

# Abstract Information

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<b>Address :</b>	25 rue du parlement saint-pierre 33000 Bordeaux France
<b>Participation :</b>	symposium
<b>Title of the Symposium :</b>	An update in the pathophysiology of the non-motor symptoms in Parkinson?s disease
<b>Category :</b>	Academic/Researcher
<b>Thematic Area :</b>	Neurodegeneration, Neuroplasticity, and Repair
<b>Title :</b>	The A11 hypothalamic dopaminergic nucleus and the control of nociception abnormalities in a mouse
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<b>Abstract :</b>	<p>Parkinson?s disease (PD) is a neurodegenerative disease characterized by the manifestation of motor and non-motor symptoms. Among the latter, pain is one of the most frequent symptoms, affecting around 80% of patients. Nowadays, their treatment is still inefficient due to the lack of knowledge of the underlying mechanisms. However, we know that pain can be modulated by the monoaminergic descending pathway at the level of the spinal cord. Thus, the aim of the present study is to unravel the involvement of the hypothalamic A11 nucleus, one of the only sources of dopamine in the dorsal horn of the spinal cord (DHSC), in the control of the nociceptive impairments in 6-OHDA mouse model of PD. After characterizing the anatomical, behavioral and electrophysiological disruption in this model, we used optogenetic approaches to selectively modulate the A11 dopaminergic neurons projecting in the lumbar DHSC. We first demonstrated that the activation of A11 dopaminergic descending pathway is able to improve mechanical allodynia in 6-OHDA mice without affecting motor symptoms. Furthermore, we also show that this activation may have an effect on nociceptive integration in the DHSC. Those new findings, may lead to find new therapeutics target in order to efficiently treat pain as a non-motor symptom of PD.</p>
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