

## Posters – Krasa Fireside Lounge (12 – 5:30)

**Note:** Posters will be on display from 12 – 5:30 with students “on station” at the times indicated below.

### 1. 12 – 1:30, Lana Ammari (Dr. Beth Vinkler)

**Title:** Machu Picchu: The History and Preservation

**Abstract:** Machu Picchu, an ancient city of the Inca Empire located in the Andes of Peru, remained undiscovered for close to three hundred years. The ancient city of the Incas now serves as a large icon of the national identity of the Peruvian population, specifically the Quecha people, direct descendants of the Inca Empire. However, the increase in tourism in recent years has led to ecological damage, which has put not only the actual city at risk, but the national identity of the Peruvian population as well.

### 2. 12 – 1:30, Harjot Sangha (Dr. Beth Vinkler)

**Title:** Barred from Society

**Abstract:** Recidivism rates in the United States remain high as the correctional system does not effectively reintegrate inmates back into society. This paper explores the problems that prevent successful reintegration and looks at ways society can diminish the barriers that marginalize former inmates from society.

### 3. 12 – 1:30, Harjot Sangha and Alexis Wadowski (Mr. Eric Goodwin)

**Title:** COOP[ERA]TE

**Abstract:** Using the values of service leadership, we hope to serve then be leaders. For our project, we are revitalizing a park while having an overlying goal of promoting interfaith collaboration.

### 4. 12 – 1:30, Katherine Ebeling (Mr. Eric Goodwin)

**Title:** Extended Day Service Project

**Abstract:** This project is devoted at making process and evaluative improvements for the Extended Day Program at Saints Peter and Paul School. A major initiative this year will be to organize various health and education clubs on campus at Benedictine to participate and give presentations on health and bullying to the students. Data will be collected to improve both process and assessment.

### 5. 12 – 1:30, Samantha Jones (Mr. Eric Goodwin)

**Title:** Giving Hope, Giving Life

**Abstract:** This project will provide information about organ donation and its importance for everyone, including college-age students. Research statistics about organ donation will be provided as well.

### 6. 12 – 1:30, Huihui Li (Dr. Cheryl Heinz)

**Title:** Testing the Biodegradability of Ep-Flex Renew Plastic

**Abstract:** Biodegradable plastic is increasingly popular today as an alternative to long lived petroleum based plastics. The following study tested if Ep-Flex Renew plastic is biodegradable. Recyclable # 4 plastic and a non-recyclable plastic served for comparison.

### 7. 12 – 1:30, Bohdan Khomtchouk (Mr. Eric Goodwin)

**Title:** Church Charity: Opportunities and Limitations

**Abstract:** The goal of this project was to establish a systematic and scheduled delivery of food and preparation of meals for the homeless and hungry in the church parish of St. Nicholas. The personal involvement and experience gained have shined light upon the theological and cultural differences that have previously made such efforts difficult. This poster presentation will show how this long-term project must be guided to achieve long-lasting change in the church neighborhood.

**8. 1:30 – 3, Megan Steiner (Mr. Eric Goodwin)**

**Title:** Everybody Love Everybody

**Abstract:** After creating an organization last year here on campus to promote bullying awareness for the future teachers and psychologists studying here at Benedictine, I have chosen to continue my project by conducting a workshop at a local grade school to teach the students there about the dangers of bullying. The first part of my project involved an event on campus to allow students to become aware of our organization and pledge to keep bullying out of their lives. The workshop will allow the students here to go out into the community and “pass it on”.

**9. 1:30 – 3, Evelyn Gomez (Mr. Eric Goodwin)**

**Title:** Hearts & Smiles Foundation

**Abstract:** Tutor and mentor to children who live in Chicago’s disadvantaged neighborhoods. To encourage and help them pursue higher education by giving them the confidence that anything is possible no matter the race and where you grow up in.

**10. 1:30 – 3, Enela Aliaj (Dr. Scott Meyer)**

**Title:** Detection of Cisplatin-Modified DNA by Sequence Enabled Reassembly of beta-Lactamase (SEER-Lac)

**Abstract:** In the past, most of the common ways to detect and sequence DNA have utilized the amplification of its single-stranded form. Though this method is extremely valuable, it lacks the ability to detect any covalent modifications of the DNA since this information is not retained through the amplification process. However, previous work has show that it is possible to detect DNA when it is in its native, double-stranded form through a system called SEER (SEquence Enabled Reassembly of proteins). The system consists of two DNA binding domains that are each connected to half of a reporter protein, such as beta-lactamase. Therefore, in the presence of the specific DNA sequence target, the signal-generating domain will come together and produce a detectable signal. As a result, this method allows for the detection any target sequence in DNA when it is in its native, double stranded form, thus constituting a sensitive, sequence-specific biosensor for DNA.

**11. 1:30 – 3, Rabia Kassim (Dr. Sandra Chmelir)**

**Title:** Arranged Marriages

**Abstract:** Arranged marriages may be a better way to get married because it has been in practice for a longer time than “love marriages”. What are the benefits and challenges to this type of matrimony and what are some aspects that can optimize a person’s chances of staying with their spouse for their whole life?

**12. 1:30 – 3 , Jessica Schiappa (Dr. Bonnie Beezhold)**

**Title:** Vegans report less mood disturbance than omnivores

**Abstract:** We examined the relationship between mood and intake of major omega-3 plant sources in a community sample of individuals aged 18 years old and older attending a large vegan festival. Three- hundred-forty-nine participants completed the survey to assess intake of major alpha-linolenic acid (ALA) sources and mood was measured by the Depressed Anxiety Stress Scale (DASS-21). Data collected indicated that vegans are reporting better mood than omnivores, however, influential dietary factors need further investigation.

**13. 3 – 4:30 , Adam Baldocchi (Dr. Steven Day)**

**Title:** Contemporary Chinese Marriage

**Abstract:** Research conducted on location in Beijing, China focused on the contemporary idea of

marriage, what individuals seek in prospective partners, and the methods utilized to ascertain these relationships. The primary research conducted included observational research at local “marriage markets” while the quantitative research consisted of survey-based research of university students and their opinion about marriage. The anecdotal evidence combined with the quantitative surveys of over 400 individuals across seven Beijing university campus’ yielded interesting results about the idea of marriage.

**14. 3 – 4:30 , Evan Ariano (Dr. Cheryl Heinz)**

**Title:** Preferences and performance of a specialist herbivore on N- and/or P- fertilized host plants

**Abstract:** This research project investigated the ecological interaction of a specialist herbivore, *Manduca sexta*, with *Solanum lycopersicum spp.* host plants grown using fertilizer treatments with varying nitrogen and phosphorous content. Behavior feeding preference tests and physiological performance tests were employed. Although no clear pattern linking these two nutrients to either behavior or physiology arose, some interesting conclusions point to the need for more nuanced approaches to looking at how plant nutrient availability impacts insect herbivores.

**15. 4:30 – 5:30, Fatjona Aliaj (Dr. Scott Meyer)**

**Title:** FRET Monitor Phage Display System

**Abstract:** In phage display a protein or peptide is expressed on the surface of a bacteriophage. The DNA for this protein is contained inside the bacteriophage, thus providing a connection between a protein and the DNA that encodes it. Currently, library of peptides displayed on individual phage particles are used to discover novel protein-protein and protein-peptide interactions in a process called *in vitro* selection. The iterative screening and amplification of members of the phage displayed peptide library do not allow for real-time monitoring of the *in vitro* selection. DNA from selected bacteriophage must be sequenced before it can be determined whether binding to the target has occurred. The sequencing process is time-consuming and there is a risk of isolating peptides that bind to the background rather than the intended target. The aim of this research is to develop a different approach to phage display by using Forster (fluorescence) Resonance Energy Transfer (FRET) to identify binding to a protein target of interest. First, the FRET donor is constructed by fusing a protein target to a yellow fluorescent protein, Venus. Then, the FRET acceptor is produced by fusing a peptide/protein library to a red fluorescent protein, mCherry. When the FRET acceptor and FRET donor are in close proximity, they will produce a FRET signal that will help identify when the protein of interest is being bound by a peptide from the phage display library.



(Updated 3-26-13)