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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

Formation / Training

B.Sc., Sciences biologiques, Université de Montréal, Montréal, QC, Canada, 1978
Ph.D., Sciences neurologiques, Université de Montréal, Montréal, QC, Canada, 1987

Orientations de la recherche

- Etude de la plasticité et de la régénération neuronales dans le système nerveux central.

Principaux projets en cours

- Rôle du récepteur EphA4 dans la plasticité structural neuronogliale du noyau supraoptique murin.

Research orientations

- Neural plasticity and regeneration in the central nervous system.

Current research projects

- Role of the EphA4 receptor in the neuronoglia structural plasticity of the supraoptic nucleus.

Publications choisies / Selected publications

Freyburger, M., Pierre, A., Paquette, G., Bélanger-Nelson, E., Bedont, J., Gaudreault, P. O., Drolet, G., Laforest, S., Blackshaw, S., Cermakian, N., Doucet, G. and Mongrain, V. (2015). EphA4 is Involved in Sleep Regulation But Not in the Electrophysiological Response to Sleep Deprivation. *Sleep*.

Horn, K. E., Glasgow, S. D., Gobert, D., Bull, S. J., Luk, T., Girgis, J., Tremblay, M. E., McEachern, D., Bouchard, J. F., Haber, M., Hamel, E., Krimpenfort, P., Murai, K. K., Berns, A., Doucet, G., Chapman, C. A., Ruthazer, E. S. and Kennedy, T. E. (2013). DCC expression by neurons regulates synaptic plasticity in the adult brain. *Cell Rep*, 3: 173-85.

Bouvier, D., Tremblay, M. E., Riad, M., Corera, A. T., Gingras, D., Horn, K. E., Fotouhi, M., Girard, M., Murai, K. K., Kennedy, T. E., McPherson, P. S., Pasquale, E. B., Fon, E. A. and Doucet, G. (2010). EphA4 is localized in clathrin-coated and synaptic vesicles in adult mouse brain. *J Neurochem*, 113: 153-65.

Tremblay, M. E., Riad, M., Chierzi, S., Murai, K. K., Pasquale, E. B. and Doucet, G. (2009). Developmental course of EphA4 cellular and subcellular localization in the postnatal rat hippocampus. *J Comp Neurol*, 512: 798-813.

Bouvier, D., Corera, A. T., Tremblay, M. E., Riad, M., Chagnon, M., Murai, K. K., Pasquale, E. B., Fon, E. A. and Doucet, G. (2008). Pre-synaptic and post-synaptic localization of EphA4 and EphB2 in adult mouse forebrain. *J Neurochem*, 106: 682-95.

Tremblay, M. E., Riad, M., Bouvier, D., Murai, K. K., Pasquale, E. B., Descarries, L. and Doucet, G. (2007). Localization of EphA4 in axon terminals and dendritic spines of adult rat hippocampus. *J Comp Neurol*, 501: 691-702.

Petit, A., Kennedy, T. E., Bagnard, D. and Doucet, G. (2005). Membrane-associated guidance cues direct the innervation of forebrain and midbrain by dorsal raphe-derived serotonergic axons. *Eur J Neurosci*, 22: 552-68.

Petit, A., Pierret, P., Vallee, A. and Doucet, G. (2001). Astrocytes from cerebral cortex or striatum attract adult host serotonergic axons into intrastriatal ventral mesencephalic co-grafts. *J Neurosci*, 21: 7182-93.

Pierret, P., Vallee, A., Bosler, O., Dorais, M., Moukhles, H., Abbaszadeh, R., Lepage, Y. and Doucet, G. (1998). Serotonin axons of the neostriatum show a higher affinity for striatal than for ventral mesencephalic transplants: a quantitative study in adult and immature recipient rats. *Exp Neurol*, 152: 101-15.