Chair's Corner

It is a new academic year at the University of Portland and the Biology Department wishes to welcome our new Freshmen and Transfer students, as well as offer a warmhearted greeting to our returning students. Each new school year, we use the September issue of the *Beaker* to highlight what our department has to offer our majors in and outside the classroom.

In your biology courses, the faculty provide you with the best educational experience by utilizing a student-centered approach to learning. This model provides opportunities for you to practice the skills necessary to become critical thinkers and independent lifetime learners. We are here to help our students determine what information is credible and worth incorporating into their knowledge base and then, to demonstrate how to apply that newly found wisdom to answer pertinent questions and solve challenging problems.

Outside of the classroom, we continue to offer opportunities for you to grow personally and professionally. For example, this year we will feature a series of Biology Seminars with invited off campus guests and on campus biology faculty to share their experiences and expertise with you. We will also spotlight various alumni who will tell you about what they are doing now and how their biology degree helped them get there. We have included some fun activities too that encourage you to use your powers of observation and creative skills. What could be more important for a would be scientist to learn then how to develop testable hypotheses and design informative experiments. Take the time to get to know the biologists you interact with every day and before you know it, you will be a "scientist" too.

-Dr. Ahern-Rindell

Professor in the Spotlight

By: Shannon Leffler

Dr. Julia Ruppell is in her third year at the University of Portland as a visiting professor. She is originally from Rhode Island where she attended the University of Rhode Island for undergraduate school, double majoring in biological anthropology and psychology. Growing up, Dr. Ruppell always had an interest in the field of science. She was curious about animals and wanted to become a veterinarian. It wasn’t until she was completing her master’s degree in biological anthropology at Portland State University that she realized her interest in teaching. Working as a TA for a human osteology class, Dr. Ruppell realized how much she enjoyed teaching and helping others understand challenging material.

Dr. Ruppell has been teaching undergraduate biology courses for 12 years. In her three years at UP, she has taught a core class for non-biology majors—Humans as Primates, Intro to Evolution and Ecology Lecture and Lab, Anatomy and Physiology Lecture and Lab, Human Genetics, and the Evolution Capstone. Dr. Ruppell really enjoys teaching at the University of Portland because of the way in which faculty are treated. She also finds the students to be unique in their motivation and intense passion to learn. She hopes that students will come out of her courses with some knowledge and skills they can apply to their
future careers and everyday lives. Dr. Ruppell encourages her students, especially the freshmen biology majors, to show up—to class, to campus events, and to office hours. She encourages her students to talk to professors and “help them get to know you.” In her spare time, Dr. Ruppell likes to play the drums and garden, as well as spend time with her two young children.

Guess That Baby Professor

Can you guess the Biology faculty who is shown in this photo? To record your guess, scan the QR code below. A prize winner will be chosen at random from those who guess correctly. You can also find the photo in person in the glass display case located in the stairway of Swindells Hall main entrance.
Biology Without Borders  
By: Shannon Leffler

This summer, Dr. Cesar, who is a Lecturer in Biology, had the opportunity to teach a course as part of the Salzburg, Austria Studies Abroad Program. She had four students in her Anatomy and Physiology Lecture. Having such a small class gave Dr. Cesar the opportunity to get to know her students very well. The Studies Abroad Program fosters unique relationships as students and faculty get to interact beyond the classroom.

The Anatomy and Physiology Course was taught on Mondays, Tuesdays, Wednesdays, and on Thursdays the group would go on excursions. The group visited an array of places including: salt mines, castles, concentration camps, and museums. One museum the group visited had skeletons, tissues, and anatomically correct molds of body structures. This was an awesome experience for students as they got to see real life models of some material discussed in class.

Dr. Cesar visited Switzerland and Germany, but found Salzburg to be her favorite place, as she fell in love with the charming small city. Students in the group travelled all over, visiting Hungary, the Czech Republic, Slovakia, Italy, France, the Netherlands, Germany, Switzerland, and other European cities. Dr. Cesar encourages students to think about studying abroad because it gives them the opportunity to continue learning but in a different environment. Students encounter uncomfortable situations, as they are in a foreign place, where they most likely don’t know the language. Studying abroad gives students a unique perspective and a once in a lifetime opportunity to grow as a student and person.

Be sure to complete your application for Studies Abroad by November 15th!

Logo Contest

Last year the freshman biology class had the opportunity to create a logo for their class, which will follow them throughout their experience as a Biology major at UP. This year, both the freshman and junior class will have the opportunity to create a logo to represent their class.

All design submissions must:
- Be original artwork
- Include “Class of 2021 or 2023”
- Only have three colors or less
- Be no larger than 8.5” x 11” in size
- Contain Biology related material
- Contain no inappropriate wording or images
- Contain no UP copyrighted fonts or images

To submit a design or ask further questions, contact Jeffrey Brown at brownje@up.edu. The deadline for submissions is October 7th by 5pm!

Glass Display Case

Check out the Biology glass display case located by the front stairs on the first floor of Swindells Hall. The case currently contains Summer Research photos, Senior Award photos from the previous school year, and current ongoing Biology Department activities. Please check out the display case on a regular basis to keep up with the new postings.

Engage

Check out the Biology Department’s Engage Site for more exciting news and events.
Teaching Assistant Recognition: Ethan Jones

Ethan Jones is a junior biology major working on minors in neuroscience and chemistry. This semester he is a TA for Dr. Wynne’s Cell and Molecular Biology Lab. This is Ethan’s first time as a TA, and he is excited to gain more experience in the lab and be a resource for students in the course. Ethan encourages other students to think about becoming a TA, as he has already learned to appreciate all the effort that goes on behind the scenes of a lab course. Ethan enjoys being able to help Dr. Wynne make sure class runs smoothly. He also works as an Organic Chemistry Workshop Leader and is enjoying having multiple academic leadership roles on campus. Ethan plans to apply to Physician Assistant (PA) School after he graduates from UP.

Biology Alumni: Where Are They Now?

My name is Michalah Leffler and I graduated from UP in May of 2017. When I entered UP as a freshman, I was a Biology major, and like many Bio students, I was planning on going to medical school and becoming a doctor. While plumbing my way through my first semester at UP, I heard about a course being offered in the Spring of my freshman year called Biocalculus, taught by Dr. Highlander. I had always enjoyed math but had never come across any instances in school where they had combined biology and math, so I was curious to see the application of two of my interests. After taking that course, and subsequently Math Modeling in Biology, I decided to tack on a Math major with my Bio major. I ended up earning a B.S with a double major in both Mathematics and Biology. When I graduated, I still did not know what I wanted to do for a career. What I knew for a fact was that I liked Biology and Math and I wanted to do something in the healthcare field. I had decided as I progressed in my time at UP that I no longer wanted to be a doctor, but I did not want to entirely give up Math or Biology, so what could I do that would allow me to combine my two passions? It was then that I reached out to someone that I knew at Kaiser Permanente who happened to be a doctor but worked closely with the Department of Medical Informatics as well. He was the one who first introduced me to who was to become my future manager, and subsequently what led to my discovery of data analytics as it is applied to healthcare.

I now work as an Information Analyst at Kaiser Permanente, as a member of the Northwest Pharmacy Analytics team. At a high level, the goal of my job is to provide data and analyses that will assist the senior leaders, as well as the front-line staff workers of the Pharmacy Department so that they can make informed, evidence-based decisions. This aids in helping the Pharmacy Department run efficiently, safely, cost-effectively and with the quality of the healthcare we expect to provide for our members.

While I no longer need to know the cell cycle, or the anatomy of the brain, my time as a Bio major helped to drill in to my mind the idea of providing supporting information for a question you are trying to answer, as well as being able to communicate it in a meaningful manner, whether that be through an oral presentation or a written report. What I do on a daily basis is essentially miniature biology reports and studies. I follow much of the same scientific processes that I used in Biology courses. The business partners ask a question, and in some cases have a hypothesis, I then pull the data using several tables (materials and methods) based upon the particular business requirements needed to answer the question. I then develop and analyze the results and tie it all back to the original question (Results, Analysis, Future Work) and determine what insights can be drawn from the information provided. This can also lead to future work and subsequent analyses. So, while I do not use the exact knowledge that I was taught in my Bio courses, I use the methods and the ways that it taught
me to think, understand, and present questions and information.

In addition to both of my majors, I would say that some of the other classes and extra curriculars I did helped me hone in on what I was looking for in a career. The computer science class that I took helped me understand and see the application of how I could intersect my two majors better. Additionally, the research that I did with Dr. Ahern-Rindell studying a lysosomal storage disorder using the cells of a unique ovine population and writing a Senior Thesis, helped me build skills in creating reports where I was the expert and had intimate knowledge of a topic and the data and methods used, but needed to be able to convey that effectively both in writing and through presentations. Research also developed my ability to understand the audience I was trying to communicate with and explain my findings to, which is something that I do on a regular basis in my current job.

Whether you are interested in a career path similar to mine or not, I would say shadow people. Shadowing members of my current team for a day to see what that entailed and if I could see myself in that role solidified my interest in becoming an analyst. I would also suggest that one should ask questions and reach out to people. That is how you learn what sorts of opportunities are out there. I had no idea that there was work such as an analyst, but once exposed to it I was able to combine all of my interests and passions, but would have not known about it had I not reached out to my initial contact at Kaiser Permanente who helped expose me to a whole new career.

While I think that a large part of why I got the job I did was my background in math, as it requires people with strong analytical skills, I believe that what also played a key role was my Biology background and the research that I did in Biology. This job not only needs/wants people with strong analytical skills, but also people with strong communication skills who can convey their thoughts in a meaningful, yet concise manner. That is what I think is unique about Biology, as well as Math, even if you have no interest in becoming a doctor, or a math professor, you really can apply your degree in a meaningful way. It is not always about what you learn, but how you learn and how you can apply different ways of thinking.

Michalah Leffler

Upcoming Biology Seminars

This year the Biology Department will be hosting seminars with guest speakers as well as faculty members at UP. Look for posted fliers closer to seminar dates for additional details.

- 10/21 at 4:10pm in DB 133: Sarah Barr, ‘15
  Graduate School experiences
- 10/30 at 7:15pm in Franz Hall 120: Ryan Kenton, PhD
  The biology of zombies
- 11/14 at 4:10pm in DB 130: David Wynne, PhD
  His research program

Upcoming Biology Seminars

This year the Biology Department will be hosting seminars with guest speakers as well as faculty members at UP. Look for posted fliers closer to seminar dates for additional details.

- 10/21 at 4:10pm in DB 133: Sarah Barr, ‘15
  Graduate School experiences
- 10/30 at 7:15pm in Franz Hall 120: Ryan Kenton, PhD
  The biology of zombies
- 11/14 at 4:10pm in DB 130: David Wynne, PhD
  His research program