Template – CV for ECI

Name: Alexander Mark Weber

Rank: Assistant Professor

Degree: MSc, PhD

Division/Department: Neurology / Pediatrics

Institution: UBC

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Years since first faculty appointment: 5

Member of o SPR o Junior SPR o ESPR o APS

Your [H-Index](https://scholar.google.com/intl/en-US/scholar/citations.html) score: 11

Peer-reviewed Publications (please number in order)

1. Mella AE, Vanderwal, Tamara, Miller, Steven P, & Weber, Alexander M. Temporal Complexity of the BOLD-Signal In Preterm Versus Term Infants. Cerebral Cortex, November 2024; 34(11). doi: 10.1093/cercor/bhae426

2. Drayne JP, Mella AE, McLean MA, Ufkes S, Chau V, Guo T, Branson HM, Kelly E, Miller SP, Grunau RE, & Weber AM. Long-Range Temporal Correlation Development in Resting-State fMRI Signal in Preterm Infants: Scanned Shortly After Birth and at Term-Equivalent Age. PLOS Complex Systems, December 2024; 1(4). doi: 10.1371/journal.pc sy.0000024

3. McWilliams S, Hill O, Ipsiroglu OS, Clemens S, Weber AM, Chen M, Connor J, Felt BT, Manconi M, Mattman A, Silvestri R, Simakajornboon N, Smith SM, & Stockler S. Iron Deficiency and Sleep/Wake Behaviors: A Scoping Review of Clinical Practice Guidelines—How to Overcome the Current Conundrum? Nutrients, January 2024; 16(15):2559. doi: 10.3390/nu16152559.

4. Malik MA, Weber AM, Lang D, Vanderwal T, & Zwicker JG. Changes in Cortical Grey Matter Volume with Cognitive Orientation to Daily Occupational Performance Intervention in Children with Developmental Coordination Disorder. Frontiers in Human Neuroscience, May 2024; 18. doi: 10.3389/fnhum.2024.1316117.

5. Malik M, Weber A, Lang D, Vanderwal T, & Zwicker JG. Cortical Grey Matter Volume Differences in Children with Developmental Coordination Disorder Compared to Typically Developing Children. Frontiers in Human Neuroscience, May 2024; 18. doi: 10.3389/fnhum.2024.1276057

6. Weber AM, Nightingale TE, Jarrett M, Lee AHX, Campbell OL, Walter M, Lucas SJE, Phillips A, Rauscher A, & Krassioukov AV. Cerebrovascular Reactivity Following Spinal Cord Injury. Topics in Spinal Cord Injury Rehabilitation, May 2024; 30(2):78–95. doi: 10.46292/sci23-00068.

7. Fothergill A, Birkl C, Kames C, Su W, Weber A, & Rauscher A. The Effects of Wearing a 3-Ply or KN95 Face Mask on Cerebral Blood Flow and Oxygenation. Journal of Magnetic Resonance Imaging, June 2023; 57(6):1696–1701. doi: 10.1002/jmri.28448

8. Bartels LM, Doucette J, Birkl C, Zhang Y, Weber AM, & Rauscher A. Orientation Dependence of R2 Relaxation in the Newborn Brain. NeuroImage, October 2022; p. 119702. doi: 10.1016/j.neuroimage.2022.119702

9. Campbell OL & Weber AM. Monofractal Analysis of Functional Magnetic Resonance Imaging: An Introductory Review. Human Brain Mapping, June 2022; 43(8):2693–2706. doi: 10.1002/hbm.25801

10. Campbell O, Vanderwal T, & Weber AM. Fractal-Based Analysis of fMRI BOLD Signal During Naturalistic Viewing Conditions. Frontiers in Physiology, 2021; 12:809,943. doi: 10.3389/fphys.2021.809943

11. Weber A, Zhang Y, Kames C, & Rauscher A. Quantitative Susceptibility Mapping of Venous Vessels in Neonates with Perinatal Asphyxia. American Journal of Neuroradiology, July 2021; 42(7):1327–1333. doi: 10.3174/ajnr.A7086

12. Weber AM, Zhang Y, Kames C, & Rauscher A. Myelin Water Imaging and R2\* Mapping in Neonates: Investigating R2\* Dependence on Myelin and Fibre Orientation in Whole Brain White Matter. NMR in Biomedicine, March 2020; 33(3). doi: 10.1002/nbm.4222

13. Zhang Y, Rauscher A, Kames C, & Weber AM. Quantitative Analysis of Punctate White Matter Lesions in Neonates Using Quantitative Susceptibility Mapping and R2\* Relaxation. AJNR. American journal of neuroradiology, July 2019; 40(7):1221–1226. doi: 10.3174/ajnr.A6114

14. Weber AM, Pukropski A, Kames C, Jarrett M, Dadachanji S, Taunton J, Li DKB, & Rauscher A. Pathological Insights From Quantitative Susceptibility Mapping and Diffusion Tensor Imaging in Ice Hockey Players Pre and Post-concussion. Frontiers in Neurology, 2018; 9. doi: 10.3389/fneur.2018.00575

15. Weber AM, Soreni N, & Noseworthy MD. A Preliminary Study on the Effects of Acute Ethanol Ingestion on Default Mode Network and Temporal Fractal Properties of the Brain. Magma (New York, N.Y.), August 2014; 27(4):291–301. doi: 10.1007/s10334-013-0420-5

16. Weber AM, Soreni N, & Noseworthy MD. A Preliminary Study of Functional Connectivity of Medication Naı̈ve Children with Obsessive–Compulsive Disorder. Progress in Neuro-Psychopharmacology and Biological Psychiatry, August 2014; 53:129–136. doi: 10.1016/j.pnpbp.2014.04.001

17. Weber AM, Soreni N, Stanley JA, Greco A, Mendlowitz S, Szatmari P, Schachar R, Mannasis K, Pires P, Swinson R, & Noseworthy MD. Proton Magnetic Resonance Spectroscopy of Prefrontal White Matter in Psychotropic Naı̈ve Children and Adolescents with Obsessive–Compulsive Disorder. Psychiatry Research: Neuroimaging, April 2014; 222(1-2):67–74. doi: 10.1016/j.pscychresns.2014.02.004

18. Anglin RE, Rosebush PI, Noseworthy MD, Tarnopolsky M, Weber AM, Soreni N, & Mazurek MF. Metabolite Measurements in the Caudate Nucleus, Anterior Cingulate Cortex and Hippocampus among Patients with Mitochondrial Disorders: A Case-Control Study Using Proton Magnetic Resonance Spectroscopy. CMAJ Open, April 2013; 1(1):E48–E55. doi: 10.9778/cmajo.20120020

19. Warsi MA, Weber AM, & Noseworthy MD. Brain Fractal Blood-Oxygen Level Dependent (BOLD) Signals: The Effect of MRI Acquisition Parameters on Temporal Fractal Dimension (FD) Stability. Visualization, Image Processing and Computation in Biomedicine, 2013; 2(1). doi: 10.1615/VisualizImageProcComputatBiomed.2013006007

20. Weber AM, Wong FK, Tufford AR, Schlichter LC, Matveev V, & Stanley EF. N-Type Ca2+ Channels Carry the Largest Current: Implications for Nanodomains and Transmitter Release. Nature Neuroscience, November 2010; 13(11):1348–1350. doi: 10.1038/nn.2657

21. Gardezi SR, Weber AM, Li Q, Wong FK, & Stanley EF. PDLIM5 Is Not a Neuronal CaV2.2 Adaptor Protein. Nature Neuroscience, August 2009; 12(8):957–958. doi: 10.1038/nn0809-957a

Book chapters/Other (please number in order)

1. Weber AM, Torres C, & Rauscher A. Imaging the Role of Myelin in Concussion. Neuroimaging Clinics of North America, February 2018; 28(1):83–90. doi: 10.1016/j.nic.2017.09.005

Grant Funding:

1. Granting agency: BCCHRI -Catalyst Grant Role on project: co-PI

Yearly amount of $$: $20,000 Dates of grant: June 2025-June 2026

Description of Project: Brain and Motor Development of Young Children; MRI Pilot Study

2. Granting agency: CIHR Role on project: co-Applicant

Yearly amount of $$: $123,000 Dates of grant: June 2025-June 2030

Description of Project: BBrain Connectome and Neurodevelopment in Neonatal Hypoxic-Ischemic Encephalopathy

3. Granting agency: NSERC Discovery Grant Role on project: PI

Yearly amount of $$: $43,000 Dates of grant: June 2024-June 2029

Description of Project: Mapping the Structural and Functional Development of the Brain in the First Year of Life: A State-of-the-Art Quantitative MRI Approach

4. Granting agency: BCCH Foundation Role on project: PI

Yearly amount of $$: $25,000 Dates of grant: March 2024-March 2025

Description of Project: fMRI Temporal Dynamics: Their Origins and Development in Newborns

5. Granting agency: DMCBH Kickstart Grant with Dept of Pediatrics Role on project: co-Applicant

Yearly amount of $$: $40,000 Dates of grant: June 2023-June 2024

Description of Project: New Magnetic Resonance Approaches To Understanding Developmental Visual Disorders

6. Granting agency: BCCH Foundation Role on project: PI

Yearly amount of $$: $25,000 Dates of grant: March 2023-March 2024

Description of Project: fMRI Temporal Dynamics: Their Origins and Development in Newborns

7. Granting agency: BCCHRI – BB&D Establishment Fund Competition Role on project: co-Applicant

Yearly amount of $$: $95,000 Dates of grant: June 2022-June 2023

Description of Project: Translational Collaborative Informatics Platform for Precision Health

8. Granting agency: O.R.S.A. Research Grant Role on project: PI

Yearly amount of $$: $14,000 Dates of grant: June 2021-June 2023

Description of Project: Functional, Metabolic, and Structural MRI Findings in Rett Syndrome

9. Granting agency: BCCHRI - Brain,Behaviour and Development Catalyst Grant

Role on project: PI

Yearly amount of $$: $20,000 Dates of grant: June 2021-June 2022

Description of Project: Brain Health in Preterm Infants: Cerebral Metabolic & Rate of Oxygen

(CMRO2) Brain Mapping

10. Granting agency: CIHR Role on project: co-Applicant

Yearly amount of $$: $220,000 Dates of grant: June 2020-June 2025

Description of Project: A prospective and longitudinal investigation of concussive and

subconcussive mild traumatic brain injury mechanisms in ice hockey players

11. Granting agency: BCCHRI Investigator Establishment Award Role on project: PI

Yearly amount of $$: $83,000 Dates of grant: Dec 2019-Dec 2022

Description of Project: Establishment Award