

EDUCATION

MA, Forensic Psychology

Carleton University, Ottawa, Ontario

2025 – Present

Thesis: Risk Factors that Distinguish Individuals with Sexual Interest in Children who have Child Sexual Abuse Offences from Those Without

Supervisor: Dr. Kelly Babchishin

GPA: 12.0/12.0

BSc, Psychology

University of Calgary, Calgary, Alberta

2019 – 2024

Honours Thesis: Using Reverse Correlation to Explore Dynamic Links Between Brain and Behaviour

Supervisor: Dr. Jackson Cone

Minor: French

GPA (last 2 years): 3.8/4.0

AWARDS/HONOURS

Carleton University Teaching Assistantship (\$12,085/year)

2025 – 2027

Carleton University Research Assistantship I (\$3000)

2025 – 2026

Carleton University Research Assistantship II (\$3000)

2025 – 2026

Carleton University Departmental Scholarships III (\$1000)

2025 – 2026

Carleton University Departmental Scholarships II (\$2500)

2025 – 2026

Carleton University Departmental Scholarships I (\$1500)

2025 – 2026

Carleton University Graduate Student Association Master Scholarship (\$1000)

2026

Carleton University Graduate Student Association Minority Grant (\$750)

2025

University of Calgary Faculty of Arts Dean's List

2023

Calgary Public Library Bright Futures Scholarship (1st place – \$3500)

2023

Québec Travel Award (\$1000)

PUBLICATIONS

Journal Articles

- Vandal, M., Institoris, A., Reveret, L., Korin, B., Gunn, C., Hirai, S., Jiang, Y., Lee, S., Lee, J., Bourassa, P., Mishra, R. C., Peringod, G., **Arellano, F.**, Belzil, C., Tremblay, C., Hashem, M., Gorzo, K., Elias, E., Yao, J., & Meilandt, B. (2025). Loss of endothelial CD2AP causes sex-dependent cerebrovascular dysfunction. *Neuron*.
<https://doi.org/10.1016/j.neuron.2025.01.006>
- Arellano, A.F.B.** (2023). The Baby Friendly Hospital Initiative in Canada: A Narrative Review. *Undergraduate Research in Natural and Clinical Science and Technology (URN CST) Journal*, 7(11), 1–8. <https://doi.org/10.26685/urncst.516>

Forthcoming Journal Articles

- Davidson, M., Samithamby, A., **Arellano, F.**, & Babchishin, K. M. (In preparation). The links between the involuntary celibacy subculture and sexual violence: A systematic review.
- Davidson, M., MacDonald, A., **Arellano, F.**, Liu, Y., & Babchishin, K. M. (In preparation). Using machine learning to predict sexual, intimate partner violence, and violent recidivism.
- Holmes, E. J., Babchishin, K. M., Peters, K., Rosales, M., Karsoho, H., **Arellano, F.**, (In preparation). A Scoping Review of Ecological Features that Contribute to Misconduct by Child and Youth Educators. *International Journal of Educational Reform*.
- Reid S., McMillan E., **Arellano, F.** (2026). Relational Proximity, Motive, and the Spatial Ecology of Child Homicide in Canada. [Manuscript submitted for publication]. *Journal of Interpersonal Violence*.
- Phelps, J., Norman, M., Dompe, B., Monaghan, J., Becker, S., Becker, C., Aiken, C., Grossman, L., Payne, J. W., Oleksiuk, C., Cheema, S., Leamon, T., Brozdowska, B., Guan, D., Betzner, W., **Arellano, F.**, Breslin, L., Dallaire-Theroux, C., Detchevery, F., Abalasei, I., Diany, R., Gagliano Taliun, S., Gawryluk, J., Sotaro, H., Ilie, A., Kwan, H., Maclean, D., Rajabli, R., Soltaninejad, M., Tarek, M., Snowball, E., Bethell, J., Nielssen, I., Badhwar, A. P., Mazerolle, E., & Smith, E. (2025). Engaging persons with lived experience to co-develop and qualitatively evaluate educational videos about vascular cognitive impairment. [Manuscript submitted for publication]. *Dementia: The International Journal of Social Research and Practice*.

Other Publications

- Arellano, F.**, Cook, N., Holmes, E.J., Babchishin, K.M. Do Risk Factors for Sibling Sexual Abuse Vary by Sexual Preference and Sibling Gender? (2026). *Crime Scene Newsletter*.

Arellano, F. (2022). Cognitive Research From a Different Perspective. (2022).
VAST Platform. <https://www.vast-training.org/blog>

PRESENTATIONS

- Arellano, F.**, Davidson, M., Holmes, E. J., & Babchishin, K. M. (2026, October). *Assessing measurement invariance for the Sexual Experiences Survey-Short Form Perpetration in a sample of BDSM Practitioners* [Data Blitz Presentation]. Canadian Sex Research Forum, Québec, PQ, CAN (Accepted).
- Robles, C. M., **Arellano, F.**, Kuban, T., Rettenberger, M., & Babchishin, K. M. (October 2026). *The role of online disinhibition in online sexual solicitation of minors* [Data Blitz Presentation]. Canadian Sex Research Forum, Québec, PQ, CAN (Accepted).
- Weir, A. E., **Arellano, F.**, Kuban, T., Rettenberger, M., & Babchishin, K. M. (October 2026). *Sexual Harm in Digital Spaces: Online Disinhibition and CSAEM Involvement* [Data Blitz Presentation]. Canadian Sex Research Forum, Québec, PQ, CAN (Accepted).
- Arellano, F.**, Samithamby, A., MacDonald, A. J., & Babchishin, K. M. (June, 2026). *Risk factors for contact child sexual abuse in individuals with pedophilic interests: An analysis of a darknet sample* [Symposium]. Accepted to the 87th Annual National Convention for the Canadian Psychological Association (CPA), Montréal, Québec, Canada.
- MacDonald, A. J., **Arellano, F.**, Samithamby, A., & Babchishin, K. M. (June, 2026). *Using the ACUTE-2007 and STABLE-2007 to predict recidivism in men with Child Sexual Exploitation Material (CSEM) offences: A 15-year follow-up*. [Symposium]. Accepted to the 87th Annual National Convention for the Canadian Psychological Association (CPA), Montréal, Québec, Canada.
- McMillan E., **Arellano F.**, & Reid S. (June, 2026). Relational Proximity, Motive, and the Spatial Ecology of Child Homicide in Canada [Poster Presentation]. Accepted to the 87th Annual National Convention for the Canadian Psychological Association (CPA), Montréal, Québec, Canada.
- Samithamby, A., MacDonald, A. J., **Arellano, F.**, & Babchishin, K. M. (June, 2026). *Comparing fictional and 'real' Child Sexual Exploitation Material (CSEM) users: Who is at higher risk for contact offending?* [Symposium]. Accepted to the 87th Annual National Convention for the Canadian Psychological Association (CPA), Montréal, Québec, Canada.
- Arellano, F.**, Samithamby, A., MacDonald, A. J., & Babchishin, K. M. (February 2026). *Risk factors that distinguish individuals with sexual interest in children who offend from those who do not*. [Presentation]. Presented at the 6th Annual Canadian Forensic Psychology Virtual Conference. Saint Mary's University, Halifax, Nova Scotia, Canada.
- McMillan E., **Arellano, F.**, & Reid S. (February, 2026). *Relational Dynamics of Child Homicide in Canada*. [Presentation]. Presented at the 6th Annual Canadian Forensic Psychology Virtual Conference. Saint Mary's University, Halifax, Nova Scotia, Canada.
- MacDonald, A. J., **Arellano, F.**, Samithamby, A., & Babchishin, K. M. (February,

- 2026). *Predicting recidivism in men with Child Sexual Exploitation Material (CSEM) offences using the STABLE-2007 and the ACUTE-2007 after a 15-year follow-up*. [Presentation]. Presented at the 6th Annual Canadian Forensic Psychology Virtual Conference. Saint Mary's University, Halifax, Nova Scotia, Canada.
- Samithamby, A., MacDonald, A. J., **Arellano, F.**, & Babchishin, K. M. (February, 2026). *Are fictional and 'real' Child Sexual Exploitation Material (CSEM) users distinct in their risk profiles?* [Presentation]. Presented at the 6th Annual Canadian Forensic Psychology Virtual Conference. Saint Mary's University, Halifax, Nova Scotia, Canada.
- Arellano, A.F.B.** (2024, April). Using Reverse Correlation to Explore Dynamic Links Between Brain and Behaviour [Poster Presentation]. University of Calgary Arts Undergraduate Student Research Conference. Calgary, Alberta, Canada
- Arellano, A.F.B.** (2024, March). Using Reverse Correlation to Explore Dynamic Links Between Brain and Behaviour [PowerPoint Presentation]. University of Calgary Arts Undergraduate Research Symposium (AURS). Calgary, Alberta, Canada
- Arellano, A.F.B.**, Vandal, M., Hirai, S., Gordon, G., & Nguyen, M.D. (2022, August). Capillary Flow in Response to Amyloid Beta In Vivo [PowerPoint Presentation]. Vascular Training (VAST) Platform Summer Student Research Symposium. Calgary, Alberta, Canada

RESEARCH EXPERIENCES

SSHRC Criminal Risk Assessment Project

Affiliation: Carleton University

Supervised by: Dr. Kelly Babchishin, Dr. Maaike Helmus, Dr. Sharon Kelly, Dr. Mark Olver

Paid Research Assistant

May 2026
– Present

- Examined racial bias in criminal risk assessment using data from Washington State's Special Commitment Center
- Reviewed and coded criminal case files
- Applied various risk assessment tools, including the VR-SSO, PCL-R, STABLE-2007, STATIC-99R, STATIC-2002R

Parenting Resilience Kids (paRK) Lab

Affiliation: Mount Royal University

Supervised by: Dr. Joanne Park, PhD, R. Psych.

Paid Research Coordinator

Jan. 2025
– Present

- Coordinated a meta-analysis examining the impact of social support on parental sensitivity and child mental health outcomes

- Trained and supervised a team of undergraduate research assistants in systematic review methodology, including abstract screening, full-text review in Covidence
- Developed project materials including project manual, coding book, study criterion, data extraction sheet, training resources

Society of Umbra Scientia

Affiliation: National Cold Case Initiative

Supervised by: Dr. Sasha Reid, PhD, JD

Forensic Research Analyst

Dec. 2022

– Present

- Collaborated with a multidisciplinary team to develop a comprehensive database on Canadian cold cases and international serial killers
- Archived data about demographic information, vulnerability markers, and geographical locations for possible patterns of missing/murdered individuals
- Collected archival records of numerous developmental factors spanning prenatal to childhood stages to identify potential contributors to serial killer pathology
- Examined details of crime scenes, including timing of murders, victim vulnerability markers, and geographical locations to identify potential serial killer murder patterns
- Served on the hiring committee for the recruitment of new research members
- Partnered with Please Bring Me Home to contribute to youth missing cases search efforts
- Analyzed spatial, relational, developmental, and motivational factors in child homicide cases and contributed to manuscript development through data collection, data cleaning, and comprehensive literature review

Sexually Harmful Behaviour Lab

Affiliation: Carleton University

Supervised by: Dr. Kelly Babchishin

Paid Research Assistant

Sept. 2025

– Apr. 2026

- Drafted Carleton University Research Ethics Board applications for multiple research projects in the lab
- Prepared a draft of a research application for Correctional Service Canada for projects connected to the lab
- Performed statistical analyses of online deterrence messages, assessing their quality and effectiveness

Hotchkiss Brain Institute

Affiliation: University of Calgary

Supervised by: Dr. Grant Gordon, PhD & Dr. Minh Dang Nguyen PhD, MD
& Dr. Milène Vandal, PhD

Clinical Neuroscience Research Volunteer

Aug. 2022
– Aug. 2024

- Assessed the effects of amyloid beta on various brain blood vessels and structures
- Examined the vasoconstriction and dilation of brain capillaries, arterioles, sphincters, and vasomotion using software in MATLAB
- Utilized the Automated Quantitative analysis (AQUA) tool to detect presence of calcium as a biomarker

Paid Summer Student Intern

Jul. 2022
– Aug. 2022

- Analyzed amyloid beta in brain capillaries in vivo to fill a gap in Alzheimer's disease research
- Conducted t-tests and produced visual representations of results using GraphPad Prism

Pediatric Emergency Medicine Research Associates Program (PEMRAP)

Affiliation: Alberta Children's Hospital

PEMRAP Director: Dr. Graham Thompson, MD

Clinical Research Associate

May 2023
– May 2024

- Enrolled patients in clinical research studies taking place at the Alberta Children's Hospital
- Screened eligible patients by checking for inclusion and exclusion criteria in the Connect Care clinical information system

Computational Behavioural Neuroscience Lab

Affiliation: University of Calgary

Supervised by: Dr. Jackson Cone, PhD

Honours Thesis

Sep. 2023
– Apr. 2024

- Extended work from the independent research project by exploring more complex methods that combine relevant metrics of performance and performing multidimensional analyses
- Independently developed software via MATLAB, leveraging machine learning techniques (K-Means, DBSCAN, t-SNE) to automate and enhance the analysis of complex behavioural data

Paid Summer Research Assistant

Jun. 2023
– Aug. 2023

- Conducted a literature search on machine learning techniques (K-Means, HMM, DBSCAN) for anomaly detection and clustering large experimental datasets
- Utilized MATLAB to code software that clusters the dataset using DBSCAN
- Explored tools for parameter validation and cluster validation for DBSCAN

PSYC 504 Course: Independent Research Project

Sep. 2022
– Apr. 2023

- Conducted an experimental analysis throughout a full academic year to understand the effects of fluctuating brain activities on mice performance during a visually-guided task
- Developed a series of original software using MATLAB to analyze data and generate visual representations of results

URNCST Mentored Scientific Paper Essay Competition

Affiliation: Undergraduate Research in Natural and Clinical Science and Technology (URNCST)

Mentor: Curtis D'Hollander, PhD Candidate

URNCST Essay Competition Participant

Jun. 2023
– Aug. 2023

- Collaborated with a mentor in the URNCST Mentored Scientific Paper Essay Competition to produce a comprehensive narrative review on the Baby-Friendly Hospital Initiative, a promising intervention aimed at enhancing breastfeeding rates in Canada
- Conducted a detailed literature review to investigate the multifaceted socioeconomic determinants influencing breastfeeding rates within the Canadian context

Attention and Action Lab

Affiliation: University of Alberta and Alberta Motor Transport Association

Supervised by: Dr. Reyhaneh Bakhtiari, PhD

Paid Research Analyst

Sep. 2021
– Sep. 2022

- Contracted as a research analyst to analyze the effects of fatigue and stress on cognitive processes related to driving

- Administered the Vitals Mobile cognitive tests that look at reaction time, spatial awareness, memory and motor skills, and decision-making abilities
- Administered online surveys identifying fatigue, stress due to operating a recently developed automated truck, and driving experiences before and after being on the road
- Set up and calibrated eye-tracking and electroencephalogram (EEG) equipment needed for data collection
- Analyzed EEG graphs and eye-tracking data using MATLAB
- Drafted a template for a final report of all the collected data

TRAINING AND CERTIFICATIONS

VR-SSO Administration and Scoring Training (for file review)	2026
PCL-R Administration and Scoring Training (for file review)	2026
STABLE-2007 Administration and Scoring Training (for file review)	2026
STATIC-99R Administration and Scoring Training (for file review)	2026
STATIC-2002R Administration and Scoring Training (for file review)	2026
Early Childhood Educator Level 1 Certification	2024
First Aid and CPR/AED Level C	2024
Canadian Pediatric Imaging Platform (C-PIP) Study Consent and Screening Training	2024
Stress After Pediatric Pain in the Emergency Department (STRAPPED) Study Consent and Screening Training	2023
WHMIS 2015 Certification	2023
Symptom Management versus Alternative Randomized Treatment of Concussion Trial (SMART) Study Consent and Screening Training	2023
Canadian Anaphylaxis Network- Predicting Recurrence after Emergency Presentation for Allergic Reaction (CAN-PREPARE) Study Enrolment Training	2023

IAUTP Mouse Husbandry and Technical Procedure Certification	2023
TCPS 2: CORE Certification	2023
CITI Good Clinical Practice Course Certification	2023
Vitals Mobile Certification	2021

VOLUNTEER AND OUTREACH POSITIONS

Carleton University Teaching Assistant

2025 – present

- Teaching Assistant supporting student learning by answering questions on course material, providing feedback on assessments, proctoring exams, and grading assignments and examinations.

Hispir Care Behavioural Aide

2024 – 2025

- Provided one-on-one support and implemented evidence-based intervention plans for children with ASD, ADHD, and other disabilities, collaborating with families and specialists to promote social and behavioural development

Calgary Public Library Program Assistant

2017 – 2025

- Assisted in several programs for young children offered at the Calgary Public Library such as Reading Buddies, ELL School Success, and Coding Buddies
- Promoted to adult lead volunteer and assisted in administering the program and acting as a guide for younger volunteers

Breastfeeding Committee for Canada Associate Member

2024 – 2025

- Active member of the Breastfeeding Committee for Canada, supporting the protection and promotion of breastfeeding through participation in annual meetings, engaging with BFI news and events, and contributing to the organization's initiatives

University of Calgary: Equity, Diversity, and Inclusion Workshop Co-Facilitator

2024

- Collaborated with University of Calgary staff to co-facilitate the Inclusive Facilitation Practices workshop, fostering inclusive learning environments and

enhancing participants' comprehension of equity, diversity, and inclusion in a collaborative setting

University of Calgary: Healthy Brain Aging and Dementia Journal Club Student Member

2022 – 2023

- Engaged in research on neurodegenerative diseases through discussion and presentations of current literature

University of Calgary: PSYCHS Club Academic Commissioner

2023 – 2024

- Responsible for organizing and contacting speakers/collaborators for academic and development events such as Honours Information Night and How to get into Grad School

University of Calgary: PSYCHS Club Peer Mentor

2022 – 2024

- Mentored 1–2 junior undergraduate students concurrently on topics including admission to the Psychology Honours Program, graduate school preparation, scholarships, and research opportunities

University of Calgary: Mental Health Awareness Club Subcommittee Member

2020 – 2022

- Responsible for organizing and administering events for the Break the Stigma Summit to help increase student knowledge on mental health

University of Calgary: Schizophrenia Awareness Vice President Treasurer

2020

- Facilitated group discussions about schizophrenia through sharing resources and conducting online meetings on specific topics related to schizophrenia

SOFTWARE SKILLS

- Mastery skills in Microsoft Excel, PowerPoint, and Word and their Google equivalents
- Advanced coding competency in MATLAB
- Intermediate coding competency in R
- Adequate competency in SPSS, NVIVO, and GraphPad Prism analysis software
- Adequate competency in Canva graphic design software
- Novice skills in the GIMP image manipulation program
- Novice coding skills in Python

LANGUAGES

- Tagalog– native language
- English – speak, read, and write fluently
- French – speak, read, and write with intermediate skills