

*Vivian Biancardi*  
*WCHRI Postdoctoral Fellow*  
*University of Alberta*  
*Faculty of Medicine and Dentistry*  
*Department of Physiology*



My career goal is to run my own independent research program addressing central control of breathing and how in utero and postnatal experiences may adversely affect this key homeostatic control system in early life as well as into adulthood.

My first foray into research started during my second-year undergraduate in Biological Sciences in the Department of Animal Morphology and Physiology at Sao Paulo State University (UNESP) in Brazil. Where I also got my MSc and PhD degrees in Physiological Sciences by the Interinstitutional Graduate Program UFSCar/UNESP (Federal University of Sao Carlos/Sao Paulo State University, Brazil). To enrich my training experience, I spent part of my undergraduate and MSc in Dr. Richard Kinkead's laboratory (Laval University, Quebec, Canada) and part of my PhD in Dr. Gregory Funk's laboratory (University of Alberta, Edmonton, Canada).

I am currently a Post Doctoral Fellow under the guidance of Drs. Gregory Funk and Silvia Pagliardini in the Department of Physiology, Faculty of Medicine and Dentistry (UofA), and awarded a Post Doctoral Fellowship from the Women and Children's Health Research Institute (WCHRI). We are interested in understanding the basic central mechanisms underlying respiratory sleep disorders in neonates as well in adulthood. Together, their laboratory environment has enabled me to develop a cross-platform (in vitro/in vivo) approach to the research I want to pursue as an independent investigator and to provide me with opportunities for my personal and professional development.

With the paper published in the Journal of Comparative Neurology "Mapping of the excitatory, inhibitory, and modulatory afferent projections to the anatomically defined active expiratory oscillator in adult male rats", we identified the regions in the brainstem that connect to and potentially modulate the region that is recruited when expiration becomes active and breathing more efficient. We hope that the knowledge of the essential neurocircuitry involving this brainstem nucleus will lead to functional studies that will potentially reveal targets in the brain for the development of alternate therapies that would recruit the expiratory muscles in condition of sleep-related breathing disorders.

I would like to thank my mentors (Drs. Funk and Pagliardini) and the lab members that brightly contributed to this study. I really appreciate the support from the Faculty of Medicine and Dentistry for the Med Star Award. I feel truly fortunate to be in the UofA environment; it inspires me to be a greater scientist.