

Luca Ruggiero

Postdoctoral Researcher - Alexander von Humboldt Research Fellow

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Professional preparation

Jan 2016 – Nov 2018 Ph.D., Neuromuscular Physiology University of British Columbia, CA
Sep 2013 – Jul 2015 M.Sc. (Hons. 1st class), Biomechanics University of Jyväskylä, FI
Sep 2009 – Jul 2012 B.Sc. (Hons. 1st class), Sport Sciences University of Rome “Foro Italico”, IT

Appointments and Work Experience

Mar 2023 – present Postdoctoral Researcher with an Alexander von Humboldt Research Fellowship, University of Konstanz, Konstanz, DE
May 2020 – Nov 2022 Biomechanics Consultant – Italian Female National Volleyball Team
Nov 2019 – Nov 2022 Postdoctoral Researcher in Biomechanics and Energetics of Locomotion, University of Milan, Milan, IT
Jan 2016 – Nov 2018 Teaching Assistant (Biomechanics, Anatomy, Physiology), University of British Columbia, CA
Sep 2016 – Nov 2016 Research Member of the Expedition to Everest Base Camp
Sep 2012 – Jul 2013 Research Assistant in Biomechanics, University of Cumbria, Lancaster, UK

Grants, Awards and Recognitions

2022 - present Alexander von Humboldt Research Fellowship
2016 - 2018 University of British Columbia Graduate Fellowship
Nov 2018 University of British Columbia Ph.D. Thesis Award
Nov 2018 Journal of Physiology, Editor’s Choice Article (Ruggiero et al., 2018a). Highlighted also by a Journal Club Article.
Aug 2018 Journal of Physiology, Editor’s Choice Article (Ruggiero et al., 2018b). Highlighted also by a Perspective Article.
Jun 2017 American College of Sports Medicine Abstract Winner
Jun 2017 University of British Columbia Travel Grant
May 2015 Vrije Universiteit Amsterdam Summer School Grant Award
Nov 2014 University of Jyväskylä International Student Award

Publications

The full list of peer-reviewed publications is located [here](#).

Most Relevant Publications

- [1]. [Ruggiero, L.](#) & McNeil, C.J. (2023). UBC-Nepal Expedition: Motor Unit Characteristics in Lowlanders Acclimatized to High Altitude and Sherpa. **Med Sci Sports Exerc**, 55(3): 430-439.
- [2]. [Ruggiero, L.](#), Harrison, S.W.D., Rice, C.L. & McNeil, C.J. (2022). Neuromuscular Fatigability at High Altitude: Lowlanders with Acute and Chronic Exposure, and Native Highlanders. **Acta Physiol**, 234(4): e13788.
- [3]. [Ruggiero, L.](#), Pritchard, S.E., Warmenhoven, J., Bruce, T., MacDonald, K., Klimstra, M. & McNeil, C.J. (2022). Volleyball Competition on Consecutive Days Modifies Jump Kinetics but not Height. **Int J Sports Physiol Perform**, 17(5): 711-719.
- [4]. [Ruggiero, L.](#), Bruce, C.D., Streight, H.B. & McNeil, C.J. (2021). Maximal Results with Minimal Stimuli: the Fewest High-frequency Pulses Needed to Measure or Model Prolonged Low-frequency Force Depression in the Dorsiflexors. **J Appl Physiol**, 131: 716-728.
- [5]. [Ruggiero, L.](#), Hoiland, R.L., Hansen, A.B., Ainslie, P.N. & McNeil, C.J. (2018a). UBC-Nepal

Expedition: Peripheral Fatigue Recovers Faster in Sherpa than Lowlanders at High Altitude. *J Physiol*, 596(22): 5365-5377.

- [6]. Ruggiero, L., Yacyshyn, A.F., Nettleton, J. & McNeil, C.J. (2018b). UBC-Nepal Expedition: Acclimatization to High-altitude Increases Spinal Motoneurone Excitability during Fatigue in Humans. *J Physiol*, 596(15): 3327-3339.

Invited Articles, Lectures and Presentations

Articles

Sep 2023 Journal of Physiology – Invited Review – Mechanisms for the decline of explosive force with muscle disuse (currently writing)

Oral

Apr 2024 Biological Institute, Slovenian Academy of Science (Slovenia) – Explosive force: (Scheduled) mechanisms and scaling across sizes

Nov 2023 Max Planck Institute of Animal Behaviour (Germany) – Ballistic performance: what Nature can teach to Humans

Dec 2020 Invited – University of Queensland, Brisbane (Australia) – Muscle fatigue and performance at high altitude

Jul 2018 World Congress of Biomechanics (Ireland) – Jump Height is Maintained through Modifications in Jump Strategy during Simulated In-season Volleyball Competition

Mar 2018 Cardiovascular and Respiratory Symposium (Canada) – Acclimatization to High-altitude Attenuates Muscle Fatigue Induced by Electrically-evoked Contractions

Jul 2017 European College of Sport Science Annual Meeting (Germany) – Peripheral Fatigue and Mechanical Impulse Recovers Faster in Sherpa than Lowlanders at High Altitude

Apr 2013 British Association of Sport and Exercise Science Annual Conference (UK) – Validity, Reliability and Sensitivity of Two Commercially Available Leg Stiffness Measurement Devices

Poster

Jun 2018 Motoneuron Meeting (Colorado, USA) – Ascent to High-altitude Increases Motor Unit Discharge Rates but Does Not Affect Force Steadiness.

Jun 2017 American College of Sports Medicine Annual Meeting (Colorado, USA) – Acute Hypoxia Exacerbates Central Fatigue but Not the Fatigue-related Reduction in Motoneurone Responsiveness.

Mar 2017 International Hypoxia Symposium (Canada) – Central Fatigue Does Not Differ Between Lowlanders and Sherpa at High Altitude.

Media Interest and Public Outreach

Nov 2018 The Squamish Chief (Magazine) – UBC Researchers Study Resilience of Sherpa Muscle Tissue

Sep 2018 Kelowna News (Newspaper) – “Are You Fitter than a Sherpa?”

Sep 2018 UBC News (University News) – Lowlanders are no match for Nepal’s Sherpa

Mar 2017 Speaker in 3 Public Events to Present the Findings of the Nepal Research Expedition to High Altitude – Kelowna, Canada

Scientific Service

Reviewed Articles

Journal of Physiology (2), Journal of Biomechanics (2), Medicine and Science in Sports and Exercise (3), Journal of Applied Physiology (2), Experimental Physiology (1), Frontiers in Physiology (1), International Journal of Sport Science and Performance (1), PLoSOne (1), Brain Sciences (1), Pediatric Exercise Science (1)