



CANADIAN BIOMATERIALS SOCIETY
SOCIÉTÉ CANADIENNE DES BIOMATÉRIAUX

BI-ANNUAL NEWSLETTER: Fall 2022

Letter from the President

As we move into Fall, I hope that you are all enjoying the energy on campus that comes with a full return to in person activities – may it continue!

It was great to see many of you at the fantastic CBS2022 meeting in Banff, adeptly organized by Prof. Larry Unsworth and team. Whether you attended in-person or online, the quality of the presentations provided a strong testament to the exciting research being done in the Canadian Biomaterials community. Congratulations to the award winners at the conference, who are recognized in this newsletter!

Prof. Mark Filiaggi and team are working hard on organizing the CBS2023 meeting in Halifax, for which you will find some details in this newsletter. I am looking forward already to seeing you there in June!

A little further on the horizon is WBC2024 in Korea. The call for symposia is already open for this, as you will read within, and I hope many of our CBS members will submit proposals as a first step towards a strong Canadian presence at the meeting.

The CBS Board of Directors welcomes several new members this year, whose profiles you will find in these pages, including Prof. Marta Cerruti as President-Elect. I look forward to working with them and the returning board members on leading the CBS this year.

Please take a moment to read in this newsletter about what our Student Chapters have up to as they also transition back to in-person activities. Students, I encourage you to join and contribute to your local chapter and to read in this newsletter about some of the mentorship programs and awards available to CBS Members.

I hope that all of you will continue to stay engaged in the Canadian Biomaterials Society and welcome you to connect with me or other board members throughout the year.

Sincerely,

Eli Sone

President, Canadian Biomaterials Society



Letter from the President Elect



I feel honored to have been chosen as President-Elect for the CBS. I am eager to work with Eli and the board and help the CBS grow. Looking forward to seeing everyone in Halifax next year and hopefully many in Korea at the 2024 World Biomaterials Congress! These are exciting times for the biomaterials community!

Marta Cerruti

President-Elect, Canadian Biomaterials Society

Introducing New Board Members

Dr. Marta Cerruti is a Professor in Mining and Materials Engineering at McGill University. I have been a professor at McGill since 2009, Canada Research Chair from 2012 to 2022, member of the College of New Scholars, Artists and Scientists of the Royal Society since 2019, board member of the Canadian Chapter of the Controlled Release Society since 2011 and its President in 2019-2021, member of the CBS for about 10 years and very involved in organizing the 2016 World Biomaterials Congress in Montreal. As a newly elected member and President-Elect, I'm looking forward to contributing to the CBS in many different ways! My priorities will be keeping up the CBS community spirit, helping new investigators and students, and making Canadian research on biomaterials even more known to the public and the world. I will be especially involved in the WBC2024 planning to ensure a strong Canadian presence. I would also like to create occasions for networking events with other Canadian societies with interests related to the CBS, and for researcher engagement with the public.



Dr. Marta Cerruti
President-Elect



Dr. Emilio I. Alarcón
Senior Board Member

Dr. Emilio I. Alarcón is an Associate Professor in the Department of Biochemistry, Microbiology, and Immunology at University of Ottawa. Since arriving in Canada 13 years ago as a post-doctoral fellow and having first-hand experience of the barriers that an immigrant scientist in Canada will face, I feel compelled to improve the situation for others. I am a member of a visible minority (South American Indigenous mix), a person with autism, and a special needs parent. My personal life experiences have made me an advocate for inclusion and accessibility. Currently, I act as an Equity-Diversity-Inclusion (EDI) champion and leader at the University of Ottawa Heart Institute, a member of the Disability Justice group at uOttawa Professors Union, and part of the CIHR External Advisory Committee on Accessibility and Systemic Ableism. Understanding what is needed from those who have the needs is the first and most instrumental way to lead transformative changes for everyone. In the last decade, much has been done in our country to create a more inclusive research ecosystem for women, LGBTQ2+, and other groups. However, differently-abled, mind or

body individuals remain underrepresented, way below the ~15%, which is the percentage of the human population differently-abled. As a board member at CBS, I will establish an EDI committee with representation at both Faculty and student levels to (1) create and launch an EDI survey for CBS that will be instrumental in determining short and long-term EDI-strategies, (2) run EDI training opportunities in topics such as: Preparing sex/gender sections for grant applications, ableism in academia, and accessible presentations, and (3) implement EDI discussion sessions at CBS meetings.

Dr. Lindsay Fitzpatrick an Assistant Professor at Queen's University in the Department of Chemical Engineering, with a cross-appointment in the Department of Biomedical and Molecular Sciences. My research focuses on molecular mechanisms that mediate immune cell-material interactions and the development biology-driven biomaterial solutions for medical problems. I became involved with the CBS in 2012 as a PhD student and have participated in many CBS Annual Meetings since then. In 2016/17, I served as the CBS Secretary and have also been involved with the CBS Kingston Student Chapter. Throughout my career, I have benefited from the vibrant, collegial community provided by the CBS, and the trainee-centric focus of our conferences. As a newly elected board member, I will seek to continue this inclusive and supportive environment, and to engage with members to understand how the CBS can better serve our community. A priority for the next two years will be to promote Canadian trainees and research at WBC2024 through travel awards and supporting members proposing symposia.



Dr. Lindsay Fitzpatrick
Senior Board Member



Dr. Mohsen Akbari
Senior Board Member

Dr. Mohsen Akbari is an Associate Professor at UVic's Department of Mechanical Engineering, an Affiliated Professor at UBC's School of Biomedical Engineering, and an Adjunct Professor at the Terasaki Institute for Biomedical Innovation in the United States. Prior to joining UVic in 2015, I worked as an NSERC postdoctoral researcher at Harvard Medical School and the Wyss Institute for Biologically Inspired Engineering for three years. My group conducts research at the intersection of cellular biology, biomaterials, and microtechnologies, with a focus on the creation of engineered tissue substitutes for regenerative medicine, biomimetic tissue models for disease modeling and drug discovery, and advanced drug-delivery systems. During the most recent CBS Annual meetings in Victoria and Quebec City, I served on the organizing committee and chaired sessions for the previous eight years. I also participated on the selection committee for the

WBC 2016 Legacy Travel Award and evaluated numerous poster sessions. I had the honor of serving as a senior member of the Board of Directors from 2017 to 2019. I am excited to return to the board and serve the Canadian Biomaterials community for the next two years. In this role, my goals will be to 1) strengthen industry and clinical relationships by involving more clinicians and industry members in our activities, 2) participate in career development activities by organizing relevant workshops in collaboration with student chapters, and 3) promote translational and entrepreneurial activities in our Society.

Dr. Neda Latifi an NSERC postdoctoral research fellow in the Department of Mechanical & Industrial Engineering and the Ted Roger Center for Heart Research at the University of Toronto working with Professor Craig Simmons.

I have served as the CBS Student Board Member and an active member of the Student Engagement and Communication Committees of the CBS Board of Directors since June 2021. During my first term, I coached a group of CBS trainees to launch the Toronto Student Chapter. Also, I helped establish the CBS Undergraduate Mentorship Program to expose undergraduate students to biomaterials research and to give CBS student members the opportunity to develop their leadership, supervisory, and communication skills. I established collaborations between CBS Chapters via the mentorship program. I helped launch a series of Professional Development Seminars to equip students with the skillset required to succeed in graduate studies. Further, I was involved in revisions to the CBS website and the development of the new CBS logo. During my current term, I aim to significantly enhance communications between the Board of Directors and the CBS trainee body as well as those among the Student Chapters. I aim to utilize my experience as a former Student Board Member and a Past-President of the Montreal Student Chapter to facilitate collaborative virtual events, career workshops, and networking opportunities with the help of the CBS Student Chapters and the support of the Board of Directors.



Dr. Neda Latifi
Student Board Member



Dr. Isabelle Catelas
Assistant Treasurer

Dr. Isabelle Catelas is a Professor in the Department of Mechanical Engineering at the University of Ottawa, with cross-appointments to the Faculty of Medicine. I joined the University of Ottawa in 2008 as a Canada Research Chair Tier 2 (2008 – 2018) in Bioengineering in Orthopaedics after working in the biotechnology industry in the United States for four years. My current research interests include the study of hip implant failure mechanisms, as well as the development of bone and osteochondral tissue substitutes using 3D bioprinting. I had the pleasure to serve on the Board of Directors of the CBS from 2010 to 2022, both as a Senior Board Member and as the President (2014 – 2015). I also had the wonderful opportunity to chair the 2013 Annual Meeting of the CBS in Ottawa and to be involved in the organization of the WBC2016 in Montreal. Additionally, I was the Academic Advisor of the Ottawa Student Chapter when it was created in 2014. It is now my pleasure to continue working with the Board as the Assistant to the Treasurer and as a member of the Finance and Awards Committees.

CBS 2023 annual meeting @Dalhousie
Come join us by the ocean!



38th CBS Annual Meeting: Wed. Jun 14th – Sat. Jun 17th, 2023

Call for abstract: Dec 1st, 2022

Early bird registration deadline: Mar 1st, 2023

The 38th CBS annual meeting will be held at Dalhousie University in Halifax, Nova Scotia. The CBS 2023 planning committee is busy curating an exciting in-person conference program featuring plenary, keynote and industrial speakers along with some pre- and post-conference events to take full advantage of what this area has to offer. Attendees can enjoy an expansive choice of on-campus accommodations or choose from several hotels located within walking distance from Dalhousie. Our east coast hospitality will be on full display at planned social events for students and faculty, with a conference gala at the Canadian Museum of Immigration at Pier 21 rounding out the festivities. We look forward to providing more updates in the next newsletter.



WBC2024 Update: Call for Symposia is Now Open!



WBC2024

12th World Biomaterials Congress

MAY 26 – 31, 2024
DAEGU, KOREA

The call for symposia is now open!

The Scientific Program Committee of WBC2024 are soliciting proposals for symposia at the upcoming World Congress in Daegu, Republic of Korea (May 26 – May 31, 2023). To learn more, please visit the [WBC2024 Call for Symposia](#) webpage.

Submission Deadline: January 15, 2023

Notification of Acceptance: March 1, 2023

[Online Submission Form](#)

If you are planning to submit a Symposia Proposal, please let us know at support@biomaterials.ca so we can help support your efforts!

Other WBC2024 dates to remember:

Abstract Submission: April 1, 2023 – September 31, 2023

Early-bird Registration: April 1, 2023 – February 29, 2024

CBS Mentorship and Professional Development Program

The call for applications is now open!

The [CBS Mentorship and Professional Development Program](#) is specifically designed to connect professionals outside of academia with graduate students and postdoctoral fellows coming from the Canadian biomaterial's community. The CBS Mentorship and Professional Development Program is the only program in Canada which combines:

- Career training and professional development
- Mentorship from a professional working outside of academia
- A peer support community

Submission Deadline: October 31, 2022

Beginning of Program: November 15, 2022

[Online Application Form](#)

The program is powered by The 2nd Lab. If you have any questions about the program or your application, please contact Gad Sabbatier, Program Manager at info@the2ndlab.com.

Congratulations to the CBS2022 Award Winners!

Presentation and Abstract Awards

ACS Biomaterials Science and Engineering - Best oral presentation overall

Yuqing Liu (University of Manitoba)

Elsevier Biomaterials Advances – Oral Presentation Awards

1st place: Guangyu Bao (McGill University)

2nd place: Jan C Kwan (University of Western Ontario)

3rd place: Jennifer Archibald (University of Ottawa)

Elsevier Biomaterials Advances – Poster Presentation Awards

1st place: Hilda Ma (University of Alberta)

2nd place: Nancy Li (University of Toronto)

3rd place: Joseph Deering (McMaster University)

ACS Publishing – Best oral abstract

Vishnu Vashanthan (University of Calgary)

ACS Publishing - Best poster abstract

Zach Gouveia (University of Toronto)

Humabiologics Top Abstract Awards

Biomaterials Innovation: Mina Vaez (University of Toronto)

Tissue Models: Nila Wu (University of Toronto)

Bioprinting: Xiaoyi Lan (University of Alberta)

Translational Biomaterials Research: Fiona Serack (University of Western Ontario)

Travel Awards

CBS Merit & Travel Award

Claire Benwood (University of Victoria)
Amanda Brissenden (Queen's University)
Sajjad Fanaee (Dalhousie University)
Kibret Mequanint (University of Western Ontario)
Krystal Ortaleza (University of Toronto)
Federica Ponti (Université Laval)
Julia Terek (University of Western Ontario)
Shahin Torki (University of Manitoba)
Brian Webb (University of Toronto)
Fei XU (McMaster University)
Kai Yu (University of British Columbia)
Peiyu Yu (University of Manitoba)

WBC 2016 Legacy Travel Award

Guangyu Bao (McGill University)
Linda Bonilla (Université Laval)
Dainelys Guadarrama Bello (Université de Montréal)
Anna Herrmann (University of British Columbia)
Shuaibing Jiang (McGill University)
Sean Kinney (University of Toronto)
Dibakar Mondal (University of Waterloo)
Shravanthi Rajasekar (McMaster University)
Hossein Riahinezhad (Queen's University)
Bishakh Rout (McGill University)
Saba Sayyareh (University of Manitoba)
Kaige Xu (University of Manitoba)
Xingying Zhang (University of Manitoba)
Yuxi Zhang (Queen's University)

2021 CBS Visiting Scholar Recipient Report

Sabrina Messaoudi (INRS-EMT)

As a PhD student at Institut National de la Recherche Scientifique (INRS), I was honoured to receive a Canadian Biomaterials Society Visiting Scholar Award. It permitted travel for an internship that has greatly advanced my research. My research program develops better therapies and technologies that will ultimately improve the quality of life of cancer patients. I am developing a new therapeutic agent based on the concept that the patient's own immune system can be engaged to attack leukemic cells. Current treatments use bispecific antibodies, which are antibodies with two different antigen recognition sites that can bring cancer-killing T-cells close enough to cancer cells to induce apoptosis. However, the structures of the bispecific antibodies are limited to designs based on the natural 'Y' shape of antibodies. My project is to unravel the fundamental details of how these bispecific antibodies interact with their targets, to develop better and more efficient treatments. I use platform technology based on DNA nanotechnology to optimize this effect, while simultaneously controlling key aspects of the two antibodies in an effort to maximize its therapeutic value.



To accelerate my research, my supervisor offered me the opportunity for a 2 week internship in the lab of Prof. Wylie, based at McMaster university. Prof. Wylie's expertise is directly complementary to my work, as he has established protocols for monitoring the efficacy of bispecific antibodies in live cells. During my internship, I was fortunate to be paired with a very patient student who took the time to teach me various aspects of cell culture in addition to the specific assays necessary for my work.

As a result of this internship, I was able to obtain significant results relating directly to the efficacy of the bispecific DNA-antibodies I had previously prepared. It was an amazing experience and allowed me to bring new expertise back to INRS so that I can complete further studies locally.

Upcoming CBS Award Deadlines

CBS Visiting Scholar Award ⁱ

Application Deadlines: March 1, 2023

WBC2016 Legacy Travel Award ⁱ

Application Deadline: January 30, 2023

CBS Lifetime Achievement Award ⁱ

Application Deadline: May 15, 2023

CBS Early Career Investigator Award ⁱ

Application Deadline: May 15, 2023

Please check out the [CBS Awards Webpage](#) for further information on all CBS awards.

Student Chapter Updates

Alberta Student Chapter

Canadian Biomaterials Society – Alberta Student Chapter (CBS-ASC) is fortunate to be a part of the conference organizing committee of the 37th Annual Meeting of the Canadian Biomaterials Society in Banff, Alberta (May 25th to May 27th, 2022). It was a hybrid event, with around 150 participants hosted in-person, including faculty members, trainees, and industry personnel. ASC executives volunteered at the reception desk, co-chaired lecture sessions, and helped in the selection process of poster and oral presentation awards. Particularly, our group hosted the “CBS 2022 conference student - trivia night,” where more than 70 students from universities all over Canada. It was a fun event but helped in growing networking. We arranged food and drinks, organized quizzes, and awarded the quiz winners.

In August 2022, we recruited new executive members for the 2022-2023 session with students from a wide range of backgrounds including Pharmaceutical Sciences, Chemical and Materials Engineering, Agricultural Food & Nutrition Sciences, and Biological Sciences. This helps us to keep the diversity in our student group so we can benefit from different viewpoints. Now, our new committee members are more than excited to make a fresh year and hold various events starting with the first event going to happen in mid-October 2022. It will be a great chance for members to meet in person (since working last 2 years remotely for pandemic restrictions), brainstorm with super ideas, and have lunch.

We are planning more exciting events in the upcoming days through which, we hope to let students know about the state-of-art research in the field of biomaterials, and perhaps inspire students to join into one of the exciting research areas. For the graduate students who are looking for opportunities outside of academia, we are also hoping to inspire them to find out the right paths for them. Stay tuned for more information!



CBS-ASC executive members (2021-2022 session) in Banff Center for the Arts and Creativity, Banff, AB. Kosala, Mohammad, Michelle, Shuhui, and Shienna (from right to left).

Quebec City Student Chapter

This spring, CBS Quebec City Student Chapter (CBS-QCSC) is proud to announce the successful return, after a 3-year interruption, of its Annual Networking Evening. This activity brought together over 30 members of the community of researchers in the field of biomaterials (students, professors, research professionals and members of the industry) who shared experiences and exchanged opinions over a cocktail offered by the association. The admission was free for CBS members, which resulted in the recruitment of 15 new members, many of which had never heard about our association before. The event kicked off with a set of conferences given by Prof. Roberto Dalto Fanganiello from the Dentistry Faculty of Laval University, and Viktoria Stanova, post-doc researcher at the University Institute of Cardiology and Pneumology, to whom we extend once again our thanks. Conferences were followed by a poster session, accompanied by a wine and cheese service, which gave graduate students the possibility to present their work to their peers and professors from different fields. Two prizes for the best presentations, as well as certificates of participation for all the attendants, were awarded at the closing ceremony.

During the months of June and July, CBS-QCSC and its members participated in two scientific exhibitions at the shopping centers "Galeries de la Capitale" and "Grand Marché" (Québec, QC). These events were hosted by the Research Center CHU de Québec-Université Laval and its affiliates at Laval University. The main goal was to educate and discover the latest trends of scientific research to the general public. Through posters and interactive games that we designed ourselves, we helped our local community understand how biomaterials are involved in our daily lives. More than 300+ people have participated in this exhibition! CBS-QCSC seized this opportunity to inspire the young generation into developing a natural interest in learning new things and solving problems, which might one day lead them to pursue a career in the field of biomaterials.

Coming up, the CBS-QCSC will host an information session about the CBS Mentorship and Professional Development, a program specifically designed to connect professionals outside of academia with graduate students and postdoctoral fellows coming from the Canadian biomaterial's community. Registration for the hybrid 5@7 is still open and available [here](#).

We are also actively recruiting students and professionals working on Biomaterials to become members of the CBS and joining QCSC committee. If you are interested in actively participating and helping organize more events like the ones you just read about in this newsletter, send us your contact information to cbs-qcsc@biomaterials.ca and we will get in touch.

More details about these not-to-be-missed events will be provided in the upcoming months, stay tuned! Visit our website at <https://cbsqcchapter.wordpress.com/>

Ottawa Student Chapter

It has been an important year for CBS-OSC, we are pleased to announce that our second mentorship program had an exceptional turnout thanks to the contributions of our mentors, mentees, and organizers. In the one-to-one mentorship program, undergraduate students were assigned to Master/Ph.D. students who shared their experience on applications to graduate school, how to find supervisors, and funding. In total, 18 mentors with expertise in 3D bioprinting to computational biomechanics, and 19 mentees were involved in the program. In fact, one of the mentees of the previous mentorship program won WUSSRA 2022 scholarship under the guidance of her mentor.

The program provided an opportunity for mentors to improve their leadership as well as supervisory skills and mentees to get familiarized with current research in the Biomedical Engineering, Biotechnology, Materials Engineering, Life Sciences, and Health Sciences, talk with their peers about their experience in research, learn about activities they can partake in to enrich their resumes and knowledge base to succeed in academia and have clearer expectations of a professional career in academia or industry. With the success of the previous mentorship program, the chapter expects to hold the third version of this mentorship program for the upcoming year with hopes of having more students taking part to advance their professional development.

Despite being online, the uOttawa chapter had few events lined aimed at both undergraduate students and graduate students. We had the pleasure of hosting our second conference where numerous professors joined us, and multiple students showed interest in the 3 minutes thesis competition. This year we have decided to step up the event and organize a chapter alumni event. Furthermore, we are planning on hosting our first lab tours in November and March as well as organizing exciting workshops, seminars, and competitions.

Toronto Student Chapter

The Toronto chapter is preparing for a busy year with many small and big events throughout the year. In our second year of running, we hope to set a good precedent of annual recurring events for years to come. Please stay tuned for more information, and please don't hesitate to reach out to us with any inquiries!

CBS Undergraduate Mentorship Program

The CBS is happy to announce that the Undergraduate Mentoring Program will be offered again this year. If you would like to become a mentor in the 2022-2023 program, please contact your local student chapter for additional information.

Thanks for Reading!

On Behalf of the Canadian Biomaterials Society

Communications Committee, Administration and Board of Directors

<https://biomaterials.ca>

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If you wish to contribute to our next newsletter, please contact:

lindsay.fitzpatrick@queensu.ca