

## **Curriculum Vitae:**



**Name:** Dr.Orawan Prasartwuth

**Gender:** Female

**Academic Position:** Associate Professor

**Qualification:** PhD (Biomedical Sciences), The University of Sydney, Australia  
MPhty (Research), The University of Queensland, Brisbane, Australia  
BSc (Physical Therapy), Chiang Mai University, Thailand

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### **Education:**

2001 – 2006 Doctor of Philosophy in Biomedical Science, The University of Sydney, Australia  
1994 – 1997 Master of Physiotherapy by research, The University of Queensland, Brisbane, Australia  
1984 – 1988 Bachelor of Sciences in Physical Therapy, Chiang Mai University, Chiang Mai, Thailand

### **Working Experience:**

1989-2010 Lecturer  
2011-2015 Head of Department  
2016-now Senior Lecturer

**Research of Interest:** Fatigue: Central or neural (supraspinal and spinal) and muscular contributions  
Eccentric exercise: force deficit, delayed onset muscle soreness (DOMS)  
Repeated bout (protective effect), tendon adaptation (stiffness)

**Area of Interest:** Electromyographic (EMG) activity  
Single motor unit recording  
Magnetic stimulation (Motor cortex stimulation)  
Voluntary activation (Motor nerve stimulation)  
Eccentric exercise  
Hip protector in elderly  
Running

## Research Grants:

### *Principle Investigator:*

2021-2022	Associated Medical Sciences Research Fund Budget Grant 70,000 THB
2020-2021	Associated Medical Sciences Research Fund Budget Grant 80,000 THB
2012-2013	Associated Medical Sciences Research Fund Collaborating research with Prof Ian Cameron and Dr Wei Yu, University of Sydney, Australia Budget Grant 45,000 THB
2009-2011	Thailand Research Fund and Ministry of University Affairs Grant Collaborating research with Prof Kemal Turker, School of Medicine, KOC University, Turkey Budget Grant 480,000 THB
2009-2010	Associated Medical Sciences Faculty Research Grant Collaborating research with Assist Prof Suchart Gotan, Department of Radiologic Technology, Chiang Mai University Thailand. Budget Grant 57,200 THB
2008-2009	Sport Authority of Thailand Grant. Budget Grant 300,000 THB
2006-2008	Thailand Research Fund and Ministry of University Affairs Grant Collaborating research with Prof Kemal Turker, Ege University, Turkey Budget Grant 480,000 THB
2007-2008	Biomedical Engineering Program Grant, Faculty of Engineering, Chiang Mai University. Budget Grant 100,000 THB
2006-2007	Biomedical Engineering Program Grant, Faculty of Engineering, Chiang Mai University Budget Grant 100,000 THB
1998-1999	Supporting New Researcher Fund, Chiang Mai University Budget Grant 25,000 THB

### *Co-investigator:*

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## Awards:

- Scholarship from the Ministry of University Affairs of Thailand, 2008-2011 (Applied by teacher for PhD student)
- Scholarship from the Ministry of University Affairs of Thailand, 2002 -2005
- Scholarship from Chiang Mai University, 2001 - 2002
- Scholarship from the Australian Agency for International Development (AusAid), 1994 – 1997.
- Best Oral Presentation Awards at International Scientific Congress: 1st Asian Indoor Games; October 17-19, 2005; Bangkok, Thailand
- Best Oral Presentation Awards by student in early stages of degree at Research Student; Conference 2003, School of Biomedical Sciences, The University of Sydney. June 11, 2003; Australia

## Professional Membership:

The Physical Therapy Association of Thailand

## Latest Publications:

### Peer-Reviewed Journal:

1. Natthakitt Yongpradern, Chatchai Phirawatthakul, Jitapa Chawawisuttikool, and **Orawan Prasartwuth**. The validity of fitness watches synced with an accelerometer for measuring spatiotemporal parameters during running. **Thai Journal of Physical Therapy**. 2024; 46(2): 64-77. TCI
2. Jitapa Chawawisuttikool, Chatchai Phirawatthakul, Warintun Thomchaita, Komes Kongtong, Chatchai Tieachanpan, and **Orawan Prasartwuth**. Reliability of running parameters using fitness watches synced with accelerometers during outdoor runs. **Journal of Associated Medical Sciences**. 2024; 57(1): 170-176. Q4
3. **Prasartwuth O**, Nanthoraphak N, Kaseantadanon A, Chawawisuttikool J, Phirawatthakul P. Reliability and minimal detectable change of running parameters monitored by fitness watch and accelerometer. **Thai Journal of Physical Therapy**. 2022; 44(2): 97-105. TCI
4. **Orawan Prasartwuth**, Roongtip Suteebut, Jitapa Chawawisuttikool, Utku S Yavuz and Kemal S Turker. Using first bout effect to study the mechanisms underlying eccentric exercise induced force loss. **Journal of Bodywork and Movement Therapies**. 2019; 23(1): 48-53. Q2, IF 1.120  
<https://doi.org/10.1016/j.jbmt.2017.11.008>
5. สุภาพร วรรณมณี และ อรวรรณ ประศาสน์วุฒิ ผลของการออกกำลังกายเสริมความมั่นคงของข้อไหล่ ต่อช่วงการเคลื่อนไหวในผู้ป่วยงูหัวข้อไหล่ติด วารสารกายภาพบำบัด 2562; 41 (3): 112-128. TCI
6. Monchuleeporn Viriyawattanukul, Patima Silsupadol, Wei Shin Yu, and **Orawan Prasartwuth**. Effectiveness of Hornsby Healthy Hip Pants on Hip Fracture Prevention from Falls in the Elders Living in Institution. วารสารเทคนิคการแพทย์และกายภาพบำบัด มหาวิทยาลัยขอนแก่น 2558; 27 (3): 287- 297. TCI
7. Sutima Thibordee, **Orawan Prasartwuth**. Effectiveness of roundhouse kick in elite Taekwondo athletes. **Journal of Electromyography and Kinesiology**. 2014; 24:353-358. Q2, IF 1.740
8. Sutima Thibordee, **Orawan Prasartwuth**. Factors influencing the impact force of the Taekwondo Roundhouse Kick. **Chiang Mai University Journal of Natural Sciences**. 2014; 103(1):51-56. TCI
9. Erdal Binboga, **Orawan Prasartwuth**, Murat Pehlivan, and Kemal Türker. Responses of human soleus motor units to low threshold stimulation of the tibial nerve. **Experimental Brain Research**. 2011; 213:73-86. Q3, IF 2.395

10. Roongtip Suteebut, Suchart Kothan, **Orawan Prasartwuth**. Effect of eccentric muscle training on achilles tendon adaptation of healthy persons. **Thai Journal of Physical Therapy**. 2011; 33(1):17-31. TCI
11. **Prasartwuth O**, Binboga E, Turker KS. A study of synaptic connection between low threshold afferent fibres in common peroneal nerve and motoneurons in human tibialis anterior, **Experimental Brain Research**. 2008; 191 (4), 465-472. Q3, IF 2.395
12. Allen TJ, Butler JE, Gandevia SC, **Prasartwuth O** and Taylor JL. Muscle damage and exercise: does the brain contribute to muscle weakness? **Physiology News**. 2006; 64, 21-22.
13. **Prasartwuth O**, Allen TJ, Butler JE, Gandevia SC, Taylor JL. Length-dependent changes in voluntary activation, maximal voluntary torque and twitch responses after eccentric damage in humans, **Journal of Physiology**. 2006; 571: 243-252. Q1, IF 4.547
14. **Prasartwuth O**, Taylor JL, Gandevia SC. Maximal force, voluntary activation and muscle soreness after eccentric damage to human elbow flexor muscles, **Journal of Physiology**. 2005; 567: 337-348. **Q1, IF 4.547**

**Conferences Presentation:**

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| Oct, 2010 | The Annual meeting of the Thailand Research Fund (TRF) 10 <sup>th</sup> , Petchaburi, Thailand                         |
| Sep,2010  | Ministry of University Affairs (MUA), Chonburi, Thailand   |
| Sep,2010  | Sports Authority Thailand (SAT), Bangkok, Thailand   |
| Oct, 2008 | The Annual meeting of the Thailand Research Fund (TRF) 8 <sup>th</sup> , Petchaburi, Thailand                          |
| Dec, 2007 | Educational research Exchange Joint Symposium, Chiangmai, Thailand   |
| Oct, 2007 | The Annual meeting of the Thailand Research Fund (TRF) 7 <sup>th</sup> , Chonburi, Thailand                            |
| Oct, 2005 | 1 <sup>st</sup> Asian indoor games scientific congress, Bangkok, Thailand  |
| Oct, 2004 | Neuroscience conference, San Diego, United States  |
| Oct, 2004 | From Cell to Society 4: Fourth College of Health Sciences Research Conference, The University of Sydney, Australia     |
| Feb, 2003 | The 24th Annual Meeting of the Australian Neuroscience Society, Melbourne, Australia                                   |
| Nov, 2002 | Fourth Australasian Biomechanics Conference, La Trobe University, Melbourne, Australia                                 |
| Sep, 2002 | From Cell to Society 3: The Medical Foundation and The College of Health Sciences, The University of Sydney, Australia |

*บทความใน proceeding conferences:*

1. สุภาพร วรรณมณี และ อรวรรณ ประศาสน์วุฒิ ผลของการออกกำลังกายเสริมความมั่นคงของข้อไหล่ต่อช่วงการเคลื่อนไหวในผู้ป่วยงูหัวข้อไหล่ติด ในการประชุมวิชาการระดับชาติประจำปี 2560 (ครั้งที่ 1) ของสำนักวิชาวิทยาศาสตร์สุขภาพ มหาวิทยาลัยแม่ฟ้าหลวง 7-8 ธันวาคม 2560 (รางวัลการนำเสนอผลงานวิจัยดีเด่น)
2. Viriyawattanakul M, Silsupadol P, Yu WS and **Prasartwuth O** (2014) Does wearing hip protectors increase awareness of falls and lead to decreased falls?. 9<sup>th</sup> Pan-Pacific conference on Rehabilitation cum 21<sup>st</sup> Annual Congress of Gerontology, Hong Kong, 29-30 November (Abstract Number: A1044), Page 31.
3. **Prasartwuth O**, Suteebut R, Chawawisuttikool S, Mankhetkorn S, Nosaka, K (2010) Adaptations in Repeated Bout Effect of Three Sub-maximal Eccentric Damaging Exercise. Annual Academic Meeting, Faculty of Associated Medical Sciences, Chiang Mai University. 30 November - 3 December, Page 343.
4. **Prasartwuth O**, Suteebut R, Chawawisuttikool S, Mankhetkorn S, Nosaka, K (2010) Effect of Three Submaximal Loads of First Eccentric Exercise Bout on Neural and Muscular Adaptations in Repeated Bout Effect. The Annual meeting of the Thailand Research Fund (TRF) 10<sup>th</sup>, Petchaburi, Thailand, 14-16 October, Page 232.
5. Sutima Thibordee and **Orawan Prasartwuth** (2010) Low versus high impact force during roundhouse kick in black-belt Thai Taekwondo players: Electromyography and kinematic analysis. The Annual meeting of Commission of Higher Education (CHE) 3<sup>rd</sup>, Chonburi, Thailand, 9-11 September, Page 192.
6. สุตติมา ชิบดี และ อรวรรณ ประศาสน์วุฒิ (2553) การเปรียบเทียบการเตะมโนท่าราวด์คิกด้วยแรงในระดับสูงและระดับต่ำ ในนักกีฬาเทควันโด: การวิเคราะห์คลื่นสัญญาณไฟฟ้าของกล้ามเนื้อและจลนศาสตร์ การประชุมการนำเสนอผลงานวิจัยด้านวิทยาศาสตร์การกีฬา วันที่ 2-4 กันยายน 2553 หน้า 48-49.
7. รุ่งทิพย์ สุธิบุตร, สุชาติ โกทันทย์, อรวรรณ ประศาสน์วุฒิ (2553) ผลการฝึกกล้ามเนื้อแบบยืดยาวออกต่อการปรับตัวของเอ็นกล้ามเนื้อร้อยหวายของคนสุขภาพดี การประชุมการนำเสนอผลงานวิจัยด้านวิทยาศาสตร์การกีฬา วันที่ 2-4 กันยายน 2553 หน้า 50-51. (รางวัลการนำเสนอผลงานวิจัยดีเด่น)
8. Binboga E, Yavuz SU, **Prasartwuth O**, Sendemir-Urkmez SA, Turker KS (2008). The effect of sensory inputs on the motoneurone activity in human soleus muscle. Mersin University Health Sciences Journal, Special Issue (S-21), Page 21.
9. **Prasartwuth O**, Binboga E, Turker KS (2008). ). A novel study to estimate synaptic connection between low threshold fibres in nerves and human motoneurons. The Annual meeting of the Thailand Research Fund (TRF) 8<sup>th</sup>, Petchaburi, Thailand, 16-18 October, Page 79.
10. Binboga E, Yavuz SU, **Prasartwuth O**, Sendemir-Urkmez SA, Turker KS (2008). Investigation of human soleus motoneuron synaptic potentials triggered by muscle spindle Ia afferents, Neuroanatomy 7; Suppl 1 Page 7-8.
11. **Prasartwuth O** and Neam-in Hudsaleark (2007). Invention Sample and Hold Amplifier (SHA) for evaluating the activation failure of nervous system. Educational Research Exchange Joint Symposium, Chiang Mai University, Thailand, 13-14 December, Page 15.
12. **Prasartwuth O** and Turker KS (2007). A novel study to estimate synaptic connection between low threshold fibres in nerves and human motoneurons. The Annual meeting of the Thailand Research Fund (TRF) 7<sup>th</sup>, Chonburi, Thailand, 11-13 October, Page 341.

13. **Prasartwuth O**, Taylor JL, Gandevia SC (2005). Changes in maximal voluntary torque, voluntary activation and twitch properties after eccentric exercise. The Challenging Role of Sports Science for Better Sports Performance. Asia Hotel, Bangkok, Thailand, 17-19 October, Page 48. **(Best oral presentation Award)**
14. **Prasartwuth O**, Taylor JL, Gandevia SC (2004). Voluntary torque-angle and the resting twitch-angle relationship following eccentric exercise. Fourth College of Health Sciences Research Conference 2004 "From Cell to Society 4", The College of Health Sciences, The University of Sydney, Fairmont Resort, Leura, Australia, 27 - 28 October, Page 4-4.
15. **Prasartwuth O**, Taylor JL, Gandevia SC (2004). Time course of changes in maximal torque, voluntary activation and twitch properties during delayed onset muscle sorenes, Neuroscience 2004, San Diego, United States, 23 - 27 October, Page 354.
16. **Prasartwuth O**, Taylor JL, Gandevia SC (2003). Voluntary activation after eccentric exercise. , Proceedings of the Australian Neuroscience Society 24th Annual Meeting, vol 15. ANS, Melbourne, Australia, 30 January - 3 February, Page 179.
17. **Prasartwuth O**, Cathers I, Gwin T, Balnave R (2002). Motor unit activation in concentric and eccentric muscle contractions after fatiguing exercise. , Proceedings of the Fourth Australasian Biomechanics Conference ABC4. La Trobe University, Melbourne, Australia, 28 - 30 November, Page 95.
18. **Prasartwuth O**, Cathers I, Gwin T, Balnave R (2002). Comparison of motor unit activation in concentric and eccentric muscle contractions in biceps brachii after fatiguing exercise, Third Research Conference 2002 "From Cell to Society 3" The Medical Foundation and The College of Health Sciences, The University of Sydney, Fairmont Resort, Leura, Australia, 18 - 19 September, Page 20-5.