



LA TROBE
UNIVERSITY

School of Allied Health,
Human Services and Sport

**RESEARCH
CAPABILITY**

PHYSIOTHERAPY



Acknowledgement of Country

LaTrobe University proudly acknowledges the Traditional Custodians of the lands our campuses are located on.

We recognise that Indigenous Australians have an ongoing connection to the land and the University values their unique contribution both to the University and the wider Australian society.

We are committed to providing opportunities for Indigenous Australians, both as individuals and communities through teaching and learning, research and community partnerships across all our campuses and online.

We pay our respects to Indigenous Elders, past, present and emerging.

Indigenous art by Dixon Patten of Bayila Creative





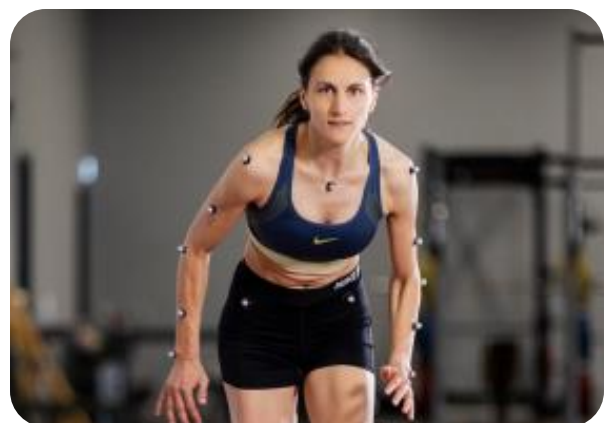
OUR VISION

To improve health and wellbeing for all communities through impactful, innovative and high-quality research.

OUR FOCUS

Our research is focused on optimising physical activity, rehabilitation and quality of life for people across the lifespan.

Through collaborative research with industry partners, clinicians and international leaders, we develop, implement, evaluate and refine innovative management strategies to deliver better health and healthcare to communities with diverse needs including those with sports injuries, musculoskeletal, neurological and cardiovascular conditions.



RESEARCH CAPABILITY

OUR OBJECTIVES

- To improve health and healthcare for all communities through improving our understanding of the causes, impact, assessment and management of disorders that limit movement, physical activity and participation.
- To create research outputs that are high quality, impactful, and clinically relevant.
- To foster a research culture within clinical and industry partners that promotes health practice guided by the best possible evidence.

OUR STAFF

Our researchers lead clinical and implementation trials, epidemiological studies, laboratory-based research, qualitative analyses and systematic reviews of best evidence to better understand, and find the best possible management practices for a range of movement disorders.

Our researchers are embedded within a range of health settings, which drives clinically-relevant research that is readily translated into practice.

OUR GRADUATE RESEARCH STUDENTS

Our graduate research students (higher degree research students), including those enrolled in Masters by research and PhD degrees, undertake highly impactful, applied research projects. Our 65 current PhD students are engaged in collaborative projects with a variety of organisations and groups including:

- Eastern Health
- Northern Health
- Australian Physiotherapy Association
- The Australian Ballet
- Australian Football League
- Australian Physiotherapy Council
- Australian Defence Force

Their work spans the breadth of our research scope improving health and healthcare for all, including:

- Physical activity and rehabilitation
- Injury prevention
- Orthopaedic and sports injuries
- Neurological disorders
- Oncology
- Scholarship of learning and teaching



STAFF PROFILES



Andrew Hahne

Professor Andrew Hahne is a physiotherapist who is passionate about practicing, teaching and conducting research relevant to physiotherapy. He has held numerous leadership positions at La Trobe University and is currently the Physiotherapy Discipline Lead, overseeing four physiotherapy programs. Professor Hahne has a particular clinical and research interest in low back pain and sciatica – the world's leading cause of disability. He leads a low back research team at La Trobe comprising national and international clinicians, researchers, and PhD students aiming to find the most effective treatments for back pain and other musculoskeletal disorders. This research includes systematic reviews, large clinical trials, cost-effectiveness studies and predictive data models that answer important questions for clinicians and patients.

Key research interests:

- low back pain
- sciatica
- clinical trials.



Jodie McClelland

Professor Jodie McClelland is a physiotherapist and currently serves as the Deputy Dean and the Associate Dean of Research and Industry Engagement for the School of Allied Health, Human Services and Sport. A previous Discipline Lead and Head of Department, Professor McClelland has supervised more than 15 doctoral and Masters students to completion. Her research focuses on outcomes for people with orthopaedic and musculoskeletal conditions. Professor McClelland's research has been supported by national competitive funding programs, as well as diverse industry partnerships with professional physiotherapy and sports organisations.

Key research interests:

- orthopaedic management of knee injuries and osteoarthritis, including total knee arthroplasty and anterior cruciate ligament reconstruction
- movement and biomechanics
- improving physiotherapy education and assessment.



Meg Morris

Emeritus Professor Meg Morris is a Professor of Implementation Sciences in a joint appointment between La Trobe University and Healthscope at Victorian Rehabilitation Centre and is currently Director of the Academic and Research Collaborative in Health (ARCH). Professor Morris has previously served as the Head of School of Allied Health and Head of Physiotherapy at La Trobe University. Professor Morris is ranked among the top physiotherapists worldwide in research of Parkinson's Disease and related conditions, and is best known for her groundbreaking studies on falls prevention, physiotherapy and dancing for Parkinson's Disease.

Key research interests:

- improving health and wellbeing in people living with chronic disease
- Parkinson's disease
- falls prevention.



Nicholas Taylor

Professor Nicholas Taylor is a Professor of Allied Health in a joint appointment between La Trobe University and Eastern Health, where he leads the Allied Health Clinical Research Office. Professor Taylor has also served as the Acting Head of Physiotherapy at La Trobe University. Professor Taylor has supervised more than 30 PhD and Research Masters students to completion, and was awarded the La Trobe Research Excellence Award for HDR Supervision. Professor Taylor has received numerous NHMRC Project and Partnership grants, funding from MRFF, Victorian Government and industry partners including Eastern Health to support his research in improving health services for rehabilitation. Through the establishment of the Allied Health Clinical Research Office, Professor Taylor leads clinically-focused research with a focus on immediate implementation.

Key research interests:

- exercise and physical activity
- people with disability or injuries
- improving health services rehabilitation.



Adam Semciw

Professor Adam Semciw is a physiotherapist, epidemiologist and Associate Professor of Allied Health in a joint appointment between La Trobe University and Northern Health. Associate Professor Semciw leads research projects focused on improving health services delivery, and this work was recently recognised with the Vice Chancellor's Industry Engagement Award for 2023. Associate Professor Semciw has completed a Graduate Certificate in Epidemiology and is soon to complete a Graduate Diploma of Biostatistics. Associate Professor Semciw supervises eight PhD and Masters students, and supports clinician-led research that evaluates health care management through his role at Northern Health.

Key research interests:

- epidemiology
- evaluation of new models of care
- management of musculoskeletal conditions, osteoarthritis and orthopaedics.



Tania Pizzari

Associate Professor Tania Pizzari is a physiotherapist and currently serves as the Course Coordinator of the Masters of Musculoskeletal and Sports and Exercise courses at La Trobe University. Associate Professor Pizzari leads research projects in partnership with several national and international sporting organisations including National Basketball Association, Australian Football League and The Australian Ballet. Associate Professor Pizzari has supervised more than 20 PhD and Masters students to completion and provides expert guidance to clinicians through her work on the Clinical Panel at WorkSafe Victoria.

Key research interests:

- shoulder and hip injuries
- soft tissue injuries
- muscle activity and strength.



Christian Barton

Associate Professor Christian Barton is a physiotherapist with an interest in researching and treating sports and musculoskeletal conditions. Associate Professor Barton's research focuses on implementation science through his leadership of GLA:D Australia (education and exercise for osteoarthritis) and TREK (Translating Research Evidence and Knowledge). He is regularly an invited speaker both national and internationally and runs popular courses on knee pain and running injury management in Australia, the United Kingdom, Europe and Scandinavia. Associate Professor Barton has completed a Masters of Communications and a Graduate Certificate in Implementation Science, and his research has been funded by NHMRC, MRFF and the Australian Physiotherapy Association.

Key research interests:

- knee and running injuries
- implementation science
- use of digital technologies.



Kate Lawler

Associate Professor Kate Lawler is a physiotherapist and currently serves as the Course Coordinator for the Bachelor of Physiotherapy (Hons). Dr Lawler has held numerous leadership roles in public health networks in Melbourne and Hobart, and has extensive experience in physiotherapy and hospital education. Dr Lawler's innovative research in dementia has recently been recognised with the Vice Chancellors' Trailblazing Discovery Research Award by the University of Tasmania.

Key research interests:

- family-assisted therapy
- clinical care for people living with dementia and dementia education for health professionals
- health services.



David Snowdon

Dr David Snowdon is a physiotherapist, Senior Lecturer and currently serves as the Course Coordinator for the Master of Physiotherapy Practice. Dr Snowdon's research program is focused on improving health services delivery. Through this program he has established effective models of professional clinical supervision, feasible models of allied health assistant care, and evidence-based approaches to implementing patient reported outcome measures into routine clinical care. Dr Snowdon supports clinician-led research at publicly funded health networks, and currently supervises four PhD students.

Key research interests:

- clinical supervision and its effect on patient care
- allied health assistant care
- improving health services rehabilitation.



Sue Mayes

Dr Sue Mayes AM is a physiotherapist and Senior Lecturer with extensive clinical and research experience in elite athletes. Dr Mayes was the Director of Artistic Health and Principal Physiotherapist of The Australian Ballet for more than 25 years, and led the industry research partnership of this collaboration. Dr Mayes' research interests focus on improving our understanding and management of hip, ankle and foot injuries, particularly in elite athletes.

Key research interests:

- hip, foot and ankle injuries
- elite athletes and dancers
- Rehabilitation.



Andrea Bruder

Dr Andrea Bruder is a physiotherapist, Senior Lecturer and Coordinator of the Honours Research program for the School of Allied Health, Human Services and Sport. Dr Bruder's research in exercise and prevention of injury and disease was recently recognised with the Vice Chancellor's Early Career Researcher Award. Dr Bruder has engaged industry partners in her research, including the Australian Football League Women's and currently supervises three PhD students.

Key research interests:

- primary and secondary prevention of knee osteoarthritis
- gender disparity in musculoskeletal injury risk and long-term burden
- exercise and rehabilitation.



Marlena Calo

Ms Marlena Calo is a physiotherapist, Senior Lecturer and currently serves as the Clinical Academic Coordinator for physiotherapy. Ms Calo is a PhD candidate investigating the experience of students in physiotherapy education, particularly during clinical professional training. Ms Calo has completed Graduate Certificates in Pelvic Floor Rehabilitation and Falls Prevention.

Key research interests:

- physiotherapy education
- grit, resilience and mindset in physiotherapy students
- clinical competency in physiotherapy education.



Matthew King

Dr Matthew King is a physiotherapist, Senior Lecturer and currently serves as the Course Coordinator for the Master of Musculoskeletal Physiotherapy. Dr King leads research in partnership with community sporting organisations including the Yarra Junior Football League.

Key research interests:

- musculoskeletal conditions, osteoarthritis and injury prevention
- hip disorders
- lower limb biomechanics.



John Mastwyk

Mr John Mastwyk is a physiotherapist and Senior Lecturer, and currently serves as the Course Coordinator for the Masters of Sports and Exercise Physiotherapy. Mr Mastwyk has worked with several sporting organisations including Essendon Football Club in the Australian Football League and Western United in the A-League.

Key research interests:

- management of sports and musculoskeletal injuries
- exercise and rehabilitation
- physiotherapy education.



Aruska D'Souza

Dr Aruska D'Souza is a physiotherapist and the inaugural Margaret Naylor Postdoctoral Physiotherapy Research Fellow. Dr D'Souza also serves as the Allied Health Research and Knowledge Translation Lead at The Royal Melbourne Hospital.

Key research interests:

- physiotherapy in general medicine
- health services research
- education research.



Amy Dennett

Dr Amy Dennett is a post-doctoral researcher and physiotherapist based at Northern Health. Dr Dennett holds an NHMRC Emerging Leader Fellowship focused on improving outcomes for people with cancer through physical activity and rehabilitation. Dr Dennett recently developed the Physio CaRe training program for physiotherapists to upskill in and implement cancer rehabilitation.

Key research interests:

- improving outcomes for people with cancer
- physical activity and rehabilitation
- exercise-based cancer rehabilitation.



Katrina Li

Dr Katrina Li is a physiotherapist and Lecturer with clinical experience in Australia and Hong Kong. Dr Li has been awarded a Physiotherapy Research Foundation Seeding Grant and the Endeavour Research Fellowship for her research.

Key research interests:

- intergenerational and life-course factors influencing lung function and health
- physiotherapy education
- sustainability in physiotherapy.



Mark Scholes

Dr Mark Scholes is a Lecturer and titled Sports and Exercise Physiotherapist. Dr Scholes recently completed a PhD investigating biomechanics and bony morphology in people with hip and groin pain. Dr Scholes is a member of the International Hip-related Pain Research Network and is Chair of the Victorian Branch of the Sports and Exercise Physiotherapy Association.

Key research interests:

- hip and groin pain
- lower limb biomechanics
- exercise-based rehabilitation.



Peta Johnston

Dr Peta Johnston is a physiotherapist and early career researcher with a particular interest in biomechanic changes in people with orthopaedic and musculoskeletal conditions.

Key research interests:

- improving functional outcomes through rehabilitation
- biomechanics and return to sport following anterior cruciate ligament reconstruction
- female athletes.



Milly Bell

Dr Milly Bell is a physiotherapist, lecturer and early career researcher. Dr Bell's research focuses on improving outcomes for patients with a range of musculoskeletal conditions and sports injuries, including knee osteoarthritis, hip, knee and back pain.

Key research interests:

- physical activity and exercise
- knee osteoarthritis, sports injuries
- education research.



Sally Mastwyk

Mrs Sally Mastwyk is a physiotherapist and Lecturer with a clinical and research interest in pelvic women's health. Mrs Mastwyk is a PhD candidate investigating the recognition and management of health in people with metabolic syndrome. Mrs Mastwyk has also completed a Masters of Physiotherapy in Women's Health and Pelvic Floor.

Key research interests:

- optimising pelvic floor function
- physiotherapy management in metabolic syndrome
- physiotherapy education.



Brodwen McBain

Dr Brodwen McBain is a physiotherapist, accredited hand therapist and Lecturer. Dr McBain is known for her education of physiotherapists in management of hand conditions and recently completed her PhD investigating the assessment and management of tendon disease in the thumb.

Key research interests:

- management of hand, wrist and elbow
- fractures, tendon injuries, sports injuries
- neurological and musculoskeletal conditions.



Tom West

Mr Tom West is a lecturer and Australian Physiotherapy Association (APA) titled Sports and Exercise Physiotherapist with over 10 years of clinical experience. Tom has submitted his PhD investigating symptomatic and functional outcomes of young adults following anterior cruciate ligament reconstruction in the context of the development of post-traumatic osteoarthritis. Tom has a particular interest in how socioeconomic factors influence outcomes for young adults following anterior cruciate ligament injury.

Key research interests:

- development of osteoarthritis after traumatic knee injury
- the influence of socioeconomic factors on health outcomes
- exercise-based rehabilitation.



Sanje Sivaanathan

Mr Sanje Sivaanathan is a physiotherapist and Lecturer with an interest in cardiorespiratory physiotherapy and sports.

Key research interests:

- optimising respiratory capacity in athletes
- physiotherapy management of cardiorespiratory conditions
- physiotherapy education and the scholarship of learning and teaching.



Tamara Moritz

Ms Tamara Moritz is a physiotherapist and Lecturer with an interest in paediatric physiotherapy and education research. Ms Moritz's PhD research focuses on the use of feedback in physiotherapy learning.

Key research interests:

- physiotherapy management of paediatric conditions
- aquatic physiotherapy for people with neurological conditions
- physiotherapy education.



**Madeline
Hannington**

Dr Madeline Hannington is a physiotherapist and Lecturer with a clinical and research interest in sports. Dr Hannington recently completed her PhD where she examined the prevalence, clinical descriptors and morbidity of anterior knee pain in elite basketball players.

Key research interests:

- injury management in sporting environments
- basketball, Australian Football League football and cricket
- clinical competency in physiotherapy education.



Rochelle Kennedy

Ms Rochelle Kennedy is a physiotherapist and Lecturer with an interest in musculoskeletal and sports conditions. Ms Kennedy completed a Masters of Exercise Science (Strength and Conditioning).

Key research interests:

- management of sports and musculoskeletal injuries
- exercise and rehabilitation
- strength and conditioning.



Nicole Baker

Mrs Nicole Baker is a physiotherapist and Lecturer with expertise in neurological physiotherapy. Mrs Baker has completed postgraduate training with a Masters of Clinical Rehabilitation, a Graduate Certificate in Clinical Teaching and Graduate Certificate in Simulation Education.

Key research interests:

- physiotherapy management of neurological conditions
- simulation in physiotherapy education
- physiotherapy education.

WORLD CLASS RESEARCH AND TRAINING FACILITIES

GAIT LABORATORY

The Gait Laboratory is one of the largest movement analysis laboratories in the southern hemisphere, and incorporates a camera-based motion analysis system (Vicon) along a 50-metre walkway with embedded force platforms, an electronic walkway (GAITrite), balance assessment system (Neurocom Balance Master), two isokinetic dynamometers for strength testing, diagnostic ultrasound equipment and electromyographic equipment for assessment of muscle activity.



SPORTS BIOMECHANICS LABORATORY

The La Trobe Sports Biomechanics Laboratory allows for detailed movement analysis of sports-based activities. The laboratory incorporates a 50-metre Mondo track with running lanes and a field-based zone that opens directly onto our FIFA accredited synthetic pitch. The laboratory is serviced by two Vicon motion capture systems (22 cameras) and six floor-embedded force plates and an isokinetic dynamometer, as well as wireless technologies including inertial measurement units (IMUs), and electromyography (Delsys Trigno).



STRENGTH AND CONDITIONING LABORATORY

The Strength and Conditioning Laboratory in the La Trobe Sports Park houses eight lifting platforms and racks with over 5000kg of competition standard Eleiko equipment. The training floor opens directly onto the FIFA accredited synthetic pitch for speed, agility and endurance training and testing activities. The Strength and Conditioning Laboratory is connected to the Sports Biomechanics Laboratory by two 50 metre Mondotrack running lanes. The Strength and Conditioning Laboratory also houses two lifting platforms with built-in dual force platforms. These platforms are instrumented with motion capture technology and interface to provide real-time feedback on lifting kinetics and kinematics. In addition, the Strength and Conditioning Laboratory houses a custom made Sorinex isometric testing rack accompanied by synchronised AMTI force platform and Delsys Trigno electromyography systems for combined strength and muscle activation assessment.



LA TROBE SPORTS PARK

The La Trobe Sports Park is located on 60 hectares in the south-west of the campus in Bundoora, Melbourne. The \$81 million precinct supports major participation in sports events, grassroots sport competitions and recreation opportunities. It also facilitates training of the next generation of sport industry professionals through a world-class student placement program.

The Sports Park includes a FIFA-accredited synthetic football pitch, multiple soccer and cricket ovals, a competition-grade AFL oval, and a baseball diamond with central pavilion and function facilities. Stage 2 of the Sports Park precinct was completed in January 2020 and includes a state-of-the-art Sports Stadium.



WORLD CLASS RESEARCH FACILITIES

THE LA TROBE SPORT AND EXERCISE MEDICINE RESEARCH CENTRE

The La Trobe Sport and Exercise Medicine Research Centre strongly advocates sport and exercise medicine, physical activity, health and well-being for all. We are determined to translate our research findings to key stake holders including the international research community, health practitioners, and the general public.

Our mission focuses on several key areas, which include conducting world-class research in sport and exercise medicine, disseminating sport and exercise medicine research, fostering sport and exercise medicine research training at La Trobe University, translating sport and exercise medicine triarch into policy, and developing an international profile through collaboration and exchange.

Our [internationally renowned research team](#) provides excellent research training and mentoring for researchers at all stages of their research career. Read more about our [research projects](#).

For more information, please view the [website](#).



WHY CHOOSE PHYSIOTHERAPY AT LA TROBE?



First choice

We're Victoria's number one choice for undergraduate physiotherapy.

Victorian Tertiary Admissions Centre (VTAC), 2019, *Application Statistics 2018/19 - Undergraduate*



Top 200 globally

La Trobe's clinical, pre-clinical and health subjects are ranked in the world's top 200.

Times Higher Education (THE), 2021, *World University Rankings 2022 by subject: clinical, pre-clinical and health*



1st in Victoria

We're the best in Victoria and third in Australia for employer satisfaction, with a rating of 88.1 per cent.

Quality Indicators for Learning and Teaching (QILT), 2023, 2022 *Employer Satisfaction Survey* [PDF, 812 KB]



#4 worldwide

Times Higher Education ranks La Trobe fourth in the world for our research on key diseases and conditions, our support for healthcare professions, and the health of our students and staff.

Times Higher Education (THE), 2022, *Impact Rankings 2022: good health and well-being*

INDUSTRY RELATIONSHIPS

The Physiotherapy Discipline partners with a diverse range of industry, clinical, sports and health organisations to develop research that deliver real-world impact. Our Australian and international partnerships are integral to ensure that our research leads to valuable and impactful change in the health, wellbeing and performance of all communities. Students enrolled in our Industry and Clinical PhD programs are embedded with partners to ensure that their PhD research addresses industry-based challenges that will have immediate impact.

OPPORTUNITIES TO ENGAGE WITH OUR RESEARCH TEAM

There are numerous opportunities to partner with us on research ideas and projects, including:

- » Honours projects (12 months' duration)
- » Masters/PhD projects (2-3 years duration, may require some funding)
- » Physiotherapy industry-based projects (Approx 5 weeks duration for each student)
- » Collaborative grant applications
- » Research consultancy

CONTACT US

If you're interested in working together but don't know where to start, please just email or give us a call:

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WANT TO KNOW MORE? GET IN TOUCH

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