

## **Heart rate as a biological marker of attention-consciousness interactions.**

Of all the information that reaches our senses we can only inform a very limited part, this is known as access consciousness (Chica & Bartolomeo, 2012). Current models of consciousness are currently focused on the cognitive and neural processes that facilitate perceptual perception. However, cognitive processes do not occur in an isolated brain, it being important to understand the interaction of the brain with the environment and with our own organism. The study of brain-organism interaction in the perceptual consciousness has not received enough attention in the literature. In the present work we explore the role of the heartbeat in the relationship between physical alertness and perceptual perception. We present stimuli at the threshold of consciousness (which are perceived in  $\sim 50\%$  of trials), and which cannot be preceded by a warning sign. In our results we found a cardiac pattern (deceleration-acceleration) that is more pronounced when the warning sign is present. In addition, when the alert is present there is a greater cardiac deceleration when the stimuli are consciously perceived in comparison with the stimuli not consciously perceived. These results reveal that cardiac activity could be a new marker of consciousness, indicating the importance of completing theoretical models with a more biological aspect.