Stanford

Julia Rachel Plank

Postdoctoral Scholar, Psychiatry

Bio

BIO

I am a postdoctoral researcher in the BRain Imaging, Development, and GEnetics (BRIDGE) Laboratory in the Department of Psychiatry and Behavioral Sciences. Currently my work focuses on the use of magnetic resonance imaging (MRI) for improving understanding of the neuropathophysiology underlying neuropsychiatric disorders with a genetic basis.

My PhD investigated the use of neuroimaging techniques (diffusion MRI, quantitative magnetization transfer, magnetic resonance spectroscopic imaging, electroencephalography) for detection of neuroinflammation in human participants.

My research interests are centered on the clinical applications of MRI for elucidation of pathology and improving diagnosis and treatment.

INSTITUTE AFFILIATIONS

- Member, Maternal & Child Health Research Institute (MCHRI)

PROFESSIONAL EDUCATION

- Doctor of Philosophy, University of Auckland (2023)
- Bachelor of Arts, University of Auckland (2017)
- BA (Hons), University of Auckland , Psychology (2018)

STANFORD ADVISORS

- Tamar Green, Postdoctoral Faculty Sponsor

LINKS

- BRIDGE: https://med.stanford.edu/bridge-lab.html

Publications

PUBLICATIONS

- **A Multi-parametric MRI and Machine Learning Study of Cerebellar Structure in Youth with Neurofibromatosis Type 1.** *Cerebellum (London, England)*
  Pardej, S. K., Plank, J. R., Raman, M. M., Green, T.
  2026; 25 (1): 17
- **Transdiagnostic similarities and distinctions in brain networks associated with autistic social impairments: a prospective cohort study.** *Molecular autism*

Bruno, J. L., Plank, J. R., Leder, S., Lake, E. M., Finn, E. S., Green, T.
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- **Genotype-phenotype correlations with autism spectrum disorder-related traits in noonan syndrome and noonan syndrome with multiple lentigines: a cross-sectional study.** *Molecular autism*
  McGhee, C. A., Plank, J. R., Pannone, L., Russo, O., Fuhrmann, N., Ruggeri, A., Radio, F. C., Martinelli, S., Tartaglia, M., Green, T.
  2025; 16 (1): 51
- **Transdiagnostic similarities and distinctions in brain networks associated with ASD symptoms: A prospective cohort study.** *medRxiv : the preprint server for health sciences*
  Bruno, J. L., Plank, J. R., Leder, S., Lake, E. M., Finn, E. S., Green, T.
  2025
- **T1w/T2w ratio suggests reduced intracortical myelin content in youth with RASopathies.** *medRxiv : the preprint server for health sciences*
  Plank, J. R., Pardej, S. K., Raman, M. M., McNab, J., Green, T.
  2025
- **Mapping neuroinflammation with diffusion-weighted MRI: randomized crossover study.** *Biological psychiatry. Cognitive neuroscience and neuroimaging*
  Plank, J. R., Morgan, C. A., Dell'Acqua, F., Sundram, F., Hoeh, N. R., Muthukumaraswamy, S., Lin, J. C.
  2025
- **Quantitative T1 mapping indicates elevated white matter myelin in children with RASopathies.** *Biological psychiatry*
  Plank, J. R., Gozdas, E., Bruno, J., McGhee, C. A., Wu, H., Raman, M. M., Saggar, M., Green, T.
  2025
- **The Effects of Neuroinflammation Induced by Typhoid Vaccine on Resting and Task-Based Electroencephalography** *BRAIN AND BEHAVIOR*
  Plank, J. R., Chen, J. C. C., Sundram, F., Hoeh, N., Muthukumaraswamy, S., Lin, J. C.
  2025; 15 (1): e70249
- **Elucidating Microstructural Alterations in Neurodevelopmental Disorders: Application of Advanced Diffusion-Weighted Imaging in Children With Rasopathies.** *Human brain mapping*
  Plank, J. R., Gozdas, E., Dai, E., McGhee, C. A., Raman, M. M., Green, T.
  2024; 45 (17): e70087
- **The Value of a Peer Mentorship Programme for Postgraduate Students in New Zealand: A Qualitative Study** *MEDICAL SCIENCE EDUCATOR*
  Chen, J. C. C., Plank, J. R., Tsai, A., Lyndon, M., Henning, M. A.
  2024
- **Detection of Neuroinflammation Induced by Typhoid Vaccine Using Quantitative Magnetization Transfer MR: A Randomized Crossover Study.** *Journal of magnetic resonance imaging : JMRI*
  Plank, J. R., Morgan, C. A., Smith, A. K., Sundram, F., Hoeh, N. R., Muthukumaraswamy, S., Lin, J. C.
  2023
- **A randomized, double-blind, placebo-controlled, hybrid parallel-arm study of low-dose naltrexone as an adjunctive anti-inflammatory treatment for major depressive disorder.** *Trials*
  Plank, J. R., Glover, S. C., Moloney, B. D., Hoeh, N. R., Sundram, F., Sumner, R. L., Muthukumaraswamy, S., Lin, J. C.
  2022; 23 (1): 822
- **Brain temperature as an indicator of neuroinflammation induced by typhoid vaccine: Assessment using whole-brain magnetic resonance spectroscopy in a randomised crossover study.** *NeuroImage. Clinical*
  Plank, J. R., Morgan, C., Sundram, F., Plank, L. D., Hoeh, N., Ahn, S., Muthukumaraswamy, S., Lin, J. C.
  2022; 35: 103053