

**Program for Undergraduate Research, Scholarship, and Arts (URSA) Conference,
(Tuesday, April 2, 2013 from 12 – 5:30 p.m. in Krasa)**

Talks in Krasa Presentation Room (noon – 1:30)

1. 12 – 12:15, Heriberto Diaz (Dr. Phil Hardy)

Title: Coercion of the Latino Vote Through Presidential Television Ads

Abstract: In this study, a systematic content analysis of more than 40 Spanish language presidential campaign TV advertisements was performed. I examined these ads to determine the types of messages Democratic and Republican candidates utilize to attract Latino voters.

2. 12:15 – 12:30, Kinga Hodorowicz (Dr. Phil Hardy)

Title: Public Preferences Toward Unions and Organized Labor

Abstract: I utilize an experimental research design to investigate variations in public support for organized labor across different types of labor unions. I focus on four specific groups in organized labor: teachers' unions, electricians' unions, sports referee unions, and sports players' unions. I hypothesize that the public will hold the most positive attitudes toward sports players' unions, and the least positive attitudes about teachers' unions. My sample consists of approximately 250 undergraduate students from Benedictine University.

3. 12:30 – 12:45, Sasmit Mohape (Dr. Jayashree Sarathy)

Title: Effect of Bile Acids on Colonic Epithelial Barrier Function

Abstract: Excess bile acids increase intestinal fluid secretion via multiple mechanisms and results in diarrhea. To delineate one of these mechanisms of action, the effect of the primary bile acid chenodeoxycholic acid (CDCA) on epithelial permeability was measured in confluent monolayers of the colon carcinoma cell line, T84 cells. CDCA (0.5 mM) applied to the luminal surface caused a dramatic decrease in transepithelial resistance (TER), which is a measure of tight junction permeability; this affects the integrity of the epithelial barrier and could allow entry of luminal contents including pathogens.

4. 12:45 – 1, Erin George (Dr. Nona Jones)

Title: Integrated Marketing Communications Plan for Hope Salon

Abstract: Hope Salon is the Integrated Marketing Communications Plan that I created during Marketing 330, Promotional Strategy. It is a complete marketing plan for an original service, Hope Salon, a specialized beauty service provider tailored to the needs of cancer patients. The market is currently extremely underserved, and as the child of a breast cancer victim I am hoping to be able to change that.

5. 1 – 1:15, Lina Savickas (Dr. Cheryl Heinz)

Title: The preference and performance of *Manduca sexta* on nitrogen- and phosphorus-treated *Solanum lycopersicum*

Abstract: The preference and performance of *Manduca sexta* in both the larval and adult stages were studied using leaves of the tomato plant *Solanum lycopersicum*. The plants were fertilized with varying amounts of nitrogen and phosphorus and sorted into treatment groups to use in fifth-instar preference tests and oviposition tests. Results from this research showed no significant difference between treatments; sample size should be increased and further tests should be done to continue the study of *Manduca sexta*'s preference and performance in relation to nutrient levels in plants.

Talks in Krasa Presentation Room (1:30 – 3)

1. 1:30 – 1:45, Kathleen Thomas (Dr. Steven Day)

Title: The Chinese National Higher Education Entrance Examination and Individuality

Abstract: This study was performed to identify the impact of the Chinese National Higher Education Entrance Examination (NHEEE) on individualism. 183 university students in Beijing were surveyed to determine their attitudes towards the NHEEE. The results showed that 63.3% of subjects believed the NHEEE to emphasize conformity, and 56.1% believed it to be detrimental to creativity.

2. 1:45 – 2, Marihan Hegazy (Dr. Scott Meyer)

Title: Modification of protein-ligand interaction via in vitro selection

Abstract: Avidin (and its derivative NeutrAvidin) is a common biotin binding protein that is used in a variety of biotechnological applications. A known cyclic peptide ligand of the protein avidin, cyclo(CDRASPYC), has higher affinity to its target in the cyclic form compared to its linear form. In an effort to enhance the affinity of the linear peptide for avidin, an in vitro selection will be carried out using phage display. The selection will allow for the isolation of linear peptide variants from a 10⁸-member library of phage-displayed peptides. Upon isolation of the selected linear peptide, colorimetric assays will be used to determine the binding affinity of the peptide to avidin. The structure of the new DRASPY peptide will then be analyzed to investigate the structure-function relationship of avidin/DRASPY binding.

3. 2 – 2:15, Anoop Takher (Dr. Scott Meyer)

Title: The process SEquence Enabled Reassembly in detecting damaged/modified DNA

Abstract: SEquence Enabled Reassembly (SEER) of proteins can be used to detect specific sequences of DNA, but SEER can also be used in the detection of damaged/modified DNA. The SEER system involves the protein beta-lactamase, which is split into two halves. Each half is fused to a protein domain that recognizes DNA. One half of the beta-lactamase is fused to a zinc finger protein that recognizes a particular sequence of DNA. The other half of the beta-lactamase is fused to High Mobility Box Domain 1 (HMGB1) protein which binds to damaged DNA. As the two halves of the split protein bind to DNA, they recombine and a detectable signal is produced indicating the site of damage on a given strand of DNA.

Talks in Krasa Presentation Room (3 – 4:30)

1. 3 – 3:15, Kevin Webster (Dr. Phil Hardy)

Title: Political Perceptions between Married Couples and Domestic Partners

Abstract: This study seeks to flesh out the role of politics in relationships. By examining the political ideology and party identification of each partner, and what they perceive to be the ideology and identification of their partner I hope to uncover a relationship between political similarities and willingness to engage in an intimate relationship.

2. 3:15 – 3:30, Taliha Nadeem and Azka Khan (Dr. Jean-Marie Kauth)

Title: The Hazardous Effects of Pesticide Use for Landscape Purposes

Abstract: We are investigating the potential risks of pesticide use for “landscape purposes” on the Benedictine campus. Our investigation consists of evaluating student and faculty opinions regarding the hazardous health effects of pesticides. This study will result in exploring the different solutions for resolving this matter.

3. 3:30 – 3:45, Catherine Hoeh (Dr. Nona Jones)

Title: Kratos, Luminous: Integrated Marketing Campaign

Abstract: For the marketing course, Promotional Strategies, each student developed an integrated marketing campaign for a fake company and/or product created by each individual student. Kratos, my company, sells the first LED running shoe on the market, Luminous. My presentation focuses on the components of my marketing plan that demonstrates its seamless integration.

4. 3:45 – 4, Alexander Huba, Christopher Jordan, David Bernard, Jillian Lipman, Manlin Liu, and Sean Scaduto (Dr. Deborah Cernauskas)

Title: Using Discrete Events Modeling to Evaluate Alternative Evacuation Routes

Abstract: This research proposal use discrete events modeling to evaluate alternative evacuation scenarios for Krasa during the busiest part of day (noon to 1 p.m.). Krasa is the only building opened 24 hours on Benedictine University’s campus and we are trying to find out if there is a fastest way of evacuation when there is an emergency occurring. We are using Extend6LT software to help us develop an interactive visual model to compare against the current evacuation plan.

Talks in Krasa Presentation Room (4:30 – 5:30)

1. 4:30 – 4:45, Emad Elmusa (Dr. Phil Novak-Gottshall)

Title: Phacopid Trilobites and the Ordovician Mass Extinction

Abstract: The Phacopid Trilobites offers a fine segue into studying the relationship between size and extinction. There are two sections to this study. First we analyzed the correlation between total body size and individual anatomical measurements and second we conducted statistical tests to see whether size is a factor of extinction.

2. 4:45 – 5, Sydney French (Dr. Jayashree Sarathy)

Title: Athletic Advantage of a Gluten-Free Diet

Abstract: A long distance runner is on the lookout for a carbohydrate source that will sustain their intense energy needs and optimize performance. Using 21 Physiology Lab students from 2012 as subjects, we measured baseline blood-glucose levels (4 hour fasting) followed by levels (every 15 mins for 1 hr) after subjects were given one of three different types of bread (1 serving): gluten free, white, and whole grain. To our surprise, we identified the gluten-free bread as the best energy source as it caused a steady rise and fall in blood-glucose levels returning near the subjects’ baseline; white bread was identified as the worst source of energy. Thus a gluten-free diet, owing to its low glycemic nature, could be advantageous to an athlete.