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Département de neurosciences

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Statut universitaire / University status

Professeur titulaire, Département de neurosciences, Faculté de médecine, Université de Montréal

Appartenance à d'autres groupes / Affiliation with other groups

Membre régulier, Groupe de recherche sur le système nerveux central (GRSNC) du FRQS, 1990-

Directeur, Groupe de recherche sur le système nerveux central (GRSNC) du FRQS, 2003-2016

Formation / Training

Stage postdoctoral, Neurophysiologie, Université de Montréal, Montréal, QC, Canada, 1981-1984

Orientations de la recherche

- Rôle des structures supraspinales dans le contrôle du mouvement et de la posture chez le chat.

Principaux projets en cours

- Rôle des noyaux gris centraux dans le contrôle du mouvement et de la posture pendant les mouvements de l'atteinte chez le chat.
- Contribution du cortex prémoteur et des noyaux gris centraux au contrôle de la locomotion sous guidage visuel chez le chat intact.

Research orientations

- Role of supraspinal structures in the control of locomotion and posture in the cat.

Current research projects

- Role of the basal ganglia in the control of movement and posture during reaching in the cat.
- Role of the premotor cortex and the basal ganglia in the control of visually-guided locomotion in the intact cat.

Publications choisies / Selected publications

Drew, T. and Marigold, D. S. (2015). Taking the next step: cortical contributions to the control of locomotion. *Curr Opin Neurobiol*, 33: 25-33.

Yakovenko, S. and Drew, T. (2015). Similar Motor Cortical Control Mechanisms for Precise Limb Control during Reaching and Locomotion. *J Neurosci*, 35 (43): 14476-90.

Krouchev, N. and Drew, T. (2013). Motor cortical regulation of sparse synergies provides a framework for the flexible control of precision walking. *Front Comput Neurosci*, 7: 83.

Marigold, D. S., Andujar, J. E., Lajoie, K. and Drew, T. (2011). Motor planning of locomotor adaptations on the basis of vision: the role of the posterior parietal cortex. *Prog Brain Res*, 188: 83-100.

Andujar, J. E., Lajoie, K. and Drew, T. (2010). A contribution of area 5 of the posterior parietal cortex to the planning of visually guided locomotion: limb-specific and limb-independent effects. *J Neurophysiol*, 103: 986-1006.

Lajoie, K., Andujar, J. E., Pearson, K. and Drew, T. (2010). Neurons in area 5 of the posterior parietal cortex in the cat contribute to interlimb coordination during visually guided locomotion: a role in working memory. *J Neurophysiol*, 103: 2234-54.

Yakovenko, S. and Drew, T. (2009). A motor cortical contribution to the anticipatory postural adjustments that precede reaching in the cat. *J Neurophysiol*, 102: 853-74.

Drew, T., Andujar, J. E., Lajoie, K. and Yakovenko, S. (2008). Cortical mechanisms involved in visuomotor coordination during precision walking. *Brain Res Rev*, 57: 199-211.

Drew, T., Prentice, S. and Schepens, B. (2004). Cortical and brainstem control of locomotion. *Prog Brain Res*, 143: 251-61.

Schepens, B. and Drew, T. (2004). Independent and convergent signals from the pontomedullary reticular formation contribute to the control of posture and movement during reaching in the cat. *J Neurophysiol*, 92: 2217-38.