

CURRICULUM VITAE

Name and Date of Birth:

Martin Ingvar, 2 March 1955, Citizenship: Swedish, Married 4 Children (age 19-27)

Academic Degrees

1984 MD
1982 PhD

Board Certifications

Licence to practice medicine in Sweden, 1987
Licensed specialist in clinical neurophysiology in Sweden, 1991

Major appointments

Professor, Integrative Medicine	2007-
Research Director MR Center, Karolinska Institute	1998-
Deputy Chairman Dept Clinical Neuroscience,	2001-2004
Chairman, Dept Clinical Neuroscience	2004-
Advisor Neuroinformatics Center, Ming Yan University Taipei	2002-
Chairman World Childhood Foundation	2001-
Praeses Rhodin Remediation Academy	2007-
Member Technical Futures Board; Health (IVA)	2002
Head Platform Imaging, Stockholm Brain Institute	2006-
Member of the Swedish Academy of Engineering Sciences	2007-
Government delegation for Gender-equality in School, Delegate	2008-
Researchsecretary FoUU Karolinska Hospital	2001-2004

Supervision of Ph.D. theses

Primary: Gunilla Nevander 1987, Överläkare Lunds Universitessjukhus, Jen Chuen Hsieh, 1994, Professor Chariman, Center for Neuroinformatics, MR and MEG Taipei, Per Hamid Ghatan, 1997 Överläkare, Rehabilitation medicine, Peter Fransson, 2000 Senior Researcher, Predrag Petrovic 2002, PostDoc Psychiatry training; Karl Magnus Petersson 2005, Presently Senior Researcher Nijmegen and Part time at MR Research Center Stockholm, Katrina Carlsson 2005, presently under training to psychiatrist.

Secondary: 5

Ongoing main tutorships 2 students (Blom, Jensen). Secondary 4

Main Current Research Grant Sources

Osher Foundation (PI), SSF (CoPI, Vinnova (CoPI), VR (PI), SLL (PI), NIH (CoPI), KAW (PI)

Leadership in science:

Formal training in the programme "Framtidens Ledare".

Served in leading positions in large scale multi group research projects for 20 years (PET, MR, Osher Center, SBI). Served in a multitude of decision-bodies within and outside KI.

Served Department of Clinical Neuroscience as co-chairman and chairman for 9 years.

Industry Collaboration

Stockholm Brain Institute is a newly developed strategic research center (300MSEK over 10 years) with the aim to facilitate the implementation of basic science. Within SBI we are presently engaged in development of biomarkers of treatment success for chronic pain based on multi level characterization of the patient (from gene to behavior). All this work is done in collaboration with industry.

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Research Interests

Present research is aimed at chronic pain and related mechanisms such as mechanisms of learning and emotional regulation. We have a multidimensional research program going where we study the descending pain inhibition.

We have shown that frontal cortical mechanisms are part of the descending pain controlling mechanisms. These mechanisms have been mapped with PET in regard to the placebo response. The present program is focused on the genetic underpinning to behavioral aspects of chronic pain. Our program is translational and reaches from molecule to patient.

Previous research achievements: We have previously demonstrated that a missed learning opportunity for written language affects both functional and structural maturation in the brain. Also adjacent cognitive domains are negatively affected.

We have demonstrated mechanism and efficacy for AMPAkinic cognitive enhancement.

The maturation and learning phenomena have been further studied in artificial grammar learning as a model for language. We have been instrumental in deploying these results and results from memory consolidation studies in artificial models and network co-variance models. The influence of contextual mechanisms and irrelevant speech on attention have been clarified.

We were first to demonstrate a recruitment of the medial temporal lobe in response to challenge was demonstrated for working memory.

Major achievements have been reached in MR modeling, signal detection and post-processing corrections of spatial aberrations.

Publications

Some 200 publications, below the last two years of publications

- [1]Blom EH, Larsson JO, Serlachius E, Ingvar M. The differentiation between depressive and anxious adolescent females and controls by behavioural self-rating scales. *J Affect Disord* 2009.
- [2]Ingvar M. Descending pain control and fibromyalgia syndrome. *Pain* 2009;145(1-2):1.
- [3]Kosek E, Jensen KB, Lonsdorf TB, Schalling M, Ingvar M. Genetic variation in the serotonin transporter gene (5-HTTLPR, rs25531) influences the analgesic response to the short acting opioid Remifentanyl in humans. *Mol Pain* 2009;5:37.
- [4]Jensen KB, Lonsdorf TB, Schalling M, Kosek E, Ingvar M. Increased sensitivity to thermal pain following a single opiate dose is influenced by the COMT val(158)met polymorphism. *PLoS One* 2009;4(6):e6016.
- [5]Henje Blom E, Olsson EM, Serlachius E, Ericson M, Ingvar M. Heart rate variability is related to self-reported physical activity in a healthy adolescent population. *Eur J Appl Physiol* 2009;106(6):877-883.
- [6]Jensen KB, Kosek E, Petzke F, Carville S, Fransson P, Marcus H, Williams SC, Choy E, Giesecke T, Mainguy Y, Gracely R, Ingvar M. Evidence of dysfunctional pain inhibition in Fibromyalgia reflected in rACC during provoked pain. *Pain* 2009;144(1-2):95-100.
- [7]Folia V, Udden J, Forkstam C, Ingvar M, Hagoort P, Petersson KM. Implicit learning and dyslexia. *Ann N Y Acad Sci* 2008;1145:132-150.
- [8]Wahlberg K, Ghatan PH, Modell S, Nygren A, Ingvar M, Asberg M, Heilig M. Suppressed neuroendocrine stress response in depressed women on job-stress-related long-term sick leave: a stable marker potentially suggestive of preexisting vulnerability. *Biol Psychiatry* 2009;65(9):742-747.
- [9]Udden J, Folia V, Forkstam C, Ingvar M, Fernandez G, Overeem S, van Elswijk G, Hagoort P, Petersson KM. The inferior frontal cortex in artificial syntax processing: an rTMS study. *Brain Res* 2008;1224:69-78.
- [10]Forkstam C, Elwer A, Ingvar M, Petersson KM. Instruction effects in implicit artificial grammar learning: a preference for grammaticality. *Brain Res* 2008;1221:80-92.
- [11]Persson J, Lind J, Larsson A, Ingvar M, Slegers K, Van Broeckhoven C, Adolfsson R, Nilsson LG, Nyberg L. Altered deactivation in individuals with genetic risk for Alzheimer's disease. *Neuropsychologia* 2008;46(6):1679-1687.
- [12]Gospic K, Gunnarsson T, Fransson P, Ingvar M, Lindfors N, Petrovic P. Emotional perception modulated by an opioid and a cholecystokinin agonist. *Psychopharmacology (Berl)* 2008;197(2):295-307.