, a reduction in total coliforms from 42.0 8.5 MPN/100mL in input water to 2.0 - <1 MPN/100mL in output water was observed, a 95 89% RE. Scale-up into the full-sized Hydraid® BSF (Cascade Engineering) showed a reduction in total coliforms ranging from 104 21.6 MPN/100mL in input water to 3.0 1.0 MPN/100mL in output water over a 3-day sampling period, a 99 - 86% RE. In Phase II, addition of rusted Fe filings to microcosms resulted in reduction of arsenic (a common groundwater contaminant in many parts of Asia) from 100¼g As in input water to 0¼g As in output water, a 100% mean RE (n=4) in two separate experiments. Without rusted Fe fillings, mean RE was 65-75%. Phase III involved the investigation of microcystin-LR (a hepatotoxin produced by bloom-forming cyanobacteria in eutrophic lakes worldwide) removal in the absence and presence of a mature biofilm. Before biofilm maturity, mean removal efficiency was 17-30% (n=4) over a 3-day period. Following biofilm maturation, mean removal efficiency ranged from 82-95% over a 6-day period. Upon scale-up into the full-sized Hydraid® BSF, a reduction in microcystin-LR ranged from 94 - 93% mean RE (n=3) over a period of 3 days. Our study demonstrates that mature BSFs effectively remove common pathogenic microbes and harmful cyanobacteria toxins and chemical contaminants, making them a viable option for delivering safe point-of-use drinking water in undeveloped countries.

**Horvat, Emily**

October – December FY13

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organization. Then, we will proceed to describe a workshop we did in collaboration with the organization PALS at Grand Valley State University. This will include the explanation of two separate projects done with at risk children and their mentors which focused on the concept of identity. A lesson plan will be provided for each project.

Jones, Erica

October – December FY13

National Conference of Peer Tutoring in Writing

"Writing Consultant Training: Is It Enough?"

Two consultants from Grand Valley State University conducted research about the different training techniques of writing centers around the nation. Many of the students that visit writing centers are from diverse backgrounds and majors. Often their expectations are based off of their past writing experiences, which are multifaceted, and many times, not in line with typical writing center pedagogy. To effectively combat this, tutor training should prepare staff members for working with different learning styles, preventing unsatisfying consultations. We have, through surveys and scholarly journals, researched the different learning styles, such as tactile, kinesthetic, visual/audio, etc. and the ways in which writing centers across the nation train their consultants.

In this presentation, we will begin with a detailed comparison of different training techniques, highlighting the most popular types of training, and the ensuing conversation will evaluate the inefficiencies and the gaps in said training. Not only will the presenters provide background information, they will also provide proposed solutions to gaps in this training based on nationwide tutor feedback. To explore the potential success of new training techniques, the Grand Valley Writing Center, at their annual training session for new consultants, had new consultants explore and discuss their feelings of preparedness in this area. This feedback was subsequently evaluated next to returning consultants perception of their trainings effectiveness, which occurred before the new programs were introduced. We will challenge center directors to look at new avenues of tutor training through audience discussion, leading to more successful consulting

**Kluck, Emily**

October – December FY13

American Urogynecologic Society (AUGS) 33rd Annual Scientific Meeting

"Robotic-Assisted Sacrocolpopexy: A Retrospective Review of 211 Cases"

Objectives: Robotic-Assisted Sacrocolpopexy (RSC) is gaining popularity as an alternative to open abdominal sacrocolpopexy. The purpose of this study was to evaluate intraoperative and postoperative complications of RSC performed by a single operator.

Materials and Methods: This was a retrospective study involving a review of 211 patients who underwent RSC between October 2007 and February 2012 in a community hospital.

Results: Two hundred and eleven patients underwent RSC for advanced pelvic organ prolapse stage 3 (135 patients) and stage 4 (76 patients). Patients had a mean age of 63.79 (range 39-83) years and mean BMI of 27.60 (SD 3.99). One hundred forty-eight (77%) had previous abdominal surgery. Two hundred six patients (98%) were treated concomitantly with the following procedures: supracervical hysterectomy in 97 (46%), total hysterectomy in one (0.5%), bilateral, right or left oophorectomy in 127 (60%), and lysis of adhesions in 142 (68%). There were three patients (1.5%) who were converted to an open abdominal procedure; two had extensive adhesions and one had a difficult pre-sacral space. Intra-operative complications included one patient (0.5%) who had a cystotomy and was converted to open abdominal. There were no ureter, rectal, small bowel, or major vessel injuries and no blood transfusions. Cystoscopy was routinely performed. Postoperative complications occurred in five patients (2.3%) which included the following: one mesh erosion, one patient developed subcutaneous emphysema, one patient developed post-operative mesh infection, one patient with back pain (discitis), and one patient readmitted with ileus herniated small bowel. Mean operative time was 157.69 (SD 32) minutes and mean length of stay was 24 (SD 4.58) hours.

Conclusions: RSC is a newly evolved procedure for pelvic organ prolapse repair. It is a

feasible and safe procedure with minimal intraoperative and postoperative complication rates when performed by a single surgeon.

**Latshaw, Skylar**

October – December FY13

American Literature Association: Cormac McCarthy, Ernest Hemmingway and Their Traditions

"Foucault's Panopticonic Gaze and Cormac McCarthy's The Road (abbreviated)"

Cormac McCarthys The Road is not only considered one of his masterpieces, but also the black sheep of his novels. Many critics and fans of McCarthy note that its post-apocalyptic setting sets The Road apart from the realism of McCarthys other works, some even arguing that it should be classified and read as science fiction. The world, deprived of flora and fauna, is certainly an alien landscape, with the few people left shells of who they once were, many resorting to cannibalism.The post-apocalyptic setting of The Road functions differently than the world before the cataclysmic event. Priorities have shifted; survival and medical skills are essential. Sight is by far the most important of the senses, allowing for scavenging and avoiding danger. The novels protagonists, an unnamed father and son, are constantly searching abandoned houses for food, hiding from cannibals, scouting and keeping watch. The ocular is survival.

As concrete as the ocular is, it goes beyond the literal in The Road. A component of sight, the gaze, the ability to see and be seen, becomes a psychological obsession with the father, informing his actions, outlook, and goals. Although the gaze is a term used by several critics and philosophers (including Jean-Paul Sartre and Jacques Lacan), Michel Foucaults panopticonic gaze is most apt to apply to the fathers situation. By viewing the father through this lens, my paper reveals how much of an impact Foucaults panopticonic gaze has on the father in The Road. The gaze creates in him an anxiety of surveillance, isolation from other people and, ultimately, a consistent sense of fear. I argue that it is the fathers own psyche that is not only both the greatest help and hindrance to him and his son, but also an insightful framework to view the novels key themesespecially good and evil, religion, and generositythrough.

**Lee, Joshua**

October – December FY13

Society for Neuroscience Annual Meeting: Neuroscience 2012

"Screening the effects of gene overexpression on markers of neural progenitor differentiation in the developing chick Spinal cord"

The chick embryonic neural tube offers an effective model to monitor the effects of gene overexpression or knockdown on neural progenitor differentiation at multiple different points during development. To better characterize the effect of gene manipulation by in ovo electroporation, we are using quantitative PCR to screen the effect of gene overexpression on markers of neural progenitor differentiation, followed by anatomical analysis of interesting candidate genes. Genes are selected from those enriched in neural stem cell populations, or criteria that suggest a role in neuronal or glial differentiation. These approaches are undertaken with undergraduate researchers, providing an optimal forum to reinforce principles of developmental biology and also to identify and characterize unknown genes or genetic mutants. These approaches can be applied broadly to allow investigators to readily screen for changes in neural progenitor differentiation.

**Leslie, Caitlin**

October – December FY13

2012 Geological Society of America (GSA) Annual Meeting and Exposition

"Recent Folding, Geomorphic Evolution, and Paleoclimate: Apsheron Peninsula Azerbaijan"

The Apsheron Peninsula, Azerbaijan in the southern foreland of the

Caucasus Mountains exposes the Pliocene clastic Productive Series and Pleistocene-Quaternary flanking carbonate-rich units in a number of long, narrow oil-saturated anticlines. We are beginning to study the tectonics, geomorphology, and exhumation history of the Apsheron Peninsula and Yasamal and Kirmaky anticlines using GIS, apatite U-Th-He and fission-track thermochronology, and 10Be and 26Cl surface exposure dating. With GIS (digital elevation models, Google Earth, aerial photos, and digital geologic maps), we investigated the morphology, gradients, and relative timing of streams flanking and crossing these two anticlines and how they vary along, across, and between the two structures. Drainage density varies systematically along and across the Yasamal anticline. The higher drainage density of streams on the eastern flank of the anticline may be associated with steeper surface slopes and/or steeper bedrock dips along this flank. The systematic decrease in drainage density toward the southern fold nose probably indicates that the anticline recently propagated to the south during an older (T1) wet climate. The flanking dry Yasamal valley post-dates earlier (fold-related) streams which are left as hanging valleys on west side of Yasamal valley and east side of the Yasamal anticline. Yasamal valley has a non-standard rectangular cross-sectional shape, trends N-S, parallel to today's prevailing winter and summer winds, and slopes southward toward the Caspian Sea. Yasamal valley appears to be wind sculpted, and likely formed during a dry period, T2, that followed T1. Kirmaky Valley appears to be a similar T2 N-S, wind-sculpted, rectangular valley. Kirmaky anticline has no T1 fold-affected streams, suggesting that it may be younger than Yasamal anticline. Results from a suite of ~30 U-Th-He, apatite fission-track samples, and several 26Cl and 10Be samples will be forthcoming; these, and links to calibrated paleoclimate records, will help us establish the absolute timing of the exhumation (unburial) of the rocks in the two Apsheron anticlines and that of the wet/dry climate cycles that helped sculpt the landscapes of the Apsheron peninsula.

**Liebig, Jennifer**

October – December FY13

American Geophysical Union (AGU) Fall Meeting

"Community Change in Long-term Vegetation Monitoring Sites in Northern Alaska"

Vegetation in the Arctic is changing in response to global climate change. Warming in high latitudes has been documented and is expected to continue. With data from sites established in the mid-1990s, we can predict how Arctic vegetation will continue to change using observed changes from both ambient and experimental warming. The four sites are in northern Alaska, where there is a wet meadow site and a dry heath site in Barrow (71°172443N 156°452593W) and a wet meadow site and a dry heath site in and in Atqasuk (70°2840N 157°25253W). Each consists of 24 experimental plots warmed by passive open-topped warming chambers and 24 control plots. The cover of plant species was sampled using a point-frame method four times from the establishment of the sites until the most recent sampling in 2012. The change in cover in response to warming was assessed individually for each species. These data were then lumped into different grouping schemes based on traits that could potentially be used to predict response. A two-way ANOVA was used to compare difference in cover among groups between the warmed and control plots. If the groups within a grouping scheme responded significantly differently to the warming treatment (i.e., there was an interaction between warming treatment and grouping scheme), then that grouping scheme was considered useful for predicting change in tundra communities. Of the grouping schemes used for this analysis, some were based on geographic distribution, such as distribution zones defined by Young 1971, some were based on phenology of the species, such date of flower opening as observed in these sites, and some were based on other morphological and life history traits, such as the wintering state of buds as defined by Sørensen 1971. Overall, the response to warming by species with particular traits varied from site to site, as did the usefulness of an individual grouping scheme. The observed changes may be driven by the increase or decrease in cover of a few abundant species, Carex aquatilis in particular. These grouping schemes are useful for increasing our understanding of how and why community composition is changing; however, a more complex grouping system that combines different traits is needed to more fully understand and better predict the response of Arctic plant species to warming.

**Lund, Andrew**

October – December FY13

92nd Anniversary Meeting of the Classical Association of the Middle West and South (CAMWS) Southern Section

"Power, Presages, and Portrayal: Suetonius' Representation of Livia"

Soon after her marriage to Octavian, Livia Drusilla received a présage foretelling his sovereignty: an eagle dropped into Livias lap a white hen clutching a laurel sprig in its beak. (A présage is an all-inclusive term that Vigourt uses to describe any and all types of divination, including omens, portents, and prodigies [2001: passim; Nice 2003].) This présage, however, brings to mind a number of striking similarities between the Livia story and another eagle présagethis time on the part of Tanaquil, foretelling Lucumos supreme power (Liv. 1.34.8-9). Whereas Livy depicts Tanaquil as an overly assertive and power-hungry manipulator of men, going so far as to hide the death of her husband so as to ensure that Servius Tullius would become king (1.41.1-7), Suetonius portrait of Livia ( Galb. 1) stands out for its comparatively benign treatment of the empress. What is more, Livias hiding the death of her husband so as to ensure the succession of Tiberiusa connection to Tanaquil which has not gone unnoticed (e.g. Rutland 1978; Bauman 1994)is noticeably absent from the De Vita Caesarum. I argue, then, that while Livias eagle présage brings to mind the specter of a woman in power, Suetonius does not portray Livia as the menacing threat that is Livys Tanaquil. Instead, he diminishes this threat by detailing Livias divinatory prowess, by using language and rhetorical strategy to distance Livia from the realm of politics, and through the simplethough effectiveuse of precedent.

While scholars have noted a connection between the tales of Suetonius and Livy (e.g. Flory 1989; Murison 1992; Reeder 1997), less attention has been paid to the role of Livia in the story of her eagle présage. Inasmuch as [w]omen& did not divine nor did amateurs make prophecies without the assistance of a professional seer (Ogilvie 1978 [1965]: 144, following Enking 1959: 78), Livia acts in an unconventional way. She does not seek priests for guidance and explanationas would have been expected (e.g. North 2006 [2000]: 27-8)but instead acts independently. Moreover, by reading this strange event as a présage, we may take into consideration the Roman belief that présages were expected to be sent to the person in the best position and with the greatest responsibility to act upon the message, that is, the person with the most real power and influence(Ripat 2006: 159). Livia in Suetonius account, not a priest or a magistrate, had the requisite power and influence to act upon the présage.

Present in both narratives, then, is the specter of a woman exercising power. The two episodes signal just how much power Livia and Tanaquil wield, a power which contributes to the varying accounts of Livias eagle présage in Pliny the Elder ( HN 15.136-37), Suetonius ( Galb. 1), and Cassius Dio (48.52.3-4). Suetonius version, however, stands out for its comparatively benign treatment of Livia, providing us with a rather different glimpse of Livia than do Dio and Pliny. Suetonius achieves this by distancing Livia from politics (it was the Caesars, and not Livia, who began the imperial custom of wearing laurel crowns from the grove [ Galb. 1]), and through simple precedent: Livia was not the first woman to receive and interpret an eagle présage, and is therefore not so transgressive.

Scholars have noted that Suetonius did document carefully his assertions when he wanted to call authors to account for inaccuracies (Hurley 2001: 9). By diminishing the negative connotations of the Tanaquil story through his portrayal of Livia, then, Suetonius may well have been trying to correct what he saw as a misrepresentation of Livia: Livia is no Tanaquil. Instead, Suetonius Livia, quite unlike Livys Tanaquil, uses her religious and divinatory prowess in a way that does not threaten male authority.

**Maodush-Pitzer, Nicholas**

October – December FY13

Association for the Advancement of Sustainability in Higher Education (AASHE) 2012: Investing in the Future

"Sustainable Impact: The Challenges of Creating Courses on Food, Food Systems, and Food Justice to Empower Students to Action"

When looking to de-silo the often-segregated, triple-bottom line of sustainability, food seems the ideal course subject to broaden understanding. The class was formulated with a three-tiered structure where our food comes from, the choices we make, and the waste and excess the class was designed to explore food systems locally, regional, nationally, and globally; and investigated the environmental, economical, and cultural aspect of each of the three areas. Over the course of two semesters, these students began to see the Herculean tasks involved with understanding our food systems. From readings to dialogues, from projects to papers, from watching films to cooking meals, the class attempted to explore an enormous range of issues. Engaging with traditional in-class lectures, service-learning activities, movie nights, and cooking together; high-impact practices and experiential learning were pivotal to the methodology and success of the course as was the active partnership with the universitys sustainability office. From the impact on their diet, to the way they handle waste, to their greater involvement with sustainability initiatives both on and off campus, this class engaged students both in and out of the classroom and had a campus-wide impact. This presentation openly discusses all aspects good, bad, and ugly of this incredible journey from the perspectives of the faculty member that envisioned the course, the students who took it, and the sustainability project manager that facilitated a variety of opportunities, in hopes that others will develop similar courses to move toward a more sustainable future.

**Martin, Alynn**

October – December FY13

North American Symposium on Bat Research

"A Comparison of DNA Yields from Different Tissue Types and Storage Media"

Preserved tissues provide a wealth of genetic information that can be revisited by researchers, but the quality of the DNA in preserved tissue is affected by the method and conditions under which it is preserved. Due to sampling location climate and logistics, tissue preservation methods are often limited. While tissue and storage media type may impact the extent to which DNA degrades, the relative efficacy of commonly-used storage media has never been directly tested. We analyzed differences in DNA yield for wing tissue preserved in three media: ethanol, dimethyl sulfoxide (DMSO), and silica gel desiccant. DNA extraction yield was also compared for different types of non-lethally sampled tissues: buccal swabs and wing punches. We found that wing tissues preserved in silica gel yield significantly more total DNA (µg/µL) than in DMSO (P = 0.032) or ethanol (P = 0.029), and wing punches yield more total DNA than buccal swabs (P = 3.332 x 10-7). Additionally, qPCR was used to determine which tissue type and preservation methods yielded the highest quality bat DNA. These results demonstrate that choices in sampled tissue and storage media type can have significant impacts on the quantity and quality of DNA obtained from genetic samples.

**McCann, Joanna**

October – December FY13

American Urogynecologic Society (AUGS) 33rd Annual Scientific Meeting

Objectives: Robotic-Assisted Sacrocolpopexy (RSC) is gaining popularity as an alternative to open abdominal sacrocolpopexy. The purpose of this study was to evaluate intraoperative and postoperative complications of RSC performed by a single operator.

Materials and Methods: This was a retrospective study involving a review of 211 patients who underwent RSC between October 2007 and February 2012 in a community hospital.

Results: Two hundred and eleven patients underwent RSC for advanced pelvic organ prolapse stage 3 (135 patients) and stage 4 (76 patients). Patients had a mean age of 63.79 (range 39-83) years and mean BMI of 27.60 (SD 3.99). One hundred forty-eight (77%) had previous abdominal surgery. Two hundred six patients (98%) were treated concomitantly with the following procedures: supracervical hysterectomy in 97 (46%), total hysterectomy in one (0.5%), bilateral, right or left oophorectomy in 127 (60%), and lysis of adhesions in 142 (68%). There were three patients (1.5%) who were converted to an open abdominal procedure; two had extensive adhesions and one had a difficult pre-sacral space. Intra-operative complications included one patient (0.5%) who had a cystotomy and was converted to open abdominal. There were no ureter, rectal, small bowel, or major vessel injuries and no blood transfusions. Cystoscopy was routinely performed. Postoperative complications occurred in five patients (2.3%) which included the following: one mesh erosion, one patient developed subcutaneous emphysema, one patient developed post-operative mesh infection, one patient with back pain (discitis), and one patient readmitted with ileus herniated small bowel. Mean operative time was 157.69 (SD 32) minutes and mean length of stay was 24 (SD 4.58) hours.

Conclusions: RSC is a newly evolved procedure for pelvic organ prolapse repair. It is a

feasible and safe procedure with minimal intraoperative and postoperative complication rates when performed by a single surgeon.

**McDonald, Hollie**

October – December FY13

National Conference of Peer Tutoring in Writing

"Writing Center's Role In Freshmen Preparedness"

As a writing consultant at Grand Valley State University, I will present my research on the writing centers role in student preparedness. The focus of the research was freshman in required composition classes. At Grand Valley State University, there is one required writing course, which all students must pass before graduation. The vast majority of students take this course their first year. This course requires students to submit a portfolio of three essays at the end of the semester. This past semester, I noticed an increased number of freshman composition students visiting the writing center in the first few weeks of the semester, long before their papers were due. This led to the question: Is the role of the writing center changing, and is it helping students be more proactive and prepared with their coursework?

To explore this topic, I examined the session notesfilled out at the end of every consultation. My research spanned six semesters, and I will present the trends that arose, or changed, within the first five weeks of the semesters. I will address the specific topics of focus for the consultations, and present on the changes that have occurred over the semesters researched. I will relay any patterns I find in the research to the session attendees; however, it will not be one sided. I intend to open the floor for discussion between fellow consultants, writing center directors and other attendees.

**Miller, Jessica**

October – December FY13

National Conference of Peer Tutoring in Writing

"I Demand Euphoria! When Good Isn't Good Enough: Felt Sense in the Writing Center"

The theory of felt sense challenges the practice of tutoring on writing as a product, refocusing the central concern of the tutorial on students interactions with their pieces. Felt sense is the bodily sensation that writers experience throughout the writing process that guides their writing decisions. Based on our findings, we will offer new tutoring techniques and strategies that will allow consultants to better aid students in developing a felt sense in their writing processes. Beginning with the pioneering research of Sondra Perl, we will transition into our primary research findings, which are drawn from personal interviews with professional writers from Grand Valley State University and observations of consultations within the Frederik Meijer Center for Writing and Michigan Authors.After presenting our research, we will hold an open discussion for participants to share their experiences with felt sense while also allowing time for them to ask us any questions. We will also provide them with a handout of the tutoring techniques and strategies we discovered to leave them with ways our research can be used practically within their own writing centers. We hope participants will leave this session with a strong understanding of felt sense theory and applicable, engaging strategies for guiding student writers to develop a felt sense for their writing process.

**Orttenburger, Marie**

October – December FY13

National Conference of Peer Tutoring in Writing

"We Can Go All Night: Supporting students and fostering community during the Long Night Against Procrastination"

Continuing work begun by several European writing centers, our university hosted a Long Night Against Procrastination in 2012. The event supported students while promoting services and a community of writers. This presentation covers the logistics of planning a similar event as well as the programmatic.

**Pankow, Sarah**

October – December FY13

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feasible and safe procedure with minimal intraoperative and postoperative complication rates when performed by a single surgeon.

**Parker, Thomas**

October – December FY13

Meaningful Play 2012

"Accessorized Therapeutic Game Experiences for Tablets"

In the world of physical therapy, a number of consumer gaming devices have been used with various levels of success. Most commercially available video games are designed for the general population and are, in most cases, overwhelming and difficult for traumatic brain injury (TBI) or stroke patients to use. Specialized therapeutic medical devices are not only expensive and non-portable, they also make limited use of gamification techniques to better engage and motivate the patient. This paper examines the use of inexpensive, portable handheld devices, together with a custom sensor accessory in order to drive a set of therapist designed and configured, short video games. Games have been designed that are intended to elicit specific therapeutic movements from the patient, are customizable by the therapist for a given patients needs, and also produce clinical output for the therapists to use. The games have been evaluated in clinics by physical therapists who treat TBI patients, and the results indicate our approach addresses the shortcomings therapists have experienced with prior attempts at gamification in physical therapy. Moreover, game controllability by the therapist has been identified as a key component in successfully gamifying treatment of TBI patients as it allows the therapist to customize the game experience to suit a patients individual needs.

**Ringerwole, Neal**

October – December FY13

2012 Geological Society of America (GSA) Annual Meeting and Exposition

"New Pliocene Paleomagnetic Constraint on Tobago's Rotation History"

We present results continuing previous paleomagnetic work on the rotational history of Tobago. Earlier published paleomagnetic work showed that Tobago has experienced approximately 90° of clockwise, finite, vertical axis rotation since the Albian (108 Ma), however, an incremental rotation history is still lacking. The goal of our work is to incorporate newly acquired paleomagnetic data from the Pliocene Rockley Bay Formation, exposed in south Tobago. The Pliocene of Tobago is unstudied from a paleomagnetic perspective. The Rockly Bay Formation is of the right age (2-5Ma) to add a younger constraint to the earlier published work. This muddy, fossiliferous, marine carbonate has a relatively stable, low-coercivity, magnetic remanence. We collected paleomagnetic data from three large, oriented hand specimens, by producing 35 core plugs that were analyzed using AF-demagnetization, thermal demagnetization, and then tested for susceptibility. Following AF-demagnetization, the Bingham average paleomagnetic poles for each of the large sample are 359.6°, 21.4°; 351.7°, 21.3°; and 357.5°, 25.8°. The magnetic mineralogy of the Rockley Bay Formation is likely characterized by primarily pseudo-single-domain magnetite with an added component of an antiferromagnetism, which is likely due to hematite, geothite, or possibly mixtures of the two. A thermal susceptibility bridge was also used to determine mineralogy, however, unexpected thermo-chemical alterations observed during the heating and cooling rendered these tests inconclusive. Additional chemical tests (dissolution, XRD, SEM) are in progress. These results suggest that Rockley Bay Formation carbonates we collected carry a primary magnetization that shows that Tobagos bulk tectonic rotation ceased by the Pliocene (2-5 Ma). This could have resulted from the late Neogene change from oblique convergence to dextral transform motion the Caribbean-South American plate boundary.

**Sawyer, Garrett**

October – December FY13

National Women's Studies Association 2012 Conference: Feminism Unbound: Imagining a Feminist Future

"Social Networks as Virtual Outreach: The It Gets Better Project and Experiences of LGBTQ Youth"

This project focuses on how the It Gets Better Project utilizes social networks constructively to help LGBTQ youth facing harassment, bullying, and rejection. Through audio and visual content analysis, the study examines themes and messages of It Gets Better Project videos, distinguishing between messages made by LGBTQ contributors and those made by allies. Preliminary research indicates LGBTQ contributors focus more directly on homophobic bullying, often including emotional personal coming out stories, while allies use bullying in broader contexts. This research provides a critical lens for analyzing the impact of social networking to a contemporary issue.

**Shultz, Aaron**

October – December FY13

"Desire and Attachment: Finding Union With God"

Southern Illinois University Edwardsville Undergraduate Philosophy Conference

No Abstract.

**Singh, Shambhavi**

October – December FY13

2012 American Society of Cell Biology (ASCB) Annual Meeting

"Identifying a regulatory role for the tumor metastasis suppressor gene KAI1/CD82 in metastatic prostate cancer cell lines"

KAI1/CD82, a metastasis prostate tumor suppressor gene expression is lost when the cancer progresses from a primary to a metastatic stage. CD82 has also been shown to be down-regulated in cancers of the gastrointestinal tract, colon, cervix, breast, lung, pancreas, skin, thyroid and liver etc. As a member of the tetraspanin family of proteins, CD82 interacts with proteins and may act as a master regulator of membrane organization at the cell surface. Even though some of the interacting proteins have been identified, the significance of these associations and its role in metastasis prevention is unclear. By reintroducing CD82 into highly metastatic prostate cells (PC3), we have shown CD82 to regulate c-Met (phosphorylation) and activation. Currently we are focused on studying the exact mechanism by which CD82 regulates c-Met. CD82 does not seem to associate with c-Met nor does it seem to down-regulate c-Met. Preliminary indications are that as a tetraspanin and thus as a molecular organizer it may be redistributing c-Met on the cell surface. It is also highly possible that it may bring a c-Met specific phosphatase (such as DEP-1) to the surface to dephosphorylate and deactivate c-Met. We are currently exploring both possibilities. Even though we have identified c-Met protein to be regulated by CD82, we have reason to believe that there may be more proteins regulated by CD82. Microarray studies done on CD82 (+/-), on both tumor and normal prostate cells suggests that CD82 may be regulating genes involved in cell cycle, growth, and metastatic suppression. To validate the results, we have utilized Q-PCR assays, investigating genes specifically involved in metastasis suppression and growth. These genes include: CXCR4, CXCR7, RUNX3, TFF-3, and MMP10. CXCR4 and CXCR7 are chemokine receptors, RUNX3, a tumor suppressor gene, and MMP10, which encodes the matrix metalloproteinase 10 needed for invasion and continuation of metastasis. Two of the genes involved in metastasis (TFF-3, RUNX-3) have been quantified and the data correlates with the microarray data. MMP10, CXCR4, and CXCR7 are currently being validated. Identifying the proteins regulated by CD82 and deciphering the downstream signaling mechanisms involved in this regulation is the focus of our future studies.

**Stokosa, Allyson**

October – December FY13

Premier Michigan Public Health Conference

"Collegiate Service Learning through International Partnership-GVSU and the Philippines"

No Abstract.

**Stoyka, Lindsay**

October – December FY13

National Conference of Peer Tutoring in Writing

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**Theuerkauf, Drew**

October – December FY13

American Urogynecologic Society (AUGS) 33rd Annual Scientific Meeting

"Robotic-Assisted Sacrocolpopexy: A Retrospective Review of 211 Cases"

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**Urban, Anna**

October – December FY13

Premier Michigan Public Health Conference

"Collegiate Service Learning through International Partnership-GVSU and the Philippines"

No Abstract.

**Waite, Molly**

October – December FY13

National Conference of Peer Tutoring in Writing

"The Cursing Consultant: The Role of Profanity in Writing Centers"

This presentation will explore the positive and negative ways vulgarity functions within the writing center. Profanity is generally viewed as unprofessional and is avoided, but it can play a role in establishing rapport between peers and explaining topics unhindered by the confines of professional discourse.

**Worm, Anna**

October – December FY13

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