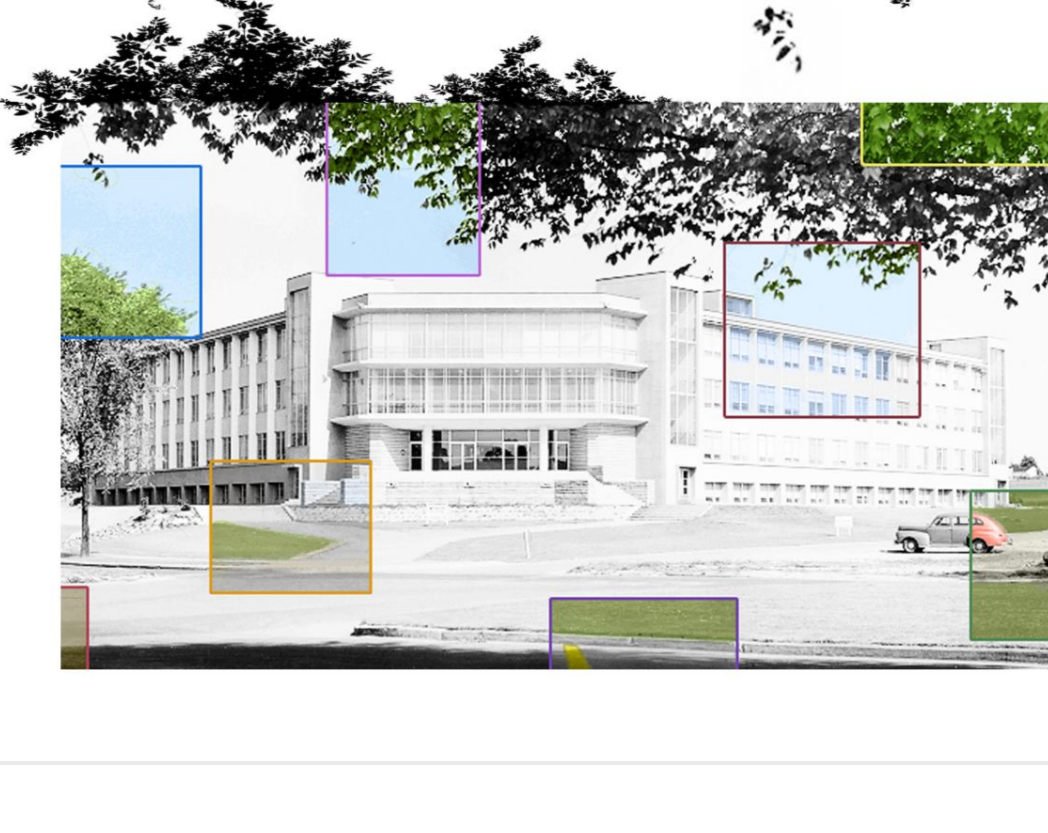


MBIM 2019 NEWSLETTER



GOODBYE WESBROOK

This year we say goodbye to Wesbrook as we move to the new Undergraduate Life Sciences Teaching building.

Join us for Graduation Tea

Monday May 27th
UBC Life Science Centre
(West Atrium)

12:30-2:30

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Alumni

Dear Alumni

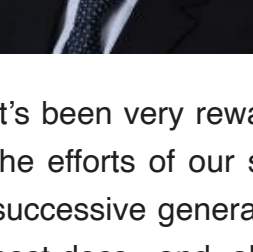
We love to hear from you!

Get in touch with our Alumni Engagement Coordinator, Parvin Bolourani to let us know where you are & what you are doing.

We look forward to hearing from you!
parvin@mail.ubc.ca

A Message From The Head

By Mike Gold



As I approach the last few weeks of my 10 years as Department Head, I've been reflecting on the tremendous progress that we've made as a department over this decade. Our department has always had a very strong sense of community and family, which was established long before me by the departmental elders (you know who you are).

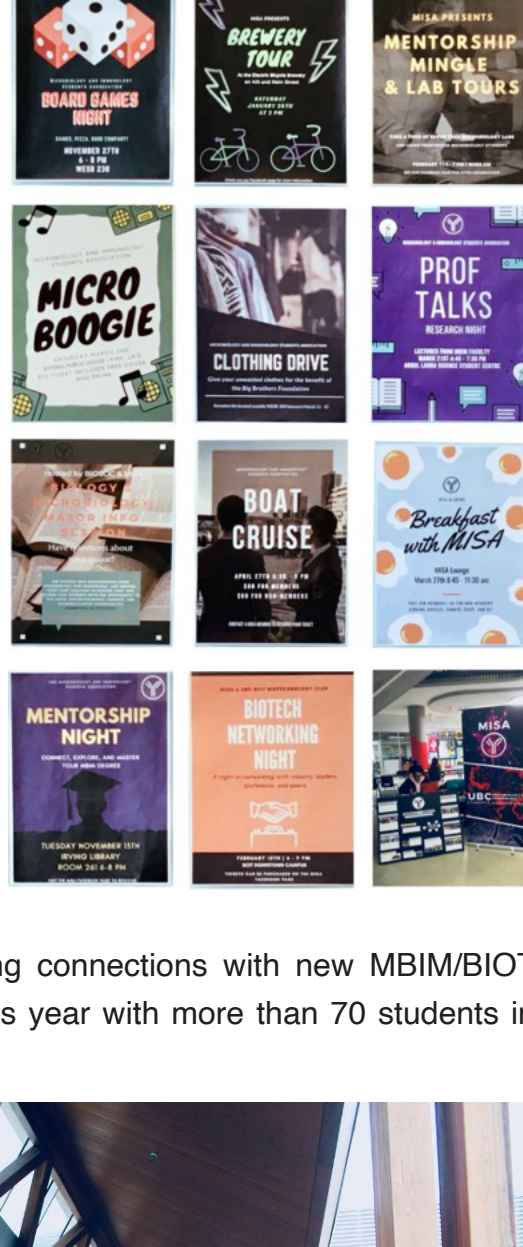
It's been very rewarding to see how this has grown and been strengthened by the efforts of our supportive and dedicated staff and faculty members and by successive generations of highly engaged undergraduates, graduate students, post-docs, and alumni. There are so many things that we should all be incredibly proud of. The cohesion of our undergraduates and how MISA creates a supportive environment that enriches their experience. The bonds that our students have forged through all those hours working together in labs, and how this is so evident at the graduation boat cruises. Their excitement in organizing a research symposium, and how impressive their research and communication skills are. The tremendous success of our graduate students and postdocs, which we celebrate in our research symposia. The pleasure that we take in seeing our trainees continue to succeed in many different venues after they become alumni. This was very obvious during the recent I4C symposium in honor of Bob Hancock's 70th birthday. More than 100 SOBs (survivors of Bob – their term) came from all over the world to stage an outstanding scientific meeting and thank Bob for his mentoring and support. The innovative teaching/learning activities, courses, and research/training opportunities that we have created for our undergraduate and graduate students. The research success of our labs and the many exciting new multi-disciplinary research directions and collaborations that have emerged. The initiative taken by our staff to support everyone and to make our department an exceptionally welcoming community.

[Mike Gold Continued...](#)

MISA STUDENT ASSOCIATION

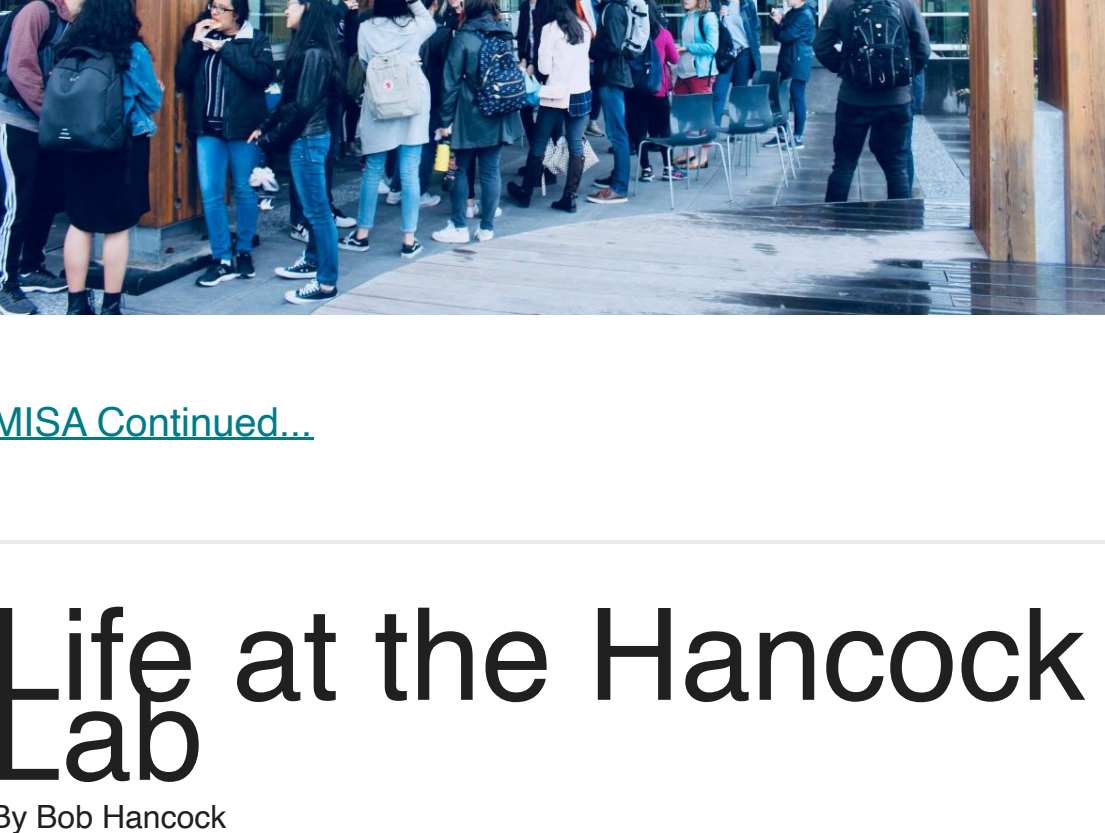
By Christiane Boen

The community in the UBC MBIM Department between students, faculty, and staff is highly prominent and cherished deeply by many. MISA is proud and honoured to represent the undergraduate students and work together with the department to enhance the student experience at UBC. In 2018/2019, we hosted 14+ events, updated our displays by designing a new banner and tri-fold, and continued to strengthen the MBIM/BIOT community. I am very excited to share some highlights of the year with you!



We always kick off the year with a **Back to School BBQ**, which has been held on the AMS Nest Rooftop for the past 3 years. Despite a rainy day, we were not held back from

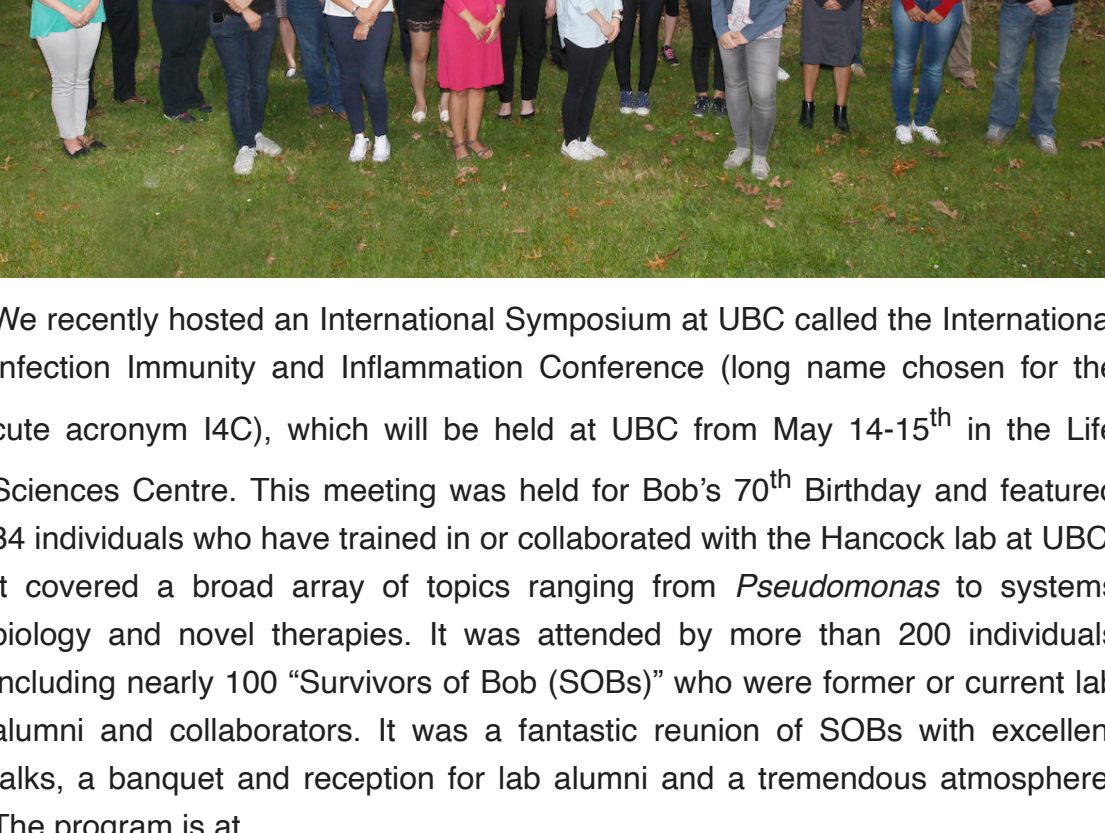
reconnecting with old friends and starting connections with new MBIM/BIOT students. We saw our largest turn-out this year with more than 70 students in attendance!



[MISA Continued...](#)

Life at the Hancock Lab

By Bob Hancock



We recently hosted an International Symposium at UBC called the International Infection Immunity and Inflammation Conference (long name chosen for the cute acronym I4C), which will be held at UBC from May 14-19th in the Life Sciences Centre. This meeting was held for Bob's 70th Birthday and featured 34 individuals who have trained in or collaborated with the Hancock lab at UBC. It covered a broad array of topics ranging from *Pseudomonas* to systems biology and novel therapies. It was attended by more than 200 individuals including nearly 100 "Survivors of Bob (SOBs)" who were former or current lab alumni and collaborators. It was a fantastic reunion of SOBs with excellent talks, a banquet and reception for lab alumni and a tremendous atmosphere. The program is at http://zhdr.ubc.ca/bobh/wp-content/uploads/2019/04/Program_webdraft.pdf.

Nevertheless I wish to squash any rumors that I am retiring any time soon. As things stand I have substantial research funding from CIHR through a Foundation grant that lasts until 2024 and my Canada Research Chair lasts until 2022. A full description of our research is found on his recently renovated web page at <http://emdi.ubc.ca/bobh/>, but it is worth mentioning a few highlights from the past year. On March 12, 2019 a paper led by Bob's postdoctoral fellow Amy Lee described the dynamic molecular changes that occur during the first week of human life, using sophisticated multi-omics approaches and novel high-end bioinformatics to demonstrate that babies in two different countries, Gambia and Papua New Guinea, follow a robust molecular developmental trajectory (that is a series of molecular events occur in a predictable fashion). This paper was published in *Nature Communications* and covered by the *CBC in prime time*.

Our work on anti-biofilm peptides, led by postdoctoral fellow Daniel Pletzer, was a featured research article in the major journal *PLoS Pathogens* and covered extensively in the *press* last year. In this article we showed that small proteins, called peptides, could be matched with antibiotics so that they worked together to combat hard-to-treat infections that don't respond well to drugs on their own. In particular we showed new ways of treating high density infections that are normally almost impossible to treat with antibiotics, showing efficacy against all of the really threatening antibiotic resistant bacteria in our society, collectively termed the ESKAPE pathogens.

Another really cool set of studies with researchers at the world leading genomics centre, the Sanger Institute in the UK, dealt with macrophages which we made from human induced pluripotent stem cells. This allowed us to grow and study *Chlamydia trachomatis*, a fastidious obligate intracellular bacterial pathogen that only grows in human cells and is the major cause of sexually transmitted infections in man as well as the major cause of preventable blindness. We were able to define molecular details of the host response to infection and find genes essential for this process that provide novel therapeutic targets. Bob Hancock, who was an Associate Faculty member at the Sanger, collaborated with former PhD student/UBC grad Amy Yeung and Gordon Dougan on this project that was published in *Nature Communications* and received strong *press coverage*. Lastly, it is worth mentioning that the lab has recently initiated a large collaborative prospective clinical study to confirm a mechanism-based *gene expression signature* for diagnosing sepsis while patients are still in the emergency ward (well before current diagnoses). When developed for sepsis, which afflicts ~18 million people worldwide annually with 5-8 million deaths, this diagnostic test will enable therapy to be applied earlier and more effectively. This large international study is taking place in Centres in Canada (VGH), Australia, Colombia, Netherlands, UK, and the USA.

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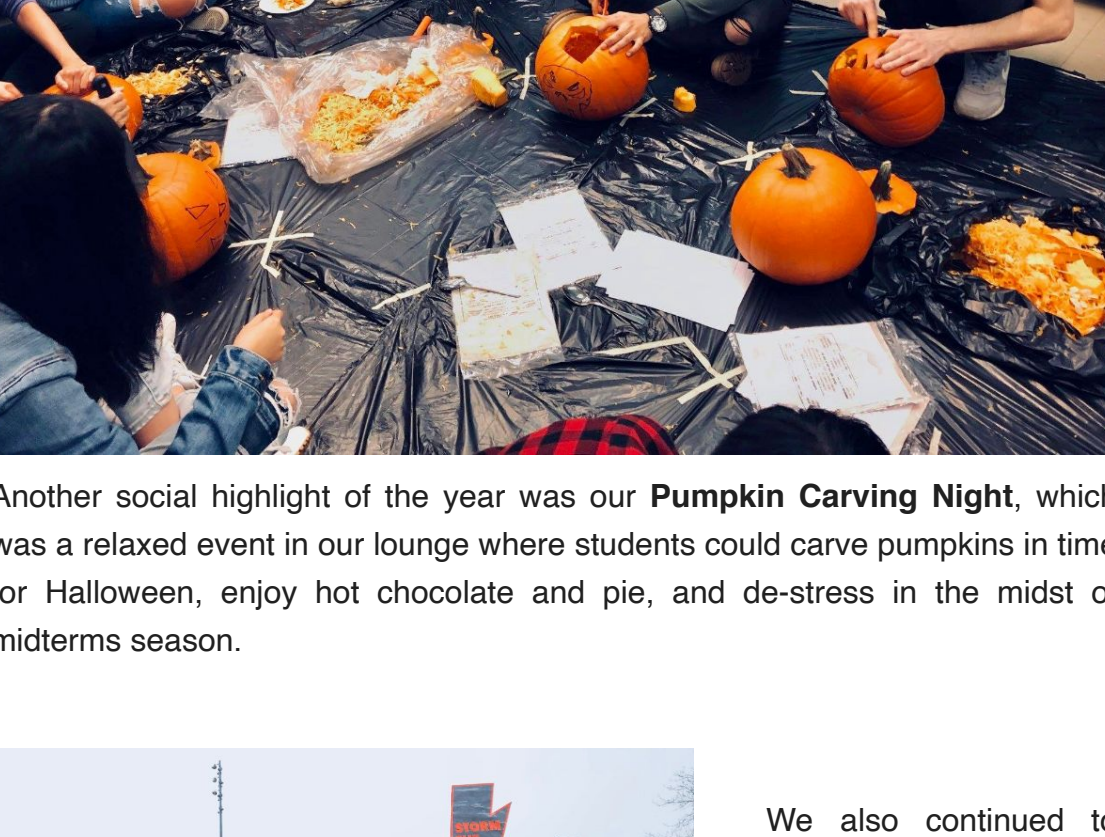
Mike Gold Continued...

The job of the department Head is to enable these developments by providing encouragement and by helping to develop opportunities. It's a very rewarding job and I thank the department for giving me this opportunity. Maybe I was destined for this job. When I was about 12, my sister and I went to a fair and each paid a dollar to have a computer (it was 1968 and the "computer" was a defunct refrigerator with a reel-to-reel tape recorder grafted on to it) determine our personality traits and future careers based on our handwritten signature. Mine came back saying that I was best suited to be a bus driver. Although I rode the city bus a lot as a kid, and thought that being a bus driver was a noble profession, I was disappointed because I wanted to be an astronaut AND a baseball player. But now that I think about being a department Head is a lot like being a bus driver -- you help people get where they are going! So the prediction came true, I'm happy that it did, and I hope that I was able to help some people on their road to success. In this way, being department Head helped me on my own path to self-realization. And if I'm no longer a bus driver (except for my lab members), then maybe I can be an Uber driver. In that regard, I would like to establish a fund that will provide financial awards to first generation university students, like I was. The award will come with a standing offer of on-going encouragement/mentoring meetings with grande non-fat no-whip mochas.

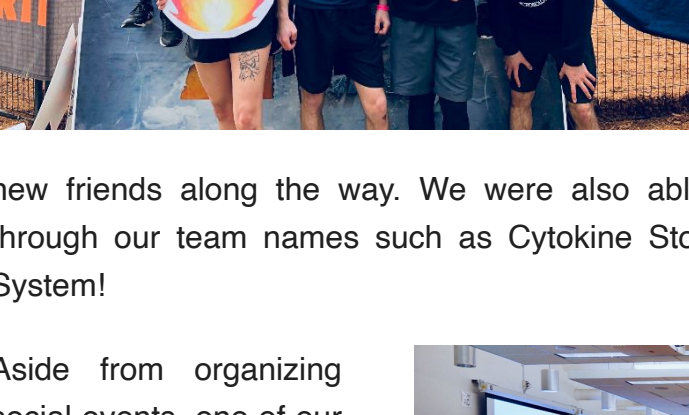
This is my last installment of "A Message from the Head" for this newsletter. But I will be on sabbatical next year so maybe I can be a foreign correspondent. All the best to our wonderful M&I family.

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MISA Continued...



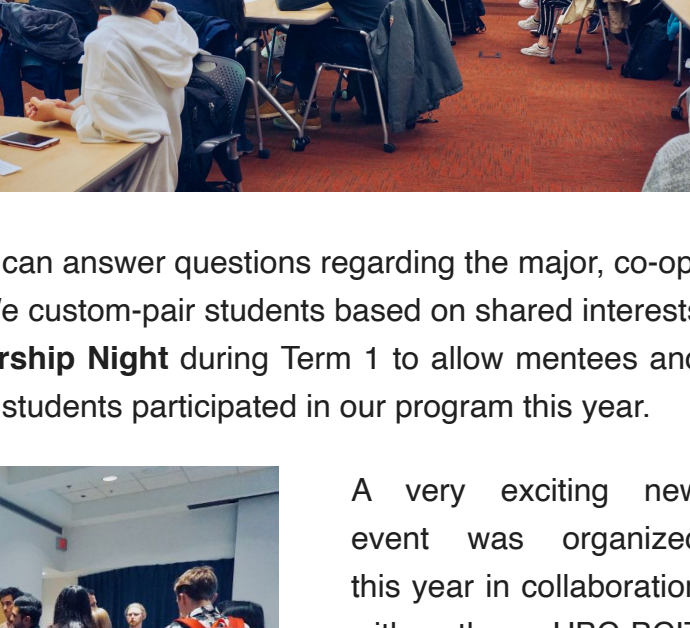
Another social highlight of the year was our **Pumpkin Carving Night**, which was a relaxed event in our lounge where students could carve pumpkins in time for Halloween, enjoy hot chocolate and pie, and de-stress in the midst of midterms season.



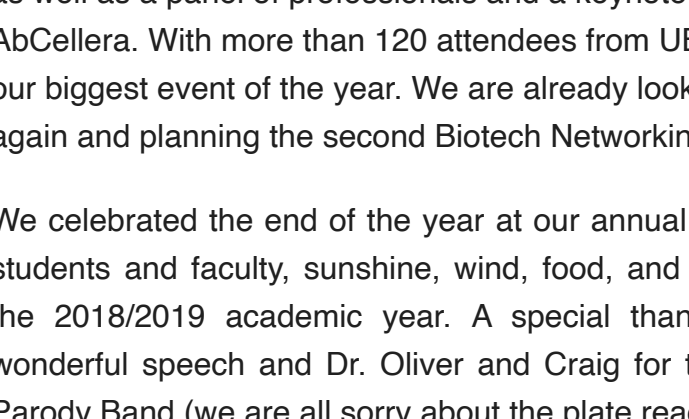
We also continued to participate in UBC intramural and recreation sports, such as volleyball, Day of the Longboard, and Storm the Wall. This was a great way for students to stay physically fit, reduce stress, and meet

new friends along the way. We were also able to show our MicroBI REPLY System!

Aside from organizing social events, one of our main goals is to provide academic support and opportunities for MBIM/BIOT students. Each year we set up a mentorship program where 1st and 2nd year students are paired up



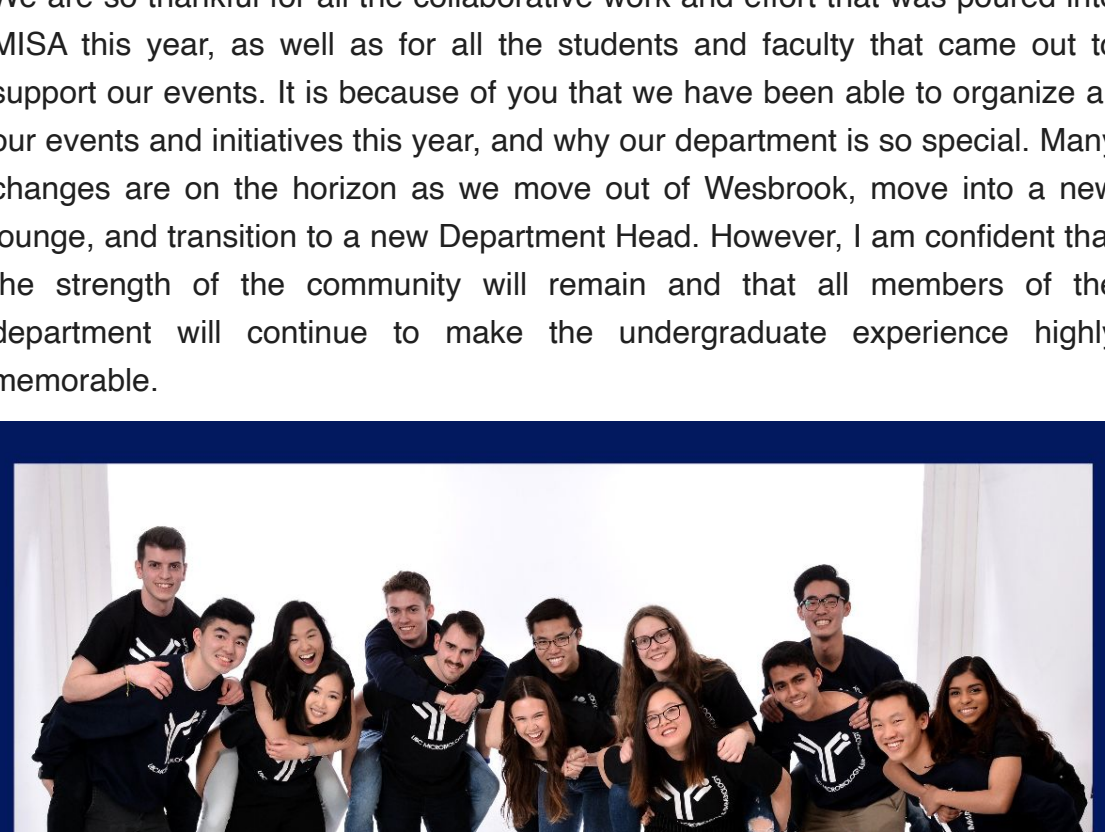
with upper-year students who can answer questions regarding the major, co-op, and research opportunities. We custom-pair students based on shared interests and goals, and host a **Mentorship Night** during Term 1 to allow mentees and mentors to meet. A total of 75 students participated in our program this year.



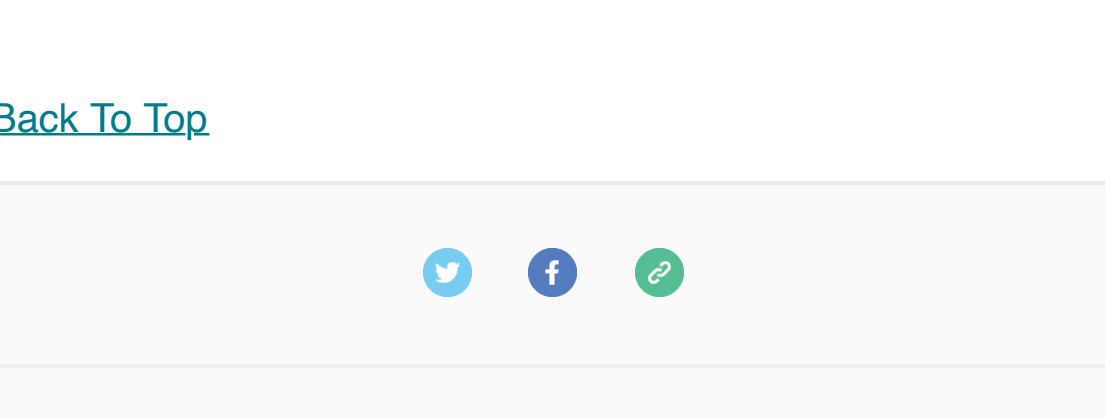
A very exciting new event was organized this year in collaboration with the UBC-BCIT Biotechnology Club. The **Biotech Networking Night**, hosted at the BCIT Downtown campus involved an evening of networking

with eight local biotechnology companies including STEMCELL and AbCellera, as well as a panel of professionals and a keynote by Dr. Carl Hansen, CEO of AbCellera. With more than 120 attendees from UBC, BCIT, and SFU, this was our biggest event of the year. We are already looking forward to collaborating again and planning the second Biotech Networking Night!

We celebrated the end of the year at our annual **MISA Boat Cruise!** With 102 students and faculty, sunshine, wind, food, and dancing, we said goodbye to the 2018/2019 academic year. A special thanks to Dr. Gold for giving a wonderful speech and Dr. Oliver and Craig for the return of the Microbiology Parody Band (we are all sorry about the plate reader).



We are so thankful for all the collaborative work and effort that was poured into MISA this year, as well as for all the students and faculty that came out to support our events. It is because of you that we have been able to organize all our events and initiatives this year, and why our department is so special. Many changes are on the horizon as we move out of Wesbrook, move into a new lounge, and transition to a new Department Head. However, I am confident that the strength of the community will remain and that all members of the department will continue to make the undergraduate experience highly memorable.



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