

Monthly Report to the Provost – Faculty of Science

The Faculty of Science (FoS) has the following to report for the month of **December 2022 - January 2023**:

Engaging Learners

School of Land Use and Environmental Change (SLUEC) Assistant Professor, **Dr. Afia Raja**'s GEOG 252 class won three awards at the CityStudio Hubbub 10 event held at Abbotsford City Hall on December 13. "Future for an Affordable Chilliwack" by **Nicholas Brakes, Annemay Garretsen, and Simosethu Mpofo** won the Data and Community Planning challenge. "Small solution is a tall solution" by **Joanna Gemmell, Gabriella Wertheimer, Makaela Emery, and Saba Berenjforooshazar** and "Strangled Chilliwack" by **Katie Krug** received special mentions. See all the winners and posters here: <https://letstalkabbotsford.ca/citystudio-virtual-hubbub-10-fall-2022>

Dr. Renee Prasad from the Agriculture Technology Department along with Ag faculty staff and students will be participating in the Pacific Agriculture Show at Tradex Jan 26-28. A booth will be set up to attract prospective students to our Agriculture programs.

Registration is now open for the Fraser Valley Regional Science Fair (FVRSF) 2023 to be held at UFV on April 6. Students from Grades K-12 in the Fraser Valley are invited to present and compete for cash and prizes including the chance to join Team BC and represent the Fraser Valley at the Canada Wide Science Fair to be held in Edmonton, Alberta in May. <https://ufv.ca/science-fair/> Joining our committee this year as Chief Judge is **Dr. Jake Spooner**, Assistant Professor from Chemistry taking over from **Dr. Jason Thomas**, Chemistry Department Head who has held this position since 2018. Jake will join from the Science Dean's Office **Dr. Ian Affleck**, Associate Dean of Science and Regional Coordinator of the FVRSF, **Caroline Majeau**, and **Janice Nagtegaal**; **Dr. Nathan Bialas**, Associate Professor from Biology, and educators from the school districts.

Transforming Lives

Dr. Cherie Enns, Associate Professor from SLUEC, remains very busy with her research. She completed her fieldwork for the SSHRC MiFood/Hungry Cities Partnership, highlighting the struggles of South Sudanese urban refugees. <https://hungrycities.net/project-coordination-committee/> **Jacqueline Fanta**, an International Student pursuing a BA in Global Development studies at UFV travelled to Kenya and wrote about her experience working on the MiFood project. https://globalcommunitylab.ca/2023/01/05/south-south-migration-and-migrant-food-security-project/#_ftn1. Jacqueline joined 6 other UFV interns (**Alexi Kneale, Natasha Knebelow, Kenzie Ekkebus, Abbey Lin, Cole McGee, and Amanjot Dhaliwal**), in December with funding for various applied planning policy and food security projects. Read more on the interns and what each have contributed to this project: <https://ufvfoodsecurityinternship.ca/intern-testimonials/>. Dr. Enns also launched her recent IDRC grant research, Catalyzing Women's Involvement in PostCovid-19 Recovery through Agricultural Cooperatives in Kenya.

Dr. Lenore Newman, Associate Professor from SLUEC and Director of the Food and Agriculture Institute (FAI) attended the opening session of Creative Destruction Labs Rockies as a science mentor; travelled to Ontario to mentor start ups YEX foods and FuelPositive; and met with the Canadian Food Innovation Network as she was invited to be in a film on cellular agriculture. She travelled to Ottawa to soft-launch a national agritech strategy with other collaborators and returned to Toronto to attend RBC's Climate Smart Agriculture and Food Roundtable with food industry leaders. Dr. Newman was recently quoted in a Macleans article, "The BC floods are a mere hint of what climate change could do to the food supply". <https://www.macleans.ca/society/environment/the-b-c-floods-are-a-mere-hint-of-what-climate-change-could-do-to-the-food-supply/>

Dr. Stefania Pizzirani, Assistant Professor from SLUEC is stepping in as acting Associate Director of FAI. **Dr. Lauren Erland**, Director of Berry Horticulture has joined FAI and partnered with her on new grant funding applications.

Building Community

Drs. Mariano Mapili, Afia Raja, and Talha Qadri from SLUEC assisted the City of Mission in securing funding from the Union of BC Municipalities for an Extreme Heat mapping, Risk Assessment and Planning. This month, the team started the mapping of vulnerable population with our student researcher **Saba Berenjforooshazar**. The same team will work on a similar project with Leq'á:mel First Nations. We hope to contribute in mitigating the effects of extreme heat to vulnerable population of the City of Mission and the Leq'á:mel First Nation.

Jaime Clare, a Bachelor of Environmental Studies student, wrote a report last year called 'Casual Contamination: Chilliwack's Butt Problem' for a course and the idea was picked up by the City of Chilliwack as reported in The Chilliwack Progress. <https://www.theprogress.com/news/recycling-bins-for-cigarette-butts-coming-to-downtown-chilliwack/>. Jaime is very busy with multiple environment projects related to water quality, gender-based initiatives, as well as conservation of Oregon forest snail.

Dr. Lucy Lee, Dean has been busy with international outreach. She was invited to Korea and met with the President of Soongsil University. Possibilities of international collaboration and student exchange were discussed. She was then invited to Peru and met with representatives from the Montessori International School in Trujillo as they are very interested in sending students to UFV. She was also invited to present three seminars at various universities but due to the civil unrest in Peru, her trip was cut short, and they were cancelled. Her visiting student from Norway, **Mari Austad Brandt** returned to Norway after a 3 month stay at UFV. An abstract has been prepared from her work here and will be submitted to the Society for In Vitro Biology's annual meeting in Norfolk, Virginia.

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

Bols, N.C., Lee, L.E.J. and Dowd, G.C. (2023) Distinguishing between *ante factum* and *post factum* properties of animal cell lines and demonstrating their use in grouping ray-fined fish cell lines into invitromes. In Vitro Cell Dev Biol Anim (in press IVAN-D-22-00359R1)

Chong, G.L.W., Bohmert, B., Lee, L.E.J., Bols, N.C. and Dowd, G.C. (2022) A continuous myofibroblast precursor cell line from the tail muscle of Australasian snapper (*Chrysophrys auratus*) that responds to transforming growth factor beta and fibroblast growth factor. In Vitro Cell Dev Biol Anim 58: 922-935 <https://doi.org/10.1007/s11626-022-00734-2>

Qadri, S.M.T., Mirza, M.Q., **Raja, A.**, Yaghmaei-Sabegh, S., Hakimi, M.H., Ali, S.H. and Khan, M.Y. (2023) Application of Probabilistic Seismic Hazard Assessment to Understand the Earthquake Hazard in Attock City, Pakistan: A Step towards Linking Hazards and Sustainability. *Sustainability*, 15, 1023, <https://doi.org/10.3390/su15021023>.

El Aal, A.A., Abdullah, G.M.S., **Qadri, S.M.T.**, Abotalib, A.Z., and Othman, A. (2022) Advances on concrete strength properties after adding polypropylene fibers from health personal protective equipment (PPE) of COVID-19: Implication on waste management and sustainable environment. *Physics and Chemistry of the Earth, Parts A/B/C*, 128:103260, <https://doi.org/10.1016/j.pce.2022.103260>.