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Areas of Expertise

Professor Edvinsson is leading expert in the field of cerebral circulation. He is world-recognized for his work on vascular innervation and receptor regulation. His extensive research has been a major contributor to what is known about the roles of the cerebral vasculature in health and diseases such as stroke and primary headaches. He has been a pioneer in elucidating the function of neuropeptides in the vascular system and a key player in the research and development of CGRP blockers for treatment of migraine. Professor Edvinsson also has a strong clinical background as a clinical pharmacologist and an MD in internal medicine.

Method Expertise: Immunohistochemistry, qPCR, Western blot, molecular biology of cell signaling, mRNA arrays, proteomics, cell and organ cultures, animal models for acute stroke and acute myocardial infarcts, pharmacology and treatment methods, string myography and perfusion myography for receptor and functional studies of isolated blood vessels.

Education/Training

University of Lund, Sweden
1975DMSci
1980M.D.
1985Specialist in Clinical Pharmacology
1988Specialist in Internal Medicine

Positions and Employment

University of Copenhagen, Denmark
2007-ongoingDirector and founder, Glostrup Research Institute, Copenhagen University Hospital
1997-ongoingChairman, Dept. Experimental Clinical Research, Glostrup Research Institute
2011-2016Director, Center of Excellence in Stroke Research (supported by Lundbeck Foundation), Copenhagen University, Glostrup Research Institute
2008-ongoingProfessor in Receptor Regulation in Cerebrovascular and Cardiovascular Diseases, Faculty of Health and Medical Sciences
University of Lund, Sweden
2002-ongoingProfessor in Internal Medicine, Faculty of Medicine
1985-Director, Experimental Vascular Research Laboratory, Biomedical Center
1988-Specialist in Internal Medicine, Lund University Hospital
2009-ongoingMember, Human Ethics Committee
1996-2002Associate Professor in Internal Medicine
1988-1996Lecturer, University of Lund
1983-2003Vice-Chair, Member, Animal Ethics Committee, Lund University
Adjunct Positions
2004-Adjunct Professor, Basic and Translational Research Institute, Xian University, Xian, China
1990-Adjunct Professor in Pharmacology, Southern Illinois University, Illinois, USA
1990-1995Professor II in Neuroscience (20%), Trondheim University, Norway

Honors and Awards

2022 Honorary doctorate in France (Paris), Hungary (Szeged) and China (Xian).
2021 Winner of the Brain Prize, largest neuroscience award globally.
2016- President for International Headache Society
2014-2016 Elected Trustee and Director, International Headache Society
2013-Member, Steering Board, European Headache Federation
2012Lifetime Achievement Award, American Headache Society
2012Honorary Doctorate, University of Szeged, Hungary
2008-2011Bland Lane International Distinguished Professor Award, FAMRI, USA
2002-Honorary Fellow, British Pharmacology Society
1985-Honorary Fellow, Stroke Council, American Heart Association

Professional Recognition

Over the last 3 decades, Dr. Edvinsson has been invited yearly to international congresses and meetings as well as to universities worldwide to give lectures and keynote presentations. Most recently, he was recognized by American headache leaders with a Lifetime Achievement Award for Research (Boston, 2012).

Received an Honorary Doctorate from Szeged University, Hungary (2012) and at Xián University, China (2013).

- Over 1095 peer-reviewed research publications.
- 128 book chapters.
- Over 100 international scientific lectures as invited/key-note speaker.
- Member scientific society boards and organizer of symposia and meetings throughout career.

Research Management and Team Leader Experience

I started as a team leader in 1976 with my first PhD students. In 1980 I got my first laboratory at the University Hospital in Lund which was supported by the Swedish Research Council and the Heart and Lung Foundation. This was expanded in 1985 to several laboratories and offices located at the Experimental Department, Lund University. In 1988 the laboratory relocated to Lund University Hospital and then it moved to the Biomedical Center when it opened in 2000; this is my current laboratory in Lund. In parallel I was responsible for organizing and building the Glostrup Research Park in Copenhagen which opened under my leadership in 2007.

Student Mentoring

1978-Supervisor for 52 PhD and 20 Masters Students (graduated) and 8 PhD and 4 Masters Students (in progress) at University of Copenhagen and University of Lund.

Evaluator of over 20 Masters, PhD and DMSci theses in Denmark and internationally

Supervisor for over 25 postdoctoral students from Denmark and recruited internationally (Sweden, England, Scotland, France, Hungary, USA, Canada, Mexico, Chile, Japan, China, Pakistan, India)

Grant Awards

Research projects and student support have been continuously funded since 1975.

Current research and student support at Glostrup Research Institute funded by grants from the Danish Medical Research Council; Danish Agency for Science, Technology and Innovation; The Lundbeck Foundation with two major grants (the LUCENS group 2005-2014; Center of Excellence in Stroke 2011-2016), EU, and the Novo Nordisk Foundation.

Bibliometry

H-index in Web of Science = 94

Citations in total = 43.068 (2025)

Citations latest 10 years per year = 1000/year

Articles in total = 1119

Publications

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Male-female comparison of vasomotor effects of circulating hormones in human intracranial arteries

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Sex differences in expression of CGRP family of receptors and ligands in the rat trigeminal system

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Pituitary cyclase-activating polypeptide targeted treatments for the treatment of primary headache disorders
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The impact of the migraine treatment onabotulinumtoxinA on inflammatory and pain responses: Insights from an animal model

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The history and rationale of the development of new drugs for migraine treatment

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Preliminary evidence that blocking the uptake of placenta-derived preeclamptic extracellular vesicles protects the vascular endothelium and prevents vasoconstriction

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Rodent behavior following a dural inflammation model with anti-CGRP migraine medication treatment

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Expression of vasopressin and its receptors in migraine-related regions in CNS and the trigeminal system: influence of sex

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The MEK Inhibitor Trametinib Improves Outcomes following Subarachnoid Haemorrhage in Female Rats

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Calcitonin gene-related peptide (CGRP) is a key molecule released in acute migraine attacks- successful translation of basic science to clinical practice

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Subacute phase of subarachnoid haemorrhage in female rats: Increased intracranial pressure, vascular changes and impaired sensorimotor function

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Identifying New Antimigraine Targets: Lessons from Molecular Biology

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Secondhand cigarette smoke induces increased expression of contractile endothelin receptors in rat coronary arteries via a MEK1/2 sensitive mechanism

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Native CGRP Neuropeptide and Its Stable Analogue SAX, But Not CGRP Peptide Fragments, Inhibit Mucosal HIV-1 Transmission

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Transcriptome profiling revealed early vascular smooth muscle cell gene activation following focal ischemic stroke in female rats - comparisons with males

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