Spring is around the corner!

I realize February has been a long month, but we are already half way to the end of the semester. Time flies when you're having fun!

I know this is also a busy time of year with applying and re-applying for grants.

All the best with the remainder of your classes and with all the grants that have been submitted, or that you are expecting notification of this month.

Keep up the great work Biomed!
The Bench is a black steel city sidewalk bench on upper Wyndham Street where Pickersgill and two volunteers provide useful items to those that need them but can’t afford them for 30 minutes every weekday. Then they pack it all up before returning the next day.

“I just call it The Bench. And I capitalize it,” says Pickersgill.

Bread, bottles of water, protein bars, drink supplements, feminine hygiene products and, on a good day, fruit. All packed in plastic tote bins for easy transport.

On this day another volunteer has come along to do the taxes for a visitor. “This is community, people helping one another,” says Papatsie, a talented Inuit artist who splits his time between Guelph and Baffin Island. “It’s a good thing. No judgment. Just sharing and kindness,” he adds in between grabbing a protein bar and joking with Pickersgill.

On average The Bench sees around 35 visitors a day between 2 p.m. and 2:30 p.m. On some winter days, when money is running short, it has hit 50 visitors.

Way to go Kim!
For U of G PhD student **Anita Luu**, encouraging young students to fall in love with science has long been a passion. For more than five years, Luu has been a volunteer for *Let’s Talk Science*, a not-for-profit national organization that sends university students into elementary and high school classrooms and community events to show them first-hand why science is both important and fun.

Last year, she led the first Women and Girls in STEM on-campus event through *Let’s Talk Science* to highlight the role of women in science, technology, engineering and mathematics. As the group’s special events coordinator at U of G, she organized the second event this year, held Feb. 8.

The event was designed to coincide with the International Day of Women and Girls in Science, designated by the United Nations in 2015 to draw attention to the many women and girls leading innovation and change in science, and to call for change to remove the barriers that hold women back from these fields.

According to UNESCO (the United Nations Educational, Scientific and Cultural Organization), only about 30 per cent of girls worldwide choose to study science, technology or math in university. Women’s enrolment is particularly low in IT, at just 3 per cent, while only 5 per cent of those in mathematics and statistics are women, and only 8 per cent of those in engineering, manufacturing and construction. Luu hopes events like the one she helped organize will help change that.

*Way to go Anita!*
In the heart of Milwaukee, Wisconsin resides Marquette University. **Dr. Jibran Khokhar** was invited to give a talk at the Integrative Neuroscience Research Center's bi-monthly seminar series. The Integrative Neuroscience Research Center (INRC) serves to promote the exchange of ideas among Marquette neuroscience research faculty members, thereby increasing opportunities for collaborative research, acquisition of resources, attraction of high quality faculty and students and strengthening of educational offerings in this area. The INRC is comprised of more than 30 faculty members and meets bi-monthly around a seminar series.

...they also took him to watch a College b-ball game!
Dr. Jibran Khokhar was the recipient of the 2019 University of Guelph Co-op Employer of the Year Award. Jake Underhill was a Biomedical Engineering Co-Op student in Jibran's lab this past year and nominated him for the award.

The award is given in appreciation to the commitment mentors have made in hiring, training and advancing the learning and growth of our students. Thank you Jibran! The award is also in recognition of the value that Co-op students bring to our organization, and a reminder of the tremendous impact that mentors make to their Co-op student.

In celebration of his nomination, Jibran received the award at a Co-op Awards reception on Thursday, March 5th, 2020 during a formal presentation.

CONGRATS JIBRAN!
1. CCVI Members Wear Red – organized by the Martino Lab members of CCVI. February is Heart Month. This year focuses on Women's Heart Health. Women's Heart Health is Under-researched (2/3 of heart disease and clinical research focuses on men); We are Under-aware (women are 6x more likely to die from Cardiovascular disease than breast cancer); Women are Under-diagnosed and Under-treated (heart attack symptoms go unrecognized in 53% of women); and Women's heart health is Under-Supported (women are only half as likely as me to attend and adhere to cardiac rehab). CCVI members, including many Biomed Students, photo at the Gryphon on #WearRedCanada because #HerHeartMatters Day – a National Initiative. Dr. Martino is a designated spokesperson for the Heart & Stroke Foundation – Women’s Heart Health – please see the CCVI website for more news and media releases on Women’s Heart Health. [http://www.uoguelph.ca/CardiovascularResearch/](http://www.uoguelph.ca/CardiovascularResearch/)

2. Dr. Mina Rasouli, a postdoc in the Martino Lab, was awarded a scholarship for the Libin International Trainee Symposium, focused on the Women’s Cardiovascular Health Initiative. Dr. Rasouli’s research focusses on the importance of Sex and Gender in Cardiovascular Health and Disease. Way to go Mina, we’re so proud of you!!

Dr. Rasouli in Banff Alberta, and at the conference.
3. **Dr. Tami Martino** was honored to be an Invited Speaker to the 4th Annual 2020 International Hawaii Cardiovascular Symposium at the John A. Burns School of Medicine (JABSOM) Feb 5th-6th. Dr. Martino’s seminar was on Circadian Medicine – including our new 1 day treatment to cure heart attacks. Dr. Martino was also honoured to be a Session Chair.

Dr. Martino with the Distinguished Cardiovascular Scientists from Canada, the United States, and Japan.

In other news:

The Martino Lab is very proud of **Priya Mistry** (MSc Biomed, 2019) who is now a *Research Assistant in Cardiology* at the Hamilton General Hospital. Yay Priya!!

**Dr. Tami Martino** visited with Scientists and Clinicians at the University of Texas at Austin in February. UT Austin is one of the key origin institutions for Circadian Biology. Dr. Martino focused on novel collaborations connecting heart and brain research – cardiovascular and neurosciences initiatives.

CCVI – Cardiovascular Centre is excited to host the Upcoming Distinguished Scientist Seminar for Dr. Glen Tibbits from Simon Fraser University. Dr. Tibbits is a Professor and Tier1 Canada Research Chair in Molecular cardiac Physiology. His talk will be on the use of human pluripotent stem cells. CCVI Seminars are organized along with the Student Executives, providing outstanding leadership and networking opportunities for students. The 2019-2020 Student Executives include Biomeder’s **Dr. Mina Rasouli & Dr. Tarak Khatua** (postdocs), **Cristine Reitz, Kathy Jacyniak** (PhD students), **Aidan Murray, Jinan Saboune, Hesham Farag** (MSc students), **David Friedman, Iman Aziz, Nina Harris** (BSc undergraduates). The seminar will be in PAHL 1800 – 11:50-1:00 PM on Thursday Feb. 27. Free for all but seating is limited, please RSVP to ccviguelph@gmail.com thanks! Please see CCVI website for further information: [http://www.uoguelph.ca/CardiovascularResearch/](http://www.uoguelph.ca/CardiovascularResearch/)

In February, Dr. Katey Rainer visited the University of Guelph to give a seminar. She is a PhD Scientist and Director of the Cardiometabolic microRNA Lab at the University of Ottawa Heart Institute. Biomed PhD student **Cristine Reitz** had the honour of joining with her and colleagues for lunch following the seminar.
Students' visit to Hannam Fertility Centre, Toronto. The visits started in January and by the end of February, all 10 students in the program have visited Hannam Fertility Centre.

L to R: Danielle Campagnolo, Rachel Scarfone, Raquel Pereira, Lukasz Czochara

L to R: Patrick Keenan, Yazmine Burley, Savana Biondic
Biomeders mourn the passing of Lois Betteridge

Guelph lost one of its most celebrated artists and champions with the recent passing of silversmith Lois Betteridge (wife of Dr. Keith Betteridge) at the age of 91. Lois died Feb. 21 surrounded by family, said daughter Lise in a phone interview on Tuesday. “I believe she felt we were all around and she could finally let go,” said Lise.

Lois was a celebrated and prolific metalsmith, a craft that she practiced for more than 67 years. Her work can be found in collections and galleries around the world, including the Canadian Museum of History, the Victoria and Albert Museum and the Royal Scottish Museum.

Over the course of almost seven decades, Lois received recognition and awards too numerous to list in her obituary, said Lise. In 1997 Lois was named to the Order of Canada, received a lifetime achievement award from the Society of North American Goldsmiths in 2010 and Queen Elizabeth II Diamond Jubilee Medal in 2002 and 2012.

In 2002 she was named one of Guelph’s Women of Distinction. She was elected to the Royal Canadian Academy of Arts in 1978 and received the Saidye Bronfman Award for Excellence in Crafts.

Lise said the family’s loss is difficult to put into words. “She would grasp her grandchildren's' hands under the table, squeezing them and being so interested in what they were doing and their next adventure,” said Lise. “She made me feel like the most cherished daughter ever and my biggest supporter through thick and thin.”

“She’s someone who was supportive and believed in people — and that was a lot of people,” added Lise.

Lise said her father Keith was her mother’s biggest fan.

(Taken from Guelph Today).

Dr. Betteridge, on behalf of Biomed, please accept our deepest heartfelt condolences on your loss. I hope you and your family are able to eventually get past the grief and find time to celebrate her lifetime of incredible achievements. Please know that she is in a much better place.

Take care.
International Women's Day!

Jinan Saboune (MSc student with Dr. Glen Pyle) wrote an awesome article following several interviews with Faculty/staff and students in Biomed.

The article can be found at the end of this newsletter...PLEASE read!

Happy International Women's Day everyone!!
International Women’s Day Spotlight: Biomedical Faculty & Graduate Student Share Untold Stories and Ideas for Change

In the light of International Women’s Day, I would like to shine the light on women scientists recounting their personal experiences navigating careers in a male-dominated field.

During my academic career I’ve encountered many female scientists that have inspired me, both at a personal and academic level. Having worked and navigated through different programs in multiple universities across North America, I’ve had the chance to meet unforgettable women scientists from various disciplines and backgrounds. I can say that they all had one thing in common: resilience. They were resilient and dedicated women in science that pushed through the “so-called” stereotypes of what women should be in the world of academia.

Despite stunning improvements with the #WomeninSTEM movement, women in academia are still objectified and sexualized – and most importantly not taken seriously compared to their fellow male colleagues. Even though we may be convinced that STEM is not just a field for men, the general bias that comes with this conviction, remains to associate science with masculinity. In certain situations, this may lead to otherwise careful scientific evaluation committees putting women at a disadvantage during job interviews or faculty decision making meetings.

Women still seem to push boundaries, break out of character and channel their inner passion for science in unexpected ways.

The purpose of this article is to highlight women scientists and early career graduate scientists in the Biomedical science department. I would like to showcase a diverse and inclusive list of women that undergraduates and graduate students in the biomedical science department can see themselves in and inspire to.
Meet Dr. Giannina Descalzi, a new faculty member in the Biomedical science department at the Ontario Veterinary College (OVC).

Giannina investigates chronic pain from a molecular neuroscience perspective looking at the intersection of pain and emotion in the brain, especially brain regions that are involved in emotion, and the molecular pathways that are altered during chronic pain states. Dr. Giannina identifies as a queer female scientist and advocates for change in inequalities and channellings for LGBTQ people in STEM.

Where did your passion for science come from?

Dr. Descalzi pursued her BA degree in Psychology at the University of Guelph. During one of the courses she was taking at that time, Principles of Learning and Memory, her professor gave a lecture about Neuroplasticity. Dr. Descalzi remembers that that day she learned about Long Term Potentiation (LTP) and how the synapse changes in response to experience. Immediately after that lecture she saw the world in a different perspective. She switched her major to neuroscience and pursued worked in neuroplasticity. During graduate school, she noticed that beyond the intersectional mechanisms of neuroplasticity and chronic pain, there was a huge human need to figure out a way to help people with chronic pain. Her passion for science does not just originate from her dedicated work in the lab but out of her desire to make the world a better place.

What kind of issues have you faced as a woman pursuing a career in science?

Throughout her path in academia, Dr. Descalzi has not faced any overt circumstances in which she has felt judged against. Beyond being a woman, Giannina is also queer and proudly identifies as a queer female scientist. However, at times she has felt that her queer identity might have hindered various job opportunities that she had applied to during her academic career. Otherwise, she has always ended up in comfortable communities in which she was welcomed for who she is.
As a LGBTQ advocate and scientist who has just successfully started running your own lab, what advice would you give to graduate students following in your path?

“Always be yourself. Be open because it’s the best way to be comfortable. Be open with who you are and try to deal with challenges with confidence.”

Was there a specific person that inspired you during your time as a graduate student?

While Dr. Descalzi was finishing her PhD work at the University of Toronto, she was inspired by one of her committee members, Dr. Sheena Josselyn. Giannina describes her as "petite” but a GIANT in the room: “She has a lot of respect and power and my inspiration came by her being such an excellent scientist”.

Do you implement the attributes you learned from Dr. Josselyn towards your students?

“Yes, I definitely think it’s important to embody the idea in being confident in what you do know”. Dr. Josselyn taught her to not feel insecure in what she does not know and to express confidence in talking. Giannina tries to bring this up in her lab meetings and encourage her students to “try and figure out answers to gaps of knowledge in our research and to things that we do not know.”

Would you like to add anything else related to your career as a woman in STEM?

“I feel very grateful for the opportunities that have been afforded to me, which have allowed me to pursue a career in STEM. We know that too many girls and women turn away from careers in STEM, whether it's due to a lack of support from families and teachers, or because of societal assumptions about the kind of careers that are more suited to women.” As a female, queer scientist, Dr. Descalzi hopes to be a visible example that careers in STEM are achievable regardless of gender or sexual orientation.

“On a personal level, I will continue to work on areas where she sometimes feels challenged, such as speaking up in a room full of colleagues who are older than me and male. These are situations that female scientists often encounter at conferences and even in some labs, and it's important to fight against the instinct to feel intimidated, and the feeling of being an impostor.”

Dr. Descalzi is thrilled that in this role as a professor at the University of Guelph, she will have the opportunity to mentor women interested in pursuing a career in STEM.
Dr. Alicia-Viloria Petit, PhD (Toronto)

Dr. Petit identifies as a Latin Women in STEM.

Currently an associate professor in the Biomedical department looking at molecular mechanisms of breast cancer invasions and metastasis. From being a well-known researcher in her field to a mother and an advisor to graduate students in her research lab, Dr. Petit does it all – A Super Woman.

Where did your passion for science come from?

“It came from school when I started to learn about science in high school.”

Dr. Petit was always very happy to study science and it is something that came naturally to her. When she started enrolling in specialized courses, such as cell and molecular biology, she realized that this is what she wanted to do. Later, Dr. Petit pursued her first master's degree in immunology in Venezuela. Her biggest motive to becoming a cancer biologist, originated from a personal event. Her grandfather died from metastatic lung cancer when she was 14 and since then she was really interested in the disease and intrigued about why her grandfather died from something that originated from a cell. Dr. Petit has been working in the area of cancer studies since she was 19 years old. After completing her master's degree, she came to Canada to pursue a PhD in biophysics at the University of Toronto in the field of tumor angiogenesis.

What kind of issues have you faced as a woman pursuing a career in science?

Growing up in a very sexist society (Latin America), women in her generation did not go to school because people thought that women did not need to. However, Dr. Petit’s parents were very supportive and always stimulated her to study and achieve academic careers. Despite coming from an underprivileged family, Alicia fought for her right to continue her education and was given multiple scholarships throughout her academic life. As she moved in different stages in her career, she did not feel discriminated for being a woman. In Canada she always felt that she was given equal opportunities compared to her male colleagues, however she does notice that a lot of the professors in the Biomedical department are males, but:

“I really think that the university is really making an effort to change that and make sure that men and women are given equal opportunities.”
Successfully navigating from a country that puts women second and as a Latin Women in Science, what advice would you give to younger students in your field?

“If you are passionate and good at something, believe that you have the same capacity as anyone around you.”

For her it is not a matter of capacity, but a fight to be strong and resilient. “It is important to have confidence in yourself and your abilities, because ultimately you are working for yourself.”

She also encourages women to find a good advisor who isn’t just an excellent scientist, but a mentor that can help you navigate the different systems. Moreover, she mentions that there is also the issue of trying to balance work and your personal life. As passionate women, we feel the need to do everything at once – getting a PhD, having a publication and having a family. Dr. Petit encourages women “to prioritize and give time to what is important- this is key.”

“Make sure you put time with your family and to organize your life as to never put family aside.” Dr. Petit tries to find time to pause and relax her mind from work as it helps her recharge her passion in the workplace.

What can we do as a department to enhance the experience of women in STEM?

“Perhaps we can find female mentors for graduate students that are not necessarily their supervisor. A person that they feel chemistry with and that could meet with them occasionally and help them navigate through women related issues.”

Dr. Petit is also involved in the CHROMA project here at the University of Guelph. She acts as a faculty mentor to help international students navigate their first year of study at the university.
Meet Dr. Sarah LePage, adjunct professor in the Biomedical department at the University of Guelph.

Currently an undergraduate/DVM course coordinator in one of the countries’ famous Ontario Veterinary College (OVC). Not only does she tackle teaching both DVM and Biomedical students, she is also the scientific advisor and production associate for a veterinary and translational regenerative medicine company, eQcell.

**Tell me about yourself and where your passion for science came from?**

Grew up loving animals, Dr. LePage worked hard in high school to get into the Ontario Veterinary College. Upon starting university, “I initially struggled with coursework and didn’t do well on tests, so that dream fizzled out”. She started to consider graduate school when she was enrolled in a Lab Methods course offered by the department of Molecular and Cellular Biology. Back then she had some really great fourth year courses and professors who encouraged her to get a Masters degree.

“I moved to Vancouver to pursue an MSc. in epigenetics, and ended up seriously disliking the entire experience. I moved back to Ontario, got a 9 to 5 office job outside of science, then heard about the work being done at OVC in equine stem cells with Thomas Koch”.

As a PhD student in Dr.Koch’s lab, she spend her first year as a visiting scholar at the University of Toronto in Dr. Kandel and Dr. Nagy’s labs to learn cartilage tissue engineering and pluripotent stem cell biology from the biggest names in the business, then spent three months in Brazil on exchange isolating stem cells from the umbilical cord blood of foals.

“Coming back to Guelph, my passion for my work only increased as I truly saw how applicable my work was to restoring joint health in horses and humans. This desire to come up with better solutions for common, chronic inflammatory conditions using regenerative medicine only continues to grow, and I’m so pumped to be in a position now where I can share that with the ‘younger’ generation.”

**What kind of issues have you faced as a woman pursuing a career in science?**

“Lack of CONFIDENCE! Lack of female mentors. Expectations that to be a woman in science, you have to give up everything: family, hobbies, stability”.
The pressures outside of science and the expectation that you are going to be 100% at everything is an obstacle that Dr. LePage faces everyday. Additionally, she finds it more difficult to say “no” to things because “we seem to need to have more credentials and experience than males with similar academic training.”

How can we find methods to improve these issues?

We need to find female mentors

Dr. LePage found Dr. Cheryle Seguin (associate prof and acting chair of the dept of Physiology and Pharmacology at Western) and considered her a great female mentor – “she’s a woman scientist who does great work, has a family, and is 100% herself, as she’s genuinely excited when things are going well in the lab, and equally vulnerable when things are not.”

Continue up show up everyday despite failures can really improve your confidence

Moving more into a mentor role for young women and marginalized groups has really helped Dr. LePage’s confidence. “Maintaining relationships and activities (horses) outside of science has kept me grounded and I think a more well-rounded individual as a whole.”

The challenges she has encountered in academia, and the issue she is currently working through have helped shape her into a more relatable and approachable leader, and she has found that being honest with her struggles has helped her work through them so much.

What advice would you give to the younger graduate students following in your shoes?

“If I were to give advice now, it would be to ALWAYS choose happiness over prestige. Having a Dr. in front of your name does NOT make you happy. Getting to explore and answer questions in biology, interacting with SO many bright minds, and having the flexibility to do all this and be supported by my colleagues, friends, and family who believe in me more than I believe in myself, that’s what makes this career path so awesome.”
Graduate Students

Vickaryous Lab

From right to left: Yi Yan Liu (MSc), Chloe Graham (MSc), Keely Schwann (MSc)

Where does your passion for science come from?

Chloe always had an interest in human medicine and wanted to try research as a new challenge. Being around the lab for Yi Yan, opened up a new world in which she has found wholesome and her motivation for science comes from having a lot of passion for her project.

Are there any issues you are facing as women pursuing a graduate scientific degree?

Chloe mentions that she may have experienced “imposter syndrome particularly because we don’t have female role models or maybe because there is not a lot of female faculty.”

To add, Yi Yan says that she feels that women are underrepresented but also feels very supported by the group of scientist in Biomed.
From right to left: Nariko Kuwahara (MSc), Lauren Isaac (PhD), Emily Martin (MsC), Kate Nicholson (PhD) and Simran Bhullar (MSc).

If you were to give advice to undergraduate students in Biomed, what would you say?

Simran would like to encourage women to “network with not just faculty but graduate students because we can all learn and strengthen each other – Girl Power, do your thing.”
Are there any issues you are facing as women pursing a graduate scientific degree?

Having come from Argentina, where women’s issues are still on the rise, Emilia has faced obstacles in getting her opinion validated the same way as her male colleagues. She hopes that women can come up with strategies to be heard more, but she is optimistic that it is getting better.

What advice would you give to younger women going into STEM fields?

“If you like science, don’t give up because everything looks so difficult. Ask for help if you need it, and don’t let anyone tell you that you are not good enough.”
HAPPY INTERNATIONAL WOMEN’S DAY FROM THE PYLE LAB!

From right to left: Aamanda Fregones (Biomed 3rd Year), Brooke Evans (Biomed, 4th Year), Dr. Glen Pyle (Advisor, #WomeninSTEM advocate), Victoria Crincoli (Biomed, 4th year) & Jinan Saboune (MSc Student) at the International Women’s Day Breakfast at the University of Guelph.

Article Written By: Jinan Saboune, MSc Candidate, Biomedical Department