



CANADIAN BIOMATERIALS SOCIETY
SOCIÉTÉ CANADIENNE DES BIOMATÉRIAUX

BI-ANNUAL NEWSLETTER: Fall 2023

Letter from the President: Dr. Marta Cerruti

We are moving towards an exciting year for the Canadian Biomaterials Society (CBS), with the World Biomaterials Congress (WBC) 2024 in Korea approaching quickly! In addition to an exciting program, you can look forward to the CBS Award Symposium, where we will honor the recipients of the Lifetime Achievement, Early Career Investigator, and Service Awards. The symposium will feature the awardees presenting their research, highlighting the excellence of Canadian research.

We are aiming for a large Canadian presence at the WBC; several Canadian-led symposia have been accepted, and we are committed to sponsor many travel awards for our trainees. A committee dedicated to raise funds from companies is hard at work. We are sure that with their help we will be able to add a considerable number of awards to those that will be offered through our CBS budget and legacy funds. Please submit your abstracts by November 30th if you have not done so yet!

This year we will be launching our first virtual seminar series, which we hope will help keeping CBS researchers connected throughout the year in between the annual meetings. The series will be organized by the Student Engagement Committee with involvement from the Student Chapters. You will hear more details about this soon. We also plan on finding new ways to connect with different Canadian societies with overlapping interests. Stay tuned!

Please take a moment to read this newsletter. You will find, among other news, the profiles of the new members of the CBS board of Directors, including Prof. Isabelle Catelas as President-Elect, and updates from our Student Chapters.

I hope that you will continue to stay engaged in the CBS and look forward to connecting with you virtually or in person at the WBC!

Sincerely,
Marta Cerruti



Letter from the President-elect: Dr. Isabelle Catelas



I have had the pleasure to serve on the Board of Directors of the CBS for over 12 years, both as a Senior Board Member and as the President (2014-2015), and I am truly honoured to have been elected as President-elect for the second time. This year is particularly exciting with the World Biomaterials Congress in just a few months! I am excited to continue serving our Society and fostering important endeavours, such as promoting student engagement (e.g., through the student chapters, mentoring programs, and awards), reinforcing industry relations and representation of clinicians in our Society, and increasing the visibility of our Society.

I look forward to working with all of you towards the success of our Society!

Sincerely,
Isabelle Catelas

Congratulations to our Awardees!

CBS Lifetime Achievement Award



Dr. Hasan Uludağ, PhD

Professor, Department of Chemical and Materials Engineering,
Faculty of Engineering, University of Alberta

CBS Early Career Researcher Award



Dr. Emilio Alarcón, PhD

Associate Professor, Department of Biochemistry, Microbiology, and Immunology,
Faculty of Medicine, University of Ottawa
Scientist, Division of Cardiac Surgery Research,
University of Ottawa Heart Institute

CBS Service Award



Dr. Todd Hoare, PhD

Professor, Department of Chemical Engineering,
Faculty of Engineering, McMaster University

CBS Award Symposium

Join us at the CBS Award Symposium in Korea to honour our awardees and enjoy their research talks showcasing excellence in Canadian biomaterials research.



Final Extension!
Last chance to submit an abstract at WBC 2024

Extended Abstract Submission Deadline

November 30, 2023

Introducing New Board Members



Dr. Simon Matoori
Senior Board Member

Simon Matoori is an Assistant Professor at the Faculty of Pharmacy at Université de Montréal since 2021. He holds a PhD in drug delivery from ETH Zurich (PhD advisor Dr. Jean-Christophe Leroux) and a Swiss federal pharmacist license. He did his postdoctoral studies in bioengineering with Dr. David Mooney (Harvard University). He is a Topic Editor with ACS Pharmacology & Translational Science and the chair of the CRS Focus Group Skin & Mucosal Delivery. His research interests are in formulation science and biomedical engineering with an emphasis on diagnostics and drug delivery.

“My goal is to create new opportunities for CBS members to engage and exchange ideas beyond the annual meetings.” – Simon Matoori

Jean-Philippe St-Pierre is an Assistant Professor in the Department of Chemical and Biological Engineering at the University of Ottawa. Prior to joining uOttawa in 2017, I worked as a Postdoctoral Fellow at Imperial College London in the UK. My research interests include tissue engineering, biomaterials design and the development of in vitro tissue models to study physiological and pathological processes, with a primary focus on the development of novel treatments for diseases affecting musculoskeletal tissues, including articular cartilage and bone. As a graduate student, I had the opportunity to attend a number of CBS conferences and really enjoyed these experiences. Since 2020, I have been involved with the Ottawa Students Chapter of the CBS as its Academic Advisor. I am really excited to have the opportunity to contribute to our community as board member for the next two years. In this position my goals will be (1) to help implement activities that increase networking opportunities for trainees throughout the year, (2) to work on strategies to increase CBS visibility with undergraduate students, and (3) to contribute to improving the online presence of the CBS through its website.



Dr. Jean-Philippe St-Pierre
Senior Board Member



Ahmed Saad
Student Board Member

Ahmed Saad is a third-year doctoral student at the faculty of Mining and Materials Engineering at McGill University, working under supervision of Professor Marta Cerruti. he received his bachelor's degree in Nano Science from Zewail University of Science and technology in 2018. He graduated from Professor Cerruti's lab as a MSc in 2021 and decided to continue at the same lab for Ph.D. Ahmed's research focuses on improving the attachment of implants to skin tissues through implant surface medications. Through his role as a student representative, Ahmed aims to enhance communications between the Board of Directors and the CBS trainees as well as those among the Student Chapters and help providing more resources and opportunities for CBS trainees.

Davide Brambilla is an Associate Professor at the Faculty of Pharmacy at the Université de Montreal. He holds a PhD in pharmaceutical technology and biopharmacy from the University of Paris-Saclay and did his postdoctoral studies in drug delivery at ETH Zurich. He is a junior research fellow of Québec Research Fund, the Biotherapy research Chair from the Canadian Generic Pharmaceutical Association and Biosimilars Canada, the current secretary of the Canadian Biomaterials Society, the past-president of the Canadian chapter of the Controlled Release Society and acts as assistant editor of the Journal of Controlled Release. His team works at the interface of medicine, pharmacy, and materials science with the main objectives of improving drug efficacy, patient compliance, and developing minimally invasive diagnostic devices. His research includes the design of sustained-release formulations, nanoparticles for the delivery of genetic material and microneedles for the non-invasive delivery of diagnostic and therapeutic agents.



Dr. Davide Brambilla
Secretary

Congratulations to the CBS2023 Award Winners!

Oral Presentation Awards

- 1st place: **Angelico Obille (University of Toronto)**
2nd place: **Krystal Ortaleza (University of Toronto)**
3rd place: **Gagan Daliaho (McGill University)**
4th place: **So-Yoon Won (University of Toronto)**



Poster Presentation Awards

- 1st place: **Kathleen Vergunst (Dalhousie University)**
2nd place: **Jordan Nhan (University of Ottawa)**
3rd place: **Francesco Touani Kameni (ETS Montreal)**
4th place: **Laura Neely (McMaster University)**



Travel Awards

CBS Merit & Travel Awards

Alexander Sotra (McMaster University)
Angelico Obille (University of Toronto)
Christian Rempe (Dalhousie University)
Connor Gillis (University of Western Ontario)
Daniel Modafferi (McGill University)
Elias Madadian (École de technologie supérieure)
Francesco Touani Kameni (Université de Montréal)
Fredrick Bulondo (Queen's University)
Ilya Yakavets (University of Toronto)
Meghan Martin (Dalhousie University)
Sarah From (University of Western Ontario)
Sean Kinney (University of Toronto)
So-Yoon Won (University of Toronto)
Zach Gouveia (University of Toronto)

WBC 2016 Legacy Travel Awards

Alex Ross (University of Ottawa)
Alex Steeves (University of Ottawa)
Chengyu Guo (University of Western Ontario)
Kenneth Kimmins (University of Toronto)
Liyang Zhong (University of Toronto)
Nathan Holwell (Queen's University)
Sumaiya Karim (Queen's University)
Xuan Li (McGill University)
Yuxi Zhang (Queen's University)

**Student travel awards have
been increased for WBC2024**

Upcoming CBS Award Deadlines

Conference Travel Awards

WBC2016 Legacy Travel Awards 

Application Deadline: January 15, 2024

CBS Merit & Travel Awards* 

Application Deadline: January 15, 2024

**note: application required for WBC years*

Research Experience Awards

CBS Visiting Scholar Award 

Application Deadlines: January 31, 2024

WBC2016 Legacy Postdoctoral Experience Award 

Application Deadlines: January 31, 2024

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

www.wbc2024.com



WBC2024

12th World Biomaterials Congress

May 26-31, 2024 / EXCO, DAEGU, KOREA

Convergence in Biomaterials: A Vision for the Future of Healthcare

SAVE THE DATE

- » **Extended Abstract Submission** : Apr. 15 ~ Nov. 30, 2023
- » **Notification of Abstract Acceptance** : Jan. 1, 2024
- » **Early-bird Registration** : Apr. 30, 2023 ~ Jan. 31, 2024

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CBS Mentorship and Professional Development Program

Are you interested in pursuing a career outside academia after a Masters, PhD, or a post-doc?

If so, consider applying for the CBS Mentorship and Professional Development program! Making the pivot out of academia is surprisingly a long and challenging process, but our program will get you started and equip you with the tools you need for your next move.

Our program is specifically designed to connect graduate students and postdoctoral fellows with professionals outside of academia coming from the Canadian Biomaterials community.

Register for the program to

- Develop new transferable skills
- Understand the job market and improve effectiveness in the job search
- Personal and professional growth
- Maximize own potential through self-awareness
- Receive guidance and encouragement necessary for professional development
- Identify job opportunities and effectively tackle new career challenges
- Set challenges whilst building and developing confidence outside of their comfort zone
- Take responsibility and control for own career management
- Be part of a growing community



Apply here:



Discover your purpose. Hone your skills. Build a community.

Applications close Dec 4, 2023

To be eligible, you must be

- A graduate student (Masters and PhD) or a postdoctoral fellow
- A CBS member in good standing, working under the supervision of a CBS member

Application Details

- Application deadline: December 4, 2023
- Beginning of the program: January 15, 2024
- Participant Fee: \$25 (Remaining fee covered by the CBS)
- Application form: click this [link](#) or scan the QR code in the poster!

The CBS is proud to subsidize the cost of this mentorship program

We welcome applications from indigenous peoples, visible minorities, ethnic minorities, persons with disabilities, women, persons of minority sexual orientations and gender identities and others who may contribute to further diversification.

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 director at the 2nd Lab gad.sabbatier@the2ndlab.com or Laura Jahchan, student community manager at laura.jahchan@the2ndlab.com.

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 2023-2024 program, please contact your local student chapter for additional information.

Save the Dates

We are pleased to announce a new virtual CBS Lunch Seminar Series!

CBS Lunch Seminars

November 13th, 2023, 12 noon (ET)



Dr. Diego Mantovani

Professor, Université Laval

<https://umontreal.zoom.us/j/82241485456?pwd=bFpIY3VjTVF3WlFjMFRpMkg5VFZTQT09>

Meeting ID: 822 4148 5456

Passcode: 746074

December 7th, 2023, 3 PM (ET)



Dr. Kyla Sask

Assistant Professor, McMaster University

<https://umontreal.zoom.us/j/85170703323?pwd=anpKWUVoOGtpOURIUGNITXZnYm1DZz09>





Meeting ID: 851 7070 3323


Passcode: 616268

Student Chapter Updates

Quebec City Student Chapter

The Quebec City Student Chapter of the Canadian Biomaterials Society (CBS-QCSC) has started another successful year. By the end of October 2023, with the virtual election of the new executive committee, CBS-QCSC welcomed a few new members consisting of graduate students with diverse backgrounds. The team's expertise includes biology, medicine, biomedical, and materials engineering, which will be accompanied by creative ideas on the topics of the CBS-QCSC seminars and future events. Thus, we hope to organize more exciting events this year. The same as last year, the executive committee is headed by President Mahdokht Akbari. In October 2023, we also had Dr. Nathalie Lavoine, assistant professor in the Department of Forest Biomaterials, NC State University, to discuss "Unlocking the potential of lignocellulosic biomass for designing and engineering the next generation of sustainable materials". More than 30 students and staff have participated in this webinar either in person or online. Over the academic year, the CBS-QCSC will host a networking event night and will host seminars to highlight local biomaterials research and foster collaborative research initiatives.






Canadian Biomaterials Society
Société Canadienne des Biomatériaux
QUEBEC CITY STUDENT CHAPTER
CHAPITRE ÉTUDIANT DE QUÉBEC

is pleased to invite you to the following event:

Unlocking the potential of lignocellulosic biomass for
designing and engineering the next
generation of sustainable materials

Dr. Nathalie Lavoine
Assistant Professor in the Department
of Forest Biomaterials, NC
State University



October 6th, 2023
14h00 – 15h00 (EDT)
Via Zoom and
in-person (PLT-2512)

Via Zoom:
<https://us06web.zoom.us/j/86824827511?pwd=dKT9yubqKVyg5Qj3g5Uv2YsWFRzGbv.1>

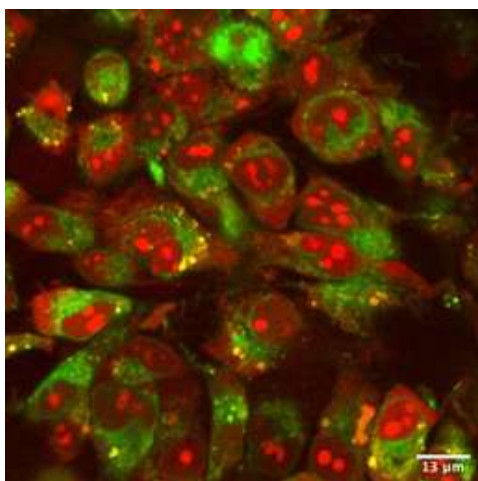
Alberta Student Chapter

We have organized an image competition during the summer for students to send us images of their projects. We have received 9 images, and our first event will be a ceremony to announce the winners and pass them their awards. Another purpose of this event is to introduce our new committee members and thank the previous ones. It will also serve as a get-together socializing event. This event is under planning at the moment. Further information will be sent to you soon.



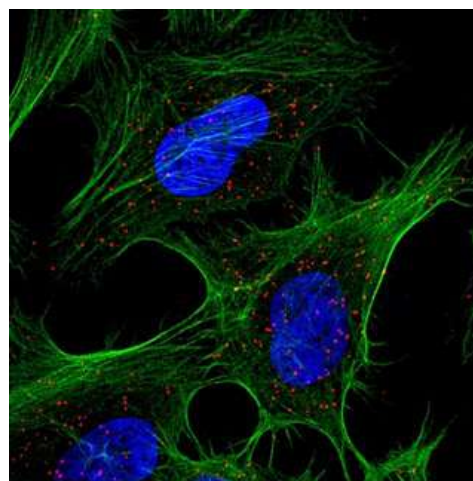
Pictures from the CBS-ASC in-person seminar by Dr. Simon Matoori from the University of Montreal.

Sample Photos received for the summer CBS-ASC Image Competition



MDA-MB-231 breast cancer cells treated with 150 μ M of 30% H₂O₂ to induce ROS (reactive oxygen species) and observed under the spinning disk confocal microscope. MitoTracker Green identifies mitochondria and MitoSox Red shows ROS levels. The project's aim was to characterize protein oxidation as a result of PCLX-001 treatment, an investigational drug which has promising anti-tumour effects and is currently in human clinical trials. When comparing this control condition to PCLX-001 treated cells, it was possible to infer if PCLX-001 ultimately increased or decreased the amount of ROS, and thus protein oxidation, based on the contrast to the H₂O₂ condition.

[By Margaret Markiewicz]



This immunofluorescence image was captured with the Leica TCS SP8 STED microscope (100 \times 1.4 N.A. oil immersion objective) using HeLa cells. The proximity ligation assay (PLA), whose signal is generated only if the proteins of interest are within 40nm, is visualized as red dots. Here we performed a PLA assay between IP3R1 (endoplasmic reticulum calcium channel) and TOM70 (mitochondria outer membrane protein), which allowed us to detect the organelle interactions within the cell. Nuclei were stained with DAPI (blue), and F-actin was stained with phalloidin (green).

[By Junsheng Chen]

Ottawa Student Chapter

It has been an important year for the CBS-OSC. We are pleased to announce that our 3rd 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 securing funding. This program provided an opportunity for mentors to improve their leadership and supervisory skills, while mentees familiarized themselves with current research in the fields of Biomedical Engineering, Biotechnology, and Materials Engineering. Mentees also had the chance to discuss research experience with peers, explore extra-curricular activities to further their knowledge base, and learn about the variety of careers in academia and industry. With the success of the previous mentorship program, the chapter expects to hold the 4th version of this mentorship program for the upcoming year with hopes of having more students taking part to advance their professional development.

We have launched the CBS-OSC's lab tours during which undergraduate and graduate students have the opportunity to attend a one-day tour of a lab that is performing research in the field of Biomaterials at uOttawa and Carleton University. This program aims to encourage students to meet with principal investigators in-person and discuss potential projects and available positions. Additionally, these lab tours provide insight into the types of research taking place in the field and the equipment available in different labs. In early 2023, we organized tours of three labs and plan to organize future tours in the Fall 2023 and Winter 2024 semesters at both uOttawa and Carleton University. Also, we are planning to engage more students with the community through organizing fun and informative events such as trivia nights. Finally, we intend to invite the CBS-OSC's current and former executive members for an Alumni get-together, where former members would share their prior experiences with current members and help us improve the chapter's activities with their insights.

Lab Tours 2023 – Student Testimonial



Thanks to the lab tours event, I was able to meet with, and become a part of, Dr. Catelas' lab. Through this visit, I had the opportunity to speak with Dr. Catelas as well as various lab members, providing a unique and personal experience to ask questions, discuss current projects, and inquire about potential research openings. I would strongly recommend this event to anyone considering research in the biomaterials field and hoping to connect with potential supervisors.

- Jesse Corbin (MSc Student, Biomedical Engineering)

Kingston Student Chapter

CBS-Kingston Student Chapter is excited to announce our new executive committee! Isaac Thevathasan – President, Yuan Pang – Vice President, and Christopher Rayner – Treasurer. Our new committee is looking forward to engaging with the biomaterials community in Kingston by showcasing the amazing researchers we have here at Queens, while also supporting and enhancing student research, education, and interest in biomaterials. We are looking forward to having a great year with our new committee!



The new CBS-KSC Executive Committee: Isaac Thevathasan (President), Yuan Pang (Vice President), and Christopher Rayner (Treasurer), picture left to right.

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:

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