

# Department of Chemistry Newsletter

## June–August Issue, 2023



Irving K. Barber Faculty of Science, University of British Columbia  
Syilx Okanagan Nation Territory

*We hope that you had a great summer and that the wildfires did not disrupt your lives too severely or for too long. Here's to a new academic year full of successes and joys!*

## Announcement

### Congratulations to:



**UBC Okanagan's Chemistry Course Union** for receiving *Honourable Mention* (i.e., 2<sup>nd</sup> place) for the 2023 CIC Student Chapter Merit Award. CCU previously won the Merit Award in 2019 and 2020 and *Honourable Mention* in 2018.

CCU has also updated their contact information. Please reach them at:

[chemcourseunion@gmail.com](mailto:chemcourseunion@gmail.com)

<https://www.chemistrycourseunion.com/>

<https://www.instagram.com/chemistrycourseunion/>.



**Dr. Robert Godin** and **Dr. Wesley Zandberg** for their new Mitacs-funded joint project with Fortis BC (\$ 60,000) entitled “Assessing the environmental impact of utility pole types: leachability and disposal of PCP and CA from treated poles”.



**Dr. Seongho Kim** (Dr. Isaac Li's group) for receiving the prestigious Michael Smith Health Research BC Trainee Award for his postdoctoral research.



**Ieva Zigg** (Dr. Wesley Zandberg's group) for successfully defending her MSc thesis entitled "Investigation of the uptake of volatile phenols in smoke exposed *Vitis vinifera* vines" on August 10<sup>th</sup>, 2023.



**Julia Solonenka** (Dr. Susan Murch's group) for successfully defending her MSc thesis entitled "Characterizing  $\beta$ -N-methylamino-L-alanine and its naturally occurring isomers in cyanobacteria and plants" on July 19<sup>th</sup>, 2023.



**Helena Nunes** (Dr. Thu-Thuy Dang's group) for receiving the IKB Faculty of Science's *Travel Award* to attend the *Canadian Society of Plant Biologists* meeting hosted by Laval University in Québec City in June 2023, where she won an *Honourable Mention* for her poster presentation.



**Tuan-Anh Nguyen** (Dr. Thu-Thuy Dang's group) for receiving *travel awards* from the Phytochemical Society of North America and the IKB Faculty of Science to attend the annual PSNA meeting hosted by Michigan State University in East Lansing, USA.



**Teddy Herriman** (Dr. Robert Szilagyi's group) and **William Kennedy** for being recognized as outstanding graduate and undergraduate teaching assistants, respectively, with the 2023 *Judith Moldovan Awards*.

## New members:



The Department welcomes **Dr. Alireza Sadeghifar** in his new position as a lecturer in physical & environmental chemistry. Starting in the new academic year of 2023/2024, Ali will be teaching 2<sup>nd</sup>- and 3<sup>rd</sup>-year courses in atmospheric chemistry, environmental water chemistry, and physical chemistry laboratories.

Ali has also been assisting Dr. Gino DiLabio in coordinating the *Pan-Canadian Computational Chemistry* courses with introductory and advanced modules that will be offered for the first time during the upcoming 2023 winter term I.



**Zhehan Jia** (from Thompson Rivers University) and **Omid Hosseinzade** are joining Dr. Gino DiLabio's group in September as MSc students.



**Karine Jarzecki** started her MSc in May in Dr. Susan Murch's group. She conducts research to understand how cannabis responds to specific light spectra.



Mitacs Globalink student **Fong "Eugenia" King Hin** (University of Hong Kong) and UBC's IURA recipient **Anastasia Bernaz** joined Dr. Thu-Thuy Dang's group.

## Equipment:



**GC autosampler:** Ieva Zigg, Department of Chemistry's Laboratory Manager, was able to secure a ThermoFisher autosampler (\$ 20,000 value) for the gas chromatography instrument in the Chemistry Teaching Laboratory. The autosampler was a donation from Factors Laboratories, a natural products company in Winfield, BC.

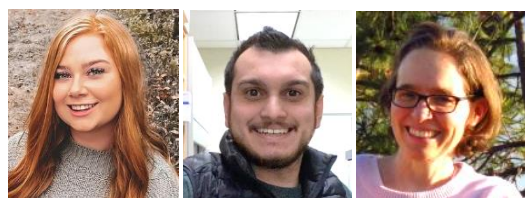


**Structural databases:** Dr. Robert Szilagy's group is happy to share with members of the Department local access to the Cambridge Crystallographic Database (1.2 million structures, <https://www.ccdc.cam.ac.uk/solutions/about-the-ccsd/>) and the Inorganic Crystal Structure Database (281,000 structures, <https://icsd.products.fiz-karlsruhe.de/en/about/about-icsd>). Please contact Robert for more information and access.

## Recent publications



**Amanda L. Darbyshire, Kirsten R. Wolthers** (2023). Expanding the  $\beta$ -substitution reactions of serine synthase through mutagenesis of aromatic active site residues. *Archives of Biochemistry and Biophysics*. DOI: 10.1016/j.abb.2023.109727.



**Amanda L. Darbyshire, Robert Mothersole, Kirsten R. Wolthers** (2023). Biosynthesis of meso-lanthionine in *Fusobacterium nucleatum*. *Archives of Biochemistry and Biophysics*. DOI: 10.1016/j.abb.2023.109666.



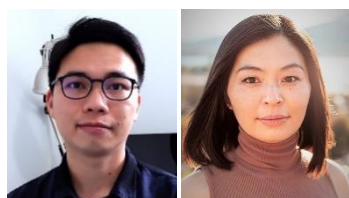


**Alexandra K. McGregor**, Anson C.K. Chan, **Megan D. Schroeder**, Long T.M. Do, **Gurpreet Saini**, Michael E.P. Murphy, **Kirsten R. Wolthers** (2023). A new member of the

flavodoxin-superfamily that functions in heme trafficking and reduction of anaerobin in *Fusobacterium nucleatum*. *Journal of Biological Chemistry* – *Editor's Pick*. DOI: 10.1016/j.jbc.2023.104902.



**Manjinder Kour**, Attila Taborosi, Eric S. Boyd, **Robert K. Szilagyi** (2023). Development of molecular cluster models to probe pyrite surface reactivity. *Journal of Computational Chemistry*. DOI: 10.1002/jcc.27213.



**Van-Hung Bui**, Carlos Eduardo Rodríguez-López, **Thu-Thuy T. Dang** (2023). Integration of discovery and engineering in plant alkaloid research: Recent developments in elucidation, reconstruction, and repurposing biosynthetic pathways. *Current Opinion in Plant Biology*. DOI: 10.1016/j.pbi.2023.102379.

## Recent events

### Recent presentations

**Dr. Isaac Li** gave a talk entitled “Super-resolution tension imaging with molecular beacon” at the *International Conference on Biological Physics*, August 14<sup>th</sup>–18<sup>th</sup>, in Seoul, South Korea. **Dr. Seongho Kim** in Isaac’s group also gave a presentation at the conference.

**Tuan-Anh Nguyen** (Dr. Thu-Thuy Dang’s group) gave an oral presentation entitled “Discovery of spirooxindole synthase from kratom” at the *Annual Meeting of the Phytochemical Society of North America*, July 16<sup>th</sup>–20<sup>th</sup>, in East Lansing, USA.



Tuan-Anh at 2023 PSNA



Helena at 2023 CSPB

**Eugenia King Hin, Anastasia Bernaz, and Dr. Thu-Thuy Dang** gave a presentation with interactive activities about medicinal plants with children attending the WWEST/iSTAND summer camp on our campus on June 29<sup>th</sup>.

**Dr. Thu-Thuy Dang** gave a talk entitled “Plant-based anticancer drugs: From discovery to production” at the *Annual Meeting of the Canadian Society of Plant Biologists*, June 18<sup>th</sup>–21<sup>st</sup>, in Québec City. **Helena Nunes** in Thuy’s group also gave a poster presentation at the meeting.

**Dr. Robert Godin** gave a talk entitled “Development of organic polymer photocatalysis for off-grid arsenic remediation” at the *2023 Canadian Chemistry Conference & Exhibition*, June 4<sup>th</sup>–8<sup>th</sup>, in Vancouver. Members of his groups also gave three other oral and one poster presentations.

## Department’s June gathering

The Department’s Head, Dr. Robert Szilagyi and his wife, Dr. Barbara Komlos, hosted a gathering in the second week of June.

The party was a blast with everyone contributing delicious foods, drinks and nice conversations, and the children having great fun. We spent a few moments celebrating Dr. Karen Perry’s retirement and faculty members’ achievements in the past year. Dr. Thu-Thuy Dang’s strawberry salsa and the host’s green salsa shared the *best salsa* price!







## Department's community



**Eduardo Romero-Montalvo**, PhD student in Dr. Gino DiLabio's group, just welcomed a wonderful addition to his family in July 2023. Baby Hana is "the splitting image of her dad", observed a colleague. *Congratulations Eduardo and family!*



**Dr. Mitra Tabatabaee**, former PhD student in Dr. Frédéric Ménard's group, has recently started her new position as an assistant professor at the University of the Fraser Valley's Department of Biology in Abbotsford, BC. *Congratulations Mitra!*

**We acknowledge that the land on which we gather is the unceded territory of the Syilx (Okanagan) Peoples. Kukwstsetsemc / kʷu kʷukʷstp !**

If you would like to contribute to, or have any suggestions for, our Department's upcoming newsletter, please contact Thuy Dang ([thuy.dang@ubc.ca](mailto:thuy.dang@ubc.ca)).