Research Rookies Meeting

Wednesday, October 5, 2016
5:30pm to 7:30pm
Altgeld Hall 125
Agenda

• **Jobs PLUS Overview** – Renique Kersh
• **Research Compliance & Integrity** – Rachel Lapidus
• **Project Updates**
• **Proposal Presentation** – Peer Mentors
• **Announcements**
Research Rookies
Proposal Guidelines
Formatting

- Requires a cover page
- Main body no more than 6 pages
- Doubled Spaced
- Times New Roman
- No smaller than 10pt font
- 1 inch margins
Abstract

• Brief description of the project
• Objectives
• Expected results
• The abstract should be written for an educated but not expert audience.
• Please limit this section to 250 words or less.
Abstract: Examples

- This project revolves around the beautiful and unique world of Japanese akoya pearls. After successful culturing of these magnificent jewels by Kokichi Mikimoto in the late 19th century, the akoya pearl became the hallmark of pearl elegance and splendor – an attribute that lasts to this day. This research will explore the rich history of pearls, the difference between natural and cultured pearls, and the role of Kokichi Mikimoto in the creation of the akoya. It also looks at the historical analysis of Japan’s social, economic, cultural and political structures from the late 19th century to post-WWII.

- The goal of this project is to differentiate between the subtypes of Diffuse Large B-cell lymphoma through public databases and laboratory skills. DLBCL is subdivided into activated B cell (ABC) and germinal center B cell (GCB) like subtypes. Looking at the gene expression of GLI family members in these subtypes will help distinguish factors that affect each. Each type responds to therapy in a different way. By analyzing and familiarizing ourselves with the distinct subtypes we can better provide therapy for patients based on our understanding of the different expression profiles.
Project Description

• NO MORE than 6 pages
• Contains the following:
  – Background
  – Statement of Project Objectives
  – Methods
  – Outcomes
  – Statement of Significance and Impact
Background and Context

• Explain and cite important information
• Clearly state why this project is important
• Highlight how this project pertains to leadership and research and artistry
Statement of Project Objectives

• State problem/question you are addressing in your project
• Be clear and concise
Statement of Project Objectives: Examples

• The experiments are designed to address the question of GLI gene expression in DLBCL with the ultimate goal of helping improve cancer treatment. Analyzing published databases and checking expression using cell lines representing the two subtypes will address this goal.

• The aim of this project is to perform behavioral and biological tests on socially isolated prairie voles given a wheel for exercise compared with socially isolated voles in the sedentary controlled condition.

• This project will analyze data concerning juvenile detention and incarceration and answer these questions. It will also uncover the reasons behind the increase of adolescent imprisonment. Offering solutions and alternatives will be another aspect of this project. Resolutions, actions and a possible book drive will also be presented to demonstrate that there are preventative measures and other ways to discipline and educate.
Methods

- General Project Plan
- Understandable by everyone
- Not too specific
- Concise paragraphs
Methods

*Social Isolation and Exercise*

To determine how exercise can affect social isolation stress in prairie voles, it will be necessary to house prairie voles alone in a cage away from their partners for four to six weeks. The control group will be sedentary while the experimental group will be given a running wheel in the cage for 24 hours per day. The experimental group activity will be monitored with a wheel odometer.

*Behavioral Tests*

Behavioral tests will be completed on the prairie voles to assess depression and anxiety levels, which are common effects of social isolation stress in both humans and voles. The sedentary control group will be compared to the experimental group offered an exercise option. Because prairie voles are respectable swimmers, the forced swim test is done to test for depression. Prairie voles will engage in behavior classified as swimming (limb movements without breaking the water surface), struggling (limb movements that break the water surface), climbing (attempting to climb the walls of the tank), and immobility (no limb or body movements, or movements solely to remain afloat). Immobility is quantified as a sign of depression in the voles.

*Biological Tests*

Biologically, the brain tissue and blood samples are also tested to assess for specific hormones and chemicals that are related to the stress response.
Methods

Historians use primary and secondary sources to research and learn which this research will also do, using each of these including photographs, books, documents and physical artifacts. Being a part of the Gemological Institute of American Alumni Association, there is access to personnel, businesses, trade shows and research material, which are not made available to the general public.
Outcomes

• State expected results
• What if results are different?
• How will these other results be interpreted?
• What is the final product?
  – i.e. URAD
Statement of Significance and Impact

• Explain the significance of the project as it contributes to:
  – The advancement of learning within the field
  – The enrichment of our cultural and aesthetic heritage
  – The public welfare
  – Other research conducted within the same lab or unit
Statement of Significance and Impact: Examples

- This project involves comparing the behaviors and physical condition of socially isolated prairie voles given an exercise option with sedentary prairie voles. This will determine how effectively exercise counters the negative effects of social isolation stress in an animal model. Exercise can then be translated into a possible treatment for depression and social stress in humans. If shown to be effective, exercise can be used instead of, or in addition to, medication to decrease the effects of depression and social isolation stress, which would ultimately lower the risks of CVD.

- From a gemological and ecological viewpoint, the culture of the akoya pearl completely revolutionized the pearl industry and undoubtedly saved countless natural pearls from depletion. This has a continuous benefit for the mollusks from which the natural pearls derive. Historically, the successful culture of pearls in Japan gave the world lustrous and symmetrical pearls, which richly enhanced the Japanese economy, both internally and through exportation, and made cultured pearls extremely valuable. These remarkable pearls helped Japan rebuild its economy after the devastation of World War II, which includes the catastrophic damages of the atomic bombs.
Literature Cited

• Contains the full references for all works cited in your proposal body
• Use the format that is standard in your field (MLA, APA, Chicago, etc.)
  – Be consistent throughout
  – For help visit: https://owl.english.purdue.edu
• Shows that you have spent the time researching your topic
• Gives proper credit to those who's work your project builds on
• Not included in the 6 page proposal limit
Citation Examples

- **APA**
  

- **MLA**
  
  Author(s). "Title of Article." Title of Periodical, Day Month Year, pages.

- **Chicago Style**
  

Examples from Purdue Online Writing Lab
Impact on Academic Experience

• Describe how the project will directly affect or improve your experience as a student
• Be as specific as possible
  – Use examples and descriptive language
• Be concise
  – Shouldn’t need more than a few sentences
This project has a number of projected benefits for the student researcher’s academic experience. First, it will provide a valuable introduction to the research experience. Second, it requires the student to gain valuable experience with powerful and versatile tools like Agisoft Photoscan and the Oculus Rift. Finally, it will provide important development experience in a rapidly expanding part of the Computer Science field.
Timeline of Project Activities

• Lists goals you plan to achieve throughout the year
• Example steps include:
  – Writing proposal
  – Data collection
  – Analysis
  – Literature search
  – Experiments conducted
  – Data compilation
  – Working on presentation
• Should be done in weekly or biweekly increments
Timeline of Project Activities:

Example

• **October 16-31:** Begin working on proposal
• **November 1-15:** First draft of proposal (due Nov. 2)
• **November 16-30:** Finalize proposal (due Nov. 18)
• **December 1-15:** Survey contemporary literature
• **December 16-31:** Outline argument (*winter break*)
• **January 1-15:** Outline argument (*winter break*)
• **January 16-31:** First draft of paper
• **February 1-15:** Second draft of paper
• **February 16-28:** Third draft of paper
• **March 1-15:** Begin poster
• **March 16-31:** Final draft of paper; first draft of poster
• **April 1-15:** Complete draft/poster
• **April 16-30:** Prepare for URAD; present at URAD on April 25
Questions?
Announcements

• **Next meeting** – November 2, 5:30-7:30
  – Proposal draft due
  – Bring a copy to go through in small groups
• **October blog post** – due October 14
• **Reception Practice** – November 28, 5:30-6:30
• **Simmon Scholar application** – due October 30
• **Jobs PLUS Workshop** – October 21, 2:00-3:00
• **Colloquium** – October 13, 12:00-1:00
• **Winter Coat Drive**