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Curriculum Vitae

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Research Interest/Topics

My research program explores the mechanistic basis of human neurovascular control and how prevalent diseases such as hypertension and heart failure strike and impair autonomic and vascular function. Through an integrative approach that includes cutting-edge assessment of autonomic/vascular function (such as Microneurography, Doppler ultrasonography, and nuclear imaging) and the application of pharmacological/invasive procedures in human subjects, the ultimate goal of my research program relies on identifying therapeutic targets and proposing potential interventions to prevent, treat or restore neurovascular function in clinical populations.

Published or In-press Refereed Articles (44 manuscripts, 775 citations, h-index – 15*)

1. #**Fernandes IA**, Teixeira AL, Secher NH. The Journal of Physiology and the odyssey of "neural control of the circulation during exercise". *J Physiol*, 600: 2825–2826, 2022. **Impact Factor 2022: 6.228** *This manuscript is an editorial that celebrates the 600th volume of the Journal.*
2. Garcia VP, Rocha HNM, Rocha MP, Mattos JD, Campos MO, Mansur DE, Nóbrega ACL, Secher NH, **Fernandes IA**, Rocha NG. Acute isocapnic hyperoxia affects vascular remodeling and cell adhesion molecules in healthy men. *Brazilian Journal of Medical and Biological Research* (2022, in press). **Impact Factor 2022: 2.904**
3. Teixeira AL, Nardone M, Samora M, Fernandes IA, Ramos PS, Sabino-Carvalho JL, Ricardo DR, Millar PJ, Vianna LC. Potentiation of GABAergic synaptic transmission by diazepam acutely increases resting beat-to-beat blood pressure variability in young adults. *Am J Physiol Regul Integr Comp Physiol*, 322: R501–R510, 2022. **Impact Factor 2022: 3.210**
4. Coutinho-Wolino KS, Cruz BC, Cardozo LFMF, **Fernandes IA**, Mesquita CT, Stenvinkel P, Bergman P, Mafra D, Stockler-Pinto MB. Effects of Brazil Nut (*Bertholletia excelsa* H.B.K.) supplementation on Trimethylamine-N-Oxide plasma levels in patients with coronary artery disease. *J Food Biochem*, 46, 8: e14201. **Impact Factor 2022: 3.654**
5. Teixeira AL, **Fernandes IA**, Millar P, Vianna LC. GABA_A receptor activation modulates the muscle sympathetic nerve activity responses at the onset of static exercise in humans. *J Appl Physiol*, 131: 1138-1147, 2021. **Impact Factor 2020: 3.880**
6. #**Fernandes IA**, Mattos JD, Campos MO, Rocha MP, Mansur DE, Rocha HNM, Garcia VP, Rocha NG, Alvares TS, Secher NH, Nóbrega ACL. Reactive oxygen species play a modulatory role in the hyperventilatory response to poikilocapnic hyperoxia in humans. *J Physiol*, 599: 3799-4007, 2021 **Impact Factor 2022: 6.228**
7. #**Fernandes IA** and Vianna LC. Passive cycling with concomitant circulatory occlusion for testing interactions between the exercise pressor reflex afferent pathways: (re)naissance or déjà vu? *Clin Auton Res*, 30: 589-590, 2020 **Impact Factor 2022: 5.625**
8. #**Fernandes IA**. Unravelling one more piece of the erythrocytes-vascular function puzzle in humans: does the double-edged sword have NO sharper side? *J Physiol*, 598: 4137-4138, 2020. *This manuscript is a perspective article I was invited to write on a paper I peer-reviewed for the Journal.* **Impact Factor 2022: 6.228**
9. Rocha MP, Campos MO, Mattos JD, Mansur DEJ, Rocha H, Secher NH, Nóbrega ACL, #**Fernandes IA**. KATP channels modulate cerebral blood flow and oxygen delivery during isocapnic hypoxia in humans. *J Physiol*, 598: 3343-3356, 2020. *This manuscript was highlighted in a perspective article (<https://doi.org/10.1113/JP280244>), I was also invited to contribute to the Physiology Shorts video project of the Journal of Physiology, briefly discussing this manuscript's key points (<https://physoc.onlinelibrary.wiley.com/hub/journal/14697793/PhysiologyShorts>).* **Impact Factor 2022: 6.228**
10. Teixeira A, **Fernandes IA**, Vianna LC. Cardiovascular control during exercise: the connectivity of skeletal muscle afferents to the brain. *Exerc Sport Sci Rev*, 48(2):83-91, 2020. *This manuscript was highlighted on the cover of the April issue of the Journal.* **Impact Factor 2022: 6.642**
11. Garcia VP, Rocha HNM, Rocha MP, Mattos JD, Campos MO, Mansur DE, Nóbrega ACL, Secher NH, **Fernandes IA**, Rocha NG. Hypertension impairs hypoxia-induced angiogenesis in men. *J Hypertens*, 38: 1131-1139, 2020. **Impact Factor 2022: 4.776**
12. Mattos JD, Campos MO, Rocha MP, Mansur DE, Rocha HNM, Garcia VP, Rocha NG, Alvares TS, Secher NH, Nóbrega ACL, #**Fernandes IA**. Differential vasomotor responses to isocapnic hyperoxia: Cerebral vs. Peripheral circulation. *Am J Physiol*

Regul Integr Comp Physiol, 318: R182-R187, 2020. **Impact Factor 2022: 3.210**

13. Campos MO, Mansur DEJ, Mattos J, Rocha MP, Rocha NG, Nóbrega ACL, #Fernandes IA. Acid-sensing ion channels blockade attenuates pressor and sympathetic responses to skeletal muscle metaboreflex activation in humans. *J Appl Physiol*, 127: 1491-1501, 2019. **Impact Factor 2022: 3.880**
14. Teixeira A, Fernandes IA, Vianna LC. GabaA receptors modulate sympathetic and pressor responses to skeletal muscle metaboreflex activation in humans. *J Physiol*, 597: 139–4150, 2019 **Impact Factor 2022: 6.228**
15. Storch AS, Rocha HNM, Garcia VP, Batista GMDS, Mattos JD, Campos MO, Nóbrega ACLD, Fernandes IA, Rocha NG. Inflammatory and oxidative responses to disturbed flow in hypertensive men. *Hypertension Research*, 42(11): 1832-1835, 2019. **Impact Factor 2022: 5.528**
16. Campos MO, Miranda S, Ribeiro M, Braghirolli AMS, Mesquita CT, Nóbrega, ACL, #Fernandes IA. Transcutaneous electrical nerve stimulation attenuates cardiac sympathetic drive in heart failure: A 123MIBG myocardial scintigraphy randomized controlled trial. *Am J Physiol Heart Circ Physiol*, 317: H226–H233, 2019. **Impact Factor 2022: 5.125**
17. Vianna LC, Fernandes IA, Martinez DG, Teixeira AL, Silva BM, Fadel PJ, Nóbrega ACL. Interpreting water drinking impact on arterial baroreflex function: when physiology speaks by itself. *Exp Physiol*, 104: 781-782, 2019. **Impact Factor 2022: 2.858**
18. Mattos JD, Campos MO, Rocha MP, Mansur DE, Rocha HNM, Garcia VP, Batista G, Alvares TS, Oliveira GV, Souza MV, Videira RLR, Rocha NG, Secher NH, Nóbrega ACL, #Fernandes IA. Human brain blood flow and metabolism during isocapnic hyperoxia: The role of reactive oxygen species. *J Physiol*, 597: 741-755, 2019. **This manuscript was highlighted in a perspective article (<https://doi.org/10.1113/JP277475>). Impact Factor 2022: 6.228**
19. Mansur DEJ, Campos MO, Mattos JD, Rocha MP, Macefield V, Nóbrega ACL, #Fernandes IA. Muscle sympathetic nerve activity and hemodynamic regulation in response to venous distension: Does sex play a role? *Am J Physiol Heart Circ Physiol*, 316: H734-H742, 2019. **Impact Factor 2022: 5.125**
20. Storch AS, Rocha HNM, Garcia VP, Batista GMDS, Mattos JD, Campos MO, Fuly AL, Nóbrega ACLD, Fernandes IA, Rocha NG. Oscillatory shear stress induces hemostatic imbalance in healthy men. *Thromb Res*, 170:119-125, 2018. **Impact Factor 2022: 10.407**
21. Rocha H, Garcia V, Batista G, Silva G, Mattos J, Campos MO, Nóbrega AC, Fernandes IA, Rocha N. Disturbed blood flow induces endothelial apoptosis without mobilizing repair mechanisms in hypertension. *Life Sci*, 209:103-110, 2018. **Impact Factor 2022: 6.780**
22. Vianna LC, Fernandes IA, Martinez DG, Teixeira AL, Silva BM, Fadel PJ, Nóbrega ACL. Water drinking enhances the gain of arterial baroreflex control of muscle sympathetic nerve activity in healthy humans. *Exp Physiol*, 103:1318-1325, 2018. **Impact Factor 2022: 2.858**
23. #Fernandes IA, Rocha MP, Campos MO, Mattos JD, Mansur DEJ, Rocha HM, Terra P, Garcia V, Rocha NG, Secher NH, Nóbrega ACL. Reduced arterial vasodilatation in response to isocapnic hypoxemia impairs peripheral and cerebral oxygen delivery in hypertensive humans. *J Physiol*, 596: 1167-1179, 2018. **This manuscript was an Editor's Choice article from the April 2018 issue and was highlighted by a perspective paper (<https://doi.org/10.1113/JP275984>). This article was one of the finalists of the Early Investigator Prize of the Journal of Physiology, 2018. It also called news outlets' attention, such as the Medical X press, The Science Daily, and the EurekaAlert! (<https://wiley.altmetric.com/details/33494698/news>). Impact Factor 2022: 6.228**
24. Vianna LC, Fernandes IA, Barbosa TC, Amaral T, Rocha NG, Secher NH, Nóbrega ACL. Regional differences in the cerebral vasodilator response to L-arginine in hypertensive men. *Am J Physiol Regul Integr Comp Physiol*, 315: R820-R824, 2018. **Impact Factor 2022: 3.210**
25. Vianna LC, Fernandes IA, Barbosa T, Teixeira AL, Nóbrega ACL. Capsaicin-based analgesic balm attenuates the skeletal muscle metaboreflex in humans. *J Appl Physiol*, 125: 362-368, 2018 **Impact Factor 2022: 3.880**
26. Gomes PSC, Campos MO, Oliveira LF, Mello R, Fernandes IA. Whole-body vibration does not seem to affect postural control in healthy, active older women. *Rehabil Res Pract*, 23: 2018:5798265, 2018.

27. **Fernandes IA**, Mattos JD, Campos MO, Machado AC, Rocha MP, Rocha NG, Vianna LC, Nóbrega AC. Selective α 1-adrenergic blockade disturbs the regional distribution of cerebral blood flow during static handgrip exercise. *Am J Physiol Heart Circ Physiol*, 310: H1541-8, 2016. **Impact Factor 2022: 5.125**
28. Paiva FM, Vianna LC, **Fernandes IA**, Nóbrega AC, Lima RM. Effects of disturbed blood flow during exercise on endothelial function: a time-course analysis. *Braz J Med Biol Res*, 49: e5100, 2016. **Impact Factor 2022: 2.904**
29. Prodel E, Fisher JP, Barbosa TC, **Fernandes IA**, Nóbrega AC, Vianna LC. Relationship between aortic augmentation index and blood pressure during metaboreflex activation in healthy young men. *Blood Press Monit*, 21: 288-94, 2016. **Impact Factor 2022: 1.430**
30. Barbosa TC, Vianna LC, **Fernandes IA**, Prodel E, Rocha HN, Garcia VP, Rocha NG, Secher NH, Nóbrega AC. Intrathecal fentanyl abolishes the exaggerated blood pressure response to cycling in hypertensive men. *J Physiol*, 594: 715-25, 2016. **Impact Factor 2022: 6.228**
31. Barbosa TC, **Fernandes IA**, Magalhães-Jr N, Cavalcanti IL, Secher NH, Nóbrega AC, Vianna LC. Oscillatory blood pressure response to the onset of cycling exercise in men: role of group III/IV muscle afferents. *Exp Physiol*, 100: 302-11, 2015. **Impact Factor 2022: 2.858**
32. Fisher JP, **Fernandes IA**, Barbosa TC, Prodel E, Coote JH, Nóbrega AC, Vianna LC. Diving and exercise: the interaction of trigeminal receptors and muscle metaboreceptors on muscle sympathetic nerve activity in humans. *Am J Physiol Heart Circ Physiol*, 308: H367-75, 2015. **Impact Factor 2022: 5.125**
33. **Fernandes IA**, Vianna LC, Freitas RA, Miranda SM, Mesquita ET, Mesquita CT, da Nóbrega AC. Statin therapy and cardiac sympathetic activity in patients with heart failure: a 123iodine- metaiodobenzylguanidine myocardial scintigraphy study. *Int J Cardiol*, 176: 1181-3, 2014. **Impact Factor 2022: 4.039**
34. Matta TT, Nascimento FX, **Fernandes IA**, Oliveira LF. Heterogeneity of rectus femoris muscle architectural adaptations after two different 14-week resistance-training programs. *Clin Physiol Funct Imaging*, 35: 210-5, 2015. **Impact Factor 2022: 2.121**
35. Barbosa TC, Machado AC, Braz ID, **Fernandes IA**, Vianna LC, Nóbrega AC, Silva BM. Remote ischemic preconditioning delays fatigue development during handgrip exercise. *Scand J Med Sci Sports*, 25: 356-64, 2015. **Impact Factor 2022: 4.645**
36. Sales AR, **Fernandes IA**, Rocha NG, Costa LS, Rocha HN, Mattos JD, Vianna LC, Silva BM, Nóbrega AC. Aerobic exercise acutely prevents the endothelial dysfunction induced by mental stress among subjects with metabolic syndrome: the role of shear rate. *Am J Physiol Heart Circ Physiol*, 306: H963-71, 2014. **Impact Factor 2022: 5.125**
37. **Fernandes IA**, Sales AR, Rocha NG, Silva BM, Vianna LC, da Nóbrega AC. Preserved flow-mediated dilation but delayed time-to-peak diameter in individuals with metabolic syndrome. *Clin Physiol Funct Imaging*, 34: 270-6, 2014. **Impact Factor 2022: 2.121**
38. **Fernandes IA**, Kawchuk G, Bhambhani Y, Gomes PS. Does whole-body vibration acutely improve power performance via increased short-latency stretch reflex response? *J Sci Med Sport*, 16: 360-4, 2013. **Impact Factor 2022: 4.597**
39. **Fernandes IA**, Kawchuk G, Bhambhani Y, Gomes PS. Does vibration counteract the static stretch-induced deficit in muscle force development? *J Sci Med Sport*, 16: 472-6, 2013. **Impact Factor 2022: 4.597**
40. Gouvêa AL, **Fernandes IA**, César EP, Silva WA, Gomes PS. The effects of rest intervals on jumping performance: a meta-analysis on post-activation potentiation studies. *J Sports Sci*, 31: 459-67, 2013. **Impact Factor 2022: 3.943**
41. Silva BM, **Fernandes IA**, Vianna LC. Welcome the carotid chemoreflex to the 'neural control of the circulation during exercise' club. *J Physiol*, 590: 2835-6, 2012. **Impact Factor 2022: 6.228**
42. **Fernandes IA**, Santos TM, Dacol FV, Oliveira BRR, Gomes PSC. Acute effect of dehydration on muscle strength and endurance. *Brazilian Journal of Science and Movement*, 18: 54-61, 2010.
43. Silva WAB, **Fernandes IA**, Meirelles CM, Gomes PSC. Acute effect of static stretching on sprint performance of professional soccer players. *Brazilian Journal of Exercise Physiology*, 8: 196-201, 2009.

44. **Fernandes IA**, Alvares TS, Arteiro SM, Vianna LC, Araújo CGS. Free communication presentations in sport medicine and science meetings and publication in indexed journals. Rev Bras Cineantropom Desempenho Hum, 10: 50-55, 2008.

* Information available at <https://scholar.google.com/citations?user=Z1itKCUA AAAAJ&hl=en>

* Pubmed bibliography at <https://www.ncbi.nlm.nih.gov/myncbi/1hiUgkbi-W7A0/bibliography/public/>

Corresponding author

Articles and Manuscripts Currently in Review or Preparation

1. Silva B, Vianna LC, Machado A, Barbosa T, Prodel E, **Fernandes IA**, Nóbrega ACL. Sympathoexcitation sensitizes the carotid chemoreflex in healthy humans: A mechanism non-specific to exercise. Respir Physiol Neurobiol (under review).
2. **Fernandes IA**, Barbosa TC, Kaur J, Young BE, Nandadeva D, Stephens B, Fadel PJ. Is cerebral autoregulation impaired in young black men? Hypertension (in preparation).
3. Nandadeva D, **Fernandes IA**, Barbosa TC, Kaur J, Young BE, Stephens B, Fadel PJ. Cerebrovascular reactivity to carbon dioxide: Does race matter? Exp Physiol (in preparation).
4. **Fernandes IA**, Bonvie-Hill NE, Shapiro BP, Narula T, Lee AS, Munipalli B, Lockwood AL, Mergo PJ, Johnson EM, Cortopassi MD, Patel NM, Taylor BJ, Helgeson SA (2022). Decreased exercise capacity as a sequela of COVID-19: insights from cardiopulmonary responses to maximal exercise before and after recovery from the disease (in preparation).

Conference Proceedings or Peer-Reviewed Abstracts

1. **Fernandes IA**, Bonvie-Hill NE, Shapiro BP, Narula T, Lee AS, Munipalli B, Lockwood AL, Mergo PJ, Johnson EM, Cortopassi MD, Patel NM, Taylor BJ, Helgeson SA (2022). Decreased exercise capacity as a sequela of COVID-19: insights from cardiopulmonary responses to maximal exercise before and after recovery from the disease. The American College of Chest Physicians, Nashville, Tennessee, USA.
2. Taylor BJ, Bonvie-Hill NE, Shapiro BP, Narula T, Lee AS, Munipalli B, Lockwood AL, Mergo PJ, Johnson EM, Cortopassi MD, Patel NM, Helgeson SA, **Fernandes IA** (2022). Exercise therapy to combat the post-acute sequelae of Covid-19: a case series. The American College of Chest Physicians, Nashville, Tennessee, USA.
3. Bonvie-Hill NE, **Fernandes IA**, Shapiro BP, Narula T, Lee AS, Munipalli B, Lockwood AL, Taylor BJ (2022). No relationship between pulmonary function and exercise capacity in people with post-acute sequelae of sars-cov-2 infection. The American College of Chest Physicians, Nashville, Tennessee, USA.
4. Teixeira AL, Nardone M, Samora M, **Fernandes IA**, Ramos OS, Sabino-Carvalho JL, Ricardo DR, Millar PJ, Vianna LC (2022). Potentiation of GABAergic synaptic transmission by diazepam acutely increases resting beat-to-beat blood pressure variability in young adults Federation of American Societies for Experimental Biology, Philadelphia, Pennsylvania, USA.
5. **Fernandes IA**, Mattos JD, Campos MO, Rocha MP, Mansur DEJ, Rocha H, Garcia VP, Alvares TS, Secher NH, Nobrega ACL (2020). Is hyperoxic hyperventilation caused by reduced carbon dioxide washout or disturbed brain Redox Homeostasis? Federation of American Societies for Experimental Biology, Orlando, Florida, USA.
3. Teixeira A, **Fernandes IA**, Vianna LC (2019). GABAA receptors modulate muscle sympathetic nerve activity and pressor responses to skeletal muscle metaboreflex activation in humans. Federation of American Societies for Experimental Biology, Orlando, Florida, USA.
4. **Fernandes IA**, Campos MO, Mansur DEJ, Mattos JD, Paiva ACS, Videira R, Macefield VG, Nobrega ACL (2019). Acid-sensing ion channels blockade attenuates pressor and sympathetic responses to skeletal muscle metaboreflex activation in humans. Federation of American Societies for Experimental Biology, Orlando, Florida, USA.
5. Mansur DEJ, Campos MO, Mattos JD, Paiva ACS, Videira R, Macefield VG, Nobrega ACL, **Fernandes IA** (2019).

Muscle sympathetic nerve activity and hemodynamic responses to venous distension: does sex play a role? Federation of American Societies for Experimental Biology, Orlando, Florida, USA.

6. **Fernandes IA**, Mattos JD, Campos MO, Rocha MP, Mansur DEJ, Rocha H, Garcia VP, Alvares TS, Videira R, Secher NH, Nobrega ACL (2018). Cerebral hypoperfusion and metabolic regulation during isocapnic hyperoxia: the role of reactive oxygen species. Federation of American Societies for Experimental Biology, San Diego, California, USA. **This abstract resulted in the EEP's CANTROL Environmental Systems Postdoctoral Research Award nomination, Environmental & Exercise Physiology (EEP) section, American Physiological Society (APS).**

7. **Fernandes IA**, Campos MO, Miranda S, Ribeiro M, Braghirolli MAS, Mesquita CT, Nóbrega ACL (2017). Cervicothoracic transcutaneous electrical nerve stimulation attenuates cardiac sympathetic overdrive in heart failure: a ¹²³I-MIBG myocardial scintigraphy, randomized, double-blind crossover trial. Federation of American Societies for Experimental Biology, Chicago, Illinois, USA. **This abstract resulted in the NCAR Research Recognition Award nomination, Neural Control, and Autonomic Regulation (NCAR) Section from The American Physiological Society (APS). I was also nominated for the International Early Career Physiologist Travel Award but had to renounce it as a requirement for receiving the NCAR Research Recognition.**

8. Rocha H, Garcia VP, Mattos J, Alves MPR, Campos, MO, Mansur DEJ, Nóbrega ACL, **Fernandes IA**, Rocha NG (2017). Altered hypoxia-induced vascular reactivity and endothelial repair capacity in hypertensive men. Federation of American Societies for Experimental Biology, Chicago, Illinois, USA.

9. Mattos JD, Campos MO, Rocha MP, Mansur DEJ, Rocha H, Terra P, Garcia VP, Alvares TS, Videira R, Rocha NG, Secher NH, Nóbrega ACL, **Fernandes IA** (2017). Intravenous vitamin c prevents isocapnic hyperoxia-induced regional and global cerebral hypoperfusion. IUPS 38th World Congress - Rhythms of Life, Rio de Janeiro, Brazil.

10. Mansur DEJ, Rocha MP, Campos MO, Mattos JD, Rocha H, Garcia VP, Secher NH, Nobrega ACL, **Fernandes IA** (2017). Cerebral and peripheral hyperperfusion under isocapnic hypoxia: do ATP-sensitive potassium channels play a role?. IUPS 38th World Congress - Rhythms of Life, Rio de Janeiro, Brazil. **This abstract resulted in one of my students' nomination for the Alvaro Osorio de Almeida Award from the Brazilian Society of Physiology.**

11. **Fernandes IA**, Campos MO, Mansur DEJ, Mattos J, Rocha MP, Rocha NG, Nóbrega, ACL. Blockade of acid-sensing ion channels attenuates the skeletal muscle metaboreflex in humans (2016). Federation of American Societies for Experimental Biology, San Diego, California, USA.

12. Silva BM, Machado AC, Vianna LC, Barbosa TC, Prodel E, **Fernandes IA**, Nóbrega ACL (2016). Brief isocapnic hyperoxia increases sympathetic vascular transduction during sympathoexcitatory maneuvers in healthy humans. Federation of American Societies for Experimental Biology, San Diego, California, USA.

13. Rocha H, Garcia VP, Silva GMB, Galinis D, Campos MO, Mattos J, Nóbrega ACL, **Fernandes IA**, Rocha NR (2016). Reduced repair capacity and endothelial apoptosis mediated by retrograde blood flow in hypertension. Federation of American Societies for Experimental Biology, San Diego, California, USA.

14. **Fernandes IA**, Rocha MP, Campos MO, Mansur DEJ, Mattos J, Nóbrega ACL (2016). Hypertension impairs peripheral and cerebrovascular reactivity to isocapnic hypoxia in humans. Federation of American Societies for Experimental Biology, San Diego, California, USA. **This abstract resulted in the International Early Career Physiologist Travel Award nomination, the American Physiological Society.**

15. Vianna LC, **Fernandes IA**, Barbosa TC, Costa LS, Rocha NG, Secher NH, Nóbrega ACL (2015). Exogenous L-arginine restores spontaneous cardiac baroreflex sensitivity in never-treated hypertensive men. Federation of American Societies for Experimental Biology, Boston, Massachusetts, USA.

16. Vianna LC, Barbosa TC, **Fernandes IA**, Prodel E, Secher NH, Nóbrega ACL (2015). Intrathecal fentanyl abolishes the exaggerated pressor response to cycling exercise in never-treated hypertensive men. Federation of American Societies for Experimental Biology, Boston, Massachusetts, USA.

17. Rocha NG, Garcia VP, Rocha HNM, Cardoso I, Silva G, Barbosa TC, **Fernandes IA**, Secher NH, Vianna LC, Nóbrega

ACL (2015). L-arginine reduces matrix metalloproteinases activity and normalizes oxidative stress in hypertensive patients. Federation of American Societies for Experimental Biology, Boston, Massachusetts, USA.

18. **Fernandes IA**, Mattos J, Campos MO, Alves MPR, Machado AC, Rocha NR, Vianna LC, Nóbrega ACL (2015). α 1-adrenergic blockade modifies the regulation of brain blood flow during static handgrip exercise. ISAN - The International Society for Autonomic Neuroscience, Stresa, Italy. **This abstract resulted in the American Autonomic Society Travel Fellowship Award nomination.**

19. **Fernandes IA**, Vianna LC, Freitas R, Miranda S, Mesquita ET, Nóbrega ACL, Mesquita CT (2014). Statin therapy decreases cardiac sympathetic activity in patients with left ventricular dysfunction: a 123I-MIBG myocardial scintigraphy study. Federation of American Societies for Experimental Biology, San Diego, California, USA.

20. Vianna LC, **Fernandes IA**, Barbosa TC, Amaral TAG, Rocha NR, Secher NH, Nóbrega ACL (2014). Blunted increases in vertebral blood flow during L-arginine infusion in patients with hypertension. Federation of American Societies for Experimental Biology, San Diego, California, USA.

21. Fisher J, **Fernandes IA**, Barbosa TC, Coote J, Nóbrega, ACL, Vianna LC. Interactive effects of trigeminal nerve stimulation and muscle metaboreflex activation on muscle sympathetic nerve activity in healthy humans (2014). Federation of American Societies for Experimental Biology, San Diego, California, USA.

22. Prodel E, **Fernandes IA**, Barbosa TC, Hawerth P, Nóbrega ACL, Vianna LC (2014). Progressive vasoconstrictory sympathetic outflow via muscle metaboreflex activation gradually increases human arterial stiffness. Federation of American Societies for Experimental Biology, San Diego, California, USA.

23. Vianna LC, Barbosa TC, **Fernandes IA**, Magalhães N, Cavalcanti I, Secher NH, Nóbrega ACL (2014). Group III/IV muscle afferents are important for the pressor response to dynamic exercise in healthy humans. Federation of American Societies for Experimental Biology, San Diego, California, USA.

24. Vianna LC, **Fernandes IA**, Martinez DG, Silva BM, Fadel PJ, Nóbrega, ACL (2013). Water drinking enhances the gain of arterial baroreflex control of muscle sympathetic nerve activity in healthy humans. Federation of American Societies for Experimental Biology, Boston, Massachusetts, USA.

25. Sales AK, **Fernandes IA**, Rocha NR, Garcia VP, Costa LS, Silva BM, Nóbrega, ACL (2013). A single bout of aerobic exercise prevents the transient endothelial dysfunction induced by mental stress in men with metabolic syndrome. Federation of American Societies for Experimental Biology, Boston, Massachusetts, USA.

26. Barbosa TC, Machado AC, Braz ID, **Fernandes IA**, Vianna LC, Nóbrega ACL, Silva BM (2013). Remote ischemic preconditioning increases the time to task failure during rhythmic handgrip exercise in men: underlying hemodynamic mechanisms. IUPS World Congress, Birmingham, England.

27. Vianna LC, **Fernandes IA**, Barbosa TC, Nóbrega ACL (2013). Capsaicin-based analgesic balm attenuates the muscle metaboreflex in humans. IUPS World Congress, Birmingham, England.

28. Gomes PSC, **Fernandes IA**, Kawchuk GN, Bhambhani YN (2012). Does vibration counteract the static stretching-induced deficit in muscle force development? ACSM's 59th Annual Meeting and 3rd World Congress on Exercise is Medicine, San Francisco, California, USA.

29. Rehani M, Grant H, **Fernandes IA**, Gomes PSC, Bhambhani YN (2010). Reliability of cerebral oxy- and deoxy-hemoglobin changes during functional tasks using near-infrared spectroscopy. European College of Sports Science, Antalya, Turkey.

Honors and Awards

1. 2015 – American Autonomic Society Travel Fellowship Award, American Autonomic Society.
2. 2016 – Postdoctoral Fellowship Grade 10 - Carlos Chagas Filho Foundation for Research Support of the State of Rio de Janeiro (FAPERJ), Brazil.

3. 2016 – International Early Career Physiologist Travel Award, American Physiological Society.
4. 2017 – NCAR Research Recognition Award, Neural Control, and Autonomic Regulation (NCAR) Section, The American Physiological Society (APS).
5. 2017 – Nominated for the International Early Career Physiologist Travel Award, American Physiological Society (APS) – I renounced the award as a requirement for receiving the NCAR Research Recognition Award.
6. 2018 – EEP's CANTROL Environmental Systems Postdoctoral Research Award, Environmental & Exercise Physiology (EEP) section, American Physiological Society (APS).
7. 2018 – Early Investigator Prize Finalist – The Journal of Physiology.
8. 2018 – 2019 – Top downloaded paper, The Journal of Physiology.
9. 2019 – Honorable Mention Award at the XXIII Brazilian Symposium on Cardiovascular Physiology, São Paulo State University (UNESP).
10. 2019 – Nominated for the Pan-American Congress Travel Award, American Physiological Society (APS) – I renounced the award for not attending the conference.
11. 2020 – Cover of the Exercise and Sports Science Reviews (April Issue).
12. 2021 – Editorial Board Fellowship – The Journal of Physiology.

Editorial Board Membership

1. 2020 to date – Frontiers in Physiology (Editorial Board of Autonomic Neuroscience)
2. 2020 to date – Frontiers in Neurology (Editorial Board of Autonomic Neuroscience)
3. 2020 to date – Frontiers in Neuroscience (Editorial Board of Autonomic Neuroscience)
4. 2021 to date – Experimental Physiology (Editorial Board of Cardiovascular Control and Environmental and Exercise)
5. 2021 to date – Journal of Physiology – (I joined the Editorial Board after being selected from a large pool of high-caliber international candidates competing for the “Editorial Board Fellowship” program in the Journal of Physiology).
6. 2022 to date – Journal of Applied Physiology – (Editorial Board)

Reviewer – Peer-review Journals*

1. Diabetology & Metabolic Syndrome
2. Clinical Physiology and Functional Imaging
3. International Journal of Sports Medicine
4. American Journal of Physiology: Heart and Circulatory Physiology
5. American Journal of Physiology: Regulatory, Integrative and Comparative Physiology
6. Clinical Autonomic Research
7. Clinical Interventions in Aging
8. The Journal of Physiology
9. Applied Physiology Nutrition and Metabolism
10. European Journal of Applied Physiology
11. Autonomic Neuroscience: Basic & Clinical

12. Plos One
13. Journal of Applied Physiology
14. Experimental Physiology
15. Atherosclerosis
16. Microcirculation
17. FASEB Journal
18. Frontiers in Neuroscience
19. Respiratory Physiology & Neurobiology
20. Frontiers in Physiology
21. BMC – Cardiovascular Disorders

* Total of 117 reviews confirmed in the Publons system (<https://publons.com/researcher/1394788/igor-a-fernandes/peer-review/>)

Reviewer – Grants and Awards

1. 2021 – Natural Sciences and Engineering Research of Canada
2. 2019 – Natural Sciences and Engineering Research of Canada
3. 2018 to 2019 – NCARnation subcommittee, Neural Control, and Autonomic Regulation Section, American Physiological Society, USA

Scientific Society Membership

1. 2013 to date – The American Physiological Society
2. 2015 to 2020 – The American Autonomic Society
3. 2012 to 2019 – Brazilian Society of Physiology
4. 2021 to date – The Physiological Society

Keynote and Invited Speaking Engagements

1. Experimental Biology Meeting, April 1st to 5th, 2022, Philadelphia, Pennsylvania, USA. Section: Diverse models in physiology: unique approaches to studying oxygen transport in hypoxemic environments. **Title: Cerebral and Peripheral Perfusion in Hypoxia: Impact of Hypertension.**
2. ISAN – International Society for Autonomic Neuroscience, September 26th – 29th, 2015, Stresa, Italy. Section: Autonomic Regulation of Cerebral Circulation. **Title: α 1-adrenergic Blockade Modifies The Regulation of Brain Blood Flow During Static Handgrip Exercise.**
3. Brazilian Physiological Society Meeting – SBFIS: Bridge to the Future, August 2nd to 5th, 2015, Águas de Lindóia, São Paulo, Brazil. Section: Counterpoint between physical inactivity and exercise to identify the mechanisms and to manage cardiovascular diseases: translational aspects. **Title: Cerebrovascular Reactivity to Conditions of Sympathoexcitation: The Impact of Hypertension.**
4. Experimental Biology Meeting, April 22nd to 26th, 2017, Chicago, Illinois, USA. Section: NCAR Young Investigator Awards. **Title: Cervicothoracic Transcutaneous Electrical Nerve Stimulation Attenuates Sympathetic Overdrive In The Failing Heart: A 123 Iodine MIBG Myocardial Scintigraphy, Randomized Double-blind Crossover Trial.**

5. XXIII Brazilian Symposium of Cardiovascular Physiology, February 25th to 27th, 2019, Araraquara, São Paulo, Brazil. Section: Central Nervous System. **Title: Human Brain Blood Flow and Metabolism during Isocapnic Hyperoxia: The Role of Reactive Oxygen Species.**
6. Experimental Biology Meeting, April 5th to 9th, 2019, Orlando, Florida, USA. Section: Regulation of Muscle Sympathetic Outflow during Exercise. **Title: Acid-Sensing Ion Channels Blockade Attenuates Pressor and Sympathetic Responses to Skeletal Muscle Metaboreflex Activation in Humans.**
7. Central Cardio-Respiratory Control: Future Directions Conference, November 18th to 19th, 2019, Auckland, New Zealand. Session: Cardiovascular control in Humans, **Title: Acid-Sensing Ion Channels Blockade Attenuates Pressor and Sympathetic Responses to Skeletal Muscle Metaboreflex Activation in Humans.**
8. Cerebral Blood Flow Virtual Seminars Series, July 22nd, 2020. Session: The regulation of cerebral blood flow in hypoxia: from mountainside to bedside, and everything in between! Keynote Speaker. **Title: Too Much Pressure on the Hypoxic Brain: Regulation Perfusion and Oxygen Delivery in Hypertension.** Link to access the content of the talk: <http://www.car-net.org/content/resources#tabSeminars>
9. Seminars Series of the Graduate Program in Physiology and Pharmacology – Federal University of Minas Gerais, August 27th, 2020. Keynote Speaker. **Title: Cardiovascular Control During Exercise: When the Skeletal Muscle Talks and The Brain Listens.**
10. II Cycle of Online Seminars – Biomedical Sciences Institute – University of São Paulo – March 3rd, 2021. Keynote Speaker. **Title: The Amazing Human Brain: With Great Power Comes Great... Dependence on Blood Flow Regulation!**

Education

1. **2014 – Integrative Cardiovascular Control, Copenhagen, University of Copenhagen, Denmark, Copenhagen.**
Lecture Series by Professors Niels Secher, Gunnar Wallin, Stefan Mortensen, Lars Nybo, Ylva Hellsten, Peter Raven, Russell Richardson, Paul Fadel, James Fisher, Wouter Weiling, Johannes Van Lieshout, Craig Crandall, and Scott Smith. This prestigious international graduate course focuses on integrative cardiovascular control in human and animal physiology.
2. **2008 to 2011 – Faculty of Physical Education, Graduate Program in Physical Education, University Gama Filho, Rio de Janeiro, Brazil**
Ph.D. – Does muscle vibration acutely change intrafusal mechanical sensitivity and stiffness modulation? Implications on stretch-shortening cycle performance. **Mentor:** Professor Paulo Sergio Chagas Gomes.
3. **2009 – 2010 – Faculty of Rehabilitation Medicine, Department of Occupational Therapy, University of Alberta, Edmonton, Alberta, Canada**
Visiting Ph.D. student – I was awarded a scholarship from the CAPES Foundation, an agency under the Ministry of Education of Brazil, to conduct part of my doctoral research at the University of Alberta under the mentorship of Professor Yagesh Bhambhani.
4. **2003 – 2005 – Faculty of Physical Education, Graduate Program in Physical Education, University Gama Filho, Rio de Janeiro, Brazil**
Specialization (master's level) in exercise physiology and kinanthropometry – Effects of dehydration on strength performance of Brazilian Jiu-Jitsu fighters. **Mentor:** Professor Paulo Sergio Chagas Gomes
5. **1999 – 2002 – Faculty of Physical Education, Oswaldo Aranha Foundation – University of Volta Redonda, Rio de Janeiro, Brazil**
Bachelors in Physical Education.

Research Funding (*submitted*)

1. The pulmonary baroreflex as a neurovascular modulator: a possible therapeutic target for chronic sympathetic overactivity in aging. ***RFA – Innovation in Aging Award – 2022***, Mayo Clinic Center for Clinical and Translational Science (CCaTS) and the Robert and Arlen Kogod Center on Aging at Mayo Clinic – **Role:** Principal Investigator; Total requested: **\$50,000.00**
2. Quantifying autonomic neural traffic in vivo in humans: establishing the microneurography technique at Mayo Clinic Florida. ***RFA – Center for Biomedical Discovery Pilot Awards***, The Mayo Clinic Center for Biomedical Discovery – **Role:** Principal Investigator; Total requested: **\$20,000.00**

Research Funding (*Total Funded: about \$122,000**)

1. Financial support – International scientific meetings - AVG - 450114/2017, **The National Council for Scientific and Technological Development – CNPq**, 2017 – **Role:** Principal Investigator. Total: \$ 2,000
2. Cerebral blood flow regulation during hypoxia: Impact of arterial hypertension. **Carlos Chagas Filho Foundation for Research Support of the State of Rio de Janeiro – FAPERJ** – 2016 (FAPERJ - E_05/2016). **Role:** Principal Investigator. Total: About \$10,000
3. Autonomic regulation of the cerebral blood flow during static exercise. **The National Council for Scientific and Technological Development – CNPq**, 2014 MCTI/CNPQ/Universal 14/2014 – 2018 – 462274/2014-4, **Role:** Principal Investigator. Total: About \$30,000
4. Physical activity, Exercise, and Sport: a legacy of knowledge, health, and performance beyond the Major sporting events - **Carlos Chagas Filho Foundation for Research Support of the State of Rio de Janeiro – FAPERJ**. **Role:** Co-Principal Investigator.
5. **Capes Postdoctoral Fellowship National Program**, Coordination for the Improvement of Higher Level – or Education – Personnel, Ministry of Education, Brazil. **Role:** Principal Investigator. Total: About \$20,000
6. Ph.D. Scholarship, **The National Council for Scientific and Technological Development – CNPq**, 2008 to 2011. Total: About \$20,000
7. Doctorate Sandwich Scholarship, **Coordination for the Improvement of Higher Level - or Education - Personnel, Ministry of Education, Brazil – CAPES Foundation**. **Role:** Visiting Ph.D. student, 2009 to 2010. Total: About \$40,000
8. Impact of resistance training and L-arginine supplementation on healthy indicators of elderly individuals. **The National Council for Scientific and Technological Development – CNPq**, FAPERJ/SESDC/ MS/CNPq/ N.º 27/2010. **Role:** Co-Principal Investigator.

*Estimate values from Brazilian Real to American Dollar

Student Funding and Awards (*Cumulative Total: \$164,300**)

1. **2018 – 2019 – Coordination for the Improvement of Higher Level – or Education – Personnel, Ministry of Education (CAPES) Sandwich Doctoral Program** – Scholarship that supported the Ph.D. student João Dario Mattos as a visiting scholar at The University of Copenhagen to work under the guidance of Professor Niels Henry Secher for six months. Total: \$15,000.
2. **2017 – 2019 – Coordination for the Improvement of Higher Level – or Education – Personnel, Ministry of Education (CAPES) Graduate National Program** – Muscle sympathetic nerve activity and hemodynamic responses to venous distension: does sex play a role? – Master's dissertation, **Student:** Daniel Elias Mansur. Total: About \$ 25,000
3. **2017 – Alvaro Osorio de Almeida Award, Brazilian Society of Physiology** – IUPS 38th World Congress - Rhythms of Life, Rio de Janeiro, Brazil – **Student:** Daniel Elias Mansur, Total: \$ 300 (registration).

4. **2017** – Honorable mention award, 5th Cardiovascular Sciences Meeting, Niterói, Brazil – **Student:** Daniel Elias Mansur.
5. **2017** – Best oral presentation and best work presented, 5th Cardiovascular Sciences Meeting, Niterói, Brazil **Student:** Monique Opuszcka Campos.
6. **2016 – 2020 – CAPES Graduate National Program – Ph.D. scholarship** – Hyperoxia-induced cerebral hypoperfusion: contribution of reactive oxygen species and implications on local vascular responses and respiratory control. **Student:** João Dario Mattos. Total: \$ 35,000
7. **2015 – 2017 – Carlos Chagas Filho Foundation for Research Support of the State of Rio de Janeiro (FAPERJ) – Scholarship** – Cerebral blood flow regulation and brain metabolic stability under isocapnic hypoxia: do ATP-sensitive potassium channels play a role? – Master's dissertation, **Student:** Marcos Paulo Rocha Alves. Total: \$ 25,000
8. **2014 – 2018 – CAPES Graduate National Program – Ph.D. scholarship** - Transcutaneous electrical nerve stimulation attenuates cardiac sympathetic drive in heart failure: a 123MIBG myocardial scintigraphy randomized controlled trial. **Student:** Monique Opuszcka Campos. Total: \$ 35,000
9. **2014 – 2015 – Carlos Chagas Filho Foundation for Research Support of the State of Rio de Janeiro (FAPERJ) – Support for undergraduate students involved in research** – Project: Autonomic regulation of cerebral blood flow during exercise in humans. **Student:** Raquel Kindlovits. Total: \$ 4,000.
10. **2014 – 2016 – Carlos Chagas Filho Foundation for Research Support of the State of Rio de Janeiro (FAPERJ) Scholarship** – Selective α 1-adrenergic blockade disturbs the regional distribution of cerebral blood flow during static handgrip exercise – Master's dissertation, **Student:** João Dario Mattos. Total: \$ 25,000

*Estimate values from Brazilian Real to American Dollar

Student Mentorship (PhD: n = 2; MSc: n = 3; BSc: n = 2)

1. **2014 – 2016** – João Dario Mattos. Selective α 1-adrenergic blockade disturbs the regional distribution of cerebral blood flow during static handgrip exercise. **M.S. in Biomedical Sciences** (Physiology and Pharmacology), Fluminense Federal University.
2. **2014 – 2018** – Monique Opuszcka Campos – Cervicothoracic transcutaneous electrical nerve stimulation attenuates cardiac sympathetic overdrive in heart failure: A 123I-MIBG Myocardial Scintigraphy, Randomized Double-Blind Crossover Trial. **Ph.D. in Cardiovascular Sciences**, Fluminense Federal University.
3. **2015 – 2017** – Marcos Paulo Rocha Alves. Hypertension impairs peripheral and cerebrovascular reactivity to isocapnic hypoxia in humans. **M.S. in Biomedical Sciences** (Physiology and Pharmacology), Fluminense Federal University.
4. **2016 – 2020** – João Dario Martins Mattos. Intravenous vitamin C prevents isocapnic hyperoxia-induced regional and global cerebral hypoperfusion. **Ph.D. in Biomedical Sciences** (Physiology and Pharmacology), Fluminense Federal University.
5. **2016 – 2017** – Raquel Kindlovits, **Undergraduate Work-Study Intern**, School of Nutrition, Fluminense Federal University.
6. **2017 – 2019** – Daniel Elias de Jesus Mansur - Muscle sympathetic nerve activity and hemodynamic regulation in response to venous extension: Does sex play a role? **M.S. in Biomedical Sciences** (Physiology and Pharmacology), Fluminense Federal University.
7. **2017 – 2018** – Paulo Terra, **Undergraduate Work-Study Intern**, Biomedical school, Fluminense Federal University.

Professional Experience

1. **2022 to date (October) – Assistant Professor, Department of Health and Kinesiology, Purdue University**

2. **2021 to 2022 – Research Associate, Department of Cardiovascular Diseases, Mayo Clinic, Jacksonville, Florida, USA.**

Research: Primary responsibility was to conduct complex and high-impact clinical research trials on human patient participants.

3. **2015 to 2021 – Research faculty*, Graduate Program in Biomedical Sciences (Physiology and Pharmacology), Fluminense Federal University, Niterói, Brazil.**

Research: I supervised the day-to-day operation of the Laboratory of Exercise Sciences (LACE). I was directly involved in managing undergraduate and graduate research projects and the research funding process. I was also responsible for elaborating on research questions and establishing national and international collaborative networks. My role also involved the training of graduate and undergraduate students to become experts in cardio-neurovascular techniques such as Doppler ultrasonography (flow-mediated dilation and measurement of conduit vessels' blood flow) and microneurography (quantification of neural impulse traffics from both myelinated and unmyelinated axons in efferent and afferent neurons of the skin and muscle) that are frequently used in our research models. **Teaching:** Lecturing human cardiorespiratory and exercise physiology for medical students and formally responsible for developing and teaching the courses of (1) biostatistics and research methods (MFLII), (2) advanced topics in cardiovascular physiology (MFL III), and (3) exercise physiology (MFLVII). **Service:** Stood on departmental, faculty, university, and research funding committees and participated in the manuscript and grant peer-review process.

4. **2018 – 2020 – Visiting Assistant Professor – NeuroVASQ – Integrative Physiology Laboratory, Faculty of Physical Education, University of Brasilia, Brazil**

Research: My role was to facilitate graduate and undergraduate research through the supervision of research projects and financial support. Responsible for establishing the Microneurography technique, allowing the quantification of neural impulse traffics from both myelinated and unmyelinated axons in efferent and afferent neurons of the skin and muscle. **Teaching:** I had no formal teaching duties. **Service:** Stood on departmental, faculty, university, and research funding committees and participated in the manuscript and grant peer-review process.

5. **2014 – 2018 – Research faculty*, Cardiovascular Sciences Graduate Program, Fluminense Federal University, Niterói, Brazil.**

Research: I supervised the day-to-day operation of the Laboratory of Exercise Sciences (LACE). I was responsible for leading research projects at undergraduate and graduate levels and the process for research funding. I was also responsible for developing the expertise of the graduate students in cardio-neurovascular research techniques such as Doppler ultrasonography (flow-mediated dilation and measurement of conduit vessels' blood flow) and microneurography (quantification of neural impulse traffics from both myelinated and unmyelinated axons in efferent and afferent neurons of the skin and muscle). **Teaching:** I was formally responsible for developing and teaching the courses (1) Biostatistics II (CMM10793) and (2) Exercise Physiology (CMM 10799). **Service:** Stood on departmental, faculty, university, and research funding committees and participated in the manuscript and grant peer-review process.

6. **2012 – 2018 – Postdoctoral fellowship, Integrative Physiology, Fluminense Federal University, Niterói, Brazil.**

I accumulated the function of the research faculty of both graduated programs while coursing a postdoctoral fellowship under the guidance of Professor Antonio Claudio Lucas da Nóbrega.

5. **2008 – 2012 – Research Assistant and Ph.D. student, University Gama Filho, Rio de Janeiro, Brazil.**

I performed subject screening and recruitment in the exercise physiology laboratory, collaborated with national and international research groups, and collected and analyzed research data.

Teaching Experience

1. **2008 – 2009 – Guest lecturer – Graduate Program of Physical Education, Faculty of Physical Education University Gama Filho, Rio de Janeiro, Brazil – * I delivered lectures on the (1) principles of strength training, (2) neuromuscular**

muscular physiology and assessment of its function, and (3) hypothesis tests, data presentation, and introduction to software packages (SPSS, Microsoft Office, and Graph Pad).

2. 2012 to 2018 – Guest lecturer, Department of Physiology and Pharmacology, Medical School, Fluminense Federal University, Niterói, Rio de Janeiro, Brazil – * I delivered lectures for 2nd and 3rd medical students on (1) **cardiovascular physiology** – heart structure and control, the short- and long-term control of arterial pressure, cardiac output, venous return, and their regulation, (2) **respiratory physiology** – pulmonary ventilation, transport of oxygen and carbon dioxide and regulation of respiration, (3) **neuromuscular physiology** – action potential, excitation-contraction coupling, muscle contraction, and (4) **exercise physiology** – acute and chronic cardiovascular, ventilatory and hormonal responses to exercise.

3. 2014 to 2019 – Research faculty – Biostatistics II (CMM 1079) – Fluminense Federal University – * I developed the course content and evaluation methods for students of the graduate program in Cardiovascular Sciences. **Course duration per semester: 60 h, Credits – 4.**

4. 2014 to 2019 – Research faculty – Advanced Topics in Exercise Physiology (CMM 10799) – Fluminense Federal University – * I developed the course content and evaluation methods for students of the graduate program in Cardiovascular Sciences. **Course duration per semester: 30 h, Credits – 2.**

5. 2015 to 2019 – Research faculty – Advanced Topics in Human Physiology (CMM 10799) – Fluminense Federal University – * I developed the cardiovascular physiology course content and evaluation methods for students of the graduate program in Biomedical Sciences. **Course duration per semester: 30 h, Credits – 2.**

6. 2015 to 2019 – Research faculty – Introduction to Biostatistics (MFLII) – Fluminense Federal University – * I developed the course content and evaluation methods for students of the graduate program in Biomedical Sciences. **Course duration per semester: 60 h, Credits – 4.**

7. 2014 to 2019 – Research faculty – Exercise Physiology (MFLIV) – Fluminense Federal University – * I developed the course content and evaluation methods for students of the graduate program in Biomedical Sciences. **Course duration per semester: 30 h, Credits – 2.**