

Dean's Round-up: February 2023

International Day of Women and Girls in Science



On International Day of Women and Girls in Science, we highlighted our recent recipients of the [Dean's Scholarship for Women in Science](#) (MSc student **Tamara Kostyuk**, PhD student **Jordan Krywonos** and PhD student **Riya Shanbhag**) and how they are advancing the fields of mathematical modelling, cosmology and neuroscience.

CONGRATULATIONS

Kyle Belozarov and **Derek Jackson** (Chemistry) received a [Minister's Award of Excellence](#) from the Ministry of Colleges and Universities. The award, in the category of Future-Proofing Ontario's Students, recognized the team's work on introducing Virtual Reality (VR) lessons into chemistry and biochemistry courses. These immersive learning activities were designed to help the students develop a deeper understanding of molecular structure and function and prepare the students for the 21st-century STEM workplace.

Donor and Professor Emeritus **Allan Carswell** (Physics & Astronomy) was named the [Philanthropist of the Year](#) by the Association of Fundraising Professionals.

Ryan Hill (Chemistry) received the 2023 [Melanie O'Neill Young Investigator Award in Biological Chemistry](#) from the Canadian Society for Chemistry. The award is presented to a scientist residing in Canada who has made a distinguished contribution to biological chemistry while working in Canada.

A research study led by **Christine Le** (Chemistry), titled “Synthesis of Carbamoyl Fluorides Using a Difluorophosgene Surrogate Derived from Difluorocarbene and Pyridine N-Oxides,” was ranked one of the [most read articles](#) in last 12 months in the *Journal of Organic Chemistry*. Team members included graduate students **Dusty Cadwallader** and **Tristan R. Tiburcio** and York Science Scholar Student **George A. Cieszynski**.

Sarah Rugheimer (Physics & Astronomy) was selected as a [Scialog Signatures of Life in the Universe Fellow](#) by the Research Corporation for Science Advancement.

Steven Wang (Mathematics & Statistics) received a Queen Elizabeth II Platinum Jubilee Award and Pin in recognition of his work with the Mon Sheong Foundation to develop AI solutions for long-term care facilities to combat COVID-19.

MORE NEWS

The Faculty of Science Experiential Education program formed a new collaboration with the Asian Business and Management Program at York to become a supporting partner of their [Career | Fit Professional Experience Programs](#), an initiative sponsored by the Royal Bank of Canada.

Associated Dean of Students **Michael Scheid** and Experiential Education Coordinator **Ivy Li** co-hosted the inaugural faculty-wide Science Internship Program Discussion. Participants included **Andrew Skelton** (Mathematics & Statistics), **Cindy Fu** (Mathematics & Statistics), **Derek Jackson** (Chemistry), **Matthew George** (Physics & Astronomy), **Robert Tsushima** (Biology), and **Patrick Hall** (Physics & Astronomy).

Invited by York International, Director of International Collaborations & Partnerships and Interim Assistant Dean **Hugo Chen** facilitated a student seminar during Chinese Ambassador Mr. Cong Peiwu's visit to York University. A group of students from York, including six student representatives from Science, was invited to meet with the ambassador. Chen was also invited to represent York as a panellist to discuss “Preserving Canada's Reputation as a Top Destination for Chinese Students in a New Era,” hosted by Canada China Business Council at the Smith School of Business, Toronto campus.

Undergraduate students **Kiran Badial** and **Amy Ward** had their research papers accepted in the Seventh International Undergraduate Research Conference on Science, Technology, Medicine and Society at the University of Toronto; their papers were entitled “Substantially Equivalent yet Notably Different: A History of the AquAdvantage Salmon” and “Evolutionary Theory as a Crutch: Involuntary Sterilization in Canada,” respectively.

Thomas Baumgartner (Chemistry) was a keynote speaker at the 19th [European Workshop on Phosphorus Chemistry](#) in San Sebastian, Spain.

Professor Emeritus **Paul Delaney** (Physics & Astronomy) presented about aurora at the Regina Royal Astronomical Society of Canada.

Former Department Chair **Brock Fenton** (Biology) is honoured in the *Canadian Journal of Zoology* with a collection of papers published by his former students (including York alumni) in celebration of his career in bat biology. The collection includes the review [article Interpretation and application of bat diversity and phylogeny](#), published by **Elizabeth L. Clare** (Biology) and Burton K. Lim.

Christine Le (Chemistry) presented an invited talk as a part of the [Thieme WebCheminar](#) for “Rising Stars in Organic Synthesis.”

Laurence Packer (Biology) published the book [Bees of the World: A Guide to Every Family](#), which celebrates the variety of bees from across the globe.

Woldegebriel Assefa Woldegerima (Mathematics & Statistics) gave a contributed talk at the [SMB Math Epi-PDEE Mini-Conference](#) (Society for Mathematical Biology, Mathematical Epidemiology and Population Dynamics, Ecology, & Evolution Subgroups), and presented “Why Do We Learn/Study all This Math: Real life-applications of Mathematics” at Lousie Arbour S.S.. as part of the Ask a Mathematician program organized by the Fields Institute.

Mike Zabrocki (Mathematics & Statistics) gave a presentation to a grade 7-8 class in Concord, Ontario about the mathematics of cryptocurrencies.

Huaiping Zhu, Jianhong Wu and Jane Heffernan (Mathematics & Statistics) participated in the Workshop on “Charting a Future for Emerging Infectious Disease Modelling in Canada” at the Banff International Research Station for Mathematical Innovation and Discovery.

RESEARCH HIGHLIGHTS

PhD student **Nayanthara Asok**, former postdoc **Joshua R. Gaffen** and **Thomas Baumgartner** (Chemistry) published [Unique Phosphorus-Based Avenues for the Tuning of Functional Materials](#) in *Accounts of Chemical Research*.

Postdoc **Nicola Luigi Bragazzi**, postdoc **Qing Han**, Sarafa Adewale Iyaniwura, Andrew Omame, Aminath Shausan, Xiaoying Wang, **Woldegebriel Assefa Woldegerima**, **Jianhong Wu** and **Jude Dzevela Kong** (Mathematics & Statistics) published [Adaptive changes in sexual behavior in the high-risk population in response to human monkeypox transmission in Canada can help control the outbreak: insights from a two-group, two-route](#)

[epidemic model](#) in the *Journal of Medical Virology*.

Former MSc student **Amy E. Laturski**, former postdoc **Joshua R. Gaffen**, former postdoc **Paul Demay-Drouhard**, **Christopher B. Caputo** and **Thomas Baumgartner** (Chemistry) published [Probing the Impact of Solvent on the Strength of Lewis Acids via Fluorescent Lewis Adducts](#) in *Precision Chemistry*.

PhD student **Jie Lin**, PhD student **Ivan Monsalvo**, MSc student **Melissa Ly**, former PhD student **Md Asrafu Jahan**, undergraduate student **Dasol Wi**, undergraduate student **Izabella Martirosyan** and **Nik Kovich** (Biology) published [RNA-Seq Dissects Incomplete Activation of Phytoalexin Biosynthesis by the Soybean Transcription Factors GmMYB29A2 and GmNAC42-1](#) in *Plants*.

Kayrel E. K. Edwards, **Ozzy Mermut** (Physics & Astronomy), **William J. Pietro** (Chemistry) and **Christopher J. Barrett** (adjunct, Physics & Astronomy) published [Optical and computational studies of the trans - cis reversible isomerization of the commercial bis-azo dye Bismarck Brown Y](#) in *Physical Chemistry Chemical Physics*.

Postdoc **Tetsuaki Miyake** and **John C. McDermott** (Biology) published [Re-organization of nucleolar architecture in myogenic differentiation](#) in the *Journal of Cell Science*. The paper was chosen to appear in the “Research Highlights” section of the journal, and Miyake was also selected for an interview for the journals “[First Person](#)” section.

PhD student **Marjan Moallem**, former MSc student **Akhi Akhter**, former undergraduate student **Giovanni L. Burke**, former MSc student **John Babu**, MSc student **Benjamin G. Bergey**, J. Bryan McNeil, former MSc student **Mohammad S. Baig** and **Emanuel Rosonina** (Biology) published [Sumoylation is Largely Dispensable for Normal Growth but Facilitates Heat Tolerance in Yeast](#) in *Molecular and Cellular Biology*.

Wiesław Kubiś and **Paul Szeptycki** (Mathematics & Statistics) published [On a topological Ramsey theorem](#) in the *Canadian Mathematical Bulletin*.

Graduate student **Yi Tan**, postdoc **Pei Yuan**, **Iain Moyles**, **Jane Heffernan**, James Watmough, Sanyi Tang and **Huaiping Zhu** (Mathematics & Statistics) published [The stochasticity in adherence to nonpharmaceutical interventions and booster doses and the mitigation of COVID-19](#) in *Discrete and Continuous Dynamical Systems - S*.

Xinrong Xiang, Baisuo Jin, and **Yuehua Wu** (Mathematics & Statistics) published [Change-Point Detection in a High-Dimensional Multinomial Sequence Based on Mutual Information](#) in *Entropy*.

For a full list of publications from the Faculty of Science, see our [website](#).

MEDIA

Dawn Bazely (Biology) spoke to *105.9 The Region* about the impacts of climate change.

Professor Emeritus **Paul Delaney** (Physics & Astronomy) spoke to *Breakfast Television* about Comet 2022 E3 observations, to the *Toronto Star* and *CHML900* about the Jupiter and Venus conjunction, to *900CHML* about SpaceX Starship engine firing and to *CTV News* about JWST and large galaxies in the early universe.

Observatory Director **Elaina Hyde** (Physics & Astronomy) spoke to [Radio Canada International](#) about the Jupiter and Venus conjunction.

Sapna Sharma (Biology) spoke to [The Star](#) about the impacts of climate change on lake ice cover.

EVENTS

Mar 20: Science Graduate Student Conversations on Teaching, 2pm-3pm via Zoom.

Mar 23: FSc. EDI Journal Club, 1:30-2:30pm via Zoom.

Mar 28: York Science Social, 2-4 pm, Second Student Centre. [Please RSVP](#)

For a full list of events, visit our [Community 2022 website](#).

INTERNATIONAL PARTNER INSTITUTION PROFILE

The Faculty of Science has established multiple partnerships with various international institutions. In order to better inform the York Science community of these international partner institutions, we will provide a brief profile of each of them in our Dean's Round-up.



Meiji University (Japan)

Meiji University was founded in 1881 and currently consists of 10 undergraduate schools, 12 graduate schools and four professional graduate schools. The Meiji University [School of Science and Technology](#) consists of five technological departments (Electronics and Bioinformatics, Mechanical Engineering, Mechanical Engineering Informatics, Architecture, and Applied Chemistry) and three science departments (Computer Science, Mathematics, and Physics). In the interest of fusing science and technology as part of their philosophy of education, the School of Science and Technology has two series of classes on the departmental level: one crossing departmental boundaries and not dedicated to any particular department, and the other devoted to a single departmental discipline.

