

Associate Professor Dawson Kidgell
Physiotherapy
Email: Dawson.Kidgell@monash.edu



Biography

Associate Professor Kidgell's research interests are in the area of neurophysiology of exercise and he specialises in the technique of Transcranial Magnetic Stimulation (TMS) which is a non-invasive method of measuring the functional properties (neuroplasticity) of the human brain, in particular the primary motor cortex. Through the use of this technique, Associate Professor Kidgell has been quantifying the motor cortical responses to strength training. Associate Professor Kidgell is also interested in the neuromodulatory effects of transcranial direct current stimulation prior to, during and following strength training to facilitate the motor cortical responses to training. Associate Professor Kidgell uses sophisticated stimulation and electrophysiological recording and analysis techniques to address these issues, which include TMS, tDCS, spinal cord reflex testing, surface electromyography and single motor unit recordings. The overall goal of his research is to understand how the healthy nervous system functions to control movements following a variety of interventions, and how it may be rehabilitated following neuromuscular injury or disease.

Associate Professor Kidgell has authored 108 peer-reviewed journal papers that have examined the effects of exercise and non-invasive brain stimulation on the human brain. Associate Professor Kidgell has also received in excess of 2.5 million dollars in research funding to support his research. Associate Professor Kidgell has supervised 11 PhD students to completion whose dissertations examined the effects of tDCS on brain excitability and is currently supervising 5 PhD students.

Employment

Associate Professor

Physiotherapy
MONASH UNIVERSITY
17 Jul 2017 → present

Curriculum Vitae: Dawson J. Kidgell, Ph.D.

I am a highly-qualified, well-respected academic with an international reputation, having worked in the field of Neurophysiology of Exercise for over 21 years. I have a strong pedagogy and research background, with more than 10 years research and education leadership experience in the academic and applied sport sciences. I have a successful track record of income generation (>\$2M) and have more than 100 peer-reviewed publications in internationally recognized journals. I lead research both within and outside my institution on collaborative, internationally-respected projects. I make substantial contributions to national governing bodies and industry by developing, implementing and leading research strategy, quality assurance policy and applying knowledge that directly influences the direction of the field of Sport, Exercise and Rehabilitation that results in a positive impact to end users on national and international levels.

Academic Qualifications

2007-2010 Doctor of Philosophy (Neurophysiology), Thesis title: 'Physiological investigation of human motor control: Neurological adaptations to resistance training', School of Exercise and Sport Science, Victoria University, Footscray Park Campus, Melbourne.

2004 Graduate Certificate of Higher Education, School of Education, Deakin University, Burwood Campus, Melbourne.

2002 Master of Applied Science (Neurophysiology), Thesis title: 'Post-activation potentiation and neuromuscular performance', School of Exercise and Sport Science, Victoria University, Footscray Park Campus, Melbourne.

1999 Graduate Diploma in Exercise Sports Science, School of Exercise and Sport Science, Victoria University, Footscray Park Campus, Melbourne.

1998 Bachelor of Applied Science (Human Movement), Department of Human Movement Science, Victoria University, Footscray Park Campus, Melbourne

Relevant Work Experience

Monash University July 2017-present

- Advanced Research Coordinator (Physiotherapy): project development and leadership; mentoring of early career researchers and research students.
- Associate Professor in Physiotherapy: course validation, module leader, delivery and support of the exercise physiology and research topics within the undergraduate and post graduate physiotherapy programmes, and post graduate curriculum development, pastoral care
- Course Coordinator M3003 Bachelor of Physiotherapy Advanced Research (Honours)
- Course Coordinator M5021 Graduate Diploma of Health and Science Research (Physiotherapy)
- Chief Examiner and Unit Chair PTY5106 Foundations of Physiotherapy (12 Credit points)
- Chief Examiner and Unit Chair PTY4010 (12 Credit points), PTY4020 (12 Credit points), PTY4030 (24 Credit points)
- Director, Exercise and Neuroplasticity Research Laboratory: day-to-day laboratory leadership; project management of new laboratory developments; PhD and Honours supervision
- Knowledge transfer: lead and delivery of public facing events; educational workshops and other CPD opportunities for ESSA; SMA and ASCA.
- Institutional citizenship: Course Management and Advisory Board member (Physiotherapy); Post Graduate and Undergraduate Research Committee member (Physiotherapy); Monash Graduate Research Milestone panel member.

La Trobe University January 2015- June 2017

- Discipline Lead Exercise Science, Bundoora Campus
- Course Coordinator HBSES Bachelor of Exercise and Sport Sciences, Bundoora Campus
- Honours Course Coordinator HBSES Bachelor of Exercise and Sport Sciences, Bundoora Campus
- Exercise and Sport Science Australia Course Accreditation Lead (Bundoora)
- Senior Lecturer, Human Motor Control and Learning: module leader, delivery and support of motor control and motor learning of undergraduate exercise science units.
- Chief Examiner and Unit Coordinator EXS2MCL Motor Control and Learning
- Chief Examiner and Unit Coordinator EXS3SKA Skill Acquisition
- Chief Examiner and Unit Coordinator EXS3EXP Exercise Science Project
- School of Allied Health Research Committee member
- ESSA network representative
- Health and Safety representative and exams officer
- Chair for other internal programmes exam boards; careers representative

Deakin University March 2004- July 2012

- Course Coordinator D394 Bachelor of Exercise and Sport Sciences/Bachelor of Business (Sport Management)
- Lecturer/Senior Lecturer in Exercise Physiology: module leader, delivery and support of functional human anatomy, exercise prescription/programming and research methods in undergraduate and post graduate exercise science units.
- Chief Examiner and Unit Coordinator HSE 101 Principles of Exercise and Sport Science, HSE102 Functional Human Anatomy, HSE 302 Exercise Programming, HSE702 Exercise Physiology for Neurological and Neuromuscular Injury, HSE707 Exercise Physiology for Musculoskeletal Injury and Disease.
- Faculty of Health Research Committee member
- Masters in Clinical Exercise Physiology Course Advisory Committee member (2011-2014)
- Faculty Admissions and Selection Committee (School Chair) (2007-2014)
- Faculty Academic, Progress and Discipline Committee member (show cause) (2008-2014)
- Community Liaison Committee member (2005-2007)
- Infrastructure and Services Advisory Committee member (2004-2006)

Deakin University July 2012- January 2015

- Alfred Deakin Post-Doctoral Research Fellow (Senior Research Fellow): Institute of Physical Activity and Nutrition.

Markers of Esteem

As an internationally-recognised expert in the discipline of the Neuromuscular Aspects of Exercise Physiology, I lend academic expertise to numerous partners. Of particular note is the work that I do for large international research funding bodies in both America and Europe. This is further evidenced by invited contributions at international conferences, international journal editorial memberships to the Journal of Strength and Conditioning Research, Journal of Science and Medicine and the Journal of Functional Morphology and Kinesiology and, finally, my role with Exercise and Sport Science Australia (ESSA) as an author for ESSA's Student Manual for Exercise Prescription, Delivery and Adherence, 1st Edition.

External esteem and professional service

- Honorary Research Fellow, Department of Sport, Exercise and Rehabilitation, University of Northumbria
- Grant Review Panel Member for the National Science Foundation Virginia, USA (2021-).
- Grant Review Panel member for UK Research and Innovation Future Leader Fellowships (2020-)
- Grant Review Panel Member Swiss National Science Foundation (2020-)
- Grant Review Panel Member Exercise and Sport Sciences Australia
- Grant Review Panel Member Sports Medicine Australia

- Editorial Board Member, Journal of Strength and Conditioning Research
- Editorial Board Member, Journal of Science and Medicine
- Editorial Board Member, Journal of Functional Morphology and Kinesiology
- University of Northumbria, UK - Visiting Research Fellow (2016-17)
- Invited expert reviewer for >20 international journals
- Invited research degrees examiner (4)

Professional Membership

- American College of Sports Medicine (ACSM) – Professional Membership
- British Association of Sports and Exercise Sciences (BASES) – Professional International Member
- Exercise and Sports Sciences Australia (ESSA) – Academic Member
- European College of Sport Sciences (ECSS) – Professional International Member
- Monthly Applications in Strength Science (MASS) – Professional Member

Invited Speaker, Chair and Communications to the Wider Community

- 1.Kidgell, DJ. (2021). Invited Speaker. Transcranial magnetic stimulation: Theory, Methods and Applications in Sport, Exercise and Rehabilitation. ADInstruments Webinar Series, Monday November 8th.
- 2.Kidgell, DJ. (2021). Invited Speaker. Contralateral transfer of strength: Mechanisms, evidence and applications. Australian Strength and Conditioning Association, March 2021.
- 3.Kidgell, DJ. (2019). Exercise is Medicine: Optimizing the dose and delivery strategies', Australian Conference of Science and Medicine in Sport. October 2019.
- 4.Kidgell, DJ. (2019). Invited Interview. Coaches Corner, Runnez Radio (<https://runnezradio.blubrry.net/2019/04/22/coaches-corner-april-22-2019/>).
- 5.Kidgell, DJ. (2018). Invited Keynote Speaker. The role of the brain in strength and power performance and training: What do we know today? 19th International Conference on Modern Strength and Endurance Training. NeuroMuscular Research Centre, Faculty of Sport and Health Sciences, University of Jyväskylä, Finland. October, 2018.
- 6.Kidgell, DJ. (2017). Invited Interview. Opposites attract: Exercising healthy limbs counters pain and injury. Monash LENS, November 2017 (<https://lens.monash.edu/@dawson-kidgell/2017/11/24/1267435/opposites-attract-how-exercising-healthy-limbs-counters-pain-and-injury>)
- 7.Kidgell, DJ. (2016). Invited Lecture. Department of Exercise, Sport and Rehabilitation. Motor responses to strength training. Northumbria University, Newcastle Upon-Type, England, September 2016.
- 8.Kidgell, DJ. (2016). Ipsilateral corticomotor responses are confined to the homologous agonist muscle following cross-education of muscular strength, 6thInternational non-invasive brain stimulation conference, Gottingen, Germany.
- 9.Kidgell, DJ. (2013). Invited Speaker, Australian Physiological Society Annual Meeting: Transcranial stimulation, exercise and motor cortex plasticity, December 2013.
- 10.Kidgell, DJ. (2011). Invited Speaker. Novel methods of resistance training in health and disease: Implications for rehabilitation. Exercise and Sport Science Australia National Research Week, December 2011.
- 11.Kidgell, DJ. (2011). Invited Speaker. Strength training and neuromuscular health: Implications for neuroplasticity, YMCA Australia Health Forum, November, 2011.
- 12.Kidgell, DJ. (2011). Invited Speaker. Transcranial stimulation, exercise and neuroplasticity. University of Melbourne, School of Physiotherapy Seminar Series: April 2011.
- 13.Kidgell, DJ. (2011). Invited Speaker. Corticomotor excitability following short term motor imagery of a strength task. Deakin University, School of Exercise and Nutrition Sciences Seminar Series: 2011.
- 14.Kidgell, DJ. (2010). Invited Speaker. Neuroplasticity in response to skill and strength training: What does it mean for exercise rehabilitation. Deakin University, School of Exercise and Nutrition Sciences Seminar Series, July 2010.
- 15.Kidgell, DJ. (2010). Invited Speaker. Neuroplasticity following skill and strength training. Exercise and Sport Science Australia National Research Week: October 2010.
- 16.Kidgell, DJ. (2010). Invited Convenor. Understanding musculoskeletal anatomy for exercise prescription. Exercise and Sport Sciences Australia CEP, April 2010.
- 17.Kidgell, DJ. (2007). Invited Speaker. Recovery modalities. Victorian Conference of Science and Medicine in Sport (Sports Trainers): 2007.

Other Achievements and Awards

- Alfred Deakin Post-Doctoral Fellowship, Faculty of Health, Deakin University, 2012-2015.
- Best Thesis Award, School of Primary and Allied Health, Monash University. Tracking the corticospinal responses to strength training (awarded to PhD student Joel Mason), 2020.

- Scientific Manuscript Excellence Honour, Dr Garry A Dudley Memorial Paper, Journal of Strength and Conditioning Research, 2019. Determining the corticospinal responses to skill and strength training.
- Outstanding Contributions to Teaching (Purple Letter), Monash University, PTY3051, 2019
- Mollie Holman Medal (Best Thesis Award). Corticospinal changes associated with patellar tendinopathy and the effects of externally paced strength training (awarded to PhD student Ebonie Rio), 2017.
- International Scientific Tendinopathy Symposium Winner of clinically relevant research paper, British Journal of Sports Medicine, 2014. Exercise reduces pain immediately and affects cortical inhibition in patellar tendinopathy.
- Winner of the Young Aspire Academy Early Career Research Award for Best Oral Presentation 'Exercise and Health' at the 6th Exercise & Sports Science Australia Conference & Sports Dietitians Australia Update: Research to Practice, Adelaide, Australia, 2014.
- Most Outstanding Research Paper: Centre for Physical Activity and Nutrition Research, Deakin University, 2012.
- Faculty of Human Development Award for Outstanding Contributions to Research: Early Career Researcher Award, Victoria University, 2011.
- Dennis Glen Cross Young Scholar Award, 10th Motor Control and Human Skills Conference, best paper award, 2011.
- Australian Physiological Society Award for Best Research Thesis, 2010.
- Dennis Glen Cross Young Scholar Award, 9th Motor Control and Human Skills Conference, best paper award, 2009.
- Teaching Innovation Award, Faculty of Health, Deakin University, 2009.

Research Profile – H index = 38

I am an acknowledged world expert in the discipline of the Neuromuscular Aspects of Exercise Physiology and specifically in the area of Neuromuscular Adaptation from Strenuous Physical Activity. I have research outputs (total citations: 4211; citations since 2016: 3178; average impact factor: 3.5; average citations per year: >500) and >50 conference communications, invited talks and session Chair.

I have authored 2 International Scholarly Research Textbooks, 2 Teaching Textbooks and have written 8 book chapters. I collaborate extensively internationally and nationally, which has led to high-impact research outputs and development of case study material that has direct application to the wider community. The work is supported by a series of successful research grant applications as CI and AI: >\$2M in total. I have a successful track record of 11 PhD supervisions to completion, >25 Honours to completion. I have been invited to examine 4 PhDs and I am currently either supervising or co-supervising 13 PhD students.

Current Research Collaborations

International: Prof. Glyn Howatson – University of Northumbria, England; Prof. Janne Avela – University of Jyväskylä, Finland; Prof. Tibor Hortobágyi – University of Groningen, Netherlands; Prof. Jonathan Farthing, University of Saskatchewan, Canada; Prof. Franca Derui - University of Sassari, Italy; Dr Juha Ahtiainen - University of Jyväskylä, Finland; Dr Jamie Tallent –University of Essex, England; Dr Callum Brownstein - Jean Monnet University, France.

National: Prof. Alan Pearce – La Trobe University, Australia; Dr David Opar – Australian Catholic University, Australia; Dr Michael Leung – Monash University, Australia, Assoc Prof. Peter Mallairas – Monash University, Australia, Assoc Prof Shapour Jaberzadeh – Monash University, Australia, Dr Ash Frazer – Monash University, Australia, Dr Ashlee Hendy – Deakin University, Australia.

Scientific Publication Record

A total of 169 peer-review full length articles and book chapters have been published in international Scientific Journals and Textbooks (see full publication list below). Total number of citations (Web of Science, June 2021): 1,434; citations per article: 22.7; H-index: 24. Number of citations Google Scholar (June 2021): 4211, H-index: 38, i10index: 65. Overall, my research has received over 43k publication views, with 12,600 publication downloads.

Peer Reviewed Publications

- 1.Alibazi, R, Frazer, AK, Pearce, AJ, Tallent, J., Avela, J, & Kidgell, DJ. (2021). Corticospinal and intracortical excitability is modulated in the knee extensors after acute strength training. Journal of Sport Sciences
Doi:10.1080/02640414.2021.2004681.
- 2.Presland, J., Timmins, RG., Maniar, N., Tofari, PJ., Kidgell, DJ., Shield, A., Dickson, J., Opar, D. (2021). Muscle activity and activation in previously strain-injured lower limbs: A systematic review. Sports Medicine,
<https://doi.org/10.1007/s40279-021-01487-w>:
- 3.Alibazi, R, Frazer, AK, Tallent, J., Pearce, AJ., Hortobágyi, T., Kidgell, DJ. (2021). A single session of submaximal grip

strength training with or without high-definition anodal-TDCS produces no cross-education of maximal force. *Brazilian Journal of Motor Behaviour* 15(3), 216–236.

4.S Behrangrad, M Zoghi, DJ Kidgell, S Jaberzadeh. (2021). The effect of a single session of non-invasive brain stimulation on balance in healthy individuals: A systematic review and best evidence synthesis. *Brain Connectivity*, <https://doi.org/10.1089/brain.2020.0872>.

5.Fernández-del-Olmo, M., Sevilla-Sanchez, M., Sanchez, H M., Kidgell, D.J., Milot, MH., Selles, RW., Rothwell, JC., Hortobágyi, Tibor. (2021). Neuromodulation by non-invasive brain stimulation (NIBS): a step back to move forward. *Brazilian Journal of Motor Behaviour* 15(2): 61-64.

6.Combes, J.S., Keating, SE., Kidgell, D.J. (2021). Designing an exercise program. In Coombes (Ed.) *ESSA's Student Manual for Exercise Prescription, Delivery and Adherence*. Elsevier Publishing, ISBN: 9780729542708.

7.Kositsky, A, Kidgell DJ, Avela, J. (2021). Medial gastrocnemius muscle architecture is altered after exhaustive stretch-shortening cycle exercise. In Seiberl, W, Hahn, D, Power, GA, Fletcher, JR, Siebert T (Eds.), *The Stretch-Shortening Cycle of Active Muscle and Muscle-Tendon Complex: What, Why and How it Increases Muscle Performance?* (pp. 21-29). *Frontiers in Physiology Ebook*. ISBN 978-2-88966-993-6.

8.Rantila, A., Ahtainen, J.P., Avela, J., Restuccia, J., Kidgell, D.J., Hakkinen, K. (2021). High responders to hypertrophic strength training also tend to lose more muscle mass and strength during detraining than low responders. *Journal of Strength & Conditioning Research* 35 (6), 1500-1511.

9.A Manca, T Hortobágyi, TJ Carroll, RM Enoka, JP Farthing, SC Gandevia, DJ Kidgell, LJ Taylor, F Deriu. (2021). Contralateral effects of unilateral strength and skill training: Modified Delphi consensus to establish key aspects of cross-education. *Sports Medicine* 51(1):11-20.

10.Hall, MG., Kidgell, DJ., Perraton, L., Morrissey, J., Jaberzadeh, S. (2021). Pain Induced Changes in Brain Oxyhemoglobin: A Systematic Review and Meta-Analysis of Functional NIRS Studies. *Pain Medicine*. <https://doi.org/10.1093/pm/pnaa453>.

11.RJ Alibazi, AJ Pearce, M Rostami, AK Frazer, C Brownstein, DJ Kidgell. (2021). Determining the intracortical responses after a single session of aerobic exercise in young healthy individuals: a systematic review and best evidence synthesis. *Journal of Strength & Conditioning Research* 35 (2), 562-575.

12.J Tallent, A Woodhead, AK Frazer, J Hill, DJ Kidgell, G Howatson. (2021). Corticospinal and spinal adaptations to motor skill and resistance training: Potential mechanisms and implications for motor rehabilitation and athletic development. *European Journal of Applied Physiology* 121:707-719.

13.AJ Pearce, DJ Kidgell, MA Tommerdahl, AK Frazer, B Rist, R Mobbs. (2021). Chronic neurophysiological effects of repeated head trauma in retired Australian male sport athletes. *Frontiers in Neurology* 12:633320.

14.Kidgell, DJ & Pearce, AJ. (2020). *Principles of Exercise Neuroscience*. Cambridge Publishers. ISBN: 1-5275-5813-4.

15.Siddique, Ummatul; Rahman, Simin; Frazer, Ashlyn; Leung, Michael; Pearce, Alan J; Kidgell, Dawson J. (2020). Task-dependent modulation of corticospinal excitability and inhibition following strength training. *Journal of Electromyography and Kinesiology*, 52, 102411.

16.Rostami, Mohamad; Mosallanezhad, Zahra; Ansari, Sepideh; Kidgell, Dawson; Rezaeian, Tahere; Bakhshi, Enayatollah; Ghodrati, Maryam; Jaberzadeh, Shapour. (2020). The effects of consecutive sessions of anodal transcranial direct current stimulation over the primary motor cortex on hand function in healthy older adults. *Archives of gerontology and geriatrics*, 89, 104063.

17.Siddique, Ummatul; Rahman, Simin; Frazer, Ashlyn K; Pearce, Alan J; Howatson, Glyn; Kidgell, Dawson J. (2020). Determining the sites of neural adaptations to resistance training: A systematic review and meta-analysis. *Sports Medicine*, 50(6):1107-1128.

18.Scott, Emily; Kidgell, Dawson; Frazer, Ashlyn K; Pearce, Alan J. (2020). The neurophysiological responses of concussive impacts: a systematic review and meta-analysis of transcranial magnetic stimulation studies. *Frontiers in Human Neuroscience*, 14: 306.

19.Mason, Joel; Frazer, Ashlyn K; Avela, Janne; Pearce, Alan J; Howatson, Glyn; Kidgell, Dawson J. (2020). Tracking the corticospinal responses to strength training. *European journal of applied physiology*, 120(4):783-798.

20.Painter, Rhys; Rahman, Simin; Kim, Woo; Frazer, Ashlyn; Tallent, Jamie; Pearce, Alan; Kidgell, Dawson. (2020). High-volume light-load strength training, but not low-volume heavy-load strength training increases corticospinal excitability. *Journal of Science and Medicine*, 2(3): DOI: 10.37714/JOSAM.V2I3.47

21.Pearce, Alan J; Kidgell, Dawson J; Frazer, Ashlyn K; King, Doug A; Buckland, Michael E; Tommerdahl, Mark. (2020). Corticomotor correlates of somatosensory reaction time and variability in individuals with post-concussion symptoms. *Somatosensory & motor research*,37(1):14-21.

22.Rahman, Simin; Siddique, Ummatul; Frazer, Ashlyn; Pearce, Alan; Kidgell, Dawson. (2020). Anodal tDCS increases bilateral corticospinal excitability irrespective of hemispheric dominance. *Journal of Science and Medicine*, 2(2): DOI: 10.37714/JOSAM.V2I2.40

23.Painter, Rhys; Pearce, Alan; Rostami, Mohamad; Frazer, Ashlyn; Kidgell, Dawson. (2020). Determining the corticospinal and neuromuscular responses following a warm-up protocol. *Journal of Science and Medicine*, 2(2): DOI: 10.37714/JOSAM.V2I2.45

24.Ansdell, Paul; Brownstein, Callum G; Škarabot, Jakob; Angius, Luca; Kidgell, Dawson; Frazer, Ashlyn; Hicks, Kirsty M; Durbaba, Rade; Howatson, Glyn; Goodall, Stuart. (2020). Task-specific strength increases after lower-limb compound resistance training occurred in the absence of corticospinal changes in vastus lateralis. *Experimental physiology*, 105(7):1132-1150.

25.Rostami, Mohamad; Mosallanezhad, Zahra; Ansari, Sepideh; Ehsani, Fatemeh; Kidgell, Dawson; Nourbakhsh, Mohammad Reza; Bakhshi, Enayatollah; Jaberzadeh, Shapour. (2020). Multi-session anodal transcranial direct current stimulation enhances lower extremity functional performance in healthy older adults. *Experimental Brain Research*, 238(9):1925-1936.

26. Haggert, Madelaine; Pearce, Alan; Frazer, Ashlyn; Rahman, Simin; Kidgell, Dawson; Siddique, Ummatul. (2020). Determining the effects of cross-education on muscle strength, thickness and cortical activation following limb immobilization: A Systematic review and meta-analysis. *Journal of Science and Medicine*, 2(4): DOI: 10.37714/JOSAM.V2I4.54
27. Alibazi, R. J., Kidgell, D., Zoghi, M., & Jaberzadeh, S. (2020). What are the acute effects of aerobic exercise on fractionated response Time: A Systematic Review and Meta-analysis. *Journal of Science in Sport and Exercise*. 2, pages 97–112.
28. Tallent, J., Goodall, S., Kidgell, D. J., Durbaba, R., & Howatson, G. (2019). Compound maximal motor unit response is modulated by contraction intensity, but not contraction type in tibialis anterior. *Physiological Reports*, 7(17), [e14201].
29. Mason, J., Frazer, A. K., Jaberzadeh, S., Ahtiainen, J. P., Avela, J., Rantalainen, T., Kidgell, D. J. (2019). Determining the corticospinal responses to single bouts of skill and strength training. *Journal of Strength and Conditioning Research*, 33(9), 2299-2307.
30. Mason, J., Frazer, A. K., Pearce, A. J., Goodwill, A. M., Howatson, G., Jaberzadeh, S., & Kidgell, D. J. (2019). Determining the early corticospinal-motoneuronal responses to strength training: A systematic review and meta-analysis. *Reviews in the Neurosciences*, 30(5), 463-476.
31. Behrangrad, S., Zoghi, M., Kidgell, D. J., & Jaberzadeh, S. (2019). Does cerebellar non-invasive brain stimulation affect corticospinal excitability in healthy individuals? A systematic review of literature and meta-analysis. *Neuroscience Letters*, 706, 128-139.
32. Kositsky, A., Kidgell, D., & Avela, J. (2019). Medial gastrocnemius muscle architecture is altered after exhaustive stretch shortening cycle exercise: *Frontiers in Physiology*. *Frontiers in Physiology*, 10, [1511].
33. Mason, J., Howatson, G., Frazer, A. K., Pearce, A. J., Jaberzadeh, S., Avela, J., & Kidgell, D. J. (2019). Modulation of intracortical inhibition and excitation in agonist and antagonist muscles following acute strength training. *European Journal of Applied Physiology*, 119, 2185–2199
34. Brandner, C. R., Clarkson, M. J., Kidgell, D. J., & Warmington, S. A. (2019). Muscular adaptations to whole body blood flow restriction training and detraining. *Frontiers in Physiology*, 10, [1099].
35. Cox, L. G., Kidgell, D. J., & Iles, R. A. (Accepted/In press). Neck-specific strengthening exercises and cognitive therapy for chronic neck pain: a systematic review. *Physical Therapy Reviews*, 25, 4.
36. Frazer, A. K., Howatson, G., Ahtiainen, J. P., Avela, J., Rantalainen, T., & Kidgell, D. J. (2019). Priming the motor cortex with anodal transcranial direct current stimulation affects the acute inhibitory corticospinal responses to strength training. *Journal of Strength and Conditioning Research*, 33(2), 307-317.
37. Frazer, A., & Kidgell, D. (2019). TMS-Induced Motor Evoked Potentials: Definitions and Physiology. In S. Jaberzadeh (Ed.), *A Closer Look at Motor-Evoked Potential* (pp. 1-14). Hauppauge NY USA: Nova Science Publishers. ISBN: 1536143898.
38. Kidgell, D. (2019). Using Stimulus-Response Curves to Determine Corticospinal Excitability. In S. Jaberzadeh (Ed.), *A Closer Look at Motor-Evoked Potential* (pp. 77-91). Hauppauge NY USA: Nova Science Publishers. ISBN: 1536143898
39. Frazer, A. K., Pearce, A. J., Howatson, G., Thomas, K., Goodall, S., & Kidgell, D. J. (2018). Invited Review. Determining the potential sites of neural adaptation to cross-education: implications for the cross-education of muscle strength. *European Journal of Applied Physiology*, 118(9), 1751-1772.
40. Mason, J., Frazer, A. K., Horvath, D. M., Pearce, A. J., Avela, J., Howatson, G., & Kidgell, D. J. (2018). Ipsilateral corticomotor responses are confined to the homologous muscle following cross-education of muscular strength. *Applied Physiology, Nutrition and Metabolism*, 43(1), 11-22.
41. Brownstein, C. G., Ansdell, P., Škarabot, J., Frazer, A., Kidgell, D., Howatson, G., Thomas, K. (2018). Motor cortical and corticospinal function differ during an isometric squat compared with isometric knee extension. *Experimental Physiology*, 103(9), 1251-1263.
42. Leung, M., Rantalainen, T., Teo, W. P., & Kidgell, D. (2018). The ipsilateral corticospinal responses to cross-education are dependent upon the motor-training intervention. *Experimental Brain Research*, 236(5), 1331-1346.
43. Mason, J., Frazer, A., Horvath, D. M., Pearce, A. J., Avela, J., Howatson, G., & Kidgell, D. (2017). Adaptations in corticospinal excitability and inhibition are not spatially confined to the agonist muscle following strength training. *European Journal of Applied Physiology*, 117(7), 1359-1371.
44. Kidgell, D. J., Bonanno, D. R., Frazer, A. K., Howatson, G., & Pearce, A. J. (2017). Corticospinal responses following strength training: a systematic review and meta-analysis. *European Journal of Neuroscience*, 46(11), 2648-2661.
45. Frazer, A. K., Williams, J., Spittle, M., & Kidgell, D. J. (2017). Cross-education of muscular strength is facilitated by homeostatic plasticity. *European Journal of Applied Physiology*, 117(4), 665-677.
46. Rio, E., Van Ark, M., Docking, S., Moseley, G. L., Kidgell, D., Gaida, J. E., Cook, J. (2017). Isometric contractions are more analgesic than isotonic contractions for patellar tendon pain: An in-season randomized clinical trial. *Clinical Journal of Sport Medicine*, 27(3), 253-259.
47. Kidgell, D. J., Frazer, A. K., & Pearce, A. J. (2017). The effect of task complexity influencing bilateral transfer. *International Journal of Exercise Science*, 10(8), 1174-1183.
48. Leung, M., Rantalainen, T., Teo, W. P., & Kidgell, D. (2017). The corticospinal responses of metronome-paced, but not self-paced strength training are similar to motor skill training. *European Journal of Applied Physiology*, 117(12), 2479-2492.
49. Frazer, A., Williams, J., Spittles, M., Rantalainen, T., & Kidgell, D. J. (2016). Anodal transcranial direct current stimulation of the motor cortex increases cortical voluntary activation and neural plasticity. *Muscle and Nerve*, 54(5), 903-913.
50. Goodwill, A. M., Teo, W-P., Morgan, P., Daly, R. M., & Kidgell, D. J. (2016). Bihemispheric-tDCS and upper limb rehabilitation improves retention of motor function in chronic stroke: A pilot study. *Frontiers in Human Neuroscience*, 10, [258].

51. Hendy, A. M., Tillman, A., Rantalainen, T., Muthalib, M., Johnson, L., Kidgell, D. J., Teo, W. P. (2016). Concurrent transcranial direct current stimulation and progressive resistance training in Parkinson's disease: Study protocol for a randomised controlled trial. *Trials*, 17(1), [326].
52. Coombs, T. A., Frazer, A. K., Horvath, D. M., Pearce, A. J., Howatson, G., & Kidgell, D. J. (2016). Cross-education of wrist extensor strength is not influenced by non-dominant training in right-handers. *European Journal of Applied Physiology*, 116(9), 1757-1769.
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Books

1. Kidgell, DJ & Pearce,AJ. (2020). *Principles of Exercise Neuroscience*. Cambridge Publishers. ISBN:1-5275-5813-4.
2. Pearce, A. J., & Kidgell, D. J. (2011). *Neuroplasticity following skill and strength training*. New York NY USA: Nova Science Publishers. ISBN: 978-1-61728-027-6.
3. Kidgell, D.J (2010). *Functional human anatomy for the movement sciences*. McGraw-Hill Inc. ISBN 9780071000239
4. Kidgell, D.J (2008). *Fundamentals of Exercise and Sport Science*. Australia: McGraw-Hill Inc. ISBN 0070288240.

Book Chapters

5. Combes, J.S., Keating, SE., **Kidgell, D.J.** (2021). Designing an exercise program. In Coombes (Ed.) ESSA's Student Manual for Exercise Prescription, Delivery and Adherence. Elsevier Publishing, ISBN: 9780729542708.
6. Kositsky, A, **Kidgell DJ**, Avela, J. (2021). Medial gastrocnemius muscle architecture is altered after exhaustive stretch-shortening cycle exercise. In Seiberl, W, Hahn, D, Power, GA, Fletcher, JR, Siebert T (Eds.), *The Stretch-Shortening Cycle of Active Muscle and Muscle-Tendon Complex: What, Why and How it Increases Muscle Performance?* (pp. 21-29). *Frontiers in Physiology Ebook*. ISBN 978-2-88966-993-6.
7. Frazer, A., & **Kidgell, D.** (2019). TMS-Induced Motor Evoked Potentials: Definitions and Physiology. In S. Jaberzadeh (Ed.), *A Closer Look at Motor-Evoked Potential* (pp. 1-14). Hauppauge NY USA: Nova Science Publishers.
8. **Kidgell, D.** (2019). Using stimulus-response curves to determine corticospinal excitability. In S. Jaberzadeh (Ed.), *A Closer Look at Motor-Evoked Potential* (pp. 77-91). Hauppauge NY USA: Nova Science Publishers. ISBN: 1536143898.
9. Pearce, AJ and **Kidgell, DJ.** (2011). Neuroplasticity following skill and strength training: In Costa, Andres and Villalba, Eugenio (ed), *Horizons in neuroscience research*, Nova Science Publishers, Hauppauge, N.Y., pp.35-39. Hauppauge NY USA: Nova Science Publishers. ISBN: 1536143898.
10. **Kidgell, D.J.** (2010). Motor control studies in skill and strength training, muscle soreness and fatigue. In *Fundamentals of Exercise and Sport Science* (pp. 353-442). Publisher: McGraw Hill. ISBN: 0070288240.
11. Pearce, A. J., & **Kidgell, D. J.** (2009). Neuroplasticity following skill and strength training: Evidence from transcranial magnetic stimulation studies. In A. Costa, & E. Villalba (Eds.), *Horizons in Neuroscience Research* (Vol.3, pp. 1-27). New York, USA: Nova Science Publishers. ISBN: 1617280275.

Conference Communications, Invited Lectures, Symposia and Published Abstracts

International Conference Presentations

1. Kidgell, DJ. The role of the brain in strength and power performance and training: What do we know today? October 2018, 19th international Conference on Modern Strength and Endurance Training.
2. Kidgell, DJ (2016). Ipsilateral motor cortical responses to TMS following cross-education of muscular strength. 6th International Conference on Transcranial Brain Stimulation, Göttingen, Germany.
3. Frazer, K & Kidgell, DJ (2016) Effects of unilateral anodal tDCS on contralateral motor cortex plasticity and the cross-transfer of strength. 6th International Conference on Transcranial Brain Stimulation, Göttingen, Germany.
4. Kidgell, DJ. (2013). Cross-transfer of strength is not dependent on limb dominance. 1st Australasian Brain Stimulation Conference, Melbourne, Australia.
5. Kidgell, DJ, Goodwill, AM, Frazer AK and Daly, RM. (2013). Unilateral and bilateral tDCS of the human motor cortex does not differentially modulate motor function in healthy adults. 5th International Brain Stimulation Conference, Leipzig, Germany.
6. Goodwill, AM, Daly, RM and Kidgell, DJ. (2013). Motor performance improvements following tDCS and skill practice in older adults: implications for motor skill training. 5th International Brain Stimulation Conference, Leipzig, Germany.
7. Hendy, AM and Kidgell, DJ. (2013). Acute strength gain and cortical modulation following a single session of atDCS combined with strength training of the contralateral homologous muscle. 5th International Brain Stimulation Conference, Leipzig, Germany.
8. Kidgell, DJ and Goodwill, AM. (2012). Corticomotor plasticity following cross-education strength training. International Society for Electrophysiology and Kinesiology, Biennial Congress, Brisbane, Australia.
9. Kidgell, DJ and Weier, AT. (2012). Strength training reduces intracortical inhibition. International Society for Electrophysiology and Kinesiology, Biennial Congress, Brisbane, Australia.
10. Jaberzadeh, S, Kidgell, DJ, Zoghi, M and Bastani, A. (2012). Transcranial direct current stimulation: Novel approach to enhance corticomotor excitability in healthy individuals. International Society for Electrophysiology and Kinesiology, Biennial Congress, Brisbane, Australia.
11. Pearce, AJ, Clark, RA and Kidgell, DJ. (2012). A comparison of two methods in acquiring stimulus-response curves with transcranial magnetic stimulation. International Society for Electrophysiology and Kinesiology, Biennial Congress, Brisbane, Australia.
12. Pearce, AJ, Latella, C, and Kidgell, DJ. (2012). Excitatory and inhibitory corticospinal responses in the trained and untrained leg following 4 wks of unilateral leg strength training. International Society for Electrophysiology and Kinesiology, Biennial Congress, Brisbane, Australia.
13. Young, K, Perkins, TJ, Kidgell, DJ, McGillivray, JA, and Stokes, MA. (2012). An investigation into the role of the mirror neuron system in facial emotion processing in high functioning autism utilizing transcranial magnetic stimulation. International Society for Autism Research, 11th Annual meeting, Ontario, Canada.
14. Kidgell, DJ and Pearce AJ. (2011). Corticospinal excitability following motor imagery of a strength training task. 8th Annual World Congress on Brain, Spinal Cord Mapping & Image Guided Therapy, San Francisco, California.
15. Pearce, AJ, Latella, C, and Kidgell, DJ. (2011). Reduction in corticospinal inhibition in the trained and untrained limb following unilateral leg strength training. 8th Annual World Congress on Brain, Spinal Cord Mapping & Image Guided Therapy, San Francisco, California.
16. Pearce, AJ, Hendy, A, Bowen, W, and Kidgell, DJ. (2011). Corticospinal adaptations with cross education underpin retention of strength and neural excitability in an unweighted upper limb. 8th Annual World Congress on Brain, Spinal Cord Mapping & Image Guided Therapy, San Francisco, California.
17. Stokes, MA, Perkins, TJ, McGillivray, JA, Manjivona, JA, Bittar, R, and Kidgell, DJ. (2011). Distinguishing self and other in high functioning autism. International Society for Autism Research, 10th Annual meeting, San Diego, California.
18. Pearce AJ and Kidgell DJ. (2009). Neural Adaptations Following Strength Training in Children and Adolescents: A TMS Pilot Study. 14th Annual European College of Sports Science, pp 349, Oslo, Norway.
19. Pearce AJ, Cassar S, and Kidgell DJ (2009). Using TMS to Measure the Effect of Hydrotherapy in Attenuating Central

Fatigue Following Repeated Exercise. 14th Annual European College of Sports Science, pp 363, Oslo, Norway.

20. Pearce AJ, Griepelis LA, Kidgell DJ, Carlson JS. (2007). Effect of compression garments on upper limb position following eccentric exercise. New Zealand Sports Medicine and Science Conference, pp96; ISBN 0-909020-07-8.

21. Pearce AJ, Griepelis LA, Kidgell DJ, Carlson JS. (2007). Neural excitability changes following loss in strength from eccentric exercise. New Zealand Sports Medicine and Science Conference, pp102; ISBN 0-909020-07-8.

22. Semmler, J.G., Sale, M.V, and Kidgell, D.J. (2006). Motor unit synchronisation measured by cross-correlation is not influenced by short-term strength training of a hand muscle. Proc Int Australas Winter Conf Brain Res. 24:24.

National Conference Presentations

23. Goodwill, AM, Teo, W, Daly, RM and Kidgell, DJ (2015). Effects of bilateral-tDCS combined with upper limb rehabilitation on motor function and cortical plasticity in chronic stroke patients. Stroke, 2015, Melbourne, Australia.

24. Kidgell, DJ (2015). Increased cross-education of muscle strength and reduced corticospinal inhibition following eccentric strength training, Australian Conference of Science and Medicine in Sport, Gold Coast, Australia.

25. Kidgell, D.J. (2015). Motor skill training and strength training are associated with the same plastic changes in the central nervous system. Australian Conference of Science and Medicine in Sport, Gold Coast, Australia.

26. Frazer, K & Kidgell, DJ (2015). Non-invasive brain stimulation increases cortical activation: implications for rehabilitation, Australian Conference of Science and Medicine in Sport, Gold Coast, Australia.

27. Bowen, W and Kidgell, DJ (2014). The importance of the contralateral limb in unilateral knee osteoarthritis. Australian Conference of Science and Medicine in Sport, Canberra, Australia.

28. Kidgell, DJ (2014). Ipsilateral and contralateral corticospinal response to unilateral strength training are similar for both the dominant and non-dominant limb. Australian Conference of Science and Medicine in Sport, Canberra, Australia.

29. E. Rio, D. Kidgell, C. Purdam, and J. Cook. (2014). Tendon Neuroplastic Training. Australian Conference of Science and Medicine in Sport, Canberra, Australia.

30. Alicia M. Goodwill, Robin M. Daly and Dawson J. Kidgell (2014). Transcranial direct current stimulation enhances the cross-transfer of motor performance in older adults. 6th Exercise & Sports Science Australia Conference & Sports Dietitians Australia Update: Research to Practice, Adelaide, Australia.

31. Ashlee M. Hendy and Dawson J. Kidgell (2014). Getting stronger without training: The role of non-invasive brain stimulation and cross education. 6th Exercise & Sports Science Australia Conference & Sports Dietitians Australia Update: Research to Practice, Adelaide, Australia.

32. Dawson J. Kidgell, Ashlyn K. Frazer, Robin M. Daly, and Glyn Howatson (2014). Ipsilateral motor cortical responses to TMS following short-term unilateral eccentric and concentric training strength training. 6th Exercise & Sports Science Australia Conference & Sports Dietitians Australia Update: Research to Practice, Adelaide, Australia.

33. Kidgell, DJ and Daly, RM. (2013). Corticomotor excitability and plasticity following transcranial direct current stimulation in young adults: Implications for motor performance. 11th Motor Control and Human Skill Conference, Melbourne, Australia.

34. Weier, AT, Daly, RM, and Kidgell, DJ. (2013). Corticospinal excitability and motor function: A comparison between young and old adults. 11th Motor Control and Human Skill Conference, Melbourne, Australia.

35. Goodwill, AM, Reynolds, J, Daly, RM, and Kidgell, DJ. (2013). Formation of use-dependent cortical plasticity in older adults following combined transcranial direct current stimulation and motor training. 11th Motor Control and Human Skill Conference, Melbourne, Australia.

36. Brandner, C, Warmington, S, and Kidgell, DJ. (2013). Corticomotor responses following acute blood flow restriction strength exercise. 11th Motor Control and Human Skill Conference, Melbourne, Australia.

37. Kidgell, DJ, Daly, RM, Lum, J, Tooley, G, and Pearce, AJ. (2012). Time-Course Changes in Motor Cortical Excitability Following Low Level Constant Transcranial Direct Current Stimulation. Australian Conference of Science and Medicine in Sport, Sydney.

38. Kidgell, DJ, Weier, AT, Brandner, C, Leung, M, and Rantalainen, T. (2012). Short-interval intracortical inhibition is not affected by varying the complexity of an isometric task in biceps brachii muscle. Australian Conference of Science and Medicine in Sport, Sydney.

39. Weier, AT and Kidgell, DJ. (2012). Effect of transcranial magnetic stimulation protocol on recruitment curve parameters. Australian Conference of Science and Medicine in Sport, Sydney.

40. Hendy, AM and Kidgell, DJ. (2012). A novel approach to enhancing muscular strength and function: A pilot study using transcranial direct current stimulation. Australian Conference of Science and Medicine in Sport, Sydney.

41. Scase, E, Kidgell, DJ, Jaberzadeh, S, and Cook, J. (2012). Investigating cortical changes associated with patellar tendinopathy. Australian Conference of Science and Medicine in Sport, Sydney.

42. Jaberzadeh, S, Bastani, A, and Kidgell, DJ. (2011). Anodal-transcranial direct current stimulation: the effects of longer applications on the size of corticomotor excitability. 10th Motor Control and Human Skill Conference, Perth, Australia.

43. Weier, A, Pearce, A, and Kidgell, DJ. (2011). Superimposed vibration confers no additional benefit compared to strength alone on corticomotor excitability. 10th Motor Control and Human Skill Conference, Perth, Australia.

44. Goodwill, A, Pearce, A, Kidgell, DJ. (2011). Corticomotor responses in the trained and untrained limb following strength training with and without vibration. 10th Motor Control and Human Skill Conference, Perth, Australia.

45. Hendy, A and Kidgell, DJ. (2012). Neurophysiological mechanisms underpinning strength maintenance following a period of limb immobilisation. 10th Motor Control and Human Skill Conference, Perth, Australia.

46. Leung, M, Spittle, M, Pearce, A, and Kidgell, DJ. (2011). Corticospinal excitability following motor imagery of a strength training task: Effects on the cross-transfer of strength. 10th Motor Control and Human Skill Conference, Perth, Australia.

47. Kidgell DJ. (2010). Corticospinal and motor unit adaptations to rapid isometric strength training. Journal of Science and Medicine in Sport 13 (Supplement) pp 38.

48. Pearce AJ and Kidgell DJ. (2010). Reduction of the Bilateral Deficit Following Unilateral Strength Training: A TMS

- Study. *Journal of Science and Medicine in Sport* 13 (Supplement) pp 92.
- 49.Kidgell DJ & Pearce AJ. (2009). Neural Adaptations Following Cross Education Strength Training. *Journal of Science and Medicine in Sport* 12 (Supplement) pp 52-53.
- 50.Pearce AJ and Kidgell DJ. (2009). Motor Cortex Excitability Responses to a Simple Visual Reaction Time Task. Australian Conference of Science and Medicine in Sport, Brisbane, Australia.
- 51.Cassar S, Kidgell DJ, and Pearce AJ (2009). The Effect of Hydrotherapy Recovery on Central Fatigue: A Preliminary Examination using Transcranial Magnetic Stimulation. Australian Conference of Science and Medicine in Sport, Brisbane, Australia.
- 52.Kidgell DJ, Hunter S, and Pearce AJ. (2009). Effect of strength training on the cortical control of movement. 9th Motor Control and Human Skill Conference, Tasmania.
- 53.Pearce AJ, Griepel LA, Gardner J, and Kidgell DJ. (2009). Effect of compression garments on performance of a visuomotor tracking task following eccentric exercise. 9th Motor Control and Human Skill Conference, Tasmania.
- 54.Kidgell DJ, Castricum TJ, Horvath DM, and Pearce AJ. (2007). The effects of a high volume versus low volume balance training program on postural sway. *Journal of Science and Medicine in Sport* 10(6); 84. (Supplement).

Invited Chair for Conference Symposia

- 1.Australian Conference of Science and Medicine in Sport, Sunshine Coast, Australia, 2019.
- 2.19th International Symposium on Modern Strength and Endurance Training, Jyväskylä, Finland, 2018.
- 3.Australian Physiological Society Annual Meeting, December 2013. Neuroplasticity Symposium.
- 4.11th Motor Control and Human Skills Conference, Melbourne, 2013. Transcranial stimulation and Neuroplasticity.
- 5.Victorian Conference of Science and Medicine in Sport and Exercise, 21st June, Melbourne, Australia. Conference chair: Behavioural Approaches to Promoting Physical Activity, 2009.

Invited Expert Reviewer for the Following Journals

Journal of Neurophysiology; *Experimental Physiology*; *Journal of Applied Physiology*; *PLoS ONE*; *Medicine and Science in Sports and Exercise*; *Sports Medicine*; *Exercise and Sport Sciences Reviews*; *British Journal of Sports Medicine*; *Scandinavian Journal of Medicine and Science in Sports*; *European Journal of Applied Physiology*; *Journal of Sport Sciences*; *European Journal of Sports Sciences*; *Journal of Sports Science and Medicine*; *International Journal of Sports Physiology and Performance*; *Journal of Science and Medicine in Sport*; *Sports Medicine*; *The Journal of Physiology*; *Frontiers in Human Neuroscience*; *European Journal of Neuroscience*; *Experimental Brain Research*; *Journal of Strength and Conditioning Research*; *Sports Health*; *Journal of Motor Behaviour*.

Postgraduate Supervision

Completed

- 1.Doctor of Philosophy (principal supervision): Joel Mason, Monash University, 'Tracking the corticospinal responses to strength training'. August 2019.
- 2.Doctor of Philosophy (principal supervision): Michael Leung, Deakin University, 'Motor cortical responses to skill and strength training'. May 2018.
- 3.Doctor of Philosophy (associate supervision): Ash Frazer, Victoria University, 'Physiological studies investigating the effect of homeostatic plasticity of the motor cortex on the expression of muscle strength'. August 2017.
- 4.Doctor of Philosophy (principal supervision): Warren Bowen, Deakin University, 'Cross education as exercise therapy for knee osteoarthritis'. December 2017.
- 5.Doctor of Philosophy (associate supervisor): Ashleigh Moreland, Deakin University, 'Improving neural function in older adults through targeted exercise'. December 2017.
- 6.Doctor of Philosophy (principal supervision): Alicia Goodwill, Deakin University, 'Transcranial direct-current stimulation and functional training: A novel neurorehabilitation technique'. February 2016.
- 7.Doctor of Philosophy (associate supervisor): Ebonie Rio, Monash University, 'Corticospinal responses to patellar tendon pain and the effects of externally paced strength training'. July 2015.
- 8.Doctor of Philosophy (associate supervisor): Christopher Brandner, Deakin University, 'Resistance exercise with blood restriction: An examination of the acute and chronic neuromuscular, haemodynamic, and perceptual responses'. December 2015.
- 9.Doctor of Philosophy (principal supervision): Ashlee Hendy, Deakin University, 'Functional and neurological adaptations to transcranial stimulation during strength training'. December 2014.
- 10.Doctor of Philosophy (associate supervisor): Kayleigh Young, Deakin University, 'An investigation into the mirror neuron system in autism spectrum disorder utilising transcranial magnetic stimulation'. April 2014.
- 11.Doctor of Philosophy (associate supervisor): Thomas Perkins, Deakin University, 'Function and structure of the mirror neuron system in autism'. January 2014.

Current:

- 1.Doctor of Philosophy (principal supervisor): Yonas Ankulu, Monash University, 'Determining the cortical, corticospinal and reticulospinal contributions to strength training'.
- 2.Doctor of Philosophy (principal supervisor): Ummatul Siddique, Monash University, 'Determining the cortico-reticular responses to strength training in older adults'.
- 3.Doctor of Philosophy (principal supervisor): Gashaw Woldeamanuel, Monash University, 'Determining the corticospinal and reticulospinal responses underlying the cross-transfer of ballistic motor performance in young and older adults'.

4. Doctor of Philosophy (principal supervisor): Mohamad Rostami, Monash University, 'Does neural drive increase in MS patients'.
5. Doctor of Philosophy (principal supervisor): Patrick Vallance, Monash University, 'Cortical voluntary activation and exercise induced hypoalgesia in patella tendinopathy'.
6. Doctor of Philosophy (principal supervisor): Razie Alibazi, Monash University, 'Physiological Studies Investigating the Acute Effects of Strength Training, Priming TDCS and Aerobic Exercise on Motor Function'.
7. Doctor of Philosophy (associate supervisor): Shabnam Behrangrad, Monash University, 'Neural control of human movements in patients with movement disorder'.
8. Doctor of Philosophy (associate supervisor): MacGregor C. Hall, Monash University, 'Restoration of neuro pain maps using brain modulation techniques in patients with chronic pain'.
9. Master of Research (associate supervisor): Matthew Kenny, Monash University, 'Efficacy of different load intensity and time-under-tension loading protocols for Achilles tendons'.
10. Doctor of Philosophy (associate supervisor): Josh Naunton, Monash University, 'Does maximal strength training offer greater benefit for rotator cuff related shoulder pain?'.
11. Doctor of Philosophy (associate supervisor): Connor Lee, Australian Catholic University, 'Transcranial direct current stimulation and hamstring strain injury'.
12. Doctor of Philosophy (associate supervisor): Joel Presland, Australian Catholic University, 'Transcranial magnetic stimulation to assess neural function in the hamstrings'.
13. Doctor of Philosophy (associate supervisor): Alex Woodhead, St Mary's University Twickenham England, 'Determining the cortical and spinal responses to skill and strength training'.