

# Science Undergraduate Poster Exhibition of Research (SUPER) - 2025

3 April 2025, 12:30 - 2:30 PM

## ARET

Student name	Supervisor name	Poster title
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NO PRESENTERS THIS YEAR

## Chemistry

Student name	Supervisor name	Poster title
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1	Connor Johnson	Allingham	A New Banana Flavouring: Extraction and Characterization of Volatile Compounds in Cavendish Bananas
2	Gabriel Chapman	Allingham	Luminescence of nitrogen-doped carbon quantum dots synthesized via microwave reactor
3	Jessica Jolicoeur	Allingham	Green aripiprazole lauroxil: a more environmentally friendly and effective synthesis
4	Ashlynn Jensen, Esther Ojukwu	Blackstock	PASS Chem: Interactive Learning Through Open Educational Resources (OER)
5	Ethan Bell	Brewer	Static Headspace Gas-Chromatography-Mass Spectrometry Determination of Chloroform in Drinking Water
6	Jessica Whitehouse	Brewer	Investigation of the Suitability of Dispersive Liquid-Liquid Microextraction with GC-MS to Determine Haloacetic Acids in Real Samples
7	Andrea Deis, Erin Plowe	Donkor	Qualitative analysis of tetrahydrocannabinol and cannabidiol in various cannabis strains using liquid chromatography-mass spectrometry.
8	Caitlin Brown	Donkor	Capillary electrophoresis method development for determination of selected bisphenols
9	Darya Radchenko	Donkor	Determination of cannabidiol in swimming pool water samples by capillary electrophoresis.
10	Gursevak Uppal	Donkor	Method development for determination of cannabidiol in pet foods using capillary electrophoresis
11	Kayla Hermiston	Donkor	Antioxidants in cancer therapy: ICP-MS analysis of metal reduction in a simulated cell environment.
12	Megan Hills	Donkor	Raman Spectroscopy characterization of energy drinks and CBD-infused beverages (Application of the Presence of Microplastics)
13	Parker Sauer	Donkor	Determination of cannabidiol in treated wastewater by capillary electrophoresis
14	Tasneem Idris	Donkor	Determination of cannabidiol in cannabis flower buds by capillary electrophoresis
15	Andrea Deis	Huttunen-Hennelly	Exploring Temporin-1CEa and Its Derivatives: A Promising Approach Against Antibiotic-Resistant Pathogens
16	Erin Plowe	Huttunen-Hennelly	Optimizing Antimicrobial Susceptibility and Hemolytic Activity in Macropin Derivatives

17	Lochlan Scholefield	Huttunen-Hennelly	Investigating the Antimicrobial Capabilities of the Scorpion-Venom-Derived Peptide Pantinin-1 for Pharmaceutical Application
18	Thomas Olsen	Huttunen-Hennelly	Determination of Antimicrobial, Antibiofilm, and Hemolytic Activity of Aurein-1.2 Derivatives
19	Yevgeniya Bukina	Huttunen-Hennelly	Determination of the Partition Coefficient of Indolicidin and Indolicidin-4,5 Using Capillary Electrophoresis
20	Amrita Ajay Sagar	Mora-Diez	Machine Learning Methods for Predicting the Aqueous $pK_a$ of Benzimidazoles
21	Megan Martin	Prema	Synthesis of New First-Row Transition Metal Catalysts for Hydroamination
22	Zoë Dobney	Prema	New Inorganic Chemistry Lab Experiments: Synthesis and Characterization of Pd/Pt Complexes using Monowave Heating

### Computing Sciences

	Student name	Supervisor name	Poster title
23	Fernando Ferrufino, Carlos Avila	Anthony Aighobahi	Real-Time Detection and Mitigation of WiFi Jamming in IoT Networks
24	Geetanshu Kamboj, Shivansh Joshi, Harleen Kaur	Anthony Aighobahi	Geeky Shoes: Smart GPS-Embedded Shoes
25	Tyler de Zeeuw, Joshua Eaket, Jesse Cochrane	Anthony Aighobahi	Intrusion Detection System with Propelled Water Threat Deference
26	Gursahib Singh	Cheeptham (BIOL)	Game-based Edutainment for Microbiology Literacy Through Transformation of Microbiology Laboratories in History
27	Gursahib Singh	Ghazanfar Latif, Jaspreet Kaur	Transforming University Experience: Leveraging Open-Source Large Language Models to Create Secure and Intelligent Students Support System at TRU
28	Pooja Verma	Ghazanfar Latif, Jaspreet Kaur	Diabetic Retinopathy Detection and Classification from Fundus Images using Optimized Deep Learning Models
29	Eric Kitt	Joseph Alexander Brown	Hard Hat Heat Stress Detector Attachment
30	Greg Vilac	Joseph Alexander Brown	Advanced Language Acquisition in Hybrid and Online Learning Environments
31	Joshua Eaket, Adam Kastor, Asher Mayan, Mohit Singh	Kevin O'Neil	Enhancing Grinding Mill Efficiency Through Object Detection and Color Coding
32	Bensly Pierre	Mridula Sharma	Enhancing oracle database performance via access-pattern-based data archiving
33	Aasiya Abdul Rauf	Nisha Puthiyedth, Kevin O'Neil	Predicting Respiratory Health: A Genomic and Environmental Data Approach

### Engineering

Student name	Supervisor name	Poster title
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34	Alikhan Madeni, Shonveer Atwal	Catherine Tatarniuk	Software Usage to Improve Traffic Lights
35	Jenny Halbert, Thomas Spencer	Catherine Tatarniuk	Wildfire Detection and Monitoring Using Drones & AI
36	Mahdi Salim, Pacifique Kwizera	Catherine Tatarniuk	Software Application in Health Sector: T:slim X2 pump
37	Munirat Balogun, Ishme Thapa	Catherine Tatarniuk	BetterHelp Software for Mental Health Support
38	Harsh Sarvaiya	Munima Jahan	AI-Assisted System Design: Improving Sequence Diagrams Through Use Case Scenarios
39	Shams Khan	Yasin Mamatjan	Rethinking Smart Wheelchair System Design
40	Shams Khan	Yasin Mamatjan	Secure & Scalable Digital Health Framework with Blockchain & Software Design Principles
<b>Mathematics &amp; Statistics</b>			
	<b>Student name</b>	<b>Supervisor name</b>	<b>Poster title</b>
	<b>NO PRESENTERS THIS YEAR</b>		
<b>Natural Resource Science</b>			
	<b>Student name</b>	<b>Supervisor name</b>	<b>Poster title</b>
41	Siya Markel	Rob Higgins (BIOL)	Ants Go Marching: Ant Recolonization in Wildfire Affected Interior Forests
42	Courtenay Campbell	Jill Harvey	How does the abundance of culturally significant plants change with time since fire
43	Autumn Smeltzer	Brian Heise	Trophic Trouble: Assessing Predation Risk on Juvenile Okanagan Chinook Salmon by Native and Invasive Fish Species
44	Cooper Butchart	Mike Flannigan	Determinants of wildfire survival through Canadian winters
<b>Physics and Geology</b>			
	<b>Student name</b>	<b>Supervisor name</b>	<b>Poster title</b>
45	Paige Hembling	Mark Halpern, Gary Hinshaw, Mateus Arantes Fandino	Characterizing the RFI Spectrum for Meridian Satellites
46	Trevor Moffat, Micah Vogt	N. Van Wagoner, M Muhammad	Eocene Volcanism and Paleoenvironments of the Buse Lake Protected Area
<b>Respiratory Therapy</b>			
	<b>Student name</b>	<b>Supervisor name</b>	<b>Poster title</b>
47	Saskia Scholtens, Kirstyn Baldock, Elle Schulze	Lauren Gilowski	Uncharted territory: AI for medical charting
48	Madison Amy, Dustin Atti, Jackelyn Beset, Aiden Leibel	Lauren Gilowski	The effects of withdrawal of life support on healthcare workers

49	Morgan Livingston, Madison Mackenzie, Saidul Islam	Lauren Gilowski	Impact of simulation in RT interprofessional collaboration
50	Athena Louvros, Sydney Reynolds, Hannah Cuccione, Maia Grose	Lauren Gilowski	The rise of telehealth for Respiratory Therapists and Healthcare Professionals in a post pandemic world
<b>Biological Sciences</b>			
	<b>Student name</b>	<b>Supervisor name</b>	<b>Poster title</b>
51	Hannah O'Neil	Baldwin	The geographies of the nature-culture interface: A holistic evaluation of Kamloops gardens
52	Hazel Fernadez	Baldwin	Cultural roots and botanical diversity: Exploring the origins and richness of plants in Mexico's house gardens
53	Ella Colistro	Bottos	Exploring the Effects of River Sediment Chemical Composition on Microbial Community Diversity Across British Columbia's River Networks
54	Nethni Warushapperuma Arachchilage	Bottos	The structure and function of electroactive biofilms cultured with or without pyrite
55	Sara Lawrence	Bottos	Validation of a quantitative PCR assay to determine methanogen abundance in Canadian Arctic permafrost
56	Emma Trotta	Cheeptham	Using compost to reduce cardboard waste and exploring the relationships microbes play
57	Leah Rousseau	Cheeptham	Culture-dependent study of actinobacterial diversity in Canada's Raspberry Rising Cave
58	Maria Alejandra Rojas	Cheeptham	Sample Preparation Methodology for Detection of Bacteriophage Structural Proteins using MALDI-TOF-MS
59	Tallis Dixon	Gosselin, Bottos	Who is living on the intertidal marine snail Nucella ostrina?
60	Donald Dillman	Irani	Allantoin and ER stress responses in Arabidopsis: Seedling growth, RNA extraction, cDNA synthesis, and preliminary gene expression analysis
61	Jasleen Morneau	Irani	Effect of exogenous allantoin application on Arabidopsis seedlings under high potassium stress
62	William Canterac	Joly	Getting back together: Does reproductive success influence re-pairing in Mountain Bluebirds?
63	Darya Radchenko	Nelson	How Life Works: Non-paradigmatic RNAs
64	JeanBaptiste Kouadio	Nelson	How Life Works - The underdogs of molecular biology
65	Dylan Fiske	Rakobowchuk	Investigating Baroreflex Modulation: Neural and Mechanical Adaptations to Acute Sodium Loading
66	Kailey Wheeler	Rakobowchuk	Assessing Psychological Stress During Physiological and Memory Tasks Using fNIRS
67	Lauren Fulton	Rakobowchuk	Measuring the effects of aging on carotid blood vessel tortuosity and longitudinal movement
68	Manuel Centeno Duque	Rakobowchuk	Impact of glycocalyx integrity and an acute hypotonic load on endothelial function

69	Parker Mills	Rakobowchuk	From Brainwaves to Blood Flow: Exploring Cognitive Decline in Aging through fNIRS and Vascular Metrics
70	Megan Hanks	Ramroop Singh	Chemical analysis towards nutritional profiling of Xúsum (Soapberry) and Stsaqwem7úl (Saskatoon berry) indigenous to the Cayosee Creek Band of Sekw'el'was in Lillooet BC
71	Brook Jameus (NRS)	Reudink	Trace Element and Heavy Metal Accumulation in Arctic Nesting Shorebirds
72	Jasmine Ehler	Reudink	Examining Bat Species Richness Across an Ecological and Temporal Gradient
73	Laura Vanleeuwen	Reudink	Does habitat affect Wilson's Phalarope nest success?
74	Luis Gomez Vargas	Reudink	The effects of weather on mountain chickadee reproduction across a rural-urban habitat gradient
75	Mia Smith	Reudink	The Presence of Trace Metals in Black Swifts ( <i>Cypseloides niger</i> ) in Simpcwulecw
76	Rowan (Maggie) Jones	Reudink	Is iNat All That: Ground truthing community science plant observations with standard sampling techniques
77	Marlisse Challe	Studd	Learning lynx lingo: Spatial distributions of Canada lynx vocalizations
78	Sophia Bawn	Studd	Under Pressure: How environmental stresses affect red squirrel ( <i>Tamiasciurus hudsonicus</i> ) vocalizations
79	Thamindu Widyaratne	Studd	A comparison of GPS and accelerometer data in the tracking of animal activity
80	Allie Shiyuk	van Hamme	Microbial ecology of milk processing facilities
81	Elissa Ony	van Hamme	Quantitative PCR assay development for monitoring genes suspected of contributing to PFAS degradation by <i>Gordonia</i> sp. strain NB4-1Y