WBS06 workshop: Basic science

Gliopathy in pain: role in neural sensitization

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16:30 - 18:00 SUMMARY: Our symposium is aimed at providing an updated overview of the role of satellite glial cells modulating neuronal sensitization in peripheral ganglia under painful conditions, and to propose this population as a new target for the development of innovative pharmacological approaches. In fact, SGCs around the somata of sensory neurons, altogether constituting a morphological and functional unit, continually monitor the extracellular milieu and exchange information with one another and with neighboring neurons. Like other glial cells, SGCs respond to nerve injury or to inflammatory stimuli by undergoing parallel to increased expression and release of pro-inflammatory mediators and neurotransmitters, which either autocrinally or paracrinally. Altogether, these changes lead to increased excitability of both primary afferents and central nervous system neurons, and the development of hyperalgesia and allodynia. Thus, targeting SGCs represents a novel opportunity to tackle various pathological conditions where the activation has been demonstrated, spanning from chronic and neuropathic pain to visceral pain, post-herpetic neuralgia, and other CNS disorders. In order to understand the complex network of signaling molecules that are involved in SGC-to-SGC and in SGC-to-neuron communication within sensory ganglia will summarize physiopathological roles of SGCs within dorsal root ganglia, Dr. Gazerani will focus on signaling transmitters for cross talk in sensory ganglia (Glutamate, NO, Fractalkine), and Dr. Ceruti will current knowledge on the role of the purinergic system in modulating peripheral trigeminal nociceptor association with migraine.

16:30 - 17:00 SATELLITE GLIAL CELLS IN DORSAL ROOT GANGLIA: MUCH MORE THAN JUST “GLUE”

Fani Lourenca Moreira Neto, Portugal
17:00 - 17:30  **SIGNALING TRANSMITTERS FOR SATELLITE GLIA-NEURON CROSS TALK WITHIN SENSORY GANGLI**  
*Parisa Gazerani, Denmark*

17:30 - 18:00  **GLIOPATHY IN PAIN: ROLE IN NEURAL SENSITIZATION**  
*Stefania Ceruti, Italy*