

Professor Patria Hume

BSc Auck., MSc Auck., PhD Otago, ISAK4, DipCoachNZG, FISBS

Research specialisation: Sports biomechanics, injury prevention, epidemiology and kinanthropometry.

Experience: 30 years' as an academic. Inaugural Director of Sports Performance Research Institute New Zealand (SPRINZ) from 2000-2009, and 2012 until Associate Dean Research for the Faculty of Health and Environmental Sciences from 2013 to 2015. Current editorial board member for: *Sports Medicine; Sports Medicine Open; eSports; BMC Sports Science, Medicine and Rehabilitation*. 2016 International Society of Biomechanics in Sports Geoffrey Dyson Award which is the most prestigious award of ISBS. AUT 2016 medal for research. NZ Herald Top 10 New Zealander of the year nominee for rugby research. Teaching spans postgraduate and undergraduate courses in human movement. Former NZ rhythmic gymnast, coach and judge.



Research overview: Focus on improving sport performance using sports biomechanics and sports anthropology, and on reducing sporting injuries by investigating injury mechanisms and injury prevention methods and using sports epidemiology analyses. Currently at AUT Millennium within SPRINZ focusing on research, teaching and service that includes TBI. Leader of the Rugby Codes Research Group with active projects on TBI identification, assessment, and rehabilitation. Research associate member of the National Institute for Stroke and Applied Neurosciences, and the AUT Centre for eHealth.

Postgraduate supervision: 23 PhD students and 11 Masters theses students to completion and currently supervising 14 PhD students. Topics have ranged from injury prevention strategies for rugby league such as instrumented mouth guards and ear patches, to finding ways to improve TBI rehabilitation and understanding the mechanisms of brain injury in sport.

Research publications: 558 publications in journals (177), books (14) and chapters (15), conference paper/abstract proceedings (148), technical reports (161), magazine articles (59), and a TV/video series (6) on human potential. Example publications: Hume, P. A., Theadom, A., Lewis, G., Quarrie, K., Brown, S. R., Hill, R., & Marshall, S. (2016). A comparison of cognitive function in former rugby union players compared to former non-contact sport players and the impact of concussion history. *Sports Medicine*, 1-12. doi:10.1007/s40279-016-0608-8

Hume, P. A., Burkett, B., & Searchfield, G. D. (2015). *IRB/AUT Rugby Protective Equipment Review Final Report to the World Rugby Board*. Auckland: Sport Performance Research Institute New Zealand, Auckland University of Technology, New Zealand.

Hume, P. A., Quarrie, K., Lewis, G., & Theadom, A. (2015). *IRB/NZR/AUT RugbyHealth project final report. A technical report to the International Rugby Board and New Zealand Rugby*. Auckland: Sport Performance Research Institute New Zealand, Auckland University of Technology, New Zealand.

King, D., Hume, P. A., Gissane, C., & Clark, T. (2016). Semi-professional rugby league players have higher concussion risk than professional or amateur participants: A pooled analysis [SPOA-D-15-00416R2]. *Sports Medicine*, 9. doi:10.1007/s40279-016-0576-z

King, D. A., Hume, P. A., Gissane, C., & Clark, T. (2016). Similar head impact acceleration measured using instrumented ear patches in a junior rugby union team during matches in comparison with other sports. *Journal of Neurosurgery: Pediatrics*, 18, 65-72. doi:DOI: 10.3171/2015.12.PEDS15605

Lewis, G. N., Hume, P. A., Stravric, V., Brown, S., & Taylor, D. (2017). NZ Rugby Health study: Motor cortex excitability in retired elite and community level rugby players. *New Zealand Medical Journal*.

King, D. A., Hume, P. A., Carlson, I., Lammas, J., Kwon, B., & Mayhew, S. (2016). *Rugby League ACC injury claims 1st January 2011 To 31st December 2015: Report to NZ Rugby League Board*. Auckland: Sport Performance Research Institute New Zealand, Auckland University of Technology.



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