SOUTENANCE DE THÈSE

de
Monsieur Mike Neubig

Le Mercredi 13 octobre 1999
13 h 00

à la Salle du Conseil (local 3632)
Pavillon Louis-Jacques Casault
Université Laval

sous la présidence du Dr. Sylvie Marcoux,
Vice-Doyenne à la Recherche et aux Études Supérieures
Faculté de Médecine

Computational Analyses of Patterns at the Subcellular Scale, of the
Electrophysiology of Thalamocortical Relay Neurons

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RÉSUMÉ

Computational analyses - that is, virtual experiments on virtual neurons inside a computer - were carried out on a reconstructed neuron. The results provide subcellular descriptions of the electrophysiology of thalamic relay neurons. Results weigh on technical issues of: 1) the heterogeneity of synaptic conductances, 2) computational dendritic subunits, 3) low-threshold calcium potentials, and on behavioral issues regarding the neurodynamics of: 4) how we sleep, and 5) how we perceive our world. Analyses are presented for the technical reader in a series of four articles, while for the general reader there is a self-contained introductory chapter that explains the entire course of research in terms that I hope everyone can understand. References are given for further reading.

PUBLICATIONS


