Henrik Bo Wiberg Larsson

Profile

Professor at the Faculty of Health & Medical Science, University of Copenhagen, Denmark. Professor at the Faculty of Medicine and Health Science, Norwegian University of Science and Technology, Norway. Consultant MD and specialist in Nuclear Medicine and Clinical Physiology, Rigshospitalet, Denmark.

Thorough knowledge of **human clinical physiology** and diseases with a specific focus on **brain and heart diseases**. More than thirty years of experience of **M**agnetic **R**esonance **I**maging and Spectroscopy with a focus on methodological **development of functional MRI** and application of new functional MRI method in brain and heart diseases.

I have a thorough knowledge of advanced **math** and **physics**, and **image postprocessing software development**, using Matlab.

I am highly interested in strategic **research management** both locally at department level and in a more multiprofessional and global perspective.

I have **leadership experience** and along record of **teaching** both at a pre- and post graduate level of medical and technical university students.

Employment

2014- **Appointed as professor II, Department of Circulation and Medical Imaging, The Norwegian University of Technology and Science (NTNU), Trondheim, Norway.**

- Teaching magnetic resonance at a post-graduate level for radiographers.
- Development of a Master programme for education in Magnetic Resonance Imaging for radiographers and other at a bachelor level.

2013-2016 **Principal professor in Clinical Physiology and Nuclear Medicine, Institute of Clinical Medicine, The Faculty of Health & Medical Science, University of Copenhagen.**

- Member of the university strategic board for research.
- Evaluation of research qualification of new professors and associate professors.
- Development of new teaching courses for medical students in clinical physiology and nuclear medicine.

2010-2014 **Member of the Ethical Committee for the Capital Region, Denmark**

- Evaluation and approval of ethical aspects of research protocols from the capital region of Copenhagen, including research protocols from all Copenhagen Hospitals

2008- **Appointed as professor in experimental and comparative clinical physiology, Institute of Clinical Medicine, The Faculty of Health & Medical Science, University of Copenhagen.**

- Continuing research in tracer kinetic theory and dynamic contrast enhanced Magnetic Resonance Imaging.
- Detailed studies of the blood brain barrier permeability in patients with Multiple Sclerosis.
- Studies of non-linearity of the BOLD response.
- Studies of the vascular system in migraine patients.
- Methodological Magnetic Resonance sequences for measurement of the brain's oxygen consumption.
- Brain oxygen consumption, perfusion, lactate in healthy human subjects, free divers, elderly humans with sleep apnoea and small brain vessel disease.
- Teaching medical students in clinical physiology and nuclear medicine.

2004- **Consultant and Head of Functional Imaging Unit, Department of Clinical Physiology and Nuclearmedicine, Glostrup Hospital – since 2015 part of Rigshospitalet, Denmark.**

- Creating a MRI research unit, acting as a core facility for clinical research at Glostrup Hospital.
- Creating MRI protocols for various research groups at the hospital.
- Performing own research: Development of dynamic contrast enhanced MRI, able to estimate cerebral perfusion, blood volume and blood brain barrier permeability.

2003-2014 **Professor of applied MR technology, Department of Circulation and Medical Imaging, The Norwegian University of Technology and Science (NTNU), Trondheim, Norway.**

- Strategic research planning in collaboration with professor Olav Haraldseth.
- Teaching medical students in medical MRI

2003-2011 **Professor at the Department of Nutrition and Medical Technology (HIST), Trondheim, Norway.**

- Development of magnetic resonance imaging teaching courses.
- Teaching magnetic resonance at a post-graduate level for radiographers.
- Teaching: Fourier analysis, k-space, perfusion, diffusion, fMRI

2001-2004 **Head of the MR Centre and Diagnostic Department, St. Olav Hospital, Trondheim, Norway.**

- Management and government.
- Staff responsibility.
- Economy responsibility.
- Implementation of a new healthcare reform.
- Supervision of implementation of new IT-technology – new PACS system.
- Fusions process.
- Education in leadership.

1998-2001 **Chief research consultant at The Danish Research Centre of Magnetic Resonance, Hvidovre Hospital, Denmark.**

- Development of research strategies.
- Responsible for research and methodological development.
- Teaching of basic and advanced MRI theory.
- Supervision of technical and medical PhD students.
- MRI sequence development and programming.
- Tracer kinetic development and postprocessing software development using MATLAB.

1990-1998 **Appointments at University Hospitals in Copenhagen**

- General clinical education at various internal medical and surgical departments.
- Senior registrar at Department of Neurology, Gentofte Hospital.
- Special education at various departments of clinical physiology and nuclear medicine at Copenhagen Hospitals.
- Continued research at The Danish Research Centre of Magnetic Resonance, Hvidovre Hospital finalizing a doctoral thesis.
- Initializing new MRI projects at The Danish Research Centre of Magnetic Resonance, involving MRI sequence programing.
- Myocardial MRI perfusion quantification.
- Tracer kinetic modelling and programming in Turbo Pascal.

1986-1990 **Research fellow at The Danish Research Centre of Magnetic Resonance, Hvidovre Hospital, Denmark** .

- Quantitative MRI studies on patients with Multiple Sclerosis.
- Relaxometry of acute and chronic MS plaques.
- Spectroscopy of normal apparent white matter and MS plaques.
- Water diffusion MRI normal apparent white matter and MS plaques.

- Blood brain barrier permeability quantification using dynamic contrast enhanced MRI in MS patients.
- Chemical shift imaging of lesions in the optic nerve in patients with optic neuritis.

Education/Academic degree

1997 Specialist in Clinical Physiology and Nuclear medicine.

1995 Defence of doctoral thesis entitled 'In vivo characterization of the multiple sclerosis plaque by Magnetic Resonance Imaging and Spectroscopy'. Acta Neurologica Scandinavica, Supplementum. 1995; No.159 Vol. 91.

1986 Medical doctor, graduated from University of Copenhagen, Denmark.

1977 One year study at the Danish Technical University (DTU), Copenhagen, Denmark

Teaching and supervision

Teaching at pre- and post graduate level in physiology, medical imaging, physics and mathematics, Magnetic Resonance Imaging and Spectroscopy.
Supervisor for 30 PhD and Master Students since 1995. At present supervisor of one Post Doc, involved in measurement of the blood brain barrier permeability in MS patients and one PhD student involved in methodological development of MR methods capable of measuring cerebral perfusion and oxygen consumption. Co-supervisor for additional 4 PhD students. Reviewer for several scientific journals.

International collaboration

Collaboration with professor I Awad, The University of Chicago Medicine, USA; Associated professor I Galea, University of Southampton, UK; and Dr. S Maier, University of Freiburg, GE.

Publications

Articles in peer reviewed journals: 194. Total number of printed contributions to peer reviewed conference proceedings more than: 200. Other publications: 21 incl. one book in tracer kinetic theory.
Web of Science: Larsson HBW as author: H-factor 50. Sum of times cited: 9562, Sum of times cited without self-citation: 9203.

See separate publication list