Weekly Colloquium

Tuesday, 02/16/2016, 12:30pm, Billings Building – Rosedale Conference Room

“Developing Symptomatic and Disease Modifying Therapies for Parkinson’s Disease – Lessons Learned and Hopes for the Future”

Jonathan M. Brotchie, Ph.D.
Senior Scientist
Toronto Western Research Institute
University Health Network

List of recent publications:


JNX-3001 clears α-synuclein accumulation and reduces deficits in an AAV-h-α-synuclein over-expressing rat model of Parkinson’s disease.

Research Abstract: The degeneration of dopaminergic neurons arising in the substantia nigra and projecting to the striatum clearly underlies the development of motor, and some non-motor, symptoms of PD. In one major aspect of our research, we build upon the work of our own group, and that of the PD field generally, to understand the dopaminergic disease process and develop novel therapeutics for PD. We employ animal models that build upon different means of inactivating of the nigrostriatal pathway. These range from simple drug-induced models, through toxin-based models in rodent and non-human primate (NHP) model, to the most sophisticated animal models of PD available today, based around the molecular pathology of the disease, e.g. a model we have developed based upon alpha-synuclein-over-expression in the substantia nigra, this represents the state-of-the-art with respect to current models of PD. This activity identifies and validates novel drug targets related to nigrostriatal dysfunction and using our existing infrastructure we can translate finding to clinical trials rapidly and effectively. Indeed, our work has been responsible for assessing the efficacy of more than 45 drug candidates in NHP models and 20 compounds that have entered clinical development.

For more information contact: dwhite@burke.org

THE BURKE MEDICAL RESEARCH INSTITUTE IS AN ACADEMIC AFFILIATE OF WEILL CORNELL MEDICINE