



NOVEMBER / NOVEMBRE 2022

The Canadian Society of Plant Biologists La Société Canadienne de Biologie Végétale

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Message from the President

Robin Cameron McMaster University

I hope you all enjoyed Thanksgiving, the fall colours have been fabulous this year in southern Ontario. Like me, maybe some of you are looking forward to winter, as it provides a break from our home gardens and field work and includes fun winter activities. I look forward to seeing many of you in-person at the CSPB-SCBV Eastern Regional Meeting taking place on Saturday December 3rd at U of T Scarborough (see ERM Director's message for more details).

Plant Biology 2022 (PB22)

Our annual general meeting was held jointly with the American Society of Plant Biologists. Plant Biology 2022 (PB22) was held in Portland Oregon at the Portland Convention Center from July 9th to 13th. This was the first in-person conference for our two societies since the pandemic began. As a member of the Program Committee, I attended weekly meetings starting in October 2021, participated in weekly email consultations, plus two weekend planning sessions, one in October 2021 (attended virtually) and one in April 2022. Despite the ongoing pandemic, ~1000 people attended PB22 including ~120 Canadians. Attendees were encouraged to wear masks and most did, resulting in few Covid-19 cases during the conference. For the first time, the CSPB-SCBV and ASPB community was asked to submit proposals for Concurrent Sessions, just like what was done for PB22 Workshops in the past few years. As a member of the organizing committee, I helped in selecting both, we used an EDI and early career lens to make the conference more inclusive. The rest of the concurrent talks were selected in a similar manner, from submitted abstracts. Using an EDI lens resulted in a more diverse group of PB22 speakers.

A number of CSPB-SCBV members gave outstanding Plenary, Concurrent, Award or Workshop presentations that were well received by PB22 audiences and created some buzz on Twitter.

Plenary Presentations

CSPB-SCBV President's Plenary: Tangled and Interacting Plant Immune Pathways, showcasing some of Canada's best with a mix of early career and established researchers: Adam Mott (UTS), Keiko Yoshioka (UoT), Kevin Ao (Xin Li's Lab, UBC) and Robin Cameron (McMaster).

First ever Joint CSPB-SCBV- ASPB EDI Plenary entitled Science Without Borders: Migration, Domestication and Culture: Speakers were invited to talk about their science



and/or EDI. Both CSPB-SCBV speakers, Allison McDonald (Laurier) - Alternative Pathways: Flexibility and Diversity in Mitochondrial Electron Transport Systems and Plant Sciences and Edel Perez-Lopez (Laval) - Don't ask, don't tell - still the key to success for LGBTQ2+ in plant pathology, gave compelling talks that were extensively talked and tweeted about.

Award Presentations

Vincenzo DeLuca gave an interesting and engaging overview of his research career during his CSPB-SCBV Gold Medal Award talk (awarded in 2021), including some awesome photos of Vincenzo as a graduate student. Isabel Desgagné-Penix, Université du Québec à Trois-Rivières, gave a compelling C.D. Nelson Award (awarded in 2021) talk about her research and her advocacy for women and indigenous people in science. And finally Lauren Erland gave an engaging talk as the Carl Douglas Post-Doctoral Awardee (2022) about her work as a PDF and her future work as Director of Berry Research at the University of the Fraser Valley. The 3-minute thesis competition was presented by the ASPB EDI committee and 3 Canadians made it into the top 5. Monique Power of the U of Ottawa won the competition!

Concurrent Sessions by CSPB-SCBV Members Marcus Samuel (UCalgary), chair, Cell-cell signaling during pollen-pistil interactions

Thuy Dang (UBC), chair, Specialized Metabolism
Devang Mehta (U Alberta) presented a workshop entitled EDI and inclusion in science publishing

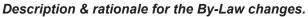
CSPB-SCBV Mixer at PB22: With help from the CSPB-SCBV EDI committee I organized a CSPB-SCBV Mix & Mingle Evening in which members enjoyed finger foods and beverages and got to know each other by playing CSPB-SCBV Bingo. We included this icebreaker Bingo

game in response to our EDI survey of 2021, in which we heard that some members feel it is challenging to interact with people at CSPB-SCBV conferences and as a result do not feel included. I believe that we were successful as many CSPB-SCBV members felt welcomed and included.

The PB22 Student Poster Competition was organized by Marcus Samuel (Vice-President), there were 50 students in the competition, see his message for more details.

Special Virtual By-law change meeting, February 2nd 2022

In response to the 2020 EDI Survey and in consultation with the EDI committee, the following changes to the By-laws were discussed and approved by the Executive, then discussed and voted on during the special meeting on Feb. 2nd. A total of 37 members attended the virtual meeting with eight members voting by proxy. The changes were accepted in a unanimous vote. Sheila Macfie, our Treasurer submitted the proposed changes to the Canada Revenue Agency and we are waiting for a response.



By-law 8 – CSPB Vice President chairs the new EDI Committee.

By-law 10 – add another member to the Executive, to have both a student and a post-doctoral representative to enhance early career member participation on the Executive.

By-laws 20, 21 – change wording for the Presidents', Directors' and Waygood Awards from best to top presentations so each award committee can decide on how many awards to give out.

By-law 24 – allow students to self-nominate to increase the number of nominations and also enhance the inclusiveness of the Ragai Ibrahim Award.

CSPB-SCBV Annual Business Meeting

Our Annual Business Meeting was held virtually on June 22nd to present society activities, financial statements, and new member elections. 32 members attended the online ABM including the CSPB executive. During this meeting, our CSPB-SCBV Society Awards were also presented.

We presented the 2022 David Gifford Award in Tree Biology to Dr. Annie DesRochers, Forest Research Institute, Université du Québec en Abitibi-Témiscamingue for excellent and innovative research in forest science. The Carl Douglas Post-Doctoral Award was presented to Dr. Lauren Erland (UBC) and the Ragai Ibrahim Best Paper Award was presented to Purva Karia (UofT, Yoshioka lab) with honourable mention to Samuel Livingston (UBC, Samuels lab).

Future Annual General Meetings

2023 CSPB, U. of Laval, Edel Perez-Lopez, Dominque Michaud, date TBD 2024 Plant Canada, CPS host, in Winnipeg at RBC Convention Centre, July 6 to 10th.

2025 Volunteers Needed

2026 PB26, ASPB-CSPB joint meeting, Dalhousie, Halifax, Sophia Stone, date TBD

EDI Update (see also Vice President's message for more details)

As a society, we are strongly committed to promoting Equity, Diversity and Inclusion in our society and continue to implement improvements from the 2021 EDI Survey as well as ideas from our EDI committee. Vice President, Marcus Samuel and the EDI committee helped organize the Mix and Mingle at PB22 and created a land acknowledgement for the CSPB-SCBV web site. Budding ideas, a section of the CSPB-SCBV Bulletin devoted to articles by graduate students and post-doctoral



Dr. Vincenzo De Luca receives the CSPB Gold Medal from CSPB President Dr. Robin Cameron



Dr. Isabel Desgagné-Penix Gives the C.D. Nelson Award Keynote



Dr. Lauren Erland
Starts off her Carl Douglas
Award Keynote

fellows has been well received and many of our early career researchers are contributing thoughtful and engaging articles.

New members of the CSPB Executive & Administration

CSPB-SCBV welcomes Executive members, Dr. Barbara Hawkins (U. Victoria), Western Regional Director and Dr. Mark Minow (U. Georgia), Student/PDF member.

We also welcome Dr. Lauren Erland (U. of the Fraser Valley) in her role as Web Master (maintains and updates web site) and Dr. Yang Qu (U. New Brunswick) in his role as Membership Officer (responds to guestions about CSPB-SCBV membership).

Robin Cameron, **CSPB/SCBV** President



Dr.'s Robin Cameron, Eliana Vigil-Gonzales, Liang Song & Keiko Yoshioka at the PB22 President's Get-Together



Nunn enjoy Portland's Washington Square **Park**



Dr. Adam Mott gives a plenary lecture



Dr. Mark Belmonte, Dr. Lauren Erland and Grad Students Caroline Dowling & Adrian Monthony check out the Portland food

Message from the Vice President



Marcus Samuel University of Calgary

It is great to connect with you all again through this message. I am sure that all of you have slowly returned to your normal routines, attending in-person activities, and relishing the chance to socialize again. These two years of COVID-related hiatus has certainly provided us the opportunity to self reflect and appreciate the simple things in life and has taught us how we should not take things for granted.

The 2022 joint ASPB-CSPB/SCBV annual meeting, PB22 in Portland was extremely well-organized and adhered to all COVID protocols. We had an overwhelming presence of over 125 CSPB-SCBV members which included close to 75 students. Out of the student poster presenters, 45 consented to participate in the poster competition and did a phenomenal job at presenting their work to the judges. I would like to sincerely thank all the judges for spending time on the posters and inspiring the student presenters. We had around 30 judges responsible for reviewing the posters, who were welcoming to the new scoring rubric designed by the EDI committee. This year we were also able to expand the number of poster award winners for the Annual General Meeting. The Presidents' award for the best poster presentation went to Yang Liu (University of British Columbia) and Joseph Utomo (University of Calgary). The best CSPB poster award was received by Paula Beronilla (University of Toronto), Sarah Lane (University of Victoria), Nathan Doner (University of Guelph), Mariann Lobbezoo (University of Guelph) and Qiaomu Li (University of Alberta). There were also eight Honorable mentions that received a certificate.

At PB22, CSPB/SCBV actively participated in the first ever Joint CSPB/SCBV - ASPB EDI Plenary session entitled, Science Without Borders: Our CSPB-SCBV speakers, Edel Pérez-López (Laval) and Allison McDonald (Laurier)

certainly made us proud with their exceptional EDIfocussed seminars. I had the honor of chairing the plenary session which also included other science-based talks from ASPB members on species migration, domestication, and culture. We would like to acknowledge the sponsorship for the CSPB-SCBV EDI plenary speakers from the University of Calgary, Biochambers Inc. and Agrisera.

Our CSPB-SCBV Mix and Mingle social event at PB22 was a phenomenal success. The EDI committee worked on making this event a less formal one through introducing a bingo night where everyone had to mingle and interact. This created a great atmosphere that allowed the informal, inclusive setting we were hoping to achieve. We were very pleased with the feedback from this event; organizing this evening has inspired us with some great ideas for facilitating similar informal environments for future social events.

Our EDI committee has achieved several significant milestones in the past year which were listed in my summer message. We were able to implement many of these principles at PB22 and look forward to further developing these documents as we continue to learn from our experience of using these new guidelines.

The Eastern Regional Meeting will be held on Dec 3rd at the University of Toronto Scarborough Campus. We would like to acknowledge the time dedicated to this event by the organizing committee (Sonia Gazzarrini, Eliana Gonzales-Vigil and Adam Mott).

We are always looking for new members to get involved with the society and for volunteers to engage in the various CSPB/SCBV committees. If you are interested, please feel free to contact either myself (cspb-vp@cspb-scbv.ca) or our Senior Director, Mehran Dastmalchi (seniordirector@cspb-scbv.ca).

Marcus Samuel
CSPB/SCBV Vice-President

CONGRATULATIONS

CSPB/SCBV #PlantBio2022 Student Poster Winners!

CSPB-SCBV Award Winners

Sarah Lane

Supervisor: Juergen Ehlting University of Victoria

Paula Beronilla

Supervisor: Daphne Goring University of Toronto

Nathan Doner

Supervisor: Rob Mullen University of Guelph

Mariann Lobbezoo

Supervisor: Joe Colasanti University of Guelph

Qiaomu Li

Supervisor: Glen Uhrig University of Alberta

Presidents' Award Winners

Yang Liu

Supervisor: Cara Haney Supervisor: Dae-Kyun Ro UBC

Joseph Utomo

University of Calgary

CSPB-SCBV Honourable Mentions

Adrian Monthony

Supervisor: Davoud Torkamaneh University: Université Laval

Alyssa Shields

Supervisor: Danve Castroverde Wilfrid Laurier Universitu

Karen Devendrakumar

Supervisor: Xin Li University: University of British Columbia

Kirsten Benidickson

Supervisor: Wayne Snedden, Bill Plaxton University: Queen's University

Clare Breit-McNally

Supervisor: David Guttman, Darrell Desveaux University: University of Toronto

Pomona Osmers

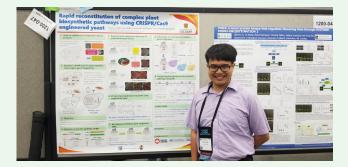
Supervisor: Marina Cvetkovska University of Ottawa

Justin Nichol

Supervisor: Marcus Samuel University of Calgary

Mackenzie Poirier

Supervisor: Marina Cvetkovska University of Ottawa



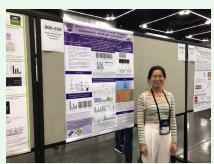
Joseph Utomo



Nathan Doner



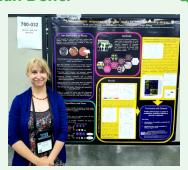
Qiaomu Li



Yang Liu



Paula Beronilla



Sarah Lane



Mariann Lobbezoo

Treasurer's News



Good news: The CSPB-SCBV executive allocated \$20,000 to the George Duff Travel Bursaries to support student and postdocs who presented their research results at Plant Biology 2022. This unprecedented amount was made possible due to cost savings associated with not having to travel to the on-line annual meetings in 2020 and 2021.

Thank you: A number of generous sponsors supported travel and accommodation expenses for Allison McDonald and Edel Perez-Lopez, the two Canadian participants in the EDI workshop at Plant Biology 2022. Robin Cameron and Marcus Samuel each contributed funds. Agrisera and Bio Chambers Inc. each donated \$500. Marcus Samuel also donated a prize to support the social networking event at Plant Biology 2022. Thank you very much to these donors.

Fund raising: Via our website, we accept on-line donations to the George Duff Travel Bursary fund as well as to the funds that support our many merit-based awards. Donations at or above \$10 CAN receive a receipt for tax purposes. I sincerely thank the members who donated to these funds over the past year. I also send out a special thank you to the ASPB (American Society of Plant Biologists) member who gave a very generous donation to the Carl Douglas Award fund. The Society is forming a fund-raising committee to help make these bursaries and awards financially sustainable. If you are interested in being nominated to this committee, please contact our Secretary (David Bird dbird@mtroyal.ca).

Membership: Our ranks have grown over the past two years, possibly in response to the accessibility of on-line meetings. We currently have 546 active members, 172 of which are full members and 9 are corporate members. Most of the other 365 members are students and postdocs whose vitality, enthusiasm and excellent presentations contribute greatly to the success of our meetings. As always, I encourage current members to promote our society to their Plant Biology colleagues.

Sheila Macfie CSPB/SCBV Treasurer



Join the CSPB Team!

MEMBERSHIP DRIVE & FUNDRAISING COMMITTEE: The executive directors have noted that membership in CSPB-SCBV tends to increase at major meetings (annual, joint), and then subsequently decline in years between high profile meetings. As well, while the CSPB has a number of scholarships and awards only one of the four major awards, the Ann Oaks Scholarship, is endowed. The rest are funded through occasional donations directed at a specific award and the operating budget of the society. Therefore, a new committee was struck to develop both a membership drive and fund development strategy.

We are looking for motivated and enthusiastic CSPB members who are interested to serve on the Membership Drive and Fund Raising committee. This provides a great opportunity to ensure that our society stays healthy and vibrant! Please contact David Bird (Secretary) dbird@mtroyal.ca.

TREASURER: The CSPB-SCBV is seeking a new treasurer starting summer 2023. The current treasurer will guide the new treasurer through the first annual cycle of activities and provide support as needed in subsequent years. The time commitment during less busy times is ~10 hours per month and at busy times is 15 to 20 hours per month, during year-end (April to May) and before and after the Annual General Meeting (allocating and providing student travel award funds). The ideal treasurer will have the following characteristics:

- 1. **Honesty and integrity.** The treasurer must be responsible with Society funds.
- 2. **Detail-orientated.** Managing payments, expenses and financial accounts requires clear and accurate records.
- 3. **Good communicator.** Comfort with reporting, explaining, and documenting what you are doing is key to transparency and communication.
- 4. **Collaborative leadership.** In addition to working with other members of the Executive, the treasurer works with the accountant to gather necessary information for the tax return and with investment counsellor to manage the Oaks scholarship fund.
- 5. **Flexible and responsive.** The treasurer answers to both the membership and the other Executive members and needs to provide financial information to support decisions related to Society activities and function.
- 6. **Dependability.** Financial transactions and reports need to be completed in a timely manner.

Please fill out the <u>online application form</u> that will ask for your name, title, institution, brief explanation of why you are interested in this position (up to 150 words).

Science Policy Director's Report

A Plea for a Living Wage for Postgraduates

Hello All.

As old and new grad students and post-docs reconvene at their lab benches this fall, they find themselves overrun by a rising cost of living. In the last few weeks, you have likely heard news stories about these challenges from Courtney Robichaud, a post-doc associate from Carleton University. As a spokesperson for Support Our Science, she has clearly outlined the stresses undergone by our researchers and has suggested steps to redress their hardship. Facts: Federal scholarships and fellowships from the Tri-Agency are designed to provide enough financial support for recipients to focus fully on their research. However, with only minimal increases over the last 20 years, these awards are no longer adequate. Graduate students and postdoctoral scholars, who conduct much of the primary research in this country, simply cannot afford to live on the wages that Canada offers them.



Research is a challenging pursuit in and of itself. But conducting research without adequate provisions for rent and groceries makes life untenable for researchers. This is what many graduate students and postdoctoral scholars are dealing with in Canada.

Support Our Science, a grassroots organization of graduate students, postdoctoral scholars, and faculty has been trying to change this. Since May 2022, they have focused on increasing both the value and number of scholarships and fellowships that the Tri-Agency provides. While not every graduate student or postdoc in Canada is a Tri-Agency award holder, these values set the standard for pay across the nation. And the federal government has begun to listen.

Since May of this year, Support Our Science has gathered over 7,000 signatures on their original open letter to NSERC and over 3000 signatures on our House of Commons petition. They have held two rallies in Ottawa and Montreal, garnered national media coverage, met with federal officials, submitted a budget to the House of Commons, and sent over 1,500 emails to Members of Parliament in their current campaign.

They continue to work hard to communicate the importance of adequately funding our graduate students and postdoctoral scholars, but they need your help to convey to your elected officials that this is something all Canadians care about. You can visit www.supportourscience.ca to learn more about the details of the Support Our Science campaign (including monetary breakdowns, media coverage, and a simple form to contact your MP).

Thanks to Courtney for supporting this initiative and for her contribution to this article.

Gopal Subramaniam CSPB/SCBV Science Policy Director



2022 CSPB/SCBV – Eastern Regional Meeting

December 3, 2022 - University of Toronto Scarborough



https://event.fourwaves.com/cspb-erm2022/

CSPB Annual Meetings

2023

CSPB/SCBV Annual General Meeting, June 18-23, 2024, ULaval, Quebec City, E. Perez-Lopez & Dominique Michaud (Chair)

2024

Plant Canada, hosted by the Canadian Phytopathological Society, Winnipeg, MB July 6-10

2025

Call for Volunteers!

2026

CSPB/SCBV Annual General Meeting, Dalhousie University, S. Stone (Chair)

Upcoming Eastern Regional Meetings

2022 University of Toronto Scarborough - S. Gazzarrini (Chair), E. Gonzales-Vigil, A. Mott

2023 Concordia University - J.S. Lee (Chair), P. Gulick, D. Dayanandan, W. Zerges

Sophia Stone as the Eastern Regional Director is co-ordinating the scheduling of these events.

Upcoming Western Regional Meetings

Barbara Hawkins as the Western Regional Director is co-ordinating the scheduling of these events. Details to be announced for the 2023 Meeting.

Call for CSPB/SCBV Award Nominations

The CSPB welcomes nominations for Society awards. Please take this opportunity to acknowledge an outstanding member of the plant biology community. The recipients will be awarded in the respective categories during the CSPB-SCBV Annual General Meeting in the coming year. More details on awards can be found on the award pages on our website www.cspb-scbv.ca/awards. Please forward nominations and/or award specific questions to the award committee Chairs by email. More details on our committees can be found here: www.cspb-scbv.ca/commitees

The annual deadline for all nomination/application files is FEBRUARY 1, 2023. Please see the CSPB-SCBV By-Laws (About CSPB) for full details and instructions www.cspb-scbv.ca/about

Early Career-Specific Awards

The RAGAI IBRAHIM AWARD: The purpose of the award is to recognize excellence in publication by graduate students. A peer reviewed paper either in print or on-line will be nominated by the supervisor of the student, and will be evaluated on the impact or potential impact that the work will have on plant biology. Committee Chair: Adam Mott, UToronto

The CARL DOUGLAS PRIZE: The Prize shall be awarded for outstanding contributions to plant biology by a post-doctoral fellow, based on initiative and originality of the research, productivity of the individual, and leadership during their postdoctoral fellowship. A postdoctoral fellow is an individual who has completed their PhD and is engaged in full-time research under the supervision of a mentor. Applicants shall have obtained their PhD no more than 4 years (i.e., 48 months) prior to the date of the submission of the application, although career breaks will be taken into account when applicants are nearing the end of this eligibility period (e.g. maternity or parental leave, caregiver's responsibilities, illness, etc.). Applicants need not be Canadian citizens or engaged in a research program in Canada at the time of the nomination or during their postdoctoral fellowship. Preference will be given to applicants who are current members of the Society and have previously participated as a member of the Society.

Committee Chair: Danve Castroverde, Laurier

Other Awards

The C.D. NELSON AWARD IN PLANT BIOLOGY: This award shall be given for outstanding research contributions to plant biology. Special consideration will be given to originality and independence of thought. Nominees shall have been in an independent, full-time research position for no more than 10 years, although career breaks will be taken into account when applicants are nearing the end of this eligibility period (e.g. maternity or parental leave, caregiver's responsibilities, illness, etc.). Nominees need not be Canadian citizens or members of the Society but must be engaged in a research program in Canada at the time of the nomination.

Committee Chair: Jaswinder Singh McGill

THE GLEB KROTKOV AWARD: The Award shall be given for outstanding career service to the Society. The Award shall be awarded by decision of the Board of Directors on the recommendation of the Gleb Krotkov Award Committee. A nomination for the Award must be supported by one Full Member and shall be documented with a full curriculum vitae and a citation outlining the nominee's outstanding career service to the Society.

Committee Chair: Belay T. Ayele, UManitoba

THE MARY E. SPENCER AWARD: The Mary E. Spencer Award was established to recognize outstanding research in the field of plant biology and active public service engagement in the plant biology community by a mid-career researcher. This award honours the exceptional career of Professor Mary Spencer (Professor Emeritus, University of Alberta). Nominees need not be Canadian citizens or members of the Society but must be engaged in a research program in Canada at the time of the nomination, and shall have been in an independent, full-time research position for more than 15 years. Committee Chair: Shelley Lumba, UToronto

NOT AVAILABLE THIS YEAR:

CSPB-SCBV SOCIETY MEDAL AWARD: no award in 2023, as awarded to Vince DeLuca in 2021 THE DAVID J. GIFFORD AWARD IN TREE BIOLOGY: no award in 2023, as awarded to Annie DesRochers in 2022

Student & Postdoc Rep

Mark Minow University of Georgia

I recently had the honour of being elected by the CSPB student and post-doctoral body to serve on the executive board as the Student/Post-doctoral representative. While on the board, I aim to be an open liaison between CSPB student/post-doctoral members and the executive. Like many of you, I completed my Graduate studies in Canada. I obtained my Ph.D. degree under the supervision of Dr. Joseph Colasanti at the University of Guelph and have a great passion for plant biology. I am currently working as a post-doctoral fellow in Dr. Robert Schmitz's lab at the University of Georgia, but I want to remain aware of the Canadian specific issues and hurdles that CSPB students and post-docs face. One of my main reasons for running for this position was to remain in touch with the Canadian plant science network, and I very much want this to extend to the CSPB student/post-doc body. I want the CSPB to help provide support to all plant biology trainees, both during their training and while they look for job placements. For this reason, I am inviting all CSPB student/post-doctoral members to please email me (studentrep@cspb-scbv.ca) to outline any struggles or concerns you are facing in your graduate or post-graduate work. I am hoping to identify common challenges, allowing for us to lobby for solutions to these hurdles, both within the CSPB and at other institutions if necessary. I will amalgamate these issues



and bring them to the attention of the CSPB board, so that the CSPB can work towards improving the experience of all Canadian plant biology trainees. I also want to take this opportunity to invite submissions for the CSPB's "budding ideas" column. The budding ideas column is meant to be a place for graduate students and post-docs to share their thoughts on science, plants, equity, diversity, and inclusion (EDI), or any other similar topics. This is an excellent opportunity to improve and demonstrate your non-academic scientific communication skills. We are currently soliciting submissions for the Spring 2023 bulletin, of which two will be printed. To submit your "budding idea" please email your column piece to studentrep@cspb-scbv.ca. Please note the deadline for submissions is always included at the end of the most recent CSPB bulletin.

Mark Minow
CSPB/SCBV Student & Postdoc Rep



New Faculty Feature

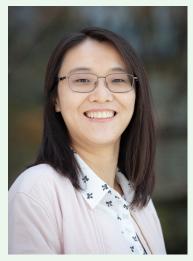


Dr. Lauren Erland joined the Agriculture Department at the University of the Fraser Valley as Director of Berry Horticulture Research in the Summer of 2022. Dr. Erland has had a multi-disciplinary research journey and looks forward to bringing this experience to both her research and trainees. Dr. Erland completed her BSc & MSc research at UBC Okanagan in Dr. Soheil Mahmoud's lab and joined Dr. Praveen Saxena's lab at the UoGuelph for her PhD where she used quantum dot microscopy, analytical chemistry and plant tissue culture to discover the cellular localization and role of melatonin and serotonin in plants. Her postdoc work with Dr. Susan Murch led her back to fieldwork, which COVID-pivoted to a discovery of the possibilities of metabolomics and establishment of a new field of untargeted hormonomics. Her new lab, the Berry Environmental Resilience Research & Innovation (BERRI) Lab aims to improve sustainability and resilience of berry horticultural systems and ecosystems. The initial focus of the lab will be in characterizing environmental resilience and the role of phytohormone networks in *Vaccinium* species including cranberry, blueberry

and huckleberry. Dr. Erland is passionate about effective science communication and building inclusive, equitable and collaborative environments where all ways of knowing are celebrated and science can thrive. You can keep in touch through social media @plantdrlauren or the BERRI Lab website www.berrilab.com

Dr. Thomas DeFalco joined Western University as an Assistant Professor in the Department of Biology in September 2022. His research seeks to understand how plants perceive and respond to their environment at the molecular level. Tom started his career in the lab of Wayne Snedden at Queen's University before completing his PhD with Keiko Yoshioka at the University of Toronto. Following his PhD, Tom joined the lab of Cyril Zipfel at The Sainsbury Laboratory (Norwich, UK), where he worked on receptor kinases in the context of plant immunity and was awarded a European Molecular Biology Organization (EMBO) Long-Term Fellowship. In 2018, Tom moved with the Zipfel group to the University of Zurich (Switzerland), where he was subsequently an NSERC PDF and led several projects characterizing the plant immune system. His new lab uses a variety of genetic, molecular, and biochemical approaches to interrogate receptor signalling pathways, with a long-term goal of engineering improved crop resilience.





Dr. Yang Xu is an Assistant Professor in plant lipid biochemistry and biotechnology in the Department of Molecular and Cellular Biology at the University of Guelph. She obtained her Bachelor's and Master's degrees in Food Science from Northwest A&F University (2006-2010) and South China University of Technology (2010-2013), respectively, with a research focus on oil chemistry and oil enzymatic modification. She then pursued her PhD in Plant Science under the supervision of Dr. Randall Weselake at the University of Alberta (2013-2017), where she expanded her research horizons and developed research interests in plant oil biotechnology. After completing her doctoral studies, she joined Dr. Guangun Chen's laboratory at the University of Alberta as a postdoctoral fellow (2017-2020) and worked on oil metabolism in microalgae. She later joined the laboratory of Dr. Christoph Benning at Michigan State University as a postdoctoral research associate (2020-2021). There, she extended her research focus to chloroplast membrane lipid metabolism in photosynthetic organisms. She was awarded the 2021 Carl Douglas Prize from the CSPB/SCBV. In Jan 2022, Dr. Xu started her own research lab at the University of Guelph. Her new research group focuses on studying acyl lipid assembly and trafficking in plants and developing biotechnology strategies to produce designer oils for food, fuel and renewable materials.

Budding Ideas

Ukraine: the world's breadbasket and a valuable contributor to plant biology Adrian Monthony

PhD Student, Université Laval

Following the invasion of Ukraine by Russia, like many people. I found myself spending a considerable amount of time listening to the news about the ongoing war. In the process, I also learned about a country, which I freely admit, I knew little about before February 24th, 2022. I had always heard references to Ukraine as a breadbasket, but I had not fully appreciated the magnitude of Ukraine's contributions to the global supply of grain until news coverage of the Russian blockade of the Ukrainian Black Sea ports. These ports are the main way in which Ukraine, the world's fifth largest wheat exporter (for reference Canada is the fourth largest), sends wheat and other grains around the globe, and because of this blockade by Russia, many countries who rely on Ukrainian grain exports faced increased food insecurity. In fact, the UN Food and Agriculture Organization (FAO) estimated that global food prices rose by over 12.6% in the first month following the invasion alone. If you'll permit an armchair economist moment, I suspect this is one of many factors that are contributing to rising grocery bills around the world. In addition to the impact of these blockades on global food security, the farmers and the Ukrainian economy who rely heavily on these exports now face a punishing hit to their pocketbooks. Watching the consequences of this blockade unfold, highlighted for me Ukraine's role as an agricultural powerhouse in our global food system. With my curiosity peaked, I began to dig deeper into Ukraine's contributions to global food security. Here are a few of the standout facts I came across:

- Fifty-five percent of the country consists of arable land.
- Prior to the Russian invasion, 20% of the country's labour force worked in the agriculture sector and agricultural products represented 40% of the country's exports, accounting for 11% of the country's GDP.
- Ukraine is the 4th largest global corn exporter (Canada is 13th) and the 3rd largest global canola exporter (Canada is 1st).
- The beloved symbol of Ukrainian identity, the sunflower, is not only of cultural and symbolic importance, but also economically important: Ukraine produces one-third of the world's sunflower oil.

As I was learning about Ukraine's strength in agriculture, I also came across the numerous scientific contributions that the country has given the world. I have chosen to highlight one powerhouse couple here and their interesting contributions to plant sciences. There are many more contributions I could have highlighted and if you are curious, I suggest you read a great three-part blog on the PLOS Blog called "Early Ukrainian"



Author Bio: Adrian Monthony is a PhD student in Dr. Torkamaneh's lab at Université Laval where he studies the genetic and epigenetic regulation of sex plasticity in *Cannabis sativa*. Adrian served as student representative on the CSPB's EDI Committe from 2021 to 2022, where he started the Budding Ideas Column and is currently the editor of the column.

Women Scientists" written by Dr. Hilda Bastian as the start of

an inevitable Wikipedia wormhole. Allow to introduce the husband-and-wife power couple: Dr. Vitaliy Arnoldovich Kordyum and Dr. Elizaveta Lvovna Kordyum. As a duo, they studied the effect of space weightlessness (microgravity) on plant cell development and adaptation to stress. In particular, Elizaveta participated in a total of 48 experiments that sent plants to space including the Soyuz spacecraft and a joint US-Ukraine experiment on the space shuttle Columbia. Her work has helped to improve our understanding of the long-term impact of space microgravity on plant growth and survival. Our understanding of plants in zero-gravity is critical if we are ever to attempt long-term space travel such as the often-discussed trips to Mars. Elizaveta's mother, Dr. Elena Dmitrievna Visyulina, was also an accomplished botanist, who over the course of her career. described 13 new species of plants (her botanical authority is Wissjul) and co-authored 75 scientific papers. In addition to collaborating with Elizaveta, her husband Vitaliy, was also a prolific scientist, publishing over 300 scientific publications and filing 41 patents. Most notably, he studied the actions of exogenous nucleic acids. His studies on the effects of exogenously applied RNA helped advance our understanding of the role of horizontal gene transfer in evolution.

From the lab to the field, to the plates of millions, Ukraine has been feeding the world and helping drive science forward. If you are interested in supporting Ukrainian scientists who's research and graduate programs may have been impacted by the ongoing war check out Science for Ukraine, which is a grassroots initiative aimed at helped members of the academic community affected by the war in Ukraine.

Suggested Readings:

Khurshudyan & Morgunov 2022, Ukraine grain farmers devastated by Russia's Black Sea blockade, The Washington Post

Bentley et al. 2022, Near- to long-term measures to stabilize global wheat supplies and food security, Nature Food

USAID 2022, Agriculture Fact Sheet, United States Agency for International Development Workman 2022, Wheat Exports by Country, World's Top Exports

USDA 2022, Ukraine Agricultural Production and Trade, USDA Foreign Agricultural Service Kordyum 1997, Biology of Plant Cells in Microgravity and under Clinostating, International Review of Cytology

Bastian 2022, Early Ukrainian Women Scientists: Part 3 – From Birds to Math, Space, & Plants in Space, PLOS Blogs

To see a list of publications by Elizaveta Kordyum click <u>here</u> to visit her Google Scholar profile.

To see a list of publications by Vitaliy Kordyum, click here to visit his Google Scholar profile.

The Peer Review Process - How to respond to reviewers' comments for publication

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The peer review process is undoubtedly an important part of science that keeps scientific integrity intact. Expert reviewers scrutinize papers. The peer review process is also a community effort that scientists volunteer for gatekeeping of the integrity of science. Individuals in graduate school will no doubt have to experience the peer review process when they plan to publish. This article seeks to address those who are in graduate school who are new to publishing.

In reviewing manuscripts, there are ways your paper can go:

- 1. Accept with no revisions: unheard of or very rare. If this happens to you, congratulations. It means that you are the envy of the Scientific world.
- 2. Accept with minor revisions. You paper was accepted! Only need minor adjustments before publishing.
- 3. Major revisions: hopeful but be cautiously optimistic. Doing major revisions may not be a guarantee that they will accept your manuscript after major revisions, but it is usually a good sign.
- 4. Rejection: news no scientist wants to hear. It may just mean to use the comments to make your paper better and either resubmit to the same journal or send to a different journal.

Despite the importance of peer review, however, authors at times experience unprofessional behaviour from reviewers. The running joke talks about "reviewer 2". How should you respond? My Post-Doc supervisor, Professor RJ Neil Emery, and my Ph.D. supervisor, Professor Céline Guéguen imparted wisdom about this topic to me over the years:

- 1. Always respond in a professional tone. Some reviewers may be rude, or unkind, especially tearing apart the manuscript that you and your lab team worked long and hard hours on. Some may not even read the paper properly and may give an unthorough and unhelpful review. Take a day or two to not look at the paper. You may even be frustrated, jaded, or upset. That is natural, and you are valid in your response. Once level-headed, you can better address the comments.
- 2. Acknowledge the comments of the reviewers: It is rude not to. You are acknowledging your peer, their insight/ perspective. To not address it is dismissive and unprofessional. You do not have to stoop down to the level of a rude reviewer by ignoring their question. Acknowledge it, express that you thank them for their expertise and answer the question.
- 3. Know when to compromise. You may not agree with everything the reviewers say, and that is OK. But the bottom line is that you want your paper published. Have a certain ratio of comments address with their recommendations, and

others to refute. For example, it is better to address 70-90% of the comments (or a higher percentage) and to have 10-30% of the comments that you refute than to argue and disagree with a high percentage. Being combative with every point will only hamper the time it takes to get your manuscript published in a target journal or overall. This brings me to the next point.

- 4. Only address comments/concerns that needs addressing. Try to look at this from the reviewers' perspective. Nothing is more annoying/frustrating for reviewers than to get a totally new manuscript with additional information from the author that the reviewer should look through. They may not even have the context to why it was done. Therefore, comments that needs addressing should be prioritized. If you see spelling errors you did, then it is OK to correct those types of errors. My PhD supervisor made sure to emphasize this to me well, as I had the habit of wanting to revamp everything.
- 5. When you address comments, point to the corrections made. By that, what is meant is giving the line number of the corrections you did, and put in bold under the comments made, so that the reviewers know the exact location to look in your manuscript.
- 6. If you are refuting comments, have evidence as to why you are refuting. Scientists will not always agree on everything. Its why Science is great! It is in this disagreement that opportunities happen. But, back to the point, if you do not agree with some comments, cite papers to prove your point. Once provided with enough evidence, with thorough reasoning, they are likely to accept the paper. You also have the editor to convince as well, so argue your case well. Consider peer reviewing as a courtroom. You are convincing the jury (peer reviewers) that your research paper is sound. The judge (Editor) has the final say in this matter.
- 7. Once the paper has been accepted: remember to thank the anonymous reviewers and editor for their comments, that helped to improve the manuscript.
- 8. If you think you have an unfair review: contact the Editor of that journal and convince them why you think your review was unfair. Every scientific author deserves a fair review, and the Editor's role is to ensure that a fair review for everyone.

It is my hope that these tips may help in increasing chances of graduate students publishing, even a slight bit.

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