OMICS Group Conferences
Accelerating Scientific Discovery

2nd International Conference and Exhibition on
Cell & Gene Therapy

October 23-25, 2013 Holiday Inn Orlando International Airport, Orlando, FL, USA

Cell transplantation therapy informatics: Cloud based oligodendrogenesis modeling for clinical translational science

Jeff B. Cromwell
The Cromwell Workshop, USA

Biomedical informatics applications for *in vivo*, *ex vivo* and *in situ* cell transplantation therapies for regenerative medicine can empower researchers with: (1) Detailed biomedical knowledge about the targeted pathology domain, (2) Feature mapping of animal to human models, (3) Optimization of differentiation and functional integration of the grafted cells, and (4) Possible adjuvant therapies for axon sustenance. Using an integrated approach with eNeoTutor, iBIOFind and ModelMaker informatics applications, a web-based service model is presented to explore and test hypotheses about genetic targets with vector requirements for remyelination. Myelinogenic cell populations and multipotent stromal cells combinations like NT-3 to address Oligodendrocyte precursor cells (OPCs) depletion, differentiation and impairment of OPC recruitment are presented. It is hoped that this collection of biomedical informatics tools can help accelerate the modeling process in gene therapeutic strategies that involve oligodendrogenic factors and oligodendrocyte differentiation.

Biography

Jeff B. Cromwell owns a research workshop that specializes in building a bridge between neuroscience and computer gaming. He has received appointments and conducted research at The Center for the Neural Basis of Cognition at Carnegie Mellon University, Department of Biomedical Informatics at the University of Pittsburgh Medical School and various research institutes. He has developed products based on NIH funding and the above research appointments and continues to submit SBIR grants for the NIH of his Neural Maestro, Neural Cipher, ModelMaker 2013, eNeoTutor and iBIOFind 2013 products. He continues to publish journal articles, books and software in biomedical informatics and neuroinformatics.

jeffbcromwell@neuronalarchitects.com