

Monthly Report to the Provost – Faculty of Science

The Faculty of Science (FoS) has the following to report for the months of **June-August 2023**:

Engaging Learners

Drs. Lauren Erland and **Renee Prasad** are collaborating with BC Ministry of Agriculture on a 2-year project to examine susceptibility of new blueberry varieties to blueberry scorch virus. The project has engaged four current students in the Agriculture Technology Diploma or BAS degree (**Alan Kelly, Caitlin Smits, Stephanie Laframboise, and Thomas Johnson**). Data collected from the project can also be used for teaching AGRI 203 and AGRI 323.

Dr. Golfam Ghafourifar and seven of her research students (**Rajan Deol, Dario Jereb, Harmanpreet Kaur, Maor Arad, Zach Nestman, Manjot Benning, Ronald Balagtas**) attended/presented at the Canadian Chemistry Conference and Exhibition (CSC 2023) held in June in Vancouver. **Zach Nestman** won an award for honorable mention in the analytical chemistry division's undergraduate competition. This is the third year in a row we won the analytical poster presentation for undergraduate students. **Maor Arad** won the annual Undergraduate Research Excellence Award at UFV earlier this year and **Manjot Benning** won the first-ever UFV Alumni Association's Outstanding Student Leader award. <https://blogs.ufv.ca/science/2023/08/17/the-ghafourifar-lab/>

Dr. Lucy Lee and three of her research assistants (**Ryan Goldbach, Mari Austadt** (visiting PhD student from Norway) and **Daylan Pritchard**) attended/presented at the Society for In Vitro Biology meeting (SIVB) held in June in Norfolk, Virginia. **Ryan Goldbach** won an SIVB travel award and Mari Austadt placed 3rd in the Student Oral Presentation competition for the in vitro animal section (IVACS). See list of presentations below for details.

Science Rocks! Summer camp 2023 <https://ufv.ca/science/science-in-the-community/science-rocks/> saw our best attendance yet! This was the first year since we began that all 6 camps were full. In fact, we increased our numbers from 24/camp to 26 due to a record number on our waitlist. A huge thank you to our Team Leaders **Mary Ann Thomas, Semir Hasic, and Cole Zaniol**. Our leaders were brand new this year and really put their hearts into it. Thanks to **Sirjan Singh** and **Dario Jereb** who volunteered throughout the summer. Each week we had a Faculty on Call to assist the leaders and welcome the campers and their parents. Special thanks to the following faculty members for volunteering their time over the summer:

- **Dr. Robin Endelman**, Math & Stats Associate Professor and Science Rocks Coordinator was on hand for her week as Faculty on Call but also oversaw the entire summer program.
- **Dr. Alan Reid** stepped in as our Faculty on Call for two weeks. He also provided nature walks for our campers at both the Abbotsford and Chilliwack campuses every week.
- **Dr. Jeff Chizma**, Physics
- **Dr. Longlong Huang**, Math & Stats
- **Dr. Ruwan Karunanayaka**, Math & Stats

In May, **Dr. Stefania Pizzirani**, Associate Professor Planning, Geography & Environmental Studies (PGES) and the Environmental Studies program participated in a school-based event in Clayton-Cloverdale. This information fair, post-secondary fair, and culture-building event centered around environment, sustainability, climate change, horticulture, ecology, and environmental ethics. In June, Dr. Pizzirani went on to host two classes of Grade 3 students from Jackson Elementary School. **Drs. Alan Reid** (Biology) and **Michelle Superle** (English) also assisted on the trip which was organized by **Hillary Rowe** in Student Affairs.

Transforming Lives

The FoS had a record number of new hires including our new **Dean of Science, Dr. Michael Hitch** <https://blogs.ufv.ca/science/2023/07/19/faculty-of-science-is-pleased-to-welcome-our-new-dean-dr-michael-hitch/>

- **BIOLOGY:** Assistant Professors **Drs. Yvonne Dzal, Mitra Tabatabaee, and Marina Tourlakis** | Lab Instructors **Natallia Varankovich and Jennifer Barrett.**
- **MATH & STATS:** Assistant Professors **Drs. Almaz Butaev and Serhii Myroshnychenko.**

The Equine Media Awards recognized **Shelagh Niblock's** article on "*Practical Nutrition for Donkeys*" with an award for third place in the Horse Care category. Shelagh covers this and other equine related topics in AGRI 238. Congratulations Shelagh! <https://www.horsejournals.com/horse-care/feed-nutrition/practical-nutrition-donkeys>

Congratulations to the following faculty members who were successful in receiving SIF Funding for their 2023/2024 projects: **Dr. Carin Bondar**, Biology Adjunct Professor - STEM Workshops for Girls across the Chilliwack School District | **Dr. Renee Prasad**, Agriculture - Livestock Program at UFV: A SWOT Analysis | **Dr. Stefania Pizzirani** - March for Sustainability | **Dr. Vanessa Radzimski** - Calculus Readiness at UFV.

BAS alumna **Jade Sherwood** started her position as Agricultural Scientist at Ocean Spray Canada (Richmond, BC) in July. Jade is finishing off her MSc at UBC this fall as well. Congratulations Jade!

UFV Agriculture Technology Diploma student **Sarah Mooney** won 2nd Place in the 4H Special Topic Education Traditional Poster Display contest. Sarah's poster was titled: "*Mooving with Technology*" and focused on the use of technology in the dairy industry. Congratulations Sarah!

Caio de Figueroa who just completed his first year BSc, worked this summer with **Dr. Lucy Lee** in an innovative cellular agriculture project sponsored by YEX Inc. from Sunnybrook Health Sciences Centre, Toronto, ON.

Ania Bula, a BAS student from the Agriculture Technology Department received a summer NSERC USRA scholarship along with **Amber Feaver**, a BSc student from Biology to work in science projects under **Drs. Lucy Lee and Justin Lee**, respectively.

Building Community

Dr. Lauren Erland (Agriculture) and **Dr. Alan Reid** (Biology) successfully hosted intern Oscar Counce from East Hill University, UK for 2 months on the Turing Scheme programme <https://www.turing-scheme.org.uk/>. Lauren also joined the Executive Committee of the Canadian Society of Plant Biologists as their Communication Director. <https://cspb-scbv.ca/>

Drs. Ian Affleck and **Robin Endelman** worked with **Caitlin Pascuzzo** from Community Engagement to organize and help to staff a booth for UFV Science in the STEM Zone at the 2023 Abbotsford International Airshow. Students **Brendan Matthews, Nicola Ferguson, Adhiraj Gupta, and Akarshi Sharma** volunteered a total of 56 hours at the booth over three days.

Dr. Javad Hadian (Agriculture) was one of four recipients of a 2023 Abbotsford Community Foundation Agricultural Enhancement Grant. He is collaborating with a local producer (Ramsar Farms, Abbotsford, BC) to develop best practices for saffron production in the Fraser Valley. <https://abbotsfordcf.org/granting/agricultural-enhancement-grants/>

On June 20, **Dr. Renee Prasad** (Agriculture) gave a presentation to the PoCo Garden Club entitled *Know Your Allies: Beneficial Critters in your Gardens*. The PoCo Garden Club has been a supporter of the horticulture portion of the Agriculture Technology Dept since 2001. They donate 50% of the profits of their annual garden club plant sale to the dept. <https://pocogardenclub.wordpress.com/current-events/upcoming-events/>

Drs. Javad Hadian and **Renee Prasad**, along with current students **Alan Kelly**, **Stephanie Laframboise** and **Caitlin Smits**, and Agriculture Technology diploma grad **Gabriel Camparmo** participated in the 4H Special Topic Education Display Contest. This contest is held province wide for all 4H Youth. This year the theme was Agri Technology. Javad, Alan, Stephanie, and Caitlin participated in poster judging. Gabriel and Renee participated in the summary webinar on June 19. UFV was a sponsor of this event. <https://www.4hbc.ca/news/posts/special-topic-educational-display-contest-2023-win>

On June 16, **Dr. Lucy Lee** gave a seminar as an invited guest at the Institute of Marine and Environmental Technology, University of Maryland in Baltimore <https://marinebiotechnology.umbc.edu/events/event/117980/> on the topic of Cell Cultured Seafood.

On June 15, **Drs. Lauren Erland** and **Renee Prasad** attended the BC Cranberry Research Farm Open House, in Delta BC. Both made informal presentations to growers and other researchers about their projects this year at the research farm and participated in a researcher roundtable.

On May 26th Dr. Lucy Lee announced our FoS Awesome Achievement Awards for 2023. Congratulations to **Dr. Greg Schmaltz** (Biology) recipient of the Awesome Achievement Award for overall excellence in academic endeavors. Dr. **Vanessa Radzimski** (Math & Stats) - FoS Teaching Excellence; **Dr. Jake Spooner** (Chemistry) – Research Excellence; **Dr. Carin Bondar** (Biology Adjunct) – Outreach Excellence; **Dr. Pedro Montoya-Pelaez** (Chemistry) -Superb Performance of Service Duties (Faculty); **Michelle Morier** (Agriculture) – Superb Performance of Service Duties (Staff). Read more: <https://blogs.ufv.ca/science/2023/06/26/2023-faculty-of-science-aaa-award-recipients/>

On May 27, the Agriculture department hosted students from Summerland Secondary School. They toured the agriculture facilities and other areas of CEP.

On April 17, full-time and sessional Agriculture Technology faculty along with **Dean Lucy Lee** and **Associate Dean Ian Affleck** were joined by **Lorna Andrews**, **Michelle Johnson** and **Dr. Victoria Surtees** from Teaching and Learning for our departmental retreat. The retreat focused on three areas of teaching practice: Indigenization focused on territorial acknowledgement, understanding the perspective of international learners, and learning more about artificial intelligence (e.g., ChatGPT, BingChat, etc.).

Dr. Carin Bondar, Biology Adjunct Professor, received the first contract with Carnival/Blackburn cruises (Sea-Alaska), Blackburn has confirmed partnership for future Bondar Sci Comm students to speak on ships. In August, Carin represented the Faculty of Science and Chilliwack School District as Trustee for a Medicine Walk collaboration with Elder Muriel Victor and Fraser Health (Cristal Biela). She also was the lead interviewer on two more on-camera interviews in the 'Chilliwack Metis Elder Series'.

Sample List of Presentations/Publications (UFV student names underlined> by FoS personnel:

Baras, A., Li, J., Ni, W., Hussain, Z. and **Hitch, M.** (Accepted Aug 2023) Evaluation of potential factors affecting steel slag carbonation: opportunities and challenges. *Processes Journal*.

Bols, N., **Lee, L.E.J.**, and Dowd, G. 2023. Distinguishing between ante factum and post factum properties of animal cell lines and demonstrating their use in grouping ray-finned fish cell lines into invitromes. *In Vitro Cellular and Developmental Biology-Animal* 59:41-62. Selected as journal highlight in the *In Vitro Report* April-June 2023 <https://www.sivb.org/InVitroReport/issue-57-2-april-june-2023/journal-highlights-22/>

Bols, N., **Lee, L.E.J.**, and Dowd, G. 2023. Delineating Ante Factum and Post Factum Properties of Animal Cell Lines and Using Them to Organize Fish Cell Lines into Invitromes. Invited talk. Society for In Vitro Biology annual meeting. Norfolk, Virginia, June 10-14, 2023

Brandt, M.A., Bula, A.M., Sheffield, R.S., Sandvik, G.K. and **Lee, L.E.J.** 2023. Developing Cell Lines from Young and Adult Coho Salmon (*Oncorhynchus kisutch*). Society for In Vitro Biology annual meeting. Norfolk, Virginia, June 10-14, 2023

Butaev, A., and Dafni, G. 2023. Locally uniform domains and extension of bmo functions. *Annales Fennici Mathematici*, 48(2), 567–594. <https://doi.org/10.54330/afm.132002>

Erland, L.A.E. 2023. Melatonin as a mediator of plant perception and response to changing climates. Plant Signaling and Behaviour 6th International Symposium, Seattle, WA, June 18-22, 2023.

Giebelhaus, R.T., Biggs, L., Murch, S. and **Erland, L.** 2023. Untargeted and targeted metabolomics to understand plant growth regulation and evolution in Wollemi pine (*Wollemia nobilis*). *Botany*. Just-IN <https://doi.org/10.1139/cjb-2023-0017>

Glaros, A., Newell, R., Ruder, S-L, Mukiri, J., **Pizzirani, S.** 2023. Cellular Agriculture Futures: A survey of public perceptions in the Lower Mainland, British Columbia. 10.13140/RG.2.2.31248.58889.

Goldbach, R.M., Sethi, I., Bula, A.M., **Lee, J.B.**, and **Lee, L.E.J.** 2023. Ease of Development of Cell Cultures From Fish Olfactory Rosettes and Initial Characterization of a Continuous Cell Line From Rainbow Trout Olfactory Tissue. Society for In Vitro Biology annual meeting. Norfolk, Virginia, June 10-14, 2023.

Jacobs, A., **Hitch, M.**, Mosallanejad, M.S., Bhatelia, T., Li, J., and Farhang, F. (Accepted Aug 2023) Mineral Carbonation Potential (MCP) of Mine Waste Material: Derivation.

Karunanayaka, R. 2023. Review of the book *Struck by Lightning: The curious world of probabilities*, by J.S. Rosenthal. *Crux Mathematicorum*, 49(6), 13-15. <https://cms.math.ca/publications/crux/issue/?volume=49&issue=6>

Lee, L.E.J. 2023. Cell Cultured Seafood: 20+ years in the making. Invited seminar, Institute of Marine and Environmental Technology, University of Maryland, Baltimore, June 16, 2023

Newell, R., **Glaros, A.**, **Pizzirani, S.** and **Newman, L.** 2023. The Role of Cellular Agriculture in Sustainable, Resilient and Just Food Systems: An Action Agenda. 10.13140/RG.2.2.34721.17768.

Pritchard, D., Bols, N.C. and **Lee, L.E.J.** 2023. Using Fish Epithelial Cell Lines to Study the Impact of Nitrate, Nitrite and Ammonia on Fish. Society for In Vitro Biology annual meeting. Norfolk, Virginia, June 10-14, 2023

Radzimski, A.V., Sargent, B.P., and Leung, C. F-S. 2023. Time and Space to Thrive: Mathematics Graduate Students in a Team Teaching Model *PRIMUS*, DOI: 10.1080/10511970.2023.2214893

Solhaug, A., Dahle, M., Ivanova, L., Gjessing, M., Sindre, H., Eriksen, G., Fæste, C., Sundaram, A., Kristensen, T., Olsvik, P., **Lee, L.E.J.**, Nowak, B., Slattery, O. 2023. The new Atlantic salmon gill epithelial cell line ASG-10 - a tool for in vitro gill research. Invited talk. Society for In Vitro Biology annual meeting. Norfolk, Virginia, June 10-14, 2023