

# Program

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## **Welcome**

Dr. Garry Fehr, Associate Vice President  
Research and Graduate Studies

## **Board Chair Remarks**

John Pankratz, Chair, UFV Board of Governors

## **President's Remarks**

Dr. Joanne MacLean, President and Vice Chancellor

## **Dinner Buffet**

## **Student Speakers**

Ariel Dennison-Hardy, Psychology  
Amrit Singh, Biology

## **Acknowledgement of Student Awards**

Dr. Garry Fehr, Associate Vice President,  
Research and Graduate Studies

## **Awards Presentations**

Dr. Sylvie Murray – Dean, College of Arts  
Cindy Schultz – Acting Dean, Faculty of Health Sciences  
Dr. Chris Schinckus – Dean, Faculty of Business and Computing  
Dr. Michael Hitch – Dean, Faculty of Science  
Dr. Allyson Jule – Dean, Faculty of Education, Community, and  
Human Development

## **Closing Remarks**



# Welcome to the 2024 Undergraduate Research Excellence Awards Presentation

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## *Growing research through innovation*

Tonight, the University of the Fraser Valley is thrilled to present 26 students with research awards totalling over \$20,000 and recognize others for their research excellence.

The Undergraduate Research Award students were nominated by faculty for exceptional research work, either as part of the UFV work study program, for contributions as research assistants on faculty projects, or for an outstanding research project of their own.

Since inception, these awards have recognized more than 500 student accomplishments with over \$370,000.

Tonight, we also acknowledge students who received prestigious research awards from UFV, federal granting agencies, and other external organizations.

Congratulations to all the students whose research activities contribute to our knowledge through their experiential learning opportunities. Blending skills, opportunity, and faculty 'husbandry' with innovative minds produces a crop that will power Canada's future!

With more than 14,000 students attending UFV this year, these awards represent only a small portion of the research and other applied learning activities that students are able to experience on their way to the next chapter in their lives.

Garry Fehr  
AVP Research and Graduate Studies



# A Message from the President

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Dear Undergraduate Research Excellence Award Winners,

It is my absolute pleasure to congratulate you on this special occasion, one of my favourite annual events at UFV. Research and teaching are the cornerstones of our institution and are fundamental in fulfilling our mission of engaging learners, transforming lives, and building community.

In a world marked by extraordinary change and formidable challenges, research is a beacon of hope and progress, and a catalyst for solving the world's most pressing issues. However, this work does not promise to be easy, and answers to the most important questions require dedication to unravelling complexity while engaging meticulous and rigorous approaches to creating understanding. This is the work of researchers: your work.

Your journey in research has undoubtedly tested your resolve. There may have been moments of true difficulty when nothing seemed to make sense or come together as you had hoped. And at those times, it is important to remember that there is much to be learned from results you did not expect.

I'm proud you've had this learning opportunity at UFV and hope you will take your experience and skills and find innovative ways to make this increasingly complex world a better place with them.

Your achievements are also a testament to the unwavering support and guidance of the faculty who have mentored you and played an integral role in shaping your research journey. To them, I extend my sincerest gratitude and admiration.

I hope you will continue to find fulfillment and purpose in the pursuit of knowledge and innovation.

Joanne MacLean  
President and Vice Chancellor

## Student Speakers

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We are delighted to have two student speakers this evening selected from our Student Research Day Microlecture presenters.

### ***Ariel Dennison-Hardy***

I am a Psychology Honours student graduating from UFV this year, I was accepted into Brock University's Master of Arts program for Psychology, which I will be attending this Fall. I am interested in children's social, emotional, and identity development, which is the focus of my honours project. My goal is to do meaningful work and research with children and adolescents. Assisting in research projects throughout my degree and conducting my own research project opened many doors for me and allowed me to gain insight and broad experiences in psychological research.

My honours project focused on the factors that potentially affect how children make emotion predictions about others. I presented children with stories that featured negative outcomes with an ambiguous cause, like a character's ice cream falling to the ground. They were then asked to make a prediction about the emotional reaction of the character. The results of this study showed no significant results regarding the effect of the child's age and gender on emotional predictions, however, additional analysis revealed that the type of object is significant in affecting emotional predictions and other slight patterns involving the child's age and their gender emerged. The non-significant results of this study suggest that age and gender may not be factors that significantly affect children's emotional predictions and suggest a potential shift away from highly gendered expectations of emotions.

# Student Speakers

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## **Amrit Singh**

I am a Bachelor of Science student, and in the future, I wish to become a doctor within a specialty, such as neurology or oncology. I chose to do a project in genomics as DNA analysis is becoming a larger part of the medical field, and plays a larger role in diagnosis, and understanding diseases. Actively engaging in novel research has reminded me that there are far more questions than answers in medicine, and we should constantly keep an open mind for new ideas.

My project is focused on genomics, which is the study of the genome. Broadly, the goal is to identify the structure and function of the coding portions of the DNA. I was provided a DNA sequence of a fruit fly called *Drosophila willistoni* from the Genomics Education Partnership, and my goal was to verify the computer model. I had found that the computer model was accurate, but prone to errors, and identifying the errors required human supervision.

*The creation of a thousand forests  
is in one acorn.*

*- Ralph Waldo Emerson*



# UFV Undergraduate Research Excellence Award Recipients

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## Community Engagement

Katrina Simon, Grace McDonald, Katelyn Theal, Veronica Barrera

– Planning, Geography, and Environmental Studies

## Community Service Research

Kamren Anderson – History

## College of Arts

Matthew Bergen – Communications

Kara Antifeau – Criminology and Criminal Justice

Noah Opmeer – Economics

Benjamin Seeley – English

Jennifer Carstensen – History

Thomas Wilson – Media and Communication Studies

Nicky Whitehouse – Philosophy

Grace Kennedy – Political Science

Claire Nehring – Psychology

Sandra Postlethwaite – School of Creative Arts

Morgan King-Roskamp – Sociology



## **Faculty of Health Sciences**

Anna Janzen – School of Kinesiology

Jasleen Brar – School of Health Studies

## **School of Business and Computing**

Sierra Pankonin, Manjot Grewal – School of Business

Josh Gourde – School of Computing

## **Faculty of Science**

Stefan Lambrecht – Agriculture

Joseph Laburn – Biology

Avery LeComte – Chemistry

Justine Stoeckly – Geoscience

## **Faculty of Education, Community, and Human Development**

Chloe Yakashiro – School of Education

# Community Engagement Award

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## ***Katrina Simon, Grace McDonald, Katelyn Theal, Veronica Barrera***

### **Planning, Geography, and Environmental Studies**

**Faculty Supervisor:** Afia Raja

**Award:** \$250 each

**Katrina:** I'm a recent urban planning student in my 4th year. Prior to entering the program, I was a geography major focusing on both the physical and human environment. This knowledge has given me the necessary foundations to understand the complexity of urban systems and the underlying mechanisms that shape our cities and communities. Research at UFV has broadened my view of how closely local and global challenges align, creating ways in which we can promote a more sustainable, safe, and equitable place to live in. Our project was a part of our planning class, partnering with the City of Abbotsford, and City Studio Abbotsford.

**Grace:** I'm currently a geography major with an urban planning concentration, hoping to transition to a Regional and Community Planning degree. Engaging in research allows me to partake in experiential learning, where I can apply course content to solving real-world problems. This enables me to enhance and tailor my skills to meet the needs of different projects that I may encounter in my academic and professional journey.

**Katelyn:** I am in my final semester at UFV majoring in Geography with a concentration in Urban Studies and Planning and minoring in English. My future career plans are to hopefully work with a city in a planning capacity with a focus on tourism and recreation. The completion of this project helped me learn about issue in my school's community and work with other students to think of options to provide solutions to better the community.

**Commercial Truck Parking Strategy** | With a combined effort by the City of Abbotsford and Professor Afia Zubair Raja, we were able to analyze the challenges commercial truck drivers are facing in terms of parking availability. Our research involved local, national, and international literature reviews and implemented strategies, as well as attending the stakeholder meeting which gave us firsthand insight on the effects of this issue.

High land value, zoning bylaws in agricultural areas, and considerations in proximity to transportation routes and ports have left drivers feeling exhausted and put added strains on supply chains. Our recommendations included expanding the Bradner and Cole Road rest areas, as well as building a new commercial truck parking area off Mount Lehman Road in Abbotsford, which would create the least amount of impact on surrounding areas and ease the strains on local long and short-haul truck drivers trying to find parking.

# Community Service Award

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## ***Kamren Anderson***

### **History**

**Faculty Supervisor: Eiji Okawa**

**Award: \$1,000**

**Kamren:** I have recently completed my undergraduate studies at UFV and will return in the fall as a teacher candidate in the Bachelor of Education program. As a longtime resident of the Fraser Valley, this project gave me an exciting opportunity to use skills developed in my studies to discover more about the history of my own region. My goal is to become a secondary school social studies teacher, and I intend to apply the knowledge that I gained in this project to my future teaching endeavours in order to help students connect with our province's past.

### **The Uprooting and Dispossession of Japanese Canadians in the Abbotsford Area Population Data and Research Notes** |

The aim of this research project was to recover knowledge of the Japanese Canadian communities that lived in the modern Abbotsford area prior to the federal government's deliberate destruction of them by racist policies in the Second World War. The research material consisted of government case files that detailed issues of land, possessions, and finances that were analyzed to glean information about the various Japanese Canadian communities in the area. The final output developed from this consists of two parts: a general census-style record covering individuals identified across pre-amalgamation communities, and a collection of biographical notes focusing on a handful of families from the area. Ultimately, this research worked towards a renewed understanding of the place of Japanese Canadian settlers in Abbotsford's early history, and uncovered stories that illustrate the nature of the wartime injustice carried out in the valley and beyond.

# Departmental Awards

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## **Matthew Bergen**

### **Communications**

**Faculty Supervisor:** David Thomson

**Award:** \$1,000

**Matthew:** I am a third-year student in the Bachelor of Arts program, completing a major in Geography in the Planning, Geography, and Environmental Studies department and a minor in Communications. After graduating with my undergraduate degree from UFV, I plan to continue my academic journey in the form of a master's degree in disaster management with a special focus on natural hazard preparedness and response. Attaining this education will better enable me to work in government positions at the local and provincial level, aiding those vulnerable to and impacted by natural phenomena. Through my time so far at UFV, I have learned how vital research is to the accumulation of knowledge and expanding my horizons for what can be learned both in class and independently.

**Ramifications of Mount Baker's Large-Scale Volcanism on the Fraser Valley** | Mount Baker is an active volcano located 23 km south of the international US-Canada border and is also close (within 50 km) to the British Columbia municipalities of Abbotsford (pop. ~150,000) and Chilliwack (pop. ~100,000). Although its recent geological past has yielded few explosive eruptions, its distant past has a far more violent record of activity. Approximately 1.15 million years ago, the volcanic field that Mount Baker is a part of produced an eruption comparable to roughly 100 simultaneous 1980 Mount St. Helens eruptions, emitting enough ash to bury the entire Fraser Valley to a depth of nearly 50 m if it was all spread evenly over this area. It was so magnitudinous that it created a large 8 km long by 4.5 km wide collapsed depression, known as the Kulshan caldera, to the northeast of the volcano. Today, the region surrounding the same magmatic focus at Mount Baker is densely populated, and the proximal hazards that stem from a future eruption on the scale of the Kulshan episode could be catastrophic. As it occurred in the volcano's past, there is a chance it could transpire once again, spelling the need for relevant disaster preparedness in the eastern Fraser Valley.

# ***Kara Antifeau***

## **Criminology and Criminal Justice**

**Faculty Supervisor:** Mark Kersten

**Award:** \$1,000

**Kara:** I began working for the public sector while still a student at UFV and transitioned to full-time employment before completing my degree. During the past semester, I returned to UFV and successfully obtained my Bachelor of Arts with a major in Criminal Justice. With invaluable guidance from Mark Kersten, I pursued a directed studies course delving into a topic I find particularly interesting: Artificial intelligence and its applications in discretionary decision-making within the public sector. Now equipped with my degree, I aim to transition into public policy, hoping to contribute to the enrichment of Canada.

## **Algorithmic Borders: AI-Driven Canadian Immigration Decision-Making**

This paper investigates the potential impact of Artificial Intelligence (AI) integration into Canada's immigration policies, particularly within the context of refugee protection. It examines the current practices, potential impacts, and ethical considerations surrounding the use of AI in discretionary decision-making processes. The study looks at how AI could reshape Canada's immigration procedures, considering both the benefits of streamlining processes and the risks of bias and ethical concerns. The paper highlights the complexity of discretionary decision-making and emphasizes the continued need for human oversight and ethical advancement in AI development.

# Noah Opmeer

## Economics

**Faculty Supervisor:** Young-il Albert Kim

**Award:** \$1000

**Noah:** I recently completed my final semester for my BA in Economics during the winter 2024 semester. With the completion of my degree, I plan on pursuing graduate studies where I can continue my research endeavours and learn more sophisticated research methods. UFV provided me with the opportunity to work closely with Dr. Albert Kim through a directed studies course in economics which allowed me to author original research investigating the socioeconomic impact of the COVID-19 Pandemic on Canadian Provinces.

### COVID-19 and Attitudes: A Study of Canadian

**Provinces** | This research paper seeks to elucidate the potential causal relationship between the pandemic and shifts in socioeconomic values and institutional confidence across the Canadian provinces. Quebec, Ontario, and Alberta were delineated as the treatment group owing to their elevated COVID-19 infection rates, while the remaining provinces constituted the control group. Employing the econometric methodology of "difference-in-differences," this study juxtaposed the trend in the dependent variables of the treatment and control provinces cohorts to ascertain the pandemic's causal influence on Canadian values and confidence. The findings underscore a discernible impact of the COVID-19 pandemic on these metrics, with Quebec exhibiting the most pronounced alterations in both values and confidence levels vis-à-vis the other treatment group provinces.



*A seed neither fears light nor darkness,  
but uses both to grow.*

*- Matshona Dhliwayo*

# ***Benjamin Seeley***

## **English**

**Faculty Supervisor:** Amy Tang

**Award:** \$1,000

**Ben:** I will be graduating in June with a major in English honours and a minor in history. I will be joining SFU's MA of English program in the Fall, with the hope of eventually teaching at the post-secondary level. Engaging in research through my honours project has allowed me to develop the necessary skills to continue my education at the next level, and I've gotten a lot of gratification from pursuing my own interests in British modernism's depictions of class and environment.

## **The Missing Link: The Intersection Between Environment and Class in Rebecca West's *The Return of the Soldier* and D.H. Lawrence's *Sons and Lovers* |**

My essay considers how D.H. Lawrence's *Sons and Lovers*, and Rebecca West's *The Return of the Soldier* depicted both natural and manufactured environments within the English countryside at a time in which the close connection between humankind and the natural world was increasingly coming under threat. I believe that through their portrayals of the benefits actively maintaining a relationship with nature allows, West and Lawrence position that consistent interaction with the natural world is key to adapting to the alienating effects of modern life. I further argue that in both novels the level of one's connection to nature is correlated to their class status, as the novels' upper-class characters are repeatedly demonstrated to be unable to achieve the same closeness with nature as their working-class counterparts. My paper's main focus is this understudied connection between class and environment in modernist literature. This research is significant because the missing link shines light upon the disproportionate effects of modernization on various social spaces and reveals how authors reacted to and sought to accommodate that transformation.



# ***Jennifer Carstensen***

## **History**

**Faculty Supervisor:** Ian Rocksborough-Smith

**Award:** \$1,000

**Jennifer:** I have just finished my Bachelor of Arts with a History Honors and English Minor with ambitions to go into education. Taking part in this research was an amazing opportunity to combine my two disciplines and delve into a topic that is deeply important to me both as a student of literature and a future teacher. This project felt like a perfect capstone to my degree that allowed me to use everything I have learned throughout my academic journey and write a paper I feel truly proud of.

## **The Artistic Criminal: Censorship and Surveillance of Black Novelists in Cold War and Modern America**

In the fight against communist ideas in Cold War America censorship and surveillance were commonly employed, especially against creatives like authors. Minority authors, such as African Americans, found themselves particularly targeted because of the ways they criticized the American state. However, this is not something that started and ended with the Red Scare, as in modern day America the same kinds of authors are targeted by book bans and governmental actions to silence their dissenting voices. My paper delves into the ways in which African American authors were and are silenced through techniques like FBI surveillance, censorship, book bans, and legislation both in the Cold War and 21st Century to compare the two eras and see how similar or different they are. Through this analysis we see that while the rhetoric and tools of censorship change, the targets remain the same, and that the internet age makes it impossible for these actions of censorship to go unnoticed by the broader public.

# ***Thomas Wilson***

## **Media and Communication Studies**

**Faculty Supervisor:** Darren Blakeborough

**Award:** \$1,000

**Thomas:** I will graduate this June with a Bachelor of Arts in English and an extended minor in Media and Communication Studies. In the fall, I will start a Master's in Communication at Simon Fraser University, where he will continue researching the implications of platformization on cultural production and consumption.

## **The Sound of Vancouver Indie:” Imagining Vancouver’s “Indie” Scene Through an Algorithmically Curated Playlist on Spotify**

This paper examines an algorithmically curated playlist on Spotify that claims to represent Vancouver’s “indie” scene. Although the term “indie” refers to an ethos that fundamentally opposes commercial production and distribution practices, Spotify co-opts this definition, reducing the term to an easily commodifiable aesthetic that blurs the material conditions of cultural production. The playlist also obscures place and time, spanning several decades of Vancouver’s independent music scene and showcasing artists with large followings and Major label releases over independently released songs from bands with fewer fans. While this makes portions of Vancouver’s indie scene visible, it does so in a way that perpetuates the economic inequalities that disproportionately affect small-scale artists.

# ***Nicky Whitehouse***

## **Philosophy**

**Faculty Supervisor:** Anastasia Anderson

**Award:** \$1,000

**Nicky:** I'm currently in my third year as a Philosophy major with a minor in Psychology. After completing my degree, I aim to pursue a PhD in Philosophy and ultimately establish a career in academia. My research experiences at UFV have been exceptional and invaluable, effectively preparing me for graduate school. The support from my supervisor has been direct and accessible, significantly boosting my confidence. This guidance has enabled me to delve deeply into existing ideas, develop my own arguments, and enhance my writing skills.

## **Embracing Moral Curiosity - A Critique of Philosophy-Washing in Moral Education**

In my essay, I critique Michael Hand's assertion in "A Theory in Moral Education" that directive moral inquiry when conducting philosophy with children is essential for moral commitment in society. I argue that such an approach is inherently biased and indoctrinatory. I advocate instead for the cultivation of moral curiosity and virtues like humility and compassion through non-directive methods. This, I propose, not only avoids indoctrination but also better equips children with the tools for making moral decisions in a diverse and ideologically polarized world, fostering the development of self-reflective, autonomous citizens.

# ***Grace Kennedy***

## **Political Science**

**Faculty Supervisor:** Edward Akuffo

**Award:** \$1,000

**Grace:** I completed my BA in Political Science this Winter semester. Before coming to UFV I was unsure of what I wanted to do or where I could go with my degree, but after taking my first International Relations course with Dr. Akuffo, I knew I wanted to be at the forefront of foreign policy decision-making. I took two directed studies courses during my time at UFV with Dr. Akuffo and Dr. Schwartz which grew my passion for research and love of enhancing my education. I chose this project because of the directed studies I did with Dr. Akuffo on China-Africa relations which probed my interest in wanting to move past the normative claims of hypocrisy in the West and uncover the shift in hegemony between the West and China. This coming fall I will be attending the Norman Paterson School of International Affairs, at Carleton University, where I plan to obtain my MA and work in foreign policy.

## **The Geopolitics of Rule-Based System: China-Africa Relations in the Era of Liberal International Order**

This paper delves into the shifting dynamics of international relations, with a focus on China's increasing engagement with African nations and its implications for the global order. By examining historical contexts, contemporary investments, and geopolitical ramifications, it aims to reveal the strategic motivations behind Western criticisms of China's involvement in Africa. These findings support a significant transition in global power dynamics, where emerging non-Western powers challenge traditional Western hegemony. Moreover, the project highlights the agency of African states in shaping their international relations, particularly in their interactions with China. By amplifying African perspectives, negotiations, and policy initiatives within the China-Africa

framework, it challenges narratives of passive African participation and underscores the continent's pivotal role in shaping the evolving global landscape. In summary, this research contributes to a nuanced understanding of contemporary international relations, unravelling the complexities of power dynamics, geopolitical strategies, and the evolving roles of global actors. By deciphering these intricacies, this paper offers valuable insights into the trajectory of global governance and the recalibration of power relations in the international arena, heralding a transformative era in global affairs.

*Innovation is the future delivered*  
- Jorge Barba



# **Claire Nehring**

## **Psychology**

**Faculty Supervisor:** Sven van de Wetering

**Award:** \$1,000

**Claire:** During the pandemic, I witnessed a distinct political divide regarding opinions toward the healthcare system, which prompted me to conduct my honours research on how political partisanship impacts views of primary care physicians. Through conducting this research, I have gained a better understanding of the scientific method as well as how to overcome the challenges associated with conducting one's own research. My future aspiration is to pursue a PhD in Clinical Psychology, and I view my honours research as an invaluable experience in preparation for this goal.

### **The Effect of Patient-Physician Political Identity on Assessments of Trust and Competence** | Higher levels of

trust in physicians are associated with positive health outcomes such as patient satisfaction and adherence to treatment; however, partisanship can result in group biases that impact assessments of trust, and identifying as politically conservative is correlated with lower trust in medical experts. This study investigated whether consistency between physician-patient political views would result in higher patient assessments of physician trustworthiness and competence. Participants were presented with a vignette depicting either a right-wing, left-wing, or politically neutral doctor. Participants then rated how trustworthy and competent they viewed the physician and completed a scale measuring overall anti-science tendencies. Results showed that, while partisanship did not affect ratings of individual physicians' trustworthiness and competence, right-wing participants scored higher on overall anti-science tendencies. This suggests that individuals may reason about institutional trust and interpersonal trust differently. Findings from this study suggest that right-leaning individuals may be more trusting of individuals as opposed to institutions, and this may help guide both organizations and physicians on how to best communicate with patients and encourage adherence to medical treatment.

# Sandra Postlethwaite

## School of Creative Arts

Faculty Supervisor: Davida Kidd

Award: \$1,000

**Sandra:** As someone who entered university later in life, I find value and fulfillment in balancing part-time work with pursuing a BFA degree. My objective is straightforward: to cultivate a "soft" art practice for my retirement years. Engaging in research enables me to marshal ideas, clarify my thinking process, and ultimately refine my approach to developing visual concepts.

## Recharge

The work "Recharge" began with a hypothesis to create a contemporary wallpaper meaningful to a designated audience of the past, present or future. It required thinking about what aspects of contemporary life to address. I chose three: climate change; the viral upsurge of misinformation with its capacity for divisiveness and harm; and technological proliferation. Research brought me to the emerging field of environmental neuroscience explaining Eco-Anxiety vis-à-vis our relationship with nature, hence the biophilic design. In refuting misinformation, the inclusion of Lunaria, commonly known as 'Honesty' and historically used as the symbol of truth, is the antithesis of falsehood and deceit. Although there are new technologies being developed, the ubiquitous power cord we are familiar with is synonymous with recharging and while we know recharging ourselves is vital, research shows we are more likely to view it as a technological need rather than a human one.



*Innovation distinguishes between a leader and a follower.*

– Steve Jobs

# ***Morgan King-Roskamp***

## **Sociology**

**Faculty Supervisor:** Kathleen Rogers

**Award:** \$1,000

**Morgan:** Over the last two years, I have learned from UFV's passionate educators, who have inspired my dreams of becoming a professor and conducting sociological research on the medical system. Having the opportunity to engage with research and work under the guidance of Dr. Kathleen Rodgers was influential to my personal and professional development and nourished competencies foundational to my future success. However, participating in this study was valuable beyond measure, for it allowed me to connect with individuals impacted by the opioid epidemic - a widely misunderstood social issue that has yet to receive the care and compassion it deserves - and I am profoundly grateful for the opportunity to meaningfully engage with my education.

## **The Structural Determinants of Well-Being in Opioid Agonist Therapy Contexts: Providing Care Amidst**

**Two Crises** | Opioid agonist therapy (OAT) is a pharmacological intervention designed to treat opioid use disorder that has proven to decrease opioid-related morbidity and mortality. Despite providing care amidst the dual crisis of the opioid epidemic and the struggling healthcare system, there is little known about the well-being of those employed in OAT contexts. As such, I explored how social and systemic characteristics organize OAT professionals' wellness outcomes and in what ways. While the participants embodied care and compassion, this came at a cost to their well-being; inadequate patient resources, social stigma, policies, and institutional factors result in structural violence - the harm inflicted on individuals due to overarching social forces. Importantly, further research on how social and systemic factors shape OAT employee well-being outcomes is imperative so that the structural violence endured by OAT professionals can be addressed.



# ***Anna Janzen***

## **Kinesiology**

**Faculty Supervisor:** Gillian Hatfield

**Award:** \$1,000

**Anna:** Participating in research during my undergraduate studies in Kinesiology has provided me with invaluable hands-on experiences which has deepened my understanding of scientific inquiry. I am thrilled to announce that my dedication to academic and practical pursuits has led to my acceptance into the Master in Physiotherapy program at UBC, where I am excited to apply evidence-based research into my future practice. My involvement in both quantitative and qualitative research with diverse demographics such as older adults and individuals affected by cancer has broadened my interests and skills which will undoubtedly have a positive impact on my ability to provide the best patient-centered care.

## **The Physiological and Cognitive Effects of Pickleball Participation in Older Adults**

The purpose of this cross-sectional study was to examine the physiological and cognitive effects of pickleball participation in older adults. Despite similar levels of self-reported physical activity ( $p=0.47$ ) between groups, pickleball players ( $n=14$ ) had significantly greater balance ( $p=0.02$ ) and significantly greater lower body muscular strength ( $p=0.01$ ) compared to the non-pickleball players ( $n=14$ ). This study suggests that pickleball is a beneficial sport for balance and lower body strength in older adults, regardless of physical activity levels. Implementing pickleball programs could help to positively impact an individual's health span and reduce fall risk among older adults.

# ***Jasleen Brar***

## **School of Health Studies**

**Faculty Supervisor:** Shelley Canning

**Award:** \$1,000

**Jasleen:** This semester, I completed my Bachelor of Sciences in Nursing program. This fall, I will begin my job as a registered nurse at Abbotsford Regional Hospital's Internal Medicine Unit. After solidifying my skills on a medical floor, I hope to work in the Intensive Care Unit and Emergency Department. Eventually, I want to pursue a master's degree in nursing. Research is highly valued in the nursing profession. I am grateful to UFV and Dr. Shelley Canning for giving me the opportunity to experience how research creates evidence-based practice in nursing care and promotes positive patient outcomes.

## **Assessing Knowledge and Comfort Levels of Student Nurses in Caring for Patients with Delirium**

Delirium, a state of acute confusion, is a common health issue that student nurses frequently deal with during their clinical placements. I was interested in better understanding any gaps in nursing students' knowledge and how comfortable they are in meeting the care needs of these patients. Findings revealed students' knowledge and comfort levels were greatly influenced by lack of clinical experience, lack of Delirium knowledge, and lack of clinical support. Three major sub-themes that impact how student nurses care for patients with Delirium include nursing staff shortage, improper use of the Delirium tool, and fear of safety. The results of the study show how poor clinical experiences, lack of Delirium knowledge, and lack of clinical support impacts a student's confidence and comfort levels in caring for patients with Delirium. These results can be utilized by the nursing educators to improve student experiences.

# ***Manjot Grewal, Sierra Pankonin***

## **School of Business**

**Faculty Supervisor:** David Dobson

**Award:** \$1,000

**Manjot:** I am a Bachelor of Business Administration (BBA) student majoring in Accounting at the School of Business. I aim to become a Chartered Professional Accountant (CPA). During my academic journey at UFV, I had the opportunity to research the economic impact of the Abbotsford International Airshow on the local community. The project has allowed me to explore real practical applications involved in the consequences of such events on the local community's well-being. This project gave me a deeper understanding of how such events affect regional economies. I am proud to have contributed to this research, highlighting research professionals and data analysts' significant role in ensuring economic stability and growth. From this research, I learned how accounting also plays a crucial role in tracking. I am grateful to Dr. David Dobson and my team members, who helped me throughout this research journey.

**Sierra:** I am a fourth year Bachelor of Business Administration (BBA) student majoring in Accounting and am working towards a Chartered Professional Accountants (CPA) designation locally in Chilliwack. Engaging in this applied research project at UFV School of Business has enabled me to expand my knowledge and understanding of research. I would like to thank Dr. David Dobson and my team members for the help and opportunities they provided.

## **Economic Impact of the Abbotsford International**

**Airshow** | Our research conducted on the economic impact of the Abbotsford International Airshow has revealed that the event plays a crucial role in boosting the local economy. The airshow attracts many tourists, aviation enthusiasts, and businesses to the area, resulting in a considerable boost in tourism, hospitality, and retail spending. This

increased spending translates into amplified business activities and job opportunities, benefiting the local community. Our research findings not only highlight the economic advantages of the airshow but also its role in fostering community growth and development. The event's ability to unite people and create a sense of community spirit is a testament to its social impact, which goes beyond its economic contributions. These insights emphasize the crucial role that large-scale events play in driving regional economic prosperity. The Abbotsford International Airshow is a prime example of how such events can boost local businesses and create job opportunities. The event's success highlights the significant benefits of investing in local events to promote community growth and development.



# **Josh Gourde**

## **School of Computing**

**Faculty Supervisor:** Ismail El Sayad

**Award:** \$1,000

**Josh:** I'm a recent graduate at UFV with a passion for software development, gaming, and science. I graduated with an Engineering Physics Diploma along with a Bachelor of Science degree with a double major in Physics and Computer Science. In doing research, I've been able to develop hands on skills with AI and machine learning in such a way that I can pursue further research as well as a career in this domain.



## **Multi-Modal Deep Learning for Detecting Toxicity in Transcribed-Audio Conversations**

This project consisted of taking several approaches at using AI to detect toxicity in both spoken and written language. An application of this would be for an online game where perhaps the target demographic is a bit younger, this would enable the creation of filters to filter out toxic language. We were able to create two AI models each which successfully identified toxic language with 75% accuracy. This result is early and could be improved by optimizing and tweaking parameters of our model.

# ***Stefan Lambrecht***

## **Agriculture**

**Faculty Supervisor:** Renee Prasad

**Award:** \$1,000

**Stefan:** I returned to university after taking a few years off and working in commercial construction. Upon my return, I re-discovered my childhood passion for farming and decided to pursue my Bachelor of Science in Agriculture, with the goal of becoming a professional agrologist. I chose this project with the intent of helping agriculture in the Fraser Valley to continue to thrive in the face of economic challenges and climate change, and plan on continuing this research professionally. Conducting this trial allowed me to fully immerse myself in the agriculture industry and gave me a sneak peek at what a career in agricultural consulting and research might look like, and also honed my abilities in the scientific method.

## **Potential use of Gibberellic Acid (GA3) as a pollination supplement in Highbush Blueberry**

This project explored the potential of using naturally occurring plant growth regulators to enhance yield in field grown highbush blueberries (*Vaccinium corymbosum*). Gibberellic acid is a plant growth regulator that can be used to stimulate fruit production regardless of whether pollination has occurred and was the focus of this trial. A secondary experiment was done to determine if the treatment would produce negative effects on native pollinator populations or the ability of the plants to produce fruit in the following season. The trial was conducted on large scale, using two nearly identical 60-acre fields, with one being treated with Gibberellic acid or GA3, and the other remaining untreated, thus relying entirely on pollinator activity for fruit production. Results showed that the treated field had nearly 50% greater production volume than the untreated field per acre, and these results were

consistent across the entirety of the field, despite evidence of declining pollinator activity in the treated field when samples were taken further away from pollinator habitats. These results indicate that the yields in the treated field were significantly bolstered by the treatment of GA3, and no negative effects were observed on the pollinator populations, or bud development of the plants in the following season.

# ***Joseph Laburn***

## **Biology**

**Faculty Supervisor:** Dina Navon

**Award:** \$1,000

**Joseph:** I have just completed my Bachelor of Science degree with a Biology Major. This research project has provided me with opportunities to visit two world-class marine research stations across Canada and the US, meet many experts in the field, and learn new lab techniques that no UFV student has done until now. Next year, I am moving to London, England to work with Youth With A Mission to see the next generation of young adults fall in love with Jesus.

## **Impact of the environment on armour plate morphology in populations of threespine stickleback (*Gasterosteus aculeatus*)**

When introduced to freshwater systems, the threespine stickleback often shows a rapid reduction in ectodermal armour plates and pelvic structures. The molecular pathways that cause the reduction of these ectodermal structures are linked to human diseases that cause the malformation of limbs, teeth, and skin. For my research, I captured 120 stickleback from marine and freshwater systems and used micro CT scanning techniques to quantify the changes in armour shape these sticklebacks are experiencing. My research identified a population experiencing significant ectodermal shape and structure divergence. This finding provides insight that will aid future research into understanding how stickleback lose ectodermal structures and will help in developing novel treatments for these human diseases.



# ***Avery LeComte***

## **Chemistry**

**Faculty Supervisor:** Linus Chiang

**Award:** \$1,000

**Avery:** Participating in research during my five years at UFV presented the opportunity to explore inorganic chemistry beyond what was taught in classes and teaching labs. My project explored the characterization of electronic structures for various metal complexes, and presented countless opportunities to practice communicating in science, as well as taught me the value of collaboration with other researchers and groups. The experience I have gained will be vital as I commence graduate studies where I will continue investigation of electronic structures, and determining how they relate to observed physical properties and reactivity.

### **Investigating the electronic structures and electrochemistry of a bis(amidateanilido) cobalt complex**

**complex** | Research interest in chemical oxidation catalysed by high-valent metal complexes using dioxygen as the terminal oxidant has grown significantly over the past decade. In natural systems like cytochrome P450 and copper metalloenzymes (e.g., catechol oxidase, tyrosinase, pMMO), dioxygen activation at metal sites leads to catalytic C-H bond activation, involving high-valent metal species like iron(IV)-oxo and Cu(III). Understanding and synthesizing these high-valent metal complexes provide insights into their spectroscopic and reactivity profiles. Our groups recent work focuses on a novel bis(amidateanilido) ligand platform, replacing traditional salen ligands, to stabilize high-valent metal species. Using such, I synthesized and characterized a cobalt complex with this ligand and explored its electrochemical behaviour, and its chemical oxidation by a variety of spectroscopic and theoretical means, to assign its electronic structures.

# ***Justine Stoeckly***

## **Geoscience**

**Faculty Supervisor:** Dr. Maria Schaarschmidt

**Award:** \$1,000

**Justine:** I am currently in my fourth year of a Bachelor of Science with an Honours in Physical Geography. After graduating, I intend to work toward becoming a Professional Geoscientist (P.Geo.) and work in terrain hazard assessment. I also plan to pursue a master's degree in the field of geomorphology or natural hazards. I am incredibly grateful to be involved in the research being done in the Luminescence Dating Lab as it has deepened my interest in optical dating and geomorphology, and given me the opportunity to present the research I've been involved in.

## **Optical dating of sand dunes to assess the timing of proglacial landscape stabilization, New Jersey Pine Barrens, USA**

The purpose of this study was to investigate landscape response to the retreat of the Laurentide Ice Sheet (LIS) in the New Jersey Pine Barrens. Near the end of the last glaciation, proglacial transportation of aeolian sediment along the central eastern American coast developed several dune forms. Sediment samples were collected from these sand dunes that are presently stabilized and preserved by vegetation. We applied optical dating to quartz grains extracted from the samples and found most sample aliquots had bright, thermally stable signals that were suitable for dating. Our ages indicated that the sediments were deposited, and the landscape had stabilized, after the last glacial maximum between 14,000 and 19,000 years ago as the LIS retreated northward.

# **Chloe Yakashiro**

## **School of Education**

**Faculty Supervisor:** Nikki Yee

**Award:** \$1,000

**Chloe:** Chloe Yakashiro, currently completing her certificate in the Community Support Worker Program at UFV, is driven by a renewed sense of purpose to reshape education after a ten-year hiatus from academia. Inspired by UFV's commitment to decolonizing educational approaches, she aims to transition into the school system while pursuing her undergraduate degree, aspiring to become a high school educator. Chloe's mission is rooted in her profound belief in education's potential to drive social change, guiding her to integrate innovative and inclusive teaching practices that honor diversity and empower students to flourish in a dynamic world.

## **The Impact of Inclusive Classrooms on Neurodivergent Students and their Academic Outcomes**

Chloe's research project ingeniously intertwines her personal journey as a neurodivergent student with scholarly literature, illuminating the detrimental effects of exclusionary practices and deficit narratives. Through her narrative, she underscores the transformative potential of inclusive approaches, drawing from her own experiences at UFV and scholarly insights. Chloe's candid firsthand perspective offers educators a nuanced understanding of the impact of inclusive practices on individual students, filling a crucial gap in research by providing authentic accounts of their multi-dimensional effects on neurodivergent individuals. In doing so, her project not only synthesizes existing literature but also adds a vital humanizing dimension to the discourse on inclusive education.

# NSERC Undergraduate Student Research Awards (USRA)

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## \$6,000 Awards

These national awards from the Natural Sciences and Engineering Research Council are meant to stimulate interest in research in the natural sciences and engineering. They allow students to gain valuable research experience that complements their studies by working full time for a term with a nationally recognized UFV faculty researcher.

Additional funds are provided by the faculty researcher's grant.

### **Alexis Baldwin, Chemistry**

Faculty Researcher: Cory Beshara

### **Amber Feaver, Biology**

Faculty Researcher: Justin Lee

### **Caio Nicolson, Biology**

Faculty Researcher: Lucy Lee

### **Nicola Ferguson, Physical Geography**

Faculty Researcher: Olav Lian

### **Nikita Egorov, Computer Science**

Faculty Researcher: Omer Waqar

### **Nykita Wigley, Biology**

Faculty Researcher: Lauren Erland

### **Sonya Malhi, Engineering Studies**

Faculty Researcher: Linus Chiang

*UFV gratefully acknowledges the support of the Tri-Council Granting Agencies (SSHRC, NSERC & CIHR) through their Research Support Fund and financial contributions to the UFV Research Office.*

# Student Presentation Grants

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In addition to the awards mentioned here, the Research and Graduate Studies Office provides travel grants to students presenting their research at professional conferences. In 2023-24, 35 students were provided up to \$1,500 each to present at conferences online and across Canada, throughout the USA, and internationally.

Our amazing students are often the only undergraduates presenting at these conferences, and they get to connect with leading researchers in their field of study. They often report that the experience was life changing and the highlight of their time at UFV, adding real world experiences to their educational journey.

*There's a way to do it better. Find it.  
- Thomas Edison*



# UFV Student Research Day Awards

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Each year the UFV Research Office invites undergraduate student researchers to showcase their work by participating in a fast-paced 2-minute Microlecture, a poster presentation, or both. More than 100 students connected at this lively interactive event and competed for twelve scholarship awards of \$200 each.

Engagement in research and events such as this can help students obtain scholarships, awards, and graduate school positions. It also contributes to UFV's strategic imperatives, "Provide opportunities for students to participate in experiential learning and/or research and scholarly activities with faculty members."

**Jasleen Brar** – School of Health Studies | **President's Award:**

*Assessing Knowledge and Comfort Levels of Student Nurses in Caring for Patients with Delirium* | **Faculty Supervisor:** Shelley Canning

**Amanjot Dhaliwal** – Psychology | **Provost and Vice-President**

**Academic Award:** *The Impact of Self-Efficacy on Learned Helplessness* | **Faculty Supervisor:** Valentina Proietti

**Falin Kostiuk** – Master of Social Work | **Associate Vice-President,**

**Research and Graduate Studies Award:** *Social work ethical tensions for mental health as sole diagnosis for MAID* | **Faculty Supervisor:** Evan Taylor

**Caitlin Kemble, Jenna Kerr, Lisa Halliday, Morgan King-Roscamp** –

Sociology | **Vice Provost and Associate Vice-President, Academic Award:** *Moving Upstream in Health Professions Education – Why Structural Competency? Why Now?* | **Faculty Supervisor:** Michael Corman

**Anna Janzen** – Kinesiology | **Vice-President, Students Award** – *The Physiological and Cognitive Effects of Pickleball Participation in Older Adults* | **Faculty Supervisor:** Gillian Hatfield

**Emily Whittaker** – Psychology | **Dean, College of Arts - Social Sciences Award:** *Feedback Dynamics in Self-Control: A Replication of Wallace & Baumeister (2002)* | **Faculty Supervisor:** Zoë Francis

**Frankie Fowle** – Graphic and Digital Design | **Dean, College of Arts - Humanities Award:** *Accessibility and The Board Game Landscape* | **Faculty Supervisors:** Eric Lee, Jenn Deon

**Nina Geerts** - Kinesiology | **Dean, Faculty of Health Sciences Award:** *Validating the Astroskin as a Measure of Heart Rate, Oxygen Saturation, Skin Temperature, Respiratory Rate, Tidal Volume, and Energy Expenditure During Treadmill Running* | **Faculty Supervisor:** Luisa Giles

**Stefan Lambrecht** – Horticultural Science | **Dean, Faculty of Science Award:** *The potential of GA3 as a supplement to conventional pollination and its effects on pollinator populations and yield in Vaccinium Corymbosum* | **Faculty Supervisor:** Renee Prasad

**Divya Mayilvaganasamy** – School of Computing | **Dean, Faculty of Business and Computing Award:** *Factors Influence students' grades at school* | **Faculty Supervisor:** Longlong Huang

**Nathan Slingerland** – Chemistry | **Dean, Faculty of Applied and Technical Studies Award:** *Force Field Parameterization for Molecular Dynamics Calculation of Molecular and Activation Volumes and Reaction Volume Profiles* | **Faculty Supervisor:** Jacob Spooner

**Nadine Moedt** – Master of Social Work | **Dean, Faculty of Education, Community, and Human Development Award:** *Serving Cunt: A Feminist Trauma Informed Approach to Genito-Pelvic Pain / Penetration Disorder* | **Faculty Supervisor:** Leah Douglas

Visit [bit.ly/SRD2024\\_ML](https://bit.ly/SRD2024_ML) to see videos of all of the Student Research Day Microlecture presentations, including our two student speakers.







# Thank you

Our students could not become the budding researchers that they are without the unwavering support of family and friends. Thank you for helping them blossom in everything they do.

Special thanks to our incredible faculty and staff who are dedicated to mentoring our students, guiding them through their education experiences in a unique and relevant way to elevate their aspirations.

*when our students succeed, we all succeed!*

Lastly, a huge thank you to the **Clarion Hotel** for providing us with an amazing facility, great service, and an outstanding buffet for this event since 2004!

