Title: **"Effect of class of obesity, body weight vs body mass loss and frictional internal mechanical work on the energetics and mechanics of walking in individuals with obesity"**.

(**) position available only with a fellowship

A higher net (above resting) energy cost of walking (lower gait economy) is observed in adults with obesity compared to lean individuals (Malatesta *et al.*, 2009; Malatesta *et al.*, 2013; Fernandez Menendez *et al.*, 2019; Fernandez Menendez *et al.*, 2020). Understanding the mechanisms (i.e., mass driven, gait pattern and behavioural changes) involved in this extra cost of walking in adults with obesity is pivotal to optimizing the use of walking to promote daily physical activity and improve health in these individuals.

The aim of this Ph.D. project will be to investigate the effect of 1) different obesity classes; 2) body weight loss vs body mass loss; and 3) frictional internal mechanical work (Minetti *et al.*, 2020) on the energetics and mechanics of walking in individuals with obesity.

References

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