

Current Position & Teaching

Associate Professor (Profesora Titular de Universidad); Head of the Exercise Physiology Laboratory (LFE); Head of the LFE Research Group.

Department of Health and Human Performance, Faculty of Sciences for Physical Activity and Sports (INEF) Universidad Politécnica de Madrid (UPM), Madrid, Spain.

Teaching: Human Physiology and Exercise Physiology across undergraduate and master's programs; supervision and mentoring of PhD/master/undergraduate students; design of practical lab sessions (lactate, cardiovascular fitness, DXA, etc.).

Education

PhD in Physical Activity and Sport Sciences (International Mention), UPM, 2010. *Sobresaliente Cum Laude* and Doctorate Extraordinary Award.

Master in Physical Activity and Sport Sciences, UPM, 2006.

Bachelor in Physical Activity and Sport Sciences, UPM, 2005.

Brief Academic & Research Trajectory

I have participated in over 15 research projects, authored of 90+ peer-reviewed publications (60+ JCR) and >100 national and international conference communications. I have led projects on bicarbonate and performance, physiological profiling in cycling, and antioxidant effects on hepcidin regulation. I am the Principal Investigator of the *IronFEMME project* (Plan Nacional DEP2016-75387-P). I have completed three pre-doctoral research stays and three post-doctoral research stays — two at Mayo Clinic (USA) with Dr Joyner, and one at Griffith University (Australia) with Dr Xanne Janse de Jonge. I have supervised 10 PhD (five with Doctorate Extraordinary Award). Exercise Physiology researcher and educator with >15 years of experience in female athlete physiology, iron metabolism, exercise-induced muscle damage, and performance.

Metrics: h-index: 25, cited >1070 times (Google Scholar Nov 2025).

Major Research Projects

- *IronFEMME Project—IRON and muscular damage: Female Metabolism and Menstrual cycle during*. Principal Investigator. Funded by the Spanish National Plan for Research, Development and Innovation (DEP2016-75387).
- Project on bicarbonate supplementation and performance in endurance sports (Role: Principal Investigator).
- Project on physiological profiling in elite cycling (Role: Principal Investigator).
- Project on antioxidant effects in exercise-induced hepcidin regulation (Role: Principal Investigator).
- Contributor/Co-PI in >15 competitive projects within the LFE group.

Research Stays & International Collaboration

- 2012 Post-doctoral stay at Mayo Clinic (USA) with Dr Michael Joyner— focus on integrative physiology and performance.
- 2015 Post-doctoral stay at Mayo Clinic (USA) with Dr Michael Joyner— second period, expanded collaboration.
- 2025 Post-doctoral stay at Griffith University (Australia) with Dr Xanne Janse de Jonge – focus on women, hormones and exercise.
- Three Pre-doctoral stays at international institutions (2007-2008) University of Helsinki (Finland), University of Copenhagen (Denmark) and École Polytechnique Fédérale de Lausanne (Switzerland).

Selected publications of the last 5 years relevant to proposed symposium (PubMed indexed)

(Full list of publications available on PubMed or Google Scholar

<https://scholar.google.com/citations?user=oo4KsVqAAAAJ&hl=en>)

- Romero-Moraleda B, Morencos-Martínez E, Varón P, Lara B, Jiménez-Ormeño E, Peinado AB, González-García J. The influence of menstrual cycle phase on neuromuscular performance and subjective perception of effort in elite football players. *Biol Sport*. 2025 Jan 20;42(3):89-98. doi: 10.5114/biolSport.2025.146781.
- Guisado-Cuadrado I, Romero-Parra N, Cupeiro R, Elliott-Sale KJ, Sale C, Peinado AB. Effect of eccentric-based resistance exercise on bone (re)modelling markers across the menstrual cycle and oral contraceptive cycle. *Eur J Appl Physiol*. 2025 May;125(5):1463-1473. doi: 10.1007/s00421-024-05693-y.
- Guisado-Cuadrado I, Romero-Parra N, Elliott-Sale KJ, Sale C, Díaz ÁE, Peinado AB. Influence of Menstrual Cycle and Oral Contraceptive Phases on Bone (re)modelling Markers in Response to Interval Running. *Calcif Tissue Int*. 2024 Oct;115(4):382-392. doi: 10.1007/s00223-024-01259-4.
- Guisado-Cuadrado I, Alfaro-Magallanes VM, Romero-Parra N, Rael B, Guadalupe-Grau A, Peinado AB. Influence of sex hormones status and type of training on regional bone mineral density in exercising females. *Eur J Sport Sci*. 2023 Nov;23(11):2139-2147. doi: 10.1080/17461391.2023.2211947.

- Benito PJ, Alfaro-Magallanes VM, Rael B, Castro EA, Romero-Parra N, Rojo-Tirado MA, Peinado AB; IronFEMME Study Group. Effect of Menstrual Cycle Phase on the Recovery Process of High-Intensity Interval Exercise-A Cross-Sectional Observational Study. *Int J Environ Res Public Health*. 2023 Feb 13;20(4):3266. doi: 10.3390/ijerph20043266.
- Alfaro-Magallanes VM, Barba-Moreno L, Romero-Parra N, Rael B, Benito PJ, Swinkels DW, Laarakkers CM, Díaz ÁE, Peinado AB; IronFEMME Study Group. Menstrual cycle affects iron homeostasis and hepcidin following interval running exercise in endurance-trained women. *Eur J Appl Physiol*. 2022 Dec;122(12):2683-2694. doi: 10.1007/s00421-022-05048-5.
- Castro EA, Rael B, Romero-Parra N, Alfaro-Magallanes VM, Rojo-Tirado MA, García-de-Alcaraz A, Cupeiro R, Peinado AB; IronFEMME Study Group. Influence of oral contraceptive phase on cardiorespiratory response to exercise in endurance-trained athletes. *Eur J Contracept Reprod Health Care*. 2022 Aug;27(4):308-316. doi: 10.1080/13625187.2021.2021176.
- Alfaro-Magallanes VM, Romero-Parra N, Barba-Moreno L, Rael B, Benito PJ, Díaz ÁE, Cupeiro R, Peinado AB; IronFEMME Study Group. Serum iron availability, but not iron stores, is lower in naturally menstruating than in oral contraceptive athletes. *Eur J Sport Sci*. 2023 Feb;23(2):231-240. doi: 10.1080/17461391.2021.2018503.
- Romero-Parra N, Maestre-Cascales C, Marín-Jiménez N, Rael B, Alfaro-Magallanes VM, Cupeiro R, Peinado AB. Exercise-Induced Muscle Damage in Postmenopausal Well-Trained Women. *Sports Health*. 2021 Nov-Dec;13(6):613-621. doi: 10.1177/19417381211014134.
- Peinado AB, Alfaro-Magallanes VM, Romero-Parra N, Barba-Moreno L, Rael B, Maestre-Cascales C, Rojo-Tirado MA, Castro EA, Benito PJ, Ortega-Santos CP, Santiago E, Butragueño J, García-de-Alcaraz A, Rojo JJ, Calderón FJ, García-Bataller A, Cupeiro R. Methodological Approach of the Iron and Muscular Damage: Female Metabolism and Menstrual Cycle during Exercise Project (IronFEMME Study). *Int J Environ Res Public Health*. 2021 Jan 16;18(2):735. doi: 10.3390/ijerph18020735.
- Rael B, Alfaro-Magallanes VM, Romero-Parra N, Castro EA, Cupeiro R, Janse de Jonge XAK, Wehrwein EA, Peinado AB. Menstrual Cycle Phases Influence on Cardiorespiratory Response to Exercise in Endurance-Trained Females. *Int J Environ Res Public Health*. 2021 Jan 20;18(3):860. doi: 10.3390/ijerph18030860.
- Rael B, Barba-Moreno L, Romero-Parra N, Alfaro-Magallanes VM, Castro EA, Cupeiro R, Peinado AB; IronFEMME Study Group. Cardiorespiratory response to exercise in endurance-trained premenopausal and postmenopausal females. *Eur J Appl Physiol*. 2021 Mar;121(3):903-913. doi: 10.1007/s00421-020-04574-4.
- Alfaro-Magallanes VM, Benito PJ, Rael B, Barba-Moreno L, Romero-Parra N, Cupeiro R, Swinkels DW, Laarakkers CM, Peinado AB, On Behalf Of The IronFEMME Study Group. Menopause Delays the Typical Recovery of Pre-Exercise Hepcidin Levels after High-Intensity Interval Running Exercise in Endurance-Trained Women. *Nutrients*. 2020 Dec 17;12(12):3866. doi: 10.3390/nu12123866.
- Romero-Parra N, Rael B, Alfaro-Magallanes VM, Janse de Jonge X, Cupeiro R, Peinado AB; IronFEMME Study Group. The Effect of the Oral Contraceptive Cycle Phase on Exercise-Induced Muscle Damage After Eccentric Exercise in Resistance-Trained Women. *J Strength Cond Res*. 2021 Feb 1;35(2):353-359. doi: 10.1519/JSC.0000000000003897.
- Barba-Moreno L, Alfaro-Magallanes VM, de Jonge XAKJ, Díaz AE, Cupeiro R, Peinado AB. Hepcidin and interleukin-6 responses to endurance exercise over the menstrual cycle. *Eur J Sport Sci*. 2022 Feb;22(2):218-226. doi: 10.1080/17461391.2020.1853816.
- Alfaro-Magallanes VM, Barba-Moreno L, Rael B, Romero-Parra N, Rojo-Tirado MA, Benito PJ, Swinkels DW, Laarakkers CM, Díaz ÁE, Peinado AB. Hepcidin response to interval running exercise is not affected by oral contraceptive phase in endurance-trained women. *Scand J Med Sci Sports*. 2021 Mar;31(3):643-652. doi: 10.1111/sms.13894.
- Romero-Parra N, Cupeiro R, Alfaro-Magallanes VM, Rael B, Rubio-Arias JÁ, Peinado AB, Benito PJ; IronFEMME Study Group. Exercise-Induced Muscle Damage During the Menstrual Cycle: A Systematic Review and Meta-Analysis. *J Strength Cond Res*. 2021 Feb 1;35(2):549-561. doi: 10.1519/JSC.0000000000003878.
- Rael B, Romero-Parra N, Alfaro-Magallanes VM, Barba-Moreno L, Cupeiro R, Janse de Jonge X, Peinado AB; IronFEMME Study Group. Body Composition Over the Menstrual and Oral Contraceptive Cycle in Trained Females. *Int J Sports Physiol Perform*. 2021 Mar 1;16(3):375-381. doi: 10.1123/ijsp.2020-0038. Epub 2020 Oct 1.
- Romero-Parra N, Alfaro-Magallanes VM, Rael B, Cupeiro R, Rojo-Tirado MA, Benito PJ, Peinado AB; IronFEMME Study Group. Indirect Markers of Muscle Damage Throughout the Menstrual Cycle. *Int J Sports Physiol Perform*. 2021 Feb 1;16(2):190-198. doi: 10.1123/ijsp.2019-0727.
- Romero-Parra N, Barba-Moreno L, Rael B, Alfaro-Magallanes VM, Cupeiro R, Díaz ÁE, Calderón FJ, Peinado AB. Influence of the Menstrual Cycle on Blood Markers of Muscle Damage and Inflammation Following Eccentric Exercise. *Int J Environ Res Public Health*. 2020 Mar 2;17(5):1618. doi: 10.3390/ijerph17051618.
- Barba-Moreno L, Cupeiro R, Romero-Parra N, Janse de Jonge XAK, Peinado AB. Cardiorespiratory Responses to Endurance Exercise Over the Menstrual Cycle and With Oral Contraceptive Use. *J Strength Cond Res*. 2022 Feb 1;36(2):392-399. doi: 10.1519/JSC.0000000000003447.