



STEM CELL SOCIETY  
SINGAPORE

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# STEM CELL SOCIETY SEMINAR

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Monday 4 April 2011 • Breakthrough Theatre, Matrix Building Level 4,  
30 Biopolis Street, Singapore 138671



# PROGRAMME

4.30 - 5.30pm

**Prof Carlos Ibáñez**

Professor in Molecular Neurobiology, Department of Neuroscience, Karolinska Institute, Sweden

**“Control of cell adhesion, migration and synapse formation by neuronal growth factors”**

5.30pm onwards

**Network Social**

Provided by Stem Cell Society Singapore

Only for members of Stem Cell Society Singapore; Non-members who wish to attend Network Social are welcome to sign up for membership at [www.stemcell.org.sg/scss\\_membership.php](http://www.stemcell.org.sg/scss_membership.php).

Hosted by

**Dr Ng Huck Hui**

President of Stem Cell Society Singapore  
Senior Group Leader, Genome Institute of Singapore

# SPEAKER

## Prof Carlos Ibáñez

Control of cell adhesion, migration and synapse formation by neuronal growth factors

### Abstract

GDNF (glial cell line-derived neurotrophic factor) was initially discovered for its survival activity in midbrain dopaminergic neurons and has held promise for the treatment of Parkinson's disease. However, more recent research has shown it to have unique effects on synapse formation, neuronal differentiation and migration in different regions of the developing central nervous system (CNS). This presentation will review recent discoveries from our laboratory that reveal how some of these novel activities of GDNF contribute to CNS development and animal behavior. (More information can be found at [www.carlosibanezlab.se](http://www.carlosibanezlab.se)).

### Biography

Carlos Ibáñez is Professor in Molecular Neurobiology at the Department of Neuroscience, Karolinska Institute. He holds numerous awards and has over 120 scientific publications. The research of Carlos Ibáñez utilizes a range of molecular, cellular and genetic techniques to elucidate the functions and molecular mechanisms of action of neuronal growth factors and their receptors. Due to the pervasive role of these molecules in all aspects of nervous system development and function, this approach has allowed Ibáñez and his colleagues to address fundamental problems in neurobiology, such as neurogenesis, neuronal differentiation and survival, axon guidance, synaptogenesis and connectivity. Their discoveries include novel growth factors and receptors, new principles of protein-protein recognition, signal transduction, and cell-cell contact. Regular interactions with the industrial sector have resulted in several patents, some of which underlie the current development of therapies for peripheral neuropathies, CNS and metabolic diseases.

