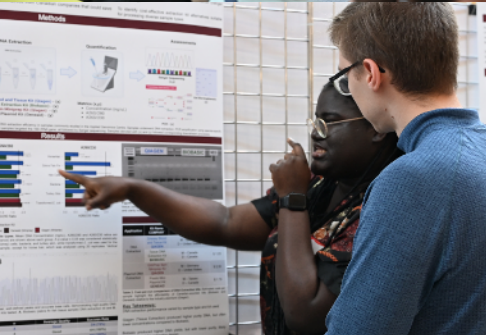


RESEARCH SHOWCASE 2026

CONFERENCE PROCEEDING BOOKLET

KWANTLEN POLYTECHNIC UNIVERSITY



RESEARCH SHOWCASE 2026

The Office of AVP Research and Innovation held its third Research Showcase event at Kwantlen Polytechnic University (KPU) in Surrey on May 19th, 2026.



CELEBRATING COLLABORATION

There was outstanding attendance from across KPU, and for the first time we welcomed external partners and guests. During the all-day event, there were numerous engaging presentations and valuable networking opportunities.

When we work together in meaningful ways, we learn from each other's perspectives and can reach new horizons. This year's Research Showcase celebrated the power of collaboration in applied research and innovation. Attendees heard from KPU experts and students about their diverse experience and skills, ground-breaking methods, and valuable community partnerships. Collaboration across disciplines is hands-on and centres student engagement, ultimately driving impactful growth, discoveries and initiatives.

One central aspect of the event was the student poster showcase. About 40 students displayed their work, and attendees circulated to chat with the students about their research and innovation projects.

There were twelve Lightning Talks from across faculties including some external partners, demonstrating the breadth of research at KPU.

This was truly a team effort. We are grateful to all the folks that made it happen. This is a major forum for KPU to increase awareness and knowledge sharing, and foster future collaborations.

AT-A-GLANCE



"Overall an inspiring and motivating event."

- ▶ **12** Lightning talks
- ▶ **40** Student posters
- ▶ **130+** attendees

Organizing Committee: Amit Shukla, Cathy Parlee, Karen Meijer, Mariko Itano, Marina Miller, Rebecca Harbut, Mike Bomford, Brett Favaro

Office of Research Services: Amit Shukla, Cathy Parlee, Cece Lee, Jackie Au, Keith Leung, Mariko Itano, Marina Miller, Geena Dhaliwal

This event took place at KPU, whose campuses are in a region that overlaps with the unceded, traditional and ancestral territories of the Musqueam, Katzie, Semiahmoo, Tsawwassen, Qayqayt, Kwikwetlem, and Kwantlen First Nation.

FIRESIDE CHAT

About the topic

"It takes an ecosystem: Shaping research culture through mentorship" with Sally Otto, UBC and Brett Favaro, Dean of Science

What does it mean to be a great mentor, and how does mentorship sustain a research ecosystem? In conversation with Dr. Sally Otto, we explored how leadership, responsibility, and public service shape healthy research cultures, from navigating pandemic science to standing up for conservation.

About the speaker

Sarah (Sally) Otto is a Killam University Professor at the University of British Columbia. Her research focuses on modelling how inheritance and reproductive systems evolve using mathematical models and yeast experimental evolution. Recent work, both theoretical and experimental, has focused on evolutionary dynamics in a rapidly changing world. Dr. Otto was co-founder of the Canadian Society of Ecology and Evolution and has served on the Species at Risk Advisory Council to the Minister of Environment and Climate Change Canada. With over 250 publications and a book, her awards include a MacArthur Fellowship, a Steacie Fellowship and Steacie Prize, and fellowship in the Royal Society of Canada and of the UK, the American Academy of Arts and Sciences, and the National Academy of Sciences.



LIGHTNING TALKS



Toxicity testing in *C. elegans*

Presenter: Kelsie Doering, Biology

Companies in industries such as pharmaceuticals and agriculture must evaluate the toxicity and biological effects of new products before approval. *C. elegans* is widely used for these studies because it is ethical, affordable, and predictive of mammalian toxicity. We have collaborated with Pan Biome Pharmaceuticals to test their drug's effects on animal lifespan, and are expanding on this work to develop a wider toolkit of assays to support future industry testing.

Food Futures in Vancouver Island

Presenters: Victor Martinez, Product Design

Vancouver Island is particularly vulnerable in terms of food security, the Island produces around 10% of the total food it consumes, in case of need stock would last only about three days. This project is about engaging community members, food experts and the general public to first explore what the problem truly looks like and then propose ideas for systemic change.

LIGHTNING TALKS

Understanding DARE (Drug Abuse Resistance Education) an evaluation of a youth intervention program

Presenter: Stef Ashton, Criminology

Discussing a collaborative project as part of an ARTS 3993 research course in Spring 2026.

When more isn't better: evidence for an instructional equivalence hypothesis in multimedia design

Presenter: Kristie Dukewich, Psychology

Multimedia design for learning research suggests that the application of multimedia design principles can have a profound impact on student learning outcomes. However, most of the research literature uses tightly controlled experiments that manipulating one design feature at a time. We conducted an experiment on this topic which was recently published in Frontiers using the KPU Knowledge Mobilization Fund.

Inclusive PPE (Personal Protective Equipment) - Designing for under-represented users in a changing climate

Presenters: Sue Fairburn, Product Design

Partnering with the Canadian Standards Association, they collaborated on a research project in the Product Design Program (2023-2026) whose insights, prototypes and opportunities are meaningful for women entering careers which use PPE.

Dry Farming on Vancouver and the Gulf Islands: Research and extension to support drought adaptation

Presenters: Naomi Robert, Institute for Sustainable Food Systems

Climate change is increasing the severity of summer drought conditions in British Columbia. The ISFS has been working with farmers on Vancouver Island and the Gulf Islands to trial dry farming to as a climate adaptation tool.



LIGHTNING TALKS

How We Made a Book: Building connections with Big Pictures Lab

Presenters: Erin Ashenhurst & Carley Hodgkinson (Big Pictures Lab), Graphic Design for Marketing

Big Pictures Lab is publishing a collection of essays and projects from multiple contributors exploring the role of creative imagery and interventions in the built environment.

From Lab to Field: Enabling Nematode Detection Services for BC Ministry of Agriculture

Presenters: Paul Adams, Applied Genomics Centre and research partner from the BC Ministry of Agriculture

The AGC partnered with the BC Ministry of Agriculture to develop rapid DNA-based tests that identify crop-damaging nematodes. They turned complex genomics into a practical service.

Living Color: Collaborative Research Between Art and Plant Science

Presenter: Maria Anna Parolin, Fine Arts

Highlights two interdisciplinary projects working between garden, laboratory, and studio, tracing pigments from living plants into artworks and scientific study.

Research by and for people who use drugs: A community-based project between KPU and the Surrey Union of Drug Users

Presenters: Tara Lyons, Criminology and research partners

We are conducting community-based research by and for people who use drugs in Surrey. The principles we use in our study can be applied to other research studies and partnerships. Our partnership is an example of how to meaningfully engage community organizations.



LIGHTNING TALKS

"Is making it up as we go along a methodology?": Community-Engaged Research Creation with Virago Nation

Presenter: Jennifer Hardwick, English

The presentation will discuss the process of envisioning, curating, and installing “Creative Kinnections,” an Art Exhibit featuring all-Indigenous Burlesque Collective Virago Nation that took place at KPU from March 13-27. I will offer background on the project, collaborators, and methodologies, and then discuss the logistical, ethical, relational, and physical challenges of community-engaged research projects in institutional settings, with the goal of providing lessons and takeaways.

Arts Research, Scholarship, and Creativity Journal

Presenters: Alena Buis and research partner Tara Lyons, Faculty of Arts

We introduce the inaugural edition of The Arts Research, Scholarship & Creativity Journal as a showcase of Arts-based inquiry at KPU. Rather than a traditional journal launch, the presentation highlights how the publication embraces multiple ways of knowing and sharing scholarship through videos, interviews, creative works, reflective pieces, and research-in-progress.



ADDITIONAL LIGHTNING TALK SUBMISSIONS

Exploring the Embodiment of Racism and its Connection to Psychological Safety in the Workplace for Canadian-born, South Asian Women

Submitter: Mina Sahota, Human Resources

My doctoral study focuses on how Canadian-born, South Asian women navigate racism in Canadian society as youth, and then in Canadian workplaces. The focus of this study is on how organizations can learn from this study and improve psychological safety programs for all marginalized employee groups.

Comparing Gendered-Violence Policies and Procedures at three BC Universities

Submitter: Cherylynn Bassani, Sociology

My research article compares UBC, TRU, and KPU gendered-violence procedures through content analysis. The research was conducted using a checklist and assessed each post secondary's website and relevant documents.

Harnessing AI for Sustainable Supply Chains: A Comprehensive Systematic Review.

Submitter: Marcelo Machado, Business Graduate Programs

This talk summarizes my ongoing research (systematic literature review) on the applications of AI to improve supply chain sustainability and resilience.

Generative AI and Collective Creativity for Tackling Wicked Problems

Submitter: Marcelo Machado, Business Graduate Programs

This talk is a summary of my ongoing research to be presented at the ISPIM conference 2026.

Who's Really Thinking? Human-AI Hybrid Regulation in Student Learning

Submitter: Zahia Marzouk, Educational Studies

My research examines how students decide what thinking to delegate to AI, how their motivation influences these choices, and how they attribute success or failure when working with AI.

1, 2, 3... AI: How Computer Vision Actually Counts

Submitter: Hao Ma, Computer Science and Information Technology

The talk breaks down the hidden mechanics of how computer vision models count everything from passing cars to massive crowds.

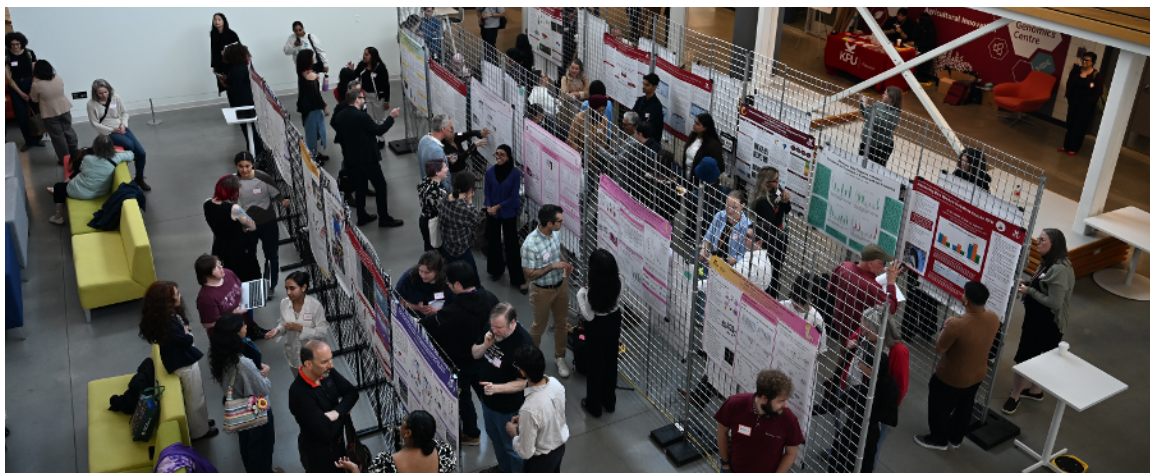
Invisible Technology - creating prototypes that look mundane, but embody new frontiers in Material Science

Submitter: Stephanie Phillips, Wilson School of Design

STUDENT POSTERS

We had about 40 student posters displayed at the event, and lots of great knowledge sharing. Congratulations to our top three posters, in no particular order:

- Cece Chitturu: "Corporate Accountability in the Amazon: The 2019 fires and their health consequences"
- Siddhant Saigal: "Assessing Bird Window Collisions Across KPU Campuses"
- Kevin Saulog: "Development of a Hop (*Humulus lupulus*) Genotyping Platform to Enable Genetics-Assisted Breeding"



Allison Lee-Meyer, *A Design-led project Addressing The Experience of Improperly Thermoregulated PPE Upper Body Base Layer For Female Structural Firefighters*

Alona Oliinyk, *Rapid Ploidy Estimation Using a One-Step DNA Extraction*

Amir Abdollahi Bajestani, Simranjet Kaur, Christian Avellaneda, *Bridging the Consumer-Resilience Gap: A Conceptual Model for AI-Enabled, Weather-Responsive Omnichannel Fulfillment in the Canadian Grocery Sector*

Amrit Gill, *Why Do Resilient People Thrive? Cognitive Reframing as a Mediating Factor in the Relationship Between Resilience and Eudaimonic Well-Being*

Aubrey Clarito, *Sense of belonging and mental health outcomes among immigrants in British Columbia.*

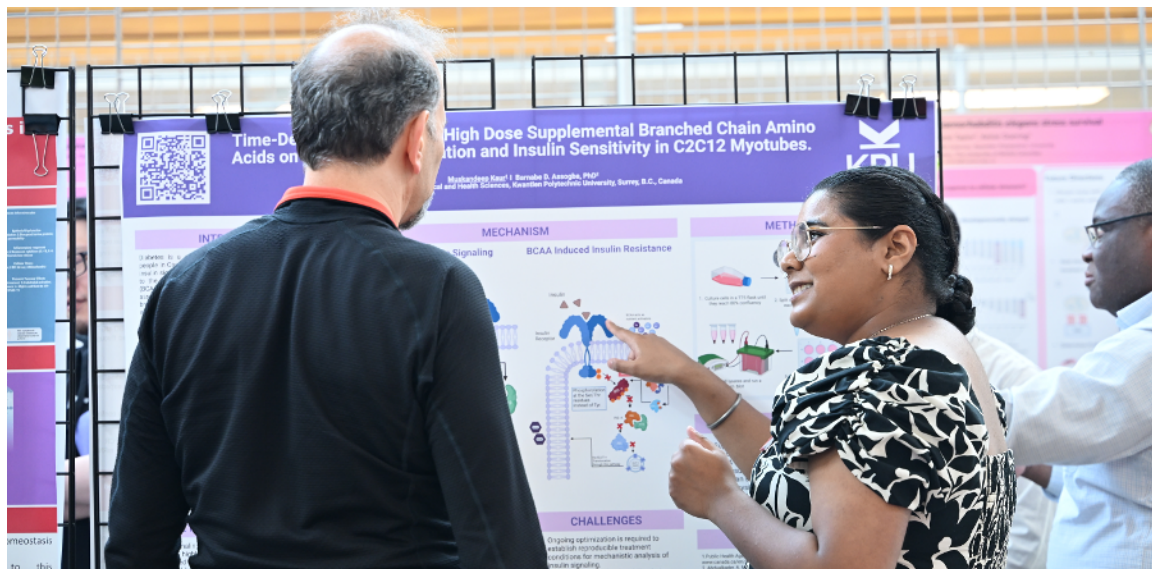
Axelle and Guedia, *Service Swap*

Cece Chitturu, *Corporate Accountability in the Amazon: The 2019 fires and their health consequences*

Chloe Chang, Nighel Cabanos, Tanner Chow, Akarsh Gupta, Alex Tran, *AI-Powered Space-Air-Ground Networks for 6G*

Conner Bavaro, *Individual Cultural Values as Moderators of the Relationship Between the Selection, Optimization, Compensation Model and Work-Life Balance*

STUDENT POSTERS



Destiny Lang, *How can women-centred flame-resistant industrial workwear be designed to optimize safety, comfort, and performance for women in trades and transportation?*

Dilwar Singh, *Replug: Recycle, Repair and Reuse*

Divina Sadher, *Prevalence and treatment of neoplastic diseases in horses*

Eileen Faith Biswayan, *Better Detection for Better Herd Health: Validation of a secY qPCR Assay for Mycoplasma bovis*

Elyse Farmer, *Effect of soil solarization on chickweed (Stellaria media) seed viability across burial depths*

Isbah Mahmood, *Assessing C. elegans recovery from high concentration oxidative chemical exposure*

Jackson Kereliuk, *Exercise-induced effects on aging within a cellular stress response pathway*

Jasleen Randhawa, *Assessment of pharmaceutical compounds for Lifespan Extension in C. elegans*

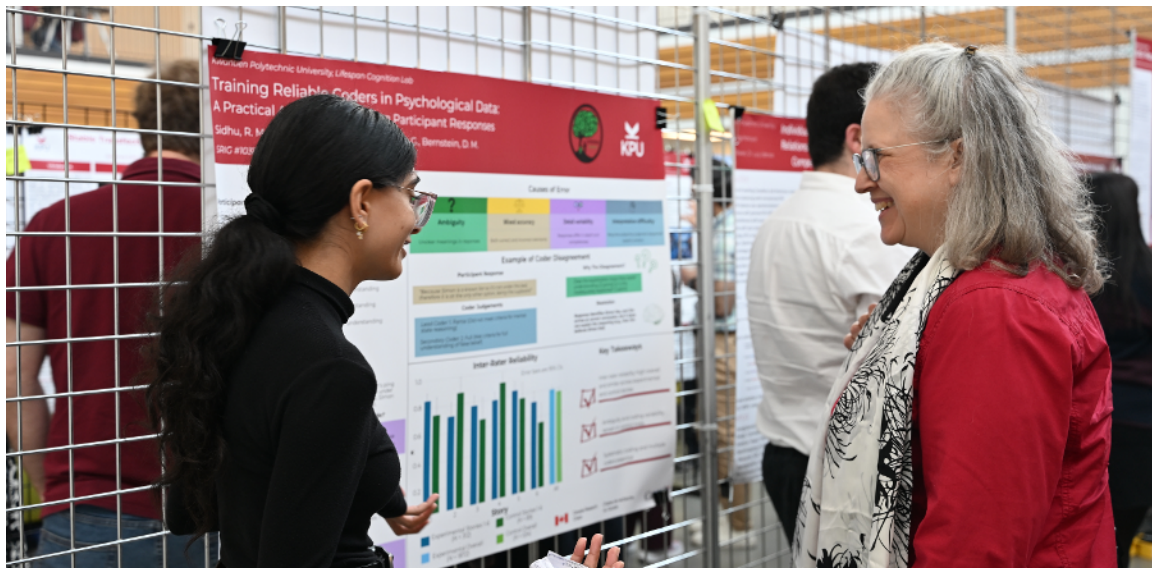
Karaveer Maan, *Advancing Human Splenic Cell Models Through Stable Transfection of SARS-CoV-2 Spike-RBD Constructs*

Kevin Saulog, *Development of a Hop (Humulus lupulus) Genotyping Platform to Enable Genetics-Assisted Breeding*

Khatira Abbasi, *Characterizing a Novel Mutation Associated with Familial Hemiplegic Migraine (FHM)*

Khushpreet Kaur, *Pedagogical analysis of applications of machine learning tools in undergraduate biology*

STUDENT POSTERS



Kirandeep Kaur, *Crosstalk Between Skin and Nerve Through Calcium-Sensing Receptors in Small Fiber Neuropathy*

Mattias Schenk, *Evaluating the role of MBK-1 in Caenorhabditis elegans oxidative stress survival*

Muskandeep Kaur, *Time-Dependent Effects of High-Dose Branched-Chain Amino Acids on IRS-1 Phosphorylation and Insulin Sensitivity in C2C12 Myotubes*

Ravneet Kaur, *Understanding Mental Health in Relation to Reproductive Health Conditions in a Community Sample: The HEALTH Survey*

Rebecca Curran, *Marigold: Automating Zebrafish Behavioural Toxicology*

Reesha Sidhu, *What's Breaking KPU Students Down: Emotional Distress and the Impact of Academics, Work, and Financial Stress*

Reesha Sidhu, *Re-evaluating the link between honesty-humility, agreeableness, and Theory of Mind*

Sanaa Kothawala, *Optimizing RNA Extraction and cDNA Synthesis for Plant Viral RNA Detection*

Shannon Campbell, *Effects of biodegradable mulch on dryland rice*

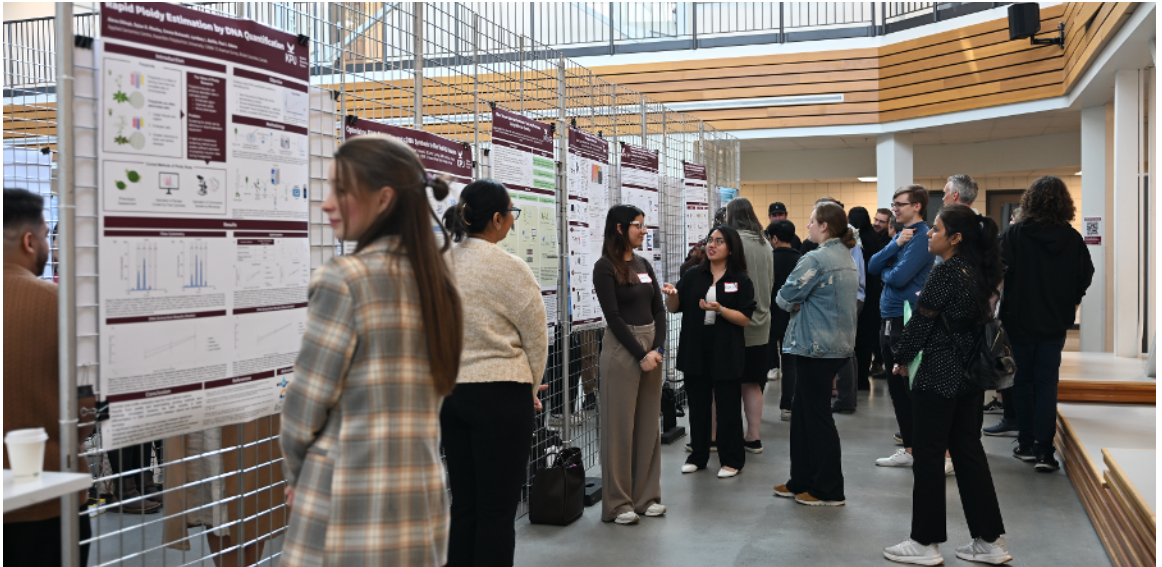
Siddhant Saigal, *Assessing Bird Window Collisions Across KPU Campuses*

Simran, *The Relationship among Academic Motivation and Academic Procrastination Among Undergraduate Students*

Sofia Kingsley, *Emotional Support in reducing Loneliness among Northern Ugandan Youth*

Sumedha Sharma, *When Weeds Outsmart Herbicides: Detecting Resistance Using Molecular Genetics*

STUDENT POSTERS



Tajinder Kaur, *Effect of oxidative stress on survival of nhr-49(et13) & aging in C.elegans*

Talia Parfeniuk and Rue Badanic, *Soil respiration on either side of the dyke across the Garden City Lands*

Vanessa Ikechebelu, *Evaluation of Canadian Owned or Distributed DNA Extraction Kits in Comparison to Industry Standards Produced or Distributed by Companies from the United States*



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