



**Canadian Biomaterials Society**  
**Soci t  Canadienne des Biomat riaux**

**Quarterly Newsletter**



**Letter from the President**

On the heels of a very successful World Biomaterials Congress in Montreal, your CBS Board is hard at work aiming to build on the momentum generated for biomaterials research in Canada. I wanted to take this opportunity to update you briefly on some of the initiatives we are currently undertaking to hopefully make CBS an even bigger part of the Canadian biomaterials community.

*Awards:* CBS gave out its first set of Society awards at WBC 2016, and we are now working toward establishing additional new awards to recognize the contributions of Canadian colleagues in promoting biomaterials science and engineering and raise the profile of biomaterials research in Canada. As one new initiative, we have now expanded eligibility to our CBS Visiting Scholar award to post-doctoral fellows (see the end of this newsletter for details on the terms and application procedures for this award). We will be announcing further initiatives in January leading up to CBS 2017 – stay tuned to the winter newsletter for full details!

*Clinical Advisory Board:* In an attempt to improve the connections between the lab and the clinic, CBS has established a Clinical Advisory Board, currently comprised of Yoav Finer (University of Toronto) and Mina Mekhail (McGill University), to brainstorm ideas and develop events aiming to engage clinicians in biomaterials research. If you have specific feedback on this topic, or are a clinician with interest in helping to bridge this gap, we would love to hear it – this is something we are very engaged in building within CBS moving forward.

*Student Chapters:* Our network of student chapters is strong, and over the next year you will hopefully be seeing through our website a lot more about their activities. We encourage all CBS trainees (students and post-doctoral fellows) to participate in these local chapters, as they offer a range of fantastic academic and network-building events throughout the country. CBS is also very interested in helping to initiate new

student chapters in areas of the country not currently served by our chapter network. Please let me know if you are a student with interest in helping to start a local chapter. CBS does offer funding directly to student chapters to help subsidize local activities.

Finally, we look forward to seeing many of you in May at CBS 2017! You will be seeing many more details about the conference very soon, but for now be sure to mark your calendars for May 24-27, 2017. We are excited to take CBS 2017 to Manitoba for the first time! Abstract submission is now open. As usual, CBS will be offering abstract travel awards to CBS 2017 to help support the attendance of graduate student and post-doctoral fellow CBS members with submitted abstracts.

We always appreciate your feedback and ideas on these and other initiatives and programs run by CBS. Please feel free to contact me ([hoaretr@mcmaster.ca](mailto:hoaretr@mcmaster.ca)) or any of our Board of Directors members (<https://biomaterials.ca/#!/directors>) at any time. Also, please visit our website <https://biomaterials.ca> for updates on various CBS events across the country. We are also endeavoring to more consistently post international opportunities (such as the current *Biomaterials Science* Lectureship now posted) through our website. Please see the News feature for these updates (or let us know if you are aware of such an opportunity so we can share it with the CBS community).

On behalf of the Board, all the best for 2017!

Sincerely,  
Todd Hoare, CBS President 2016-2017

**Annual Membership Renewal!**

It's that time of year to renew your membership in the Canadian Biomaterials Society! Visit the website to ensure you remain a member. Note that all memberships purchased between now and the end of 2016 will also apply to your membership for 2017. <https://biomaterials.ca/#!/membership>

## World Biomaterials Congress Review

CBS would like to thank and acknowledge the many members who worked hard to make the 2016 World Biomaterials Congress in Montreal such a success. The organizing committee of Paul Santerre, Gaétan Laroche, Hasan Uludag, and Diego Mantovani did an outstanding job of leading the conference organization. In addition, the student volunteers (most of which are also involved in our CBS student chapters) worked incredibly hard to run the student program as well as help with all the logistics of the event. Thank you also to all CBS senior members who served breakfast on the final day (as well as to the organizing committee who made the moose aprons only moderately embarrassing!) Multiple CBS members were also involved in chairing and organizing many of the very well-attended New Frontiers Symposia as well as events like Workshops, Round Table Discussions, Clinic-to-Bench sessions, Lunch & Learn, and Science-in-Industry sessions. Finally, thank you to the Canadian biomaterials community that was amazingly well-represented at our home Congress (over 500 abstracts). We hope that many of you who joined CBS to attend WBC 2016 will continue to engage with us through our annual CBS meetings.

**We hope to see you at the Annual Meeting of the Canadian Biomaterials Society held on the University of Manitoba, May 24-27, 2017!**



The first CBS annual meeting to be held in Manitoba, the program is designed to provide an overview of the

latest research and development in the field of biomaterials and their clinical applications. Distinguished scientists and clinicians have been invited for lectures in plenary sessions. Research papers will be presented in the form of oral presentations or posters in multiple sessions to cover a wide variety of topics in biomaterials. Social programs and special workshops are also being planned.

We hope that you will join us for the CBS Annual Meeting on the Fort Gary Campus of the University of Manitoba, located at the south end of Winnipeg on the bank of Red River. The conference will provide many opportunities to interact with colleagues from across Canada and around the world. Abstract submission is now open, and we would like to encourage you to submit your abstracts for the meeting at your earliest convenience.

**Meet the new members of the CBS Executive!**

### President-elect – Dr. Stephanie Willerth

I'm excited to be working with the Board of Directors in capacity of President-Elect of the Canadian Biomaterials Society and I am looking forward to hosting the 2018 CBS Annual Meeting in Victoria. I am currently an Associate Professor of Biomedical Engineering at the University of Victoria where I hold joint appointments in the Department of Mechanical Engineering and the Division of Medical Sciences. I am a Canada Research Chair in Biomedical Engineering and I also serve as the Associate Director for the Centre for Biomedical Research. My research program focuses on engineering neural tissue from stem cells. I had previously served two terms on the Board of Directors for the Canadian Biomaterials Society where I was involved with the Communications committee.

### Senior Board Member – Dr. Isabelle Catelas

I joined the Department of Mechanical Engineering at the University of Ottawa in 2008 as an Associate Professor and Canada Research Chair (CRC), with a cross-appointment to the Faculty of Medicine. My research interests include the study of hip implant failure mechanisms, as well as bone tissue engineering. I have had the pleasure to serve on the Board of Directors during the last six years, first as a Senior Board Member and then as the President of the

Society, and I am honored to have the opportunity to continue serving as a Senior Board Member for the next two years. I look forward to continue fostering the important endeavours that the Society has been working on during the last few years. These include the promotion of student engagement through the creation of more student chapters, the reinforcement of industry relations, and the increased representation of clinicians in our Society.

### **Senior Board Member – Dr. Kathryn Grandfield**

Dr. Kathryn Grandfield is an Assistant Professor in the Department of Materials Science & Engineering and School of Biomedical Engineering at McMaster University. Her research interests include development of high-resolution characterization techniques for applications in osseointegration and biomineralization. She has served as CBS Secretary for 3 yrs. and is hoping to facilitate more cross-Canada collaborations through her new role as a Senior Board Member.

### **Senior Board Member – Dr. Tom Willett**

Thomas Willett, PhD, PEng is an assistant professor in the Biomedical Engineering program in the Department of Systems Design Engineering at the University of Waterloo. His laboratory is concerned with the mechanics of biomaterials and tissues, especially bone and composite bio-inspired materials assembled using 3D printing, and biodesign. He aims to contribute towards the continued growth and stability of the CBS by promoting the development of new student chapters (Atlantic Canada, Southern Ontario), continued strong support for current trainee members and chapters, and developing increased engagement of the CBS with industry and clinicians.

### **Student Board Member – Ross Fitzsimmons**

Ross Fitzsimmons is a Ph.D. candidate at the University of Toronto in the Institute of Biomaterials and Biomedical Engineering. As a member of Prof. Craig Simmons' cellular mechanobiology lab, he is focused on developing strategies for engineering vascularized tissues *ex vivo* and is interested in the roles growth factors and matrix cues play in microvessel formation and stabilization. He looks forward to helping improve the student experience within the society while serving as a member of the CBS board. He's particularly enthusiastic about cultivating increased interaction between the student

chapters and improving the professional development resources available to students and postdoctoral fellows on the CBS website. He looks forward to seeing everyone in Winnipeg for the next CBS meeting!

### **Secretary – Dr. Lindsay Fitzpatrick**

Dr. Lindsay Fitzpatrick is an Assistant Professor in the Department of Chemical Engineering at Queen's University. Her research interests include cell-material interactions, inflammation and immunomodulation, and the development of new animal models for rapid, *in vivo* screening of biomaterial candidates. She is looking forward to serving as Secretary to the CBS Board of Directions.

### **Update from the Student Chapters**

#### **Alberta Student Chapter**

CBS-Alberta chapter kicked off the 2016-17 academic year by participating at the Clubs Fair organized by the Students' Union, University of Alberta in September 2016 to promote the group on campus. More importantly, CBS-ASC will continue hosting its series of biomaterials-related seminars. For the first seminar in our series for this academic year, we invited Dr. Shell Ip from Precision NanoSystems Inc., Vancouver BC to give a talk on the rapidly emerging field of nanomedicine in September, 2016. In November 2016, Dr. Lingyun Chen, a leading nutraceutical researcher at the University of Alberta will be giving a seminar about the use of biomaterials in nutraceutical delivery as well as talking to students informally to provide insight about a career in academia.

#### **British Columbia Student Chapter**

The BC Student Chapter of the Canadian Biomaterials Society recently held our first symposium this past February, focusing on Biomaterials Commercialization. The symposium featured speakers from the student (Jenna Collier, Genentech Intern), academic (Dr. Christian Kastrup, Assistant Professor at UBC and founder of Ptec) and commercial (Dr. Steve Woodside, STEMCELL Technologies) aspects of industrial research. With generous contributions from both The Canadian Biomaterials Society and STEMCELL Technologies, we hosted over 70 attendees with representatives from SFU, UVic and UBC. A select group of students was also invited to have breakfast with former CBS member and current Associate Professor at the Harvard Stem Cell Institute, Dr. Jeffrey Karp.

## Montreal Student Chapter

The Montreal held several events this year in addition to their extensive participation in supporting the World Biomaterial Congress.

### Feb. 2016 – Tissues and 3D-Printing

This event occurred at École de Technologie Supérieure shortly before the WBC and featured Profs. Diego Mantovani from Université Laval and Jake Barralet from McGill University. This event was aimed both at educating our members as usual, but also at promoting the WBC and recruiting volunteers. We had approximately 60 participants who greatly enjoyed the presentations, networking and volunteering opportunity.

### Jul. 2016 - Physiologically Relevant Bioengineered Tissue Equivalents and Council Elections

We held this event in the Engineering building of McGill University. We had Prof. Showan Nazhat give us a presentation on the topic of their cellular framework materials. This presentation was followed up by our executive elections.

### Oct 2016 – Polymeric Drug Delivery Systems in Industry and Academia

At Université de Québec à Montréal, Prof Mateescu from UQÀM and Dr Wilms Baille from Altus Formulations described the polymers they have developed for use in drug delivery applications. We had a fantastic turnout for this event, completely filling the room (about 50 attendees).

## Ottawa Student Chapter

The CBS Ottawa Student Chapter is expecting continued increase in its membership and projects in the coming year.

We had the pleasure to be actively involved in the 10<sup>th</sup> World Biomaterials Congress (WBC) that was held in Montreal May 17<sup>th</sup>-22<sup>nd</sup>, 2016. Several members of our chapter volunteered to be part of the WBC organization and also worked at the CBS booth to promote and advertise the CBS, specifically the upcoming annual CBS meeting in Winnipeg.

In the next months, we will be holding one themed seminar event in February 2017. The seminar will be focused on Biomaterials in Heart Regeneration. We will also hold an exciting big event in the beginning of April 2017! We will invite four speakers who will debate about the pros and cons of current techniques for Regenerative Medicine. This event is designed to expand the horizon and knowledge of both graduate and undergraduate students. It will give them an

opportunity to see different points of view about regenerative medicine within the scientific community.

Our chapter looks forward to the coming months during which we will continue to be involved in establishing relationships with other student societies, such as the Engineering in Medicine and Biology Society at Carleton University, while reaching out to the potential new CBS chapter in Kingston for future collaborations.

## Quebec City Student Chapter

The Quebec City Student chapter has organized several scientific events over the past year. Speakers from all around the world (Canada, Italy, India, Switzerland, Belgium, USA, etc.) presented their research in one-hour-long seminars periodically organized by the Chapter. The attendees of these events were mostly students in the field of biomaterials, but we also had surgeons, chemists and biologists in attendance.

## CBS Visiting Scholar Award

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 for the Award?

The award is opened to Ph.D. students *as well as post-doctoral fellows* in their 2<sup>nd</sup> year and above, working in the field of Biomaterials. The student must fulfill the two conditions given below to be considered for an award:

- Have been a member of the Canadian Biomaterials Society for at least 2 years at the time of application for the award. The supervising professors in the student home and hosting institutions should also be members of the Canadian Biomaterials Society.
- Have attended at least one annual meeting of the Canadian Biomaterials Society 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 student or PDF should submit:
  - a current CV including the list of publications;
  - a short summary describing the proposed research activities during his/her visit in the hosting institution (maximum 2 pages);
  - a one page budget summarizing the expected expenses.
- The supervising professors (both in the student home and hosting institutions) should submit a support letter.
- Applications are now due annually on March 1st (one award to be given per year). Send applications electronically to the CBS Secretary, Lindsay Fitzpatrick ([lindsay.fitzpatrick@queensu.ca](mailto:lindsay.fitzpatrick@queensu.ca)). Results will be announced via the CBS website (together with a visiting scholar profile).

Information can be found on our website at:

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

### ***CBS Newsletter editorial board***

Isabelle Catelas  
Kathryn Grandfield  
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Todd Hoare

Please contact [willerth@uvic.ca](mailto:willerth@uvic.ca) if you want to contribute to our next CBS Newsletter.



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