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DREW, Trevor

Statut universitaire / University status

Professeur titulaire
Physiologie
Faculté de médecine
Université de Montréal

Appartenance à d'autres groupes / Affiliation with other groups

Directeur, Groupe de recherche sur le système nerveux central (GRSNC) du FRSQ

Formation / Training

B.Sc., University of Bristol, England, Physiology, 1976
Ph.D., University of Bristol, England, Physiology, 1981
Postdoctorale, Université de Montréal, Neurophysiologie, 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:

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

Research orientations

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

Current research projects:

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

Publications choisies/Selected publications

Drew, T., Prentice, S. and Schepens, B. Cortical and brainstem control of locomotion. In: Brain mechanisms for the integration of posture and movement; Prog. Brain Res. Edited by: Mori, S.; Stuart, D. G.; Wiesendanger, M. Elsevier, New York, pp. 251-261, 2003.

Schepens and Drew, T. Independent and convergent signals from the pontomedullary reticular formation (PMRF) contribute to the integration of posture and movement during reaching in the cat. J. Neurophysiol. 92: 2217-2238, 2004.

Bretzner, F. and Drew, T. Changes in corticospinal efficacy contribute to the locomotor plasticity observed following unilateral cutaneous denervation of the hindpaw in the cat. J. Neurophysiol. 94: 2911-2927, 2005.

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

Drew, T., Kalaska, J. and Krouchev, N. Muscle synergies during locomotion in the cat: a model for motor cortex control. J. Physiol. 586: 1239-1245, 2008.

Yakovenko, S. and Drew, T. A motor cortical contribution to the anticipatory postural adjustments that precede reaching in the cat. J. Neurophysiol. 102: 853-874.

Andujar, J.E., Lajoie, K. and Drew, T. 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, 2010.

Lajoie K., Andujar J.-E., Pearson, K and Drew, T. 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: 2234-2254, 2010.

Marigold, D., Andujar, J.E., Lajoie, K and Drew, T. Motor Planning of Locomotor Adaptations on the Basis of Vision: the Role of the Posterior Parietal Cortex. Prog. Brain. Res. 188: 83-100, 2011.