Faculty of Dentistry, McGill University
CERC 2 – Joint position in Faculties of Dentistry and Medicine (Anesthesia) in the field of Pain Research

Research Presentation ~ Monday, April 9, 2018
13:15 in Lecture Room, rm 102, 2001 McGill College Ave

“Touch and pain: how inhibition shapes what we feel”

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Bio sketch: Dr. Stephanie Koch received her Masters in Pharmacy at the University of Bath, and an MSc in Neuroscience at UCL. She subsequently completed her PhD at UCL with Professor Maria Fitzgerald studying the postnatal development of spinal inhibitory circuits. This work led to publications in leading journals and the award of a prestigious Marie Curie Fellowship to train at the Salk Institute with Professor Martyn Goulding. Combining her expertise in electrophysiology with innovative genetic manipulations, she pioneered work uncovering the spinal sensorimotor networks involved in motor reflex inhibition. She is currently based at UCL, investigating the inhibitory control of touch.

Presentation summary: The spinal cord represents the first integrative site of somatosensory information, allowing touch, proprioception and pain to coordinate behavioral output whilst remaining discriminatively distinct in affect. The cellular circuitry underlying sensory coding is beginning to be unraveled. It remains unclear however, how common spinal networks can retain both the stringency to differentiate between modalities whilst ensuring flexibility to behaviorally adapt to complex environments. Using state-of-the-art intersectional genetic approaches in combination with electrophysiology, the local networks necessary for discriminating touch and pain can be dissected and manipulated in order to gain insight into their functional recruitment during ongoing behavior.