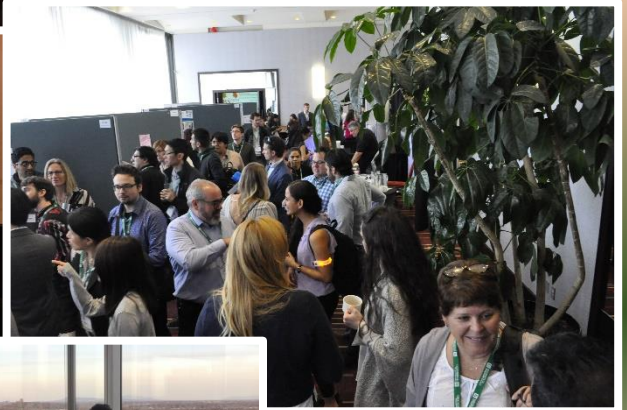
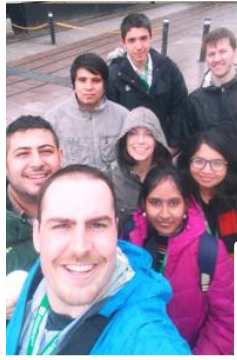


Canadian Biomaterials Society Société Canadienne des Biomatériaux



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Letter from the President

To our dear members of CBS, colleagues, and friends,

We're rapidly approaching the end of 2019 and so I'm pleased to take this excellent chance, to share with you our vision, the society's accomplishments, as well as plans for CBS presence at WBC2020. All in all, I would like to take this opportunity to extend my best words of thanks to our board of directors, the efforts of current IUS-SBE representatives, and our very own volunteers, students and trainees in my time as president. We are working hard with several teams to further the growth and development of our society, initiating ideas, implementing them, and referring to lessons learned for the success of CBS.

This year (2019-2020), the CBS board is pleased to have Dr. Kibret Mequanint as President-Elect, along with other board members focusing on different initiatives. Last year, our previous president, Dr. Sophie Lerouge made a great progress for developing a budget model as well as supporting our student chapters to ensure we are continuously growing in a very organized way. Also, I would like to welcome our new board member, Dr. Fabio Variola who is very passionate to contribute in our CBS Industry Mentorship Program. Such program is led by Dr. Gad Sabbatier, Dr. Corinne Hoesli, and Brent Godau, where they work hard to implement a new initiative to support our trainees by enhancing their networking skills, and further ease their career transition by having mentorship from senior leaders in industry, entrepreneurs, as well as healthcare professionals. For more information about this program, please feel free to approach their team.

We also have great news! In support of our students and trainees, the Board of Directors have approved the foundation of a new student chapter, the Southwestern Ontario Student Chapter (CBS-SWOSC), that will cover events and workshops in University of Western Ontario, University of Waterloo, and McMaster University. Kudos to their team and thanks to their academic mentors for supporting their initiatives!

I am sure you have received my emails regarding several awards we have re-opened, with provided information for deadlines, eligibility, and election process. As the chair of award committee, I will be happy to take any questions you have in this regard to ensure we have the maximum amount of transparency. Please allow me to thank all members of award committee (Board members & IUS-SBE representative). Please refer to our [CBS Website](#) to see a huge list of awards, and we are really looking forward to receiving your applications.

Letter from the President

Moving forward with our international presence, I would like to thank Dr. Brian Amsden and Dr. Gaetan Laroche for their efforts over the past 4 years, and congratulations to our new IUS-SBE representatives Dr. Sophie Lerouge and Dr. Lauren Flynn. And congratulations to Dr. Diego Mantovani for winning the CBS Service Award! He gave us an extremely well-organized CBS Annual Meeting 2019, where we all had fun and enjoyed our time in beautiful Quebec City.

Following our award procedures, we also reviewed many impressive CBS visiting scholar applications with exciting research objectives. Thank you to everyone who submitted their application. The CBS award committee has selected Dr. Felipe Eltit, a PhD student at the University of British Columbia (supervised by Drs. Michael Cox and Rizhi Wang), to study the gene expression profile in metal-exposed murine macrophages at the University of Ottawa with Dr. Isabelle Catelas. We will hear more about his research accomplishments in our Spring newsletter. There are still other awards open, so please check them out and find out their deadlines!

And yes, WBC2020 is almost here. This will be a super exciting event for all of us. The Board of directors have worked extremely hard to manage financial agendas and ensure there is sufficient support for our trainees to attend WBC2020. Moreover, we are also organizing a social night, "Canadian Family Night"! We all may need a break during WBC2020, after many hours of networking, presentations, talks and discussions. Having a drink or appetizer will be a good way to refresh and catch up with our old friends, or perhaps make new ones! Laura McKiel, Erik Jacques, Sadaf Samimi and myself are still working on this, and we will send out further details about the event soon. Please stay tuned!

In this Newsletter you can catch up on the workshops and events our student chapters have organized. They are doing great work, and we are always very proud of our chapters. I am sure that our trainees will be the future leaders in the field, so best of luck to you all organizing such initiatives and events. I would also like to acknowledge Samira Ravanbakhsh and Morgane Laurent for the design and layout of the newsletter.

Enjoy reading our Fall Newsletter, and please be involved and stay connected with us! Thank you, and see you in Glasgow at WBC2020!

Sincerely Yours,

Nima Khadem Mohtaram

President of the Canadian Biomaterials Society





11th World Biomaterials Congress
19 - 24 May 2020, Glasgow, Scotland

Welcome to WBC 2020 Glasgow!

*Pioneering biomaterials for global wellbeing
Tùsaireachd bith-stuth airson sochair domhanta*

The Executive Committee is delighted to invite you to Glasgow to participate and share in the 11th World Biomaterials Congress WBC 2020 19-24 May 2020. You will experience the exciting city of Glasgow, steeped with culture and history and the SEC conference venue on the banks of the River Clyde. The Congress promises a diverse and interesting programme, an international forum for the presentation and discussion of cutting-edge research related to the interactions of biological systems with engineered, synthetic and natural materials. It is an occasion to meet, listen, discuss, share knowledge and bring together inspired biomaterials people.

We particularly welcome our early career researchers and will facilitate interactions with prominent senior investigators in the field as well as scientists from leading biomedical companies. We hope the Congress will provide a forum to exchange scientific ideas, inspire new research, and new contacts for closer collaboration, so that we can, together, define the future for our young (and not so young) researchers who are today's reality and tomorrow's future.

Register today and don't miss out on the chance to save up to £150 on your registration fees. We encourage you to stay connected during the lead up to WBC 2020, keep us proactive and help us to shape the future of Biomaterials. **Join the mailing list** to get the latest news.

Ceud mìle fàilte

The Executive Committee

Lucy Di Silvio
Nicholas Dunne
Liz Tanner

Keep up to date by visiting the website and signing up for the WBC2020 newsletter!

<https://wbc2020.org/>

35th Annual

Meeting of the

Canadian Biomaterials Society

CBS2019 Report

Written by Diego Mantovani, Co-Chair of the conference

The 35th Annual Meeting (AM) of our Society was held in Quebec City from May 21-24, 2019. I had the pleasure to co-chair this AM with my colleagues Nathalie Faucheux (U of Sherbrooke) and Marc-André Fortin (ULaval), and in close and continuous partnership with the most dynamic team of the CBS Quebec City Student Chapter.

On May 21, there were 5 tutorials given on entrepreneurship, mentoring, 3D printing, biotechnology in biomaterials, and tissue engineering. Some 75 participants were trained in each of these new emerging fields by 3 to 6 tutors, during 3 to 4 hours. A welcome reception on the same day launched this AM, allowing some 180 attendees to meet, have a drink, and listen to some live music. For the following three days, 4 parallel oral and 2 poster sessions allowed the 278 participants of this AM to present their research in all topics of biomaterials. Of the conference attendees, there were 173 young scientists in training, 73 professors, 24 industry professionals, and 8 clinicians. We were excited to welcome many international attendees from America, the United Kingdom, Europe, and Asia. As well, there were many wonderful sponsors including Rheolution Inc, Instron, Québec Metallurgy Center, Biomomentum Inc, Spectra Research Corporation/Cellink, Systems for Research (SFR), Regemat/Cloud Science, Université de Sherbrooke, Le réseau ThéCell, WBC2020, and Aspect Biosystems Ltd.

On May 22 evening in Old Quebec City, a student activity was organised for young CBS scientists, while senior scientists were dining together in a relaxed atmosphere. On May 23, from 2 pm, the classical CBS Treasure Hunt introduced some 125 participants to the UNESCO Heritage Old Quebec City, in an atmosphere appropriate to network and build team spirit. The conference dinner in an Orleans Island old sugar shack closed the day, and allowed the most dynamic attendees to end up in dancing on traditional Quebec music (photos & CBS2019CLIP are available for download [here](#), until Dec 31, 2019). A record number of 30 awards were given to oral and poster presenters, classed by their respective level of advancement in graduate or postdoctoral studies.

Quebec City biomaterial scientists have been very honoured to welcome senior and young scientists, from Canada and the world, in Quebec City. This was the third time in the last 20 years (1999-2009-2019) that the AM was held in town! After the 2020 World Biomaterials Congress in Glasgow, Scotland, we are proud to announce that the 36th AM of the CBS will be held in 2021 in Waterloo, Ontario, organised by our colleagues at the University of Waterloo.

Congratulations to the CBS2019 Presentation Award Winners!

Best Poster Presentation Awards

Science

- Zachary Gouveia (MSc)
- Candice Diaz (MSc)
- Audrey Lainé (MSc)
- Ruchi Sharma (PhD)
- Camille Couture/Élodie Gillard (PhD)
- Bryan Lee (PhD)
- Hoda Soleymani Abyaneh (Postdoc)
- Jacqueline Kort-Mascort (Postdoc)
- Suja Shrestha (Postdoc)

Communication

- Zachary Gouveia (MSc)
- Kenneth Kimmins (MSc)
- Candice Diaz (MSc)
- Camille Couture/Élodie Gillard (PhD)
- Brendan Grue (PhD)
- Bryan Lee (PhD)
- Hoda Soleymani Abyaneh (Postdoc)
- Kyla Sask (Postdoc)
- Gabriele Griffanti (Postdoc)

Oral Presentation Awards

Master's

- Nadia Sharma
- Kyla Wilson
- David Lomboni

Doctoral

- Alexander Steeves
- Ali Babar
- Nicholas Cunningham

PostDoctoral

- Eهران Rezabeigi
- Arthi Shridhar
- Sergio Diaz-Rodriguez

Emerging Talent Awards

- Eهران Rezabeigi (Postdoc)
- Alexander Steeves (PhD)
- Xiaoyi Lan (PhD)

Introducing the President-Elect!

Dr. Kibret Mequanint is a Professor in the Department of Chemical and Biochemical Engineering, and School of Biomedical Engineering at the University of Western Ontario. His laboratory contributed to fundamental advances in the design of novel biomaterials for medical devices, tissue engineering, and regenerative medicine applications - in particular for vascular tissue engineering. He has published over 100 peer-reviewed articles and more than 70 conference proceedings where some of his technologies are licensed. He has also delivered more than 50 invited talks at international conferences and universities. His contributions to biomaterials and regenerative medicine research have been recognized by the Early Researcher Award (Ontario Ministry of Research and Innovation), the Faculty Scholars Award (Western), the Bikila Professional Excellence Award (Bikila Awards), and Engineering Award for Excellence in Research (Western). He is an elected Fellow of the American Institute for Medical and Biological Engineering (AIMBE), a member of Tissue Engineering and Regenerative Medicine International Society (TERMIS) and the Canadian Biomaterials Society (CBS).



His involvement with CBS started in 2002 and was elected to CBS Board of Directors and served for six years (2008-2012, and 2017-2019). In 2015, Dr. Mequanint served as Guest Editor for Biomaterials Research in Canada – Special Issue (Journal of Biomaterials and Tissue Engineering) – focusing on Canada's contributions to Biomaterials Research. He currently serves as an Editorial Board member for a number of peer-reviewed international Journals.

Meet the new Board member!



Dr. Fabio Variola (*PhD., P.Eng*) is an Associate Professor in the Department of Mechanical Engineering at the University of Ottawa, with cross-appointments to the Department of Cellular and Molecular Medicine and to the

Children's Hospital of Eastern Ontario (CHEO). My research aims at investigating structure-function relationships governing cell behaviour at interfaces and in 3D matrices to instruct the design of biomaterials for applications in tissue engineering and disease modelling. As a newly elected Board Member, I propose to strengthen professional development aspects that are currently lagging behind in the conventional training of natural science and engineering trainees, aiming at bridging the current soft skills gap in the biomedical workforce. I am convinced that these aspects will further expand the impact of CBS on crafting the professional profile of tomorrow's leaders in the biomedical field.

New CBS Student Chapter!

The inception of the Canadian Biomaterials Society – **Southwestern Ontario Student Chapter (CBS-SWOSC)** was inspired by the proximity and research quality of the groups at Western, Waterloo and McMaster in the field of biomaterials. The CBS-SWOSC poses a unique opportunity to fulfill the CBS' mandate by:

- promoting and enhancing student involvement in biomaterials research
- providing professional development and networking opportunities for students and faculty members involved in biomaterials
- promoting inter-disciplinary networking among biomaterials and related field researchers and industrial professionals between institutions

The main purpose of this chapter is to develop networks between students and professionals who work in biomaterials and related fields in Southwestern Ontario. Within the chapter's first year of operation, the student members hope to host a variety of tutorial and seminar events along with a large research symposium to highlight the biomaterials research in our region. Details about our coming events can be found on our website:

<https://cbsswosc.wordpress.com>

Keep up to date on the activities of our student chapters!

Alberta:

<https://abbiomat.ca/>

British Columbia:

<https://blogs.ubc.ca/cbsstudentchapterbc/>

Kingston:

<https://biomaterialskingston.wordpress.com>

Ottawa:

<https://ottawachaptercbs.wordpress.com/>

Montreal:

<https://cbsmontrealchapter.wordpress.com/>

Quebec City:

<https://cbsqcchapter.wordpress.com>

Southwestern Ontario:

<https://cbsswosc.wordpress.com>



Alberta Student Chapter

It has been a very busy fall semester for the CBS-ASC, with the election of the Executive Committee in September 2019. The team consists of individuals with diverse backgrounds and experiences, bringing different perspectives to the group for the New Year. Collectively, the executive committee has agreed on a main goal for the semester, which is to increase awareness of our group on campus. The first step to achieve this was to conduct a samosa sale to inform people about CBS-ASC. The samosa sale was a great success, selling out in half the time anticipated and we were able to promote our future events to individuals who were interested in biomaterials.



In late October, we held a seminar which was kindly given by Dr. Heather Sheardown, who was visiting from McMaster University. Her lecture focused on her research in ophthalmic biomaterials, including ocular drug delivery. This seminar was also sponsored by Malvern, with a short presentation on recent nanoparticle characterization techniques. The event was well attended, with a diverse group of people in attendance that were engaged in the talks. We are very excited to see how the remainder of the year will go, especially with the various seminars, fundraisers, and mixers planned!



BC Student Chapter

The CBS BC Student chapter is preparing for an exciting future with a focus on collaboration. After a productive 2 years leading the chapter, chapter president Laura de la Vega (UVic) stepped down and Chris Lee (UBC) took over the position. BC students were able to showcase their research at CBS 2019, highlighted by chapter member Ruchi Sharma taking home 1st Distinguished Poster award. Going forward, the BC chapter aims to strengthen the connection between UVIC, UBC, and industry. Starting in the spring, the chapter plans to host a panel discussion at UBC featuring prominent biomaterial figures in medicine, academia, and industry that will be broadcast simultaneously to UVIC. Following this, each university is planning to host a summer networking BBQ that will bring students together with faculty and local industry, allowing students to learn more about all the nearby research and opportunities in biomaterials.

Kingston Student Chapter

The Kingston Student Chapter has had an eventful summer and hopes that continues into the fall and winter. Several great events were hosted, including the 3rd Annual Eastern Ontario Biomaterials Symposium, which is a joint research symposium with the Ottawa chapter held at Queen's consisting of several biomaterial-related research presentations from researchers across both universities. The Kingston chapter also put on an event with Dr. Charlie Hindmarch from the Queen's Cardio Pulmonary Unit (QCPU), during which Dr. Hindmarch shared insights into career development in health-related sciences as well as his own research.



Montreal Student Chapter

The Montreal Student Chapter of the Canadian Biomaterials Society (CBS-MSC) has been devoted to the demonstration and communication of the latest biomaterials research progress within the local biomaterials research communities in Montreal and other student chapters. The chapter has organized various events, including seminars and conferences, towards this goal. The newly elected executive committee is very excited for the upcoming year! We will focus on further strengthening the connections between academia and industry, and enriching an encouraging environment for entrepreneurship in the field of biomaterials in Montreal, such as regenerative medicine and diagnostics.

We are in the process of organizing a biomaterials-entrepreneurship themed event in November, where we'll feature 3 CEOs and co-founders of local spin-off companies and start-ups, along with associate directors from local patent offices and incubators. We'll also have bi-monthly biomaterials café events for the showcase of recent research progress in the fields of biomaterials. The biggest event planned for the year, our 4th annual Montreal Biomaterials Research Day, is also on our schedule.

Ottawa Student Chapter

The Ottawa Chapter has had an exciting and busy year! This year, the Ottawa Student Chapter events had great turn out from all levels of academia, including undergraduate and graduate students, in addition to faculty members and industry partners. Following our tissue engineering seminar in the Fall of 2018, the Ottawa chapter hosted a Biomedical Engineering Conference (BEC2019) in March 2019. The two-day conference had an exceptional turn out, with over 100 students and faculty members in attendance. The CBS-OSC was honored to have Dr. May Griffith, Dr. Abdulmotaleb EL Saddik, Dr. Diego Mantovani, and Dr. Adrian Chan speak as conference keynotes. Students had the opportunity to participate in oral competitions and interactive workshops on: (1) Nanoparticles, (2) Microfluidics, (3) 3D Bioprinting, and (4) Biomaterials and Advanced Medical Databases. Additionally, industry partners from 3D Bioprinting companies across Canada and from Spain, including Rheolution Inc., CELLINK, and Regemat3D were in attendance providing students and professors the opportunity to learn more about bioprinting and test out different types of printers. Thanks to the biomedical engineering community for coming out!



Beginning in Fall 2019, the Ottawa student chapter executive team begun hosting live streamed interviews on the BEaTS Research Radio at the University of Ottawa Heart Institute. In collaboration with the BEaTS Research Lab, the Ottawa Student Chapter hopes to help connect the community to research in the science, engineering and medicine fields with a main focus on interdisciplinary efforts for translational medicine. During the interviews, we attempt to dissect complex ideas, topics, and technical information into simple terms to allow all listeners to better understand the importance of science and the translational efforts in scientific research. This effort has been led by Dr. Emilio Alarcon and we are extremely excited to be working with him on this initiative.



To wrap up this year, in October 2019, the Ottawa Student Chapter was also involved in organizing a Biomaterials and Regenerative Medicine Networking Symposium in collaboration with Ottawa Hospital Research Institute, the University of Ottawa Heart Institute, the Centre for Advanced Materials Research, and the Bioengineering and Therapeutic Solutions Laboratory. This event brought together scientists, engineers, and physicians in the Ottawa area, and enabled identification of high-impact research opportunities, as well as the development of interdisciplinary collaborations. Dr. Lorenzo Gutierrez, Site Director, at Starfish Medical in Toronto also attended as a keynote speaker. Thanks from the CBS-OSC to all those who attended!

Quebec City Student Chapter

Since April 2019, the CBS Quebec City Student Chapter (CBS-QCSC) has organized different activities such as seminars, webinars, workshops and a networking event. In April, Prof. Michael Walsh (University of Limerick) gave an interesting talk about the role of blood flow and calcification in vascular disease. Also, Dr. Juan V. Cauich-Rodriguez (Centro de Investigación Científica de Yucatán) presented his research about the development and characterization of biomaterials based on copper-containing polyurethanes.

In May, the CBS-QCSC participated in the organization of the annual meeting of our society by organizing different social activities for students and attendees. In particular, on the 22nd of May, a social night with pizza, board games and science took place in the relaxed atmosphere of Ninkasi Pub in the heart of Quebec City downtown. During the night, Prof. Jesse Greener (Université Laval) discussed with the participants about academic carriers for young graduate students. On the 23rd of May, the traditional treasure hunt, set in the suggestive streets of Old Town Quebec, gave the opportunity to students, professors, and professionals to visit and discover the secrets of this UNESCO heritage site despite the pouring rain.



This November, the CBS-QCSC will host a conference about SOVAR, a company focused on the translation of scientific research to a responsible technological and social innovation. Gregory Hersant, innovation development manager of SOVAR, will talk about the patent application process. Also, during the event, the chapter will have its elections for the open positions of President, Vice-President, Treasurer, Communication Manager, Secretary, Fundraiser and Website manager. In the first week of December, Yvan Bédouin, professor of the Dentistry department of Université de Rennes, will talk about the development of new titanium alloys for dental implants. Before Christmas holidays, a workshop about the 3D simulation software Creo will take place.

For the next year, more seminars and workshops are planned with international professors and professionals. In addition, the 3rd Symposium of Biomaterial is planned for October 2020. This one-day event will host representatives from the academic, industrial and medical fields to discuss about biomaterials. This year, we are also planning the involvement of the other CBS student chapters!

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

Did you know?

CBS has several awards available yearly for student and postdoc members!

Find new awards on our website: biomaterials.ca



CBS Visiting Scholar Award

Deadline: March 1 and October 1, Annually

The Canadian Biomaterials Society is providing a Visiting Scholar Award to give to the most promising young scientists the opportunity to visit another university / lab with common research interests and stimulate their interest to pursue their career in the field of biomaterials. The award also intends to foster collaborations as well as exchange of technologies and ideas between Canadian universities in the field of biomaterials.

Who is eligible?

Ph.D. students in their 2nd year and above and post-doctoral fellows, who:

- Have been a member of CBS for at least 1 year at the time of application. The supervising professors in the home and hosting institutions should also be members.
- Have attended at least one annual meeting of the CBS (or WBC) prior to the application for the award.

Value of the award

This award has a value of a maximum of \$3,000, to cover travel and housing expenses for a visit of up to 2 weeks.

Application

procedure

The candidate should submit:

- a current CV including the list of publications
- a brief summary describing the proposed research activities during his/her visit in the hosting institution (maximum 2 pages)
- a maximum one-page budget summarizing the expected expenses

The supervising professors (both in the student home and hosting institutions) should submit a maximum 1-page support letter confirming their interest in the collaborative research activity.

Applications should be sent electronically to the CBS secretary before **March 1 and October 1 annually**. A maximum of one award will be distributed and announced at the CBS Annual Meeting.

Information can be found on our website at:

<http://www.biomaterials.ca/#!/awards/cbs-visitingscholar>

Join us for the 11th World Biomaterials Congress, occurring **May 19-24, 2020** in **Glasgow, Scotland!**

Registration is now **OPEN**

<https://wbc2020.org/>



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Design & Layout
Samira Ravanbakhsh
Morgane Laurent

CBS Communications Committee

Isabelle Catelas
Laura McKiel
Fabio Variola

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

nima.khademmohtaram@uwaterloo.ca

