



Professor Michael Nilsson

Professor Michael Nilsson MD FAFRM (RACP) PhD is the Director of Hunter Medical Research Institute (HMRI) Newcastle, Burges Professor of Medical Science at University of Newcastle and Staff Specialist in Rehabilitation Medicine at Hunter New England Health in Newcastle, Australia. He is a Conjoint Professor of Neurorehabilitation and Translational Stroke Research, University of Gothenburg (JoG), Gothenburg, Sweden and Honorary Professor of The Florey Institute of Neuroscience and Mental Health, Melbourne.

Professor Nilsson has over 15 years' experience from executive roles in health and medical research and health care in Sweden and Australia. As a clinician and neuroscientist, he is studying mechanisms underpinning neuroprotection, brain plasticity and neural repair with special emphasis on stress-related mechanism and degeneration. Michael is a translational neuroscientist bridging together the fields of astrocyte biology, brain plasticity and rehabilitation after stroke.

He has published over 100 peer-reviewed scientific articles and about 20 book chapters and other publications in these research areas. His research includes aspects of the functions of the astrocyte network in the mammalian brain with particular focus on cellular and intercellular signaling mechanisms, cellular reactivity and defense mechanisms against oxidative stress. He has also studied the effects of enriched environment on plasticity and regeneration which constitute an important platform for ongoing animal and clinical studies.

Specialised research interests include;

- Stroke recovery and rehabilitation – The influence of enriched environment and multimodal stimulation.
- Glia biology – Cellular and neurobiological reactions in brain plasticity and secondary neurodegeneration.
- Role of brain plasticity in stroke recovery.
- Cardiovascular fitness and brain cognition – Epidemiological studies utilising comprehensive Swedish military conscription data.

He is principle investigator of an interdisciplinary translational research program, The Culture and Brain Health Initiative, involving studies on the effects of cardiovascular exercise, music, rhythm and dance on cognition and motor recovery of stroke patients. He has also completed clinical work focusing on the implementation and evaluation of modern principles for stroke, traumatic brain injury and Parkinson rehabilitation. Michael Nilsson is also the co-founder of NeuroOptima Inc., which is a pioneering Rehabilitation enterprise in Sweden and Spain with a focus on stroke, traumatic brain injury and Parkinson's disease, offering programs that are based on the principles of multimodal stimulation in an enriched environment in combination with education and intensive task-specific training.

Brisbane Waters Private Hospital welcomes Professor Nilsson to our team.

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Private Hospital

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