Gaia Giuriato

MSc in Adapted Sport Science
PhD in Neuroscience

Verona

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Professional Appointments

Cultore della materia
SSD: MEDF-01/B
2023 – now

University of Verona
Dept. Of Neuroscience, Biomedicine and Movement
Cultore della materia (Teaching fellow) in Adapted Physical Activity

Postdoctoral Fellow
SSD: MEDF-01/B
Jan 2023 – Dec 2023
March 2025 – now

University of Verona
Dept. Of Neuroscience, Biomedicine and Movement
Advisor: Federico Schena
Advisor: Massimo Venturelli

Postdoctoral Fellow
SSD: MEDF-01/B
March 2024 – Feb 2025

University of Verona
Dept. Of Engineering for Innovation Medicine
Advisor: Federico Schena

Education

PhD in Neuroscience
Oct 2019 – July 2023

University of Verona
Neuroscience, Psychological, and Movement Sciences
Advisor: Massimo Venturelli
Dissertation: *Molecular and functional basis of sex difference in healthy young adults (Published with doi: 10.1249/MSS.0000000000003558 and 10.1111/apha.14118)*

MS in Preventive and Adapted Exercise Sciences
Oct 2016 – Nov 2018

University of Verona
Advisor: Massimo Venturelli, Antonio Cevese
Dissertation: *Blood flow regulation during exercise: the role of central command (Published with doi: 10.1152/japplphysiol.00898.2019)*
Grade: 110/110 cum laude

BS in Sport Science
Oct 2013 - July 2016

University of Verona
Advisor: Carlo Capelli, Enrico Tam
Dissertation: *Etiology of muscle cramps in humans: a review of the recent scientific literature (Published with doi: 10.1016/j.jelekin.2018.05.006)*

International Experience

Research Trainee for Prof. Ian Lanza
2022

Mayo Clinic (Rochester, MN, USA)
Division of Endocrinology, Nutrition, and Metabolism
- Learned the immunofluorescence method to analyze muscle fiber types
- Improved skills with the mitochondrial respiration analysis

PhD Visiting Student for Prof. Gwenael Layec

University of Massachusetts (Amherst, MA, USA)
Oxygen and Muscle Metabolism Laboratory

2020

- Learned to treat and perform muscle samples for mitochondrial respiration ex vivo
- Performed assessments in the MRI for mitochondria assessment in vivo
- One study published from this collaboration

Research Associate
for Prof. Stephen J. Ives
2018

Skidmore College (Saratoga Springs, NY, USA)
Health and Human Physiological Sciences

- Conducted a study to assess the effect of Capsaicin on fatigue in healthy humans
- Conducted a study to assess the effect of Capsaicin on the microcirculation in sex difference
- Five studies published from this collaboration

Teaching Experience

Conducting physical exercise for health - University of Modena and Reggio Emilia

MSc in Sport and Health
A.A. 2023/2024 – now: Professor on contract – 72 hours

Programming and conducting physical exercise - University of Verona

MSc in Preventive and Adapted Exercise Sciences
A.A. 2023/2024 - now: Professor on contract – 15 hours
A.A. 2022/2023: Teaching Assistant (Lab section)

Adapted Physical Activity – University of Verona

BSc in Sport Science
A.A. 2022/2023 to 2023/2024: Teaching assistant (Lecturer)
A.A. 2018/2019 to 2021/2022: Head Teaching Assistant (Lab section)

Master's in Exercise programming for exercise-sensitive pathologies (Exercise therapy) – University of Verona

2nd grade Master
2024: Lecturer (Exercise in Diabetes type 2)

Master of Research in Movement Sciences - University of Verona

2nd grade Master
A.A. 2022/2023: Lecturer (Bibliographical research)

Skills

- Neuromuscular fatigue assessments (using transcranial magnetic stimulation and electrical stimulation)
- Hemodynamic assessments (using ultrasound, ECG and blood pressure monitors)
- Muscle analysis (mitochondrial metabolism ex vivo with the respirometer and in vivo with the NIRS and MRI, immunofluorescence for fiber typing)
- Performance assessments (force and endurance)

Awards and Honors

Prize "Young Researcher in Physiology 2024" – Catania, 22-24 May 2024
Awarded by the Italian Society of Physiology (SIF) at the Annual Meeting of Young Researchers in Physiology (YRP)

9^ edition "Fondo Gianesini Emma" 2022 - 35000€
Project: "The kinetics of frailty: ways to counteract physiological decline with physical exercise"
Host Institution: University of Liverpool – MRC-Versus Arthritis Centre for Integrated Research into Musculoskeletal Ageing

COOPERINT 2019 (University of Verona) - 5000€
Project: "The effect of nitrate supplementation during exercise in COPD patients."
Host Institution: UMASS Amherst, Department of Kinesiology and Institute of Applied Life Sciences (USA)

Scholarships

University of Verona Oct 2018 – Sept 2019	Dept. Of Neuroscience, Biomedicine and Movement Project: Marcatori bio-funzionali della fragilità fisica e cognitiva

Professional Affiliations

- American Physiological Society (APS)
- American College of Sport Medicine (ACSM)
- European College of Sport Science (ECSS)
- Institute of Myology (IIM)
- Società italiana Scienze Motorie e Sportive (SISMES)

Language

- Italian: native
- English: professional working proficiency (speaking, writing, reading, and listening)
- Portuguese: Limited working proficiency (reading, listening), elementary proficiency (speaking, writing)

Scientific Publications

1. **Giuriato, G.,** Barbi, C., Laginestra, F. G., …, & Venturelli, M. (2024). Mitochondrial Influence on Performance Fatigability: Considering Sex Variability. *Medicine and science in sports and exercise*, 10.1249/MSS.0000000000003558. Advance online publication. https://doi.org/10.1249/MSS.0000000000003558
2. Matias, A. A., Serviente, C. F., Decker, S. T., Erol, M. E., **Giuriato, G.,** …, & Layec, G. (2024). Repeatability of alkaline inorganic phosphate quantification in the skeletal muscle using ^{31}P-magnetic resonance spectroscopy at 3 T. *NMR in biomedicine*, e5255. Advance online publication. https://doi.org/10.1002/nbm.5255
3. Zambolin, F., Laginestra, F. G., Favaretto, T., **Giuriato, G.,** …, & Venturelli, M. (2024). Activation of skeletal muscle mechanoreceptors and nociceptors reduces the exercise performance of the contralateral homologous muscles. *American journal of physiology. Regulatory, integrative and comparative physiology*, 10.1152/ajpregu.00069.2024. Advance online publication. https://doi.org/10.1152/ajpregu.00069.2024

4. **Giuriato, G.**, Ives, S. J., Tarperi, C., …, & Venturelli, M. (2024). Central and peripheral haemodynamics at exercise onset: the role of central command. European journal of applied physiology, 10.1007/s00421-024-05513-3. https://doi.org/10.1007/s00421-024-05513-3

5. Greaves LM, Zaleski KS, Matias AA, Gyampo AO, **Giuriato G**, …, Ives SJ. (2024) Limb, sex, but not acute dietary capsaicin, modulate the near-infrared spectroscopy-vascular occlusion test estimate of muscle metabolism. Physiol Rep. 2024 Mar;12(6):e15988. https://doi.org/10.14814/phy2.15988

6. **Giuriato, G.**, Romanelli, M. G., Bartolini, D, … Venturelli, M. (2024). Sex differences in neuromuscular and biological determinants of isometric maximal force. Acta physiologica (Oxford, England), e14118. Advance online publication. https://doi.org/10.1111/apha.14118

7. Barbi, C., Temesi, J., **Giuriato, G.**, … & Vernillo, G. (2024). Skeletal muscle fiber type and TMS-induced muscle relaxation in unfatigued and fatigued knee-extensor muscles. American journal of physiology. Regulatory, integrative and comparative physiology, 10.1152/ajpregu.00174.2023. Advance online publication. https://doi.org/10.1152/ajpregu.00174.2023

8. Barbi, C., Vernillo, G., Emadi Andani, M., **Giuriato, G.**, … & Venturelli, M. (2023). Comparison between conventional and neuronavigated strategies to assess corticospinal responsiveness in unfatigued and fatigued knee-extensor muscles. Neuroscience letters, 811, 137351. https://doi.org/10.1016/j.neulet.2023.137351

9. Laginestra, F. G., Favaretto, T., **Giuriato, G.**, … & Venturelli, M. (2023). Concurrent metaboreflex activation increases chronotropic and ventilatory responses to passive leg movement without sex-related differences. European journal of applied physiology, 123(8), 1751–1762. https://doi.org/10.1007/s00421-023-05186-4

10. Zaleski, K. S., Gyampo, A. O., Lora, B., Tomasi, T., Lynch, M., **Giuriato, G.**, Basso, E., Finegan, E., Schickler, J., Venturelli, M., DeBlauw, J., & Ives, S. J. (2023). Sex differences in estimates of cardiac autonomic function using heart rate variability: effects of dietary capsaicin. European journal of applied physiology, 10.1007/s00421-023-05136-0. Advance online publication. https://doi.org/10.1007/s00421-023-05136-0

11. Pedrinolla, A., Cavedon, V., Milanese, C., Barbi, C., **Giuriato, G.**, Laginestra, F. G., Martignon, C., Schena, F., & Venturelli, M. (2022). The role of muscle mass in vascular remodeling: insights from a single-leg amputee model. European journal of applied physiology, 10.1007/s00421-022-05076-1. Advance online publication. https://doi.org/10.1007/s00421-022-05076-1

12. Zaleski, K., Matias, A., Gyampo, A., **Giuriato, G.**, Lynch, M., Lora, B., ... & Ives, S. J. (2023). Does sex influence near-infrared spectroscopy-derived indicators of microvascular reactivity and the response to acute dietary capsaicin. Microvascular Research, 145, 104436. https://doi.org/10.1016/j.mvr.2022.104436

13. Zambolin, F., **Giuriato, G.**, Laginestra, F. G., ... & Venturelli, M. (2022). Effects of nociceptive and mechanosensitive afferents sensitization on central and peripheral hemodynamics following exercise-induced muscle damage. Journal of Applied Physiology, 133(4), 945-958. Advance online publication. https://doi.org/10.1152/japplphysiol.00302.2022

14. **Giuriato, G.**, Paneroni, M., Venturelli, M., & Layec, G. (2022). Strategies targeting the NO pathway to counteract extra-pulmonary manifestations of COPD: A systematic review and meta-analysis. Nitric oxide : biology and chemistry, 128, 59–71. Advance online publication. https://doi.org/10.1016/j.niox.2022.08.004

15. Laginestra, F. G., Cavicchia, A., Vanegas-Lopez, J. E., Barbi, C., Martignon, C., **Giuriato, G.**, Pedrinolla, A., Amann, M., Hureau, T. J., & Venturelli, M. (2022). Prior Involvement of Central Motor Drive does not Impact Performance and Neuromuscular Fatigue in a Subsequent Endurance Task. Medicine and science in sports and exercise. Advance online publication. https://doi.org/10.1249/MSS.0000000000002965

16. Barbi, C., Pizzini, F. B., Tamburin, S., Martini, A., Pedrinolla, A., Laginestra, F. G., **Giuriato, G.**, Martignon, C., Schena, F., & Venturelli, M. (2022). Brain Structural and Functional Alterations in Multiple Sclerosis-Related Fatigue: A Systematic Review. Neurology international, 14(2), 506–535. https://doi.org/10.3390/neurolint14020042

17. Vernillo, G., Barbi, C., Temesi, J., **Giuriato, G.**, …, & Venturelli, M. (2022). Reliability of relaxation properties of knee-extensor muscles induced by transcranial magnetic stimulation. Neuroscience letters, 782, 136694. https://doi.org/10.1016/j.neulet.2022.136694

18. Martignon, C., Pedrinolla, A., Laginestra, F. G., **Giuriato, G.**, Saggin, P., Tinazzi, M., Schena, F., & Venturelli, M. (2022). Does Parkinson's disease affect peripheral circulation and vascular function in physically active patients?. Journal of applied physiology (Bethesda, Md.: 1985), 132(5), 1223–1231. https://doi.org/10.1152/japplphysiol.00030.2022

19. **Giuriato, G.,** Venturelli, M., Matias, A., Soares, E. M., Gaetgens, J., Frederick, K. A., & Ives, S. J. (2022). Capsaicin and Its Effect on Exercise Performance, Fatigue and Inflammation after Exercise. Nutrients, 14(2), 232.

20. Martignon, C., Laginestra, F. G., **Giuriato, G.**, Pedrinolla, A., Barbi, C., DI Vico, I. A., Tinazzi, M., Schena, F., & Venturelli, M. (2022). Evidence that Neuromuscular Fatigue Is not a Dogma in Patients with Parkinson's Disease. Medicine and science in sports and exercise, 54(2), 247–257. https://doi.org/10.1249/MSS.0000000000002791

21. Martignon, C., Ruzzante, F., **Giuriato, G.,** ... & Venturelli, M. (2021). The key role of physical activity against the neuromuscular deterioration in patients with Parkinson's disease. Acta Physiologica, 231(4), e13630. https://doi.org/10.1111/apha.13630

22. Martignon, C., Pedrinolla, A., Ruzzante, F., **Giuriato, G.**, Laginestra, F. G., Bouça-Machado, R., ... & Venturelli, M. (2021). Reply to the Letter "What does characterize exercise guidelines for Parkinson's disease?". Aging Clinical and Experimental Research, 33(3), 677-678. https://doi.org/10.1007/s40520-020-01770-2

23. Martignon, C., Pedrinolla, A., Ruzzante, F., **Giuriato, G.,** Laginestra, F. G., Bouça-Machado, R., ... & Venturelli, M. (2021). Guidelines on exercise testing and prescription for patients at different stages of Parkinson's disease. Aging Clinical and Experimental Research, 33, 221-246. https://doi.org/10.1007/s40520-020-01612-1

24. Laginestra, F. G., Amann, M., Kirmizi, E., **Giuriato, G,** …, & Venturelli, M. (2021). Electrically induced quadriceps fatigue in the contralateral leg impairs ipsilateral knee extensors performance. American journal of physiology. Regulatory, integrative and comparative physiology, 320(5), R747–R756. https://doi.org/10.1152/ajpregu.00363.2020

25. Fochi, S., **Giuriato, G.**, De Simone, T., Gomez-Lira, M., Tamburin, S., Del Piccolo, L., Schena, F., Venturelli, M., & Romanelli, M. G. (2020). Regulation of microRNAs in Satellite Cell Renewal, Muscle Function, Sarcopenia and the Role of Exercise. International journal of molecular sciences, 21(18), 6732. https://doi.org/10.3390/ijms21186732

26. Pedrinolla, A., Venturelli, M., Fonte, C., Tamburin, S., Di Baldassarre, A., Naro, F., Varalta, V., **Giuriato, G.**, Ghinassi, B., Muti, E., Smania, N., & Schena, F. (2020). Exercise training improves vascular function in patients with Alzheimer's disease. European journal of applied physiology, 120(10), 2233–2245 https://doi.org/10.1007/s00421-020-04447-w

27. **Giuriato, G.**, Ives, S. J., Tarperi, C., Bortolan, L., …, & Venturelli, M. (2020). - Timed synchronization of muscle contraction to heartbeat enhances muscle hyperemia. - Journal of applied physiology (Bethesda, Md.: 1985), 128(4), 805–812. https://doi.org/10.1152/japplphysiol.00898.2019

28. **Giuriato, G.**, Gundersen, A., Verma, S., Pelletier, E., Bakewell, B., & Ives, S. J. (2020). - The Effects of Chest Wall Loading on Perceptions of Fatigue, Exercise Performance, Pulmonary Function, and Muscle Perfusion. - Sports (Basel, Switzerland), 8(1), 3. https://doi.org/10.3390/sports8010003

29. Cavedon, V., Milanese, C., Laginestra, F. G., **Giuriato, G.**, Pedrinolla, A., Ruzzante, F., Schena, F., & Venturelli, M. (2020). - Bone and skeletal muscle changes in oldest-old women: the role of physical inactivity. - Aging clinical and experimental research, 32(2), 207–214. https://doi.org/10.1007/s40520-019-01352-x

30. **Giuriato, G.,** Pedrinolla, A., Schena, F., & Venturelli, M. (2018). Muscle cramps: A comparison of the two-leading hypothesis. Journal of electromyography and kinesiology: official journal of the International Society of Electrophysiological Kinesiology, 41, 89–95. https://doi.org/10.1016/j.jelekin.2018.05.006

Verona, 21.05.2025