



January 2017

**Biology Club
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Welcome Back!

Welcome back Biology Club, we hope you all made the best of your break!

The Biology Club executive has a ton in store for the semester! Be on the lookout for the following:

Meet the Department Curling –
Early February

Biology Beer Night – Mid-February

Biology Trivia Night – March 23rd

Grad Photos – TBD

Troutreach – TBD

Graduation and Awards Night –
April 1st

And much more!



Biology Bear Sports

Looking for the opportunity to meet fellow Biologists without talking “science” or a beer in your hand?

Then join the Biology Bears sports teams! We are offering Volleyball and Inner-tube Water Basketball this semester! The deadline to register is next week, so sign up as soon as possible!

For members, it only costs \$5 to play on all the teams you desire, and \$10 for non-members. Last semester proved quite successful as all three teams were able to advance into the playoffs!

Stop by the Bioclub (Room 248) to register!



Featured Grad Student of the Month:

Kira Goff

PhD Candidate

kira.goff@usask.ca



Tell us about your research:

I shoot the synchrotron at algae to see how it's holding up after I stress it out. More specifically, I use synchrotron-based Fourier transform infrared spectromicroscopy (FTIR) to study the effects of oxidative stress on individual living cells of *Chlamydomonas reinhardtii*. FTIR uses the vibrations of functional groups to give us a survey of cellular composition, biochemical makeup, and metabolism in a measurement area. The size of my cells (~ 8 μm in diameter) puts them right around the same physical size as the wavelengths of infrared light that give me information about biophysical components such as proteins, lipids, and carbohydrates. The fact that FTIR is non-damaging gives me a unique opportunity to directly observe cellular metabolism and response to stressors (like oxidative stress) real time in living cells, rather than making inferences based on extracted cellular components.

How did you get your position?

Through a series of fortunate events, to be honest. I worked at the synchrotron as an undergraduate summer student while I was completing on my engineering and biology degrees. I applied on a whim, while I was applying for jobs I considered myself much more qualified for, but things fell into place. As I entered my final year of undergrad, I reached out to Dr. Ken Wilson – who would eventually become my current co-supervisor – about doing a Bio 481 project. After that, I did my MSc in toxicology working with different people – though still with algae and the synchrotron – but came back to do a PhD in biology with Dr Wilson and with Dr Tom Ellis, who I knew from my time at the CLS.

Any general tips for undergrads wanting to pursue future studies in biology?

If you can, try to get some research experience during undergrad. Bio 480 and 481 projects are a great experience. Beyond that, a number of professors, research institutions, and government agencies hire summer students, though the actual amount of research you do will vary by position. In addition to giving you more experience with research itself, and how laboratories work, it can give you a chance to do some field work. Lab and field work are very different experiences, and it's a great opportunity to find out how you interact with both of them. Knowing that is important for understanding the type of research you might find most interesting. Do a bit of reading about professors at the university – many departments have people doing research that overlaps with or is essentially biology. If you're interested in anyone's work, email them and ask to talk to them about it, or ask if they're looking for summer students. If you're at the point of looking for a MSc/PhD, the same ideas apply. It's a good idea to take some time to talk to a potential supervisor's current grad students to get their impressions and learn more about the types of projects and work you could expect. In addition, every professor has a different supervisory style, so it's important to make sure you're signing up for one that's going to mesh with how you want to work.

A STUDENTS PERSPECTIVE: Why Biology?!

Brendan Libner

Why not! Biology is one of the most exciting and diverse subjects available and it has endless possibilities for its students. Plants, animals, genetics, you name it! A degree in biology can lead you down many paths such as working in the industry, pursuing a graduate's degree, or even into a professional college.

I personally chose to study biology due to a life-long love of animals. Like most animal loving kids, I wanted to be a marine biologist or a veterinarian when I grew up, so naturally I thought biology was the logical first step. During my time in the Department of Biology, I found that my true love was animal physiology. With the department offering courses that ranged from the fundamentals to in-depth analyses of various animal body systems, I believe that I was able to thoroughly explore this newfound love of mine. Outside of the regularly offered courses, there are also plenty of summer or honors positions in research labs available that can help you get a taste for what research or industry work is like. I was able to take advantage of this and spent a summer studying locust collision avoidance in Dr. Grays lab.

Pursuing a biology degree helped progress my critical thinking and writing skills, something that professional colleges look for in applications. The endless papers, lab reports, and presentations may seem trivial at the time, but they are the key to developing the skills that will set you apart from the rest of the applicants. So, whether you are planning on entering a professional college or entering the industry, a biology degree is one of the best decisions you could make!



CONTACT US!

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LOUNGE HOURS
10:00AM – 4:00PM

PRAIRIE UNIVERSITY BIOLOGY SYMPOSIUM (PUBS)

PUBS is a student organized conference running here at the UofS during the February Reading Week, 23rd-25th!

If you're looking to get involved or just for some more information about PUBS itself, contact Jillian Kusch (jillian.kusch@usask.ca)

To learn more and stay up-to-date, follow the process on Facebook and Twitter: @PUBS2017SK

Check us out and register at <http://pubs2017.wixsite.com/home>

