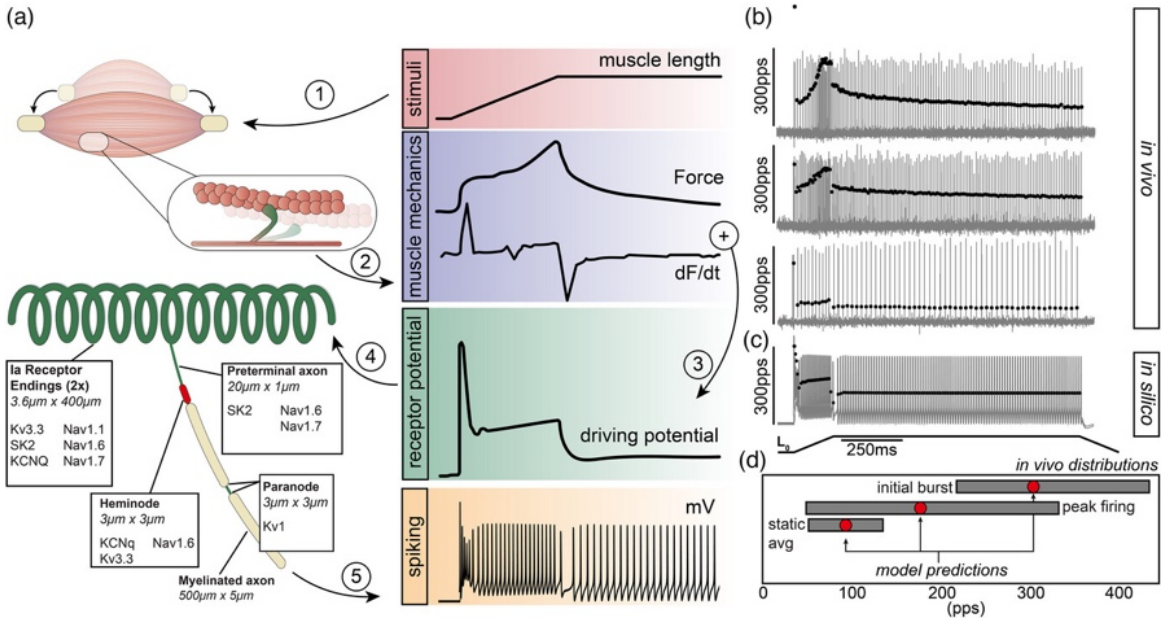
Provisional Programme 200326

The 3rd Mechanotransduction, Muscle Spindles and Proprioception conference

Monash Prato Campus
Via Pugliesi 26, 59100 Prato, Italy
June 29–July 1, 2026

Experimental Physiology



Housley SN, Powers RK, Nardelli P, Lee S, Blum K, Bewick GS, Banks RW, Cope TC. Biophysical model of muscle spindle encoding. Exp Physiol. 2024 109: 55-65

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Monday, June 29

9:15-9:30
Bridgette Watkins & Vaughan Macefield
Welcome to the 3rd Conference

Session 1: Chair – Vaughan Macefield

9:30-10:30
Robert Banks
University of Durham, United Kingdom
Some properties of equatorial nuclear membranes

10:30-11:00
Morning Tea

11:00-11:30
Guy Bewick
Institute of Medical Sciences, University of Aberdeen, UK
Further investigations into the role of Piezo2 in stretch-evoked responsiveness in mammalian muscle spindle afferents: a progress report

11:30-12:00
Stephan Kröger
Ludwig Maximilians University, Germany
3D Electron Microscopic Reconstruction of the Central Region of a Murine Muscle Spindle – A Progress Report

12:00-12:30
Arzu Petersen
Center of Anatomy and Cell Biology, Medical University Vienna, Austria
Molecular properties of muscle spindles in extraocular muscles of humans

12:30-2:00
Lunch

Session 2: Chair – Bridgette Watkins

2:00-2:30
Turkay Akay
Brain Repair Center, Department of Neuroscience, Dalhousie University, Canada
Proprioceptive feedback: a key driver of homolateral leg coordination during locomotion

2:30-3:00
Kazuhiko Seki
National Institute of Neuroscience, Japan
Optogenetic manipulation of large-diameter primary afferent feedback during voluntary movement in nonhuman primates

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3:00-3:30
Piotr Krutki
Department of Neurobiology, Poznan University of Physical Education, Poland
Exercise-induced plasticity of Ia proprioceptive input to spinal motoneurons

3:30-4:00
Afternoon Tea

4:00-4:30
Alessandro Santuz
Max Delbrück Center, Germany
Proprioception drives the emergence of skipping in hypogravity through reuse of conserved locomotor modules

4:30-5:00
Vaughan Macefield
Department of Neuroscience, Monash University, Australia
Microelectrode recordings from muscle spindle afferents in the intrinsic muscles of the human foot during walking

5:00-7:00
Welcome Reception

Tuesday, June 30

Session 3: Chair – Véronique Marchand-Pauvert

9:00-10:00
Daniel Zytnicki
Université Paris Cité, CNRS, Saints-Pères Paris Institute for the Neurosciences, France
Defective signalling from Ia spindle afferents to spinal motoneurons plays a key role in Amyotrophic Lateral Sclerosis

10:00-10:30
Katherine Wilkinson
School of Biological Sciences, San Jose State University, USA
Impaired muscle proprioceptor function in mouse models of two diseases that alter Piezo2 function, Angelman Syndrome and Distal Arthrogryposis subtype 5

10:30-11:00
Morning Tea

11:00-11:30
Jente Wiliart
KU Leuven, Belgium

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Altered muscle spindle responses in immobilised rats: investigating the interaction between muscle mechanics and spindle sensitivity

11:30-12:00
Slav Bagriantsev
Department of Cellular and Molecular Physiology, Yale University, USA
Early origin of tactile acuity in the somatosensory system of vertebrates

12:00-12:30
TBA

12:30-2:00
Lunch

Session 4: Chair – Bob Banks

2:00-2:30
TBA

2:30-3:00
TBA

3:00-3:30
TBA

3:30-4:00
Afternoon Tea

4:00-4:30
TBA

4:30-5:00
TBA

6:00-9:00
Conference Dinner

Wednesday, July 1

Session 5: Chair – Guy Bewick

9:00-10:00
Véronique Marchand-Pauvert
Laboratoire d'Imagerie Biomédciale, Sorbonne Université, INSERM, CNRS, France
Patterned tendon vibration therapy enhances neuroplasticity in subacute post-stroke rehabilitation

10:00-10:30

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TBA

10:30-11:00
Morning Tea

11:00-11:30
TBA

11:30-12:00
TBA

12:00-12:30
TBA

12:30-2:00
Lunch

Session 5: Chair – Vaughan Macefield

2:00-2:15
Announcement of Prize Winners

2:15-2:30
Discussion on future meetings

2:30
End of Conference