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Medicine/Emergency Medicine, Lund  
Experimental Vascular Research  
LTH Profile Area: Photon Science and Technology  
LU Profile Area: Light and Materials  
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## Research

Professor Edvinsson is leading expert in the field of (1) cerebral circulation and (2) migraine. 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 written the major textbook in the field; Cerebral Blood Flow & Metabolism (1993 Raven Press, 2002 Lippincott Williams Wilkins). In the field of headache he is now a president of The International Headache society. Recently, his groundbreaking work on the sensory system has resulted in new medicine being introduced small molecular CGRP-blockers for acute attacks and antibodies towards CGRP or CGRP-receptors as prophylaxis chronic migraine. 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.

## Qualifications

Internal Medicine, Specialist, Faculty of Medicine  
... → 1988

Award Date: 1988 Jan 1

Clinical Pharmacology, Specialist, Faculty of Medicine  
... → 1985

Award Date: 1985 Jan 1

Medicine, MD, Faculty of Medicine  
... → 1980

Award Date: 1980 Jan 1

Medicine, DMSGI, Neurogenic mechanisms in cerebrovascular bed, Faculty of Medicine  
... → 1975

Award Date: 1975 Jan 1

## Employment

### **Principal investigator, Supervisor, Professor**

Medicine/Emergency Medicine, Lund  
Lund University  
Lund, Sweden  
2016 Jan 27 → present

### **Project manager**

Experimental Vascular Research  
Lund University  
Lund, Sweden  
2016 Jun 27 → present

### **Profile area member**

LTH Profile Area: Photon Science and Technology  
Lund University  
Sweden  
2022 Sept 14 → present

### **Profile area member**

LU Profile Area: Light and Materials  
Lund University  
Sweden  
2023 Jan 1 → present

### **Profile area member**

Lund Laser Centre, LLC  
Lund University  
Lund, Sweden  
2025 Oct 31 → present

### **Director, Center of Excellence in Stroke Research**

Copenhagen University Hospital  
Copenhagen, Denmark  
2011 Jan 1 → present

### **Professor in Receptor Regulation Cerebrovascular and Cardiovascular Diseases**

Copenhagen University Hospital  
Copenhagen, Denmark  
2008 Jan 1 → present

### **Director and founder, Glostrup Research Institute**

Copenhagen University Hospital  
Copenhagen, Denmark  
2007 Jan 1 → present

## Research output

### **Understanding RAMP1's role in hormonal migraine may improve CGRP-targeted therapies**

Edvinsson, L. & Holm, A., 2026 Feb, (E-pub ahead of print) In: Expert Review of Clinical Pharmacology.

**Ex vivo stimulation of the trigeminal nucleus caudalis induces peripheral CGRP release in the trigeminal ganglion and reveals a distinct dopamine–endocannabinoid mechanism relevant to migraine**

Christiansen, I. M., Reducha, P. V., Edvinsson, L., Holm, A. & Haanes, K. A., 2025 Dec, In: Journal of Headache and Pain. 26, 1, 141.

**RAMP1-dependent hormonal regulation of CGRP and its receptor in the trigeminal ganglion**

Holm, A., Edvinsson, J. C. A., Krause, D. N. & Edvinsson, L., 2025 Dec, In: Journal of Headache and Pain. 26, 1, 142.

**Temporal light modulation activation in visual cortex: a 7T fMRI study on healthy subjects**

Lindén, J., Hemphälä, H., Markenroth Bloch, K., Edvinsson, L., Surova, Y., Mauritsson, J., Pålsson, E., Magnusson, V., van Westen, D. & Björkstrand, J., 2025 Nov 19, In: LEUKOS - Journal of Illuminating Engineering Society of North America. 17 p.

**Is PACAP the next big thing in migraine therapy?**

Edvinsson, L., 2025 Aug, In: Cephalalgia. 45, 8, 03331024251368748.

**Independent and synergistic roles of MEK-ERK1/2 and PKC pathways in regulating functional changes in vascular tissue following flow cessation**

Kazantzi, S., Edvinsson, L. & Haanes, K. A., 2025 Jun, In: Journal of Molecular and Cellular Cardiology Plus. 12, 100300.

**Gepants**

Edvinsson, L., 2025, *Migraine Pain Management: Current Pharmacological and Non-pharmacological Options*. Elsevier, p. 295-304 10 p.

**Revisiting substance P in migraine: a methodological approach inspired by anti-CGRP and anti-PACAP success**

Pellesi, L. & Edvinsson, L., 2025, In: Journal of Headache and Pain. 26, 1, 22.

**Switching Off Vascular MAPK Signaling: A Novel Strategy to Prevent Delayed Cerebral Ischemia Following Subarachnoid Hemorrhage**

Edvinsson, L. & Krause, D. N., 2025, In: Translational Stroke Research. 16, p. 952-961

**TRPM3 activation causes CGRP release in trigeminal neurons: Implications for migraine mechanisms**

Reducha, P. V., Nielsen, L. K. S., Jensen, M. N., Edvinsson, J. C. A., Kazantzi, S., Wæver, S. L., Lylloff, T., Westgate, C. S. J., Edvinsson, L. & Haanes, K. A., 2025, (E-pub ahead of print) In: Headache.

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

Edvinsson, J. C. A., Grubor, I., Maddahi, A. & Edvinsson, L., 2024 Dec 11, In: Journal of Headache and Pain. 25, 216.

**MERTK in the rat trigeminal system: a potential novel target for cluster headache?**

Edvinsson, J. C. A., Ran, C., Olofsgård, F. J., Steinberg, A., Edvinsson, L. & Belin, A. C., 2024 Dec, In: Journal of Headache and Pain. 25, 1, 85.

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

Maddahi, A., Edvinsson, J. C. A. & Edvinsson, L., 2024 Dec, In: Journal of Headache and Pain. 25, 1, 193.

**Pituitary cyclase-activating polypeptide targeted treatments for the treatment of primary headache disorders**

Karsan, N., Edvinsson, L., Vecsei, L. & Goadsby, P. J., 2024 Jul, In: Annals of Clinical and Translational Neurology. 11, 7, p. 1654-1668 15 p.

**Protein kinase C-inhibition reduces critical weight loss and improves functional outcome after experimental subarachnoid haemorrhage**

Bömers, J. P., Holm, A., Kazantzi, S., Edvinsson, L., Mathiesen, T. I. & Haanes, K. A., 2024 Jul, In: Journal of Stroke and Cerebrovascular Diseases. 33, 7, 107728.

**Rimegepant for the acute and preventive treatment of migraine: a narrative review of the evidence**

Edvinsson, L., 2024, In: Expert Review of Neurotherapeutics. 24, 12, p. 1141-1155 15 p.

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

Erlandsson, L., Ohlsson, L., Masoumi, Z., Rehnström, M., Cronqvist, T., Edvinsson, L. & Hansson, S. R., 2023 Dec, In: *Scientific Reports*. 13, 1, 18425.

**Progesterone distribution in the trigeminal system and its role to modulate sensory neurotransmission: influence of sex**

Maddahi, A., Warfvinge, K., Holm, A., Edvinsson, J. C. A., Reducha, P. V., Kazantzi, S., Haanes, K. A. & Edvinsson, L., 2023 Dec, In: *Journal of Headache and Pain*. 24, 1, 154.

**Amine mechanisms in brain vessels, with particular regard to autonomic innervation and blood-brain barrier**

Owman, C., Edvinsson, L., Falck, B. & Nielsen, K. C., 2023, *Pathology of Cerebral Microcirculation*. Mouton de Gruyter, p. 184-200 17 p.

**Dual action of the cannabinoid receptor 1 ligand arachidonyl-2'-chloroethylamide on calcitonin gene-related peptide release**

Christiansen, I. M., Edvinsson, J. C. A., Reducha, P. V., Edvinsson, L. & Haanes, K. A., 2022 Dec, In: *Journal of Headache and Pain*. 23, 30.

**Repair-related molecular changes during recovery phase of ischemic stroke in female rats**

Mostajeran, M., Edvinsson, L., Ahnstedt, H., Arkelius, K. & Ansar, S., 2022 Dec, In: *BMC Neuroscience*. 23, 1, 23.

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

Bömers, J. P., Grell, A. S., Edvinsson, L., Johansson, S. E. & Haanes, K. A., 2022 Dec, In: *Pharmaceuticals*. 15, 12, 1446.

**Could Experimental Inflammation Provide Better Understanding of Migraines?**

Reducha, P. V., Edvinsson, L. & Haanes, K. A., 2022 Aug, In: *Cells*. 11, 15, 2444.

**Neuropeptides and the Nodes of Ranvier in Cranial Headaches**

Edvinsson, J. C. A., Haanes, K. A. & Edvinsson, L., 2022 Jan, In: *Frontiers in Physiology*. 12, 820037.

**Biological and small molecule strategies in migraine therapy with relation to the CGRP family of peptides**

Edvinsson, L., Edvinsson, J. C. A. & Haanes, K. A., 2022, In: *British Journal of Pharmacology*. 179, 3, p. 371-380

**Changes in P2Y<sub>6</sub> receptor-mediated vasoreactivity following focal and global ischemia**

Erdling, A., Johansson, S. E., Radziwon-Balicka, A., Ansar, S. & Edvinsson, L., 2022, In: *Physiological Reports*. 10, 8, e15283.

**Lasmiditan and 5-Hydroxytryptamine in the rat trigeminal system; expression, release and interactions with 5-HT<sub>1</sub> receptors**

Edvinsson, J. C. A., Maddahi, A., Christiansen, I. M., Reducha, P. V., Warfvinge, K., Sheykhzade, M., Edvinsson, L. & Haanes, K. A., 2022, In: *Journal of Headache and Pain*. 23, 1, 26.

**Ovariectomy Reduces Vasocontractile Responses of Rat Middle Cerebral Arteries After Focal Cerebral Ischemia**

Rehnström, M., Ahnstedt, H., Krause, D. N., Edvinsson, M. L., Haanes, K. A. & Edvinsson, L., 2022, In: *Journal of Cardiovascular Pharmacology*. 79, 1, p. e122-e128

**Neurokinins and their receptors in the rat trigeminal system: Differential localization and release with implications for migraine pain**

Edvinsson, J. C. A., Reducha, P. V., Sheykhzade, M., Warfvinge, K., Haanes, K. A. & Edvinsson, L., 2021 Dec, In: *Molecular Pain*. 17

**Hormonal influences in migraine — interactions of oestrogen, oxytocin and CGRP**

Krause, D. N., Warfvinge, K., Haanes, K. A. & Edvinsson, L., 2021 Oct, In: *Nature Reviews Neurology*. 17, 10, p. 621-633 13 p.

**Pre-chiasmatic, single injection of autologous blood to induce experimental subarachnoid hemorrhage in a rat model**  
Bömers, J. P., Johansson, S. E., Edvinsson, L., Mathiesen, T. I. & Haanes, K. A., 2021 Jun, In: Journal of Visualized Experiments. 2021, 172, e62567.

CGRP and migraine; from bench to bedside  
Edvinsson, L., 2021, In: Revue Neurologique. 177, 7, p. 785-790

**Identifying New Antimigraine Targets: Lessons from Molecular Biology**  
Edvinsson, L. & Haanes, K. A., 2021, In: Trends in Pharmacological Sciences. 42, 4, p. 217-225

**Oral rimegepant for migraine prevention**  
Edvinsson, L., 2021, In: The Lancet. 397, 10268, p. 4-5 2 p.

**Secondhand cigarette smoke induces increased expression of contractile endothelin receptors in rat coronary arteries via a MEK1/2 sensitive mechanism**  
Cao, L., Lindstedt, I., Edvinsson, M. L., Ping, N. N., Cao, Y. X. & Edvinsson, L., 2021, In: Scandinavian Cardiovascular Journal. 55, 1, p. 50-55

**Subacute phase of subarachnoid haemorrhage in female rats: Increased intracranial pressure, vascular changes and impaired sensorimotor function**  
Spray, S., Haanes, K. A., Edvinsson, L. & Johansson, S. E., 2021, In: Microvascular Research. 135, 104127.

**Differences in pituitary adenylate cyclase-activating peptide and calcitonin gene-related peptide release in the trigeminovascular system**  
Edvinsson, J. C. A., Grell, A. S., Warfvinge, K., Sheykhzade, M., Edvinsson, L. & Haanes, K. A., 2020 Oct 1, In: Cephalalgia. 40, 12, p. 1296-1309 14 p.

**The effects of CGRP in vascular tissue - Classical vasodilation, shadowed effects and systemic dilemmas**  
Sohn, I., Sheykhzade, M., Edvinsson, L. & Sams, A., 2020 Aug 15, In: European Journal of Pharmacology. 881, 173205.

**Serotonin and Neuropeptides in Blood From Episodic and Chronic Migraine and Cluster Headache Patients in Case-Control and Case-Crossover Settings: A Systematic Review and Meta-Analysis**  
Frederiksen, S. D., Bekker-Nielsen Dunbar, M., Snoer, A. H., Deen, M. & Edvinsson, L., 2020 Jun, In: Headache. 60, 6, p. 1132-1164 33 p.

**Cellular distribution of PACAP-38 and PACAP receptors in the rat brain: Relation to migraine activated regions**  
Warfvinge, K. & Edvinsson, L., 2020 May 1, In: Cephalalgia. 40, 6, p. 527-542 16 p.

**Understanding side-effects of anti-CGRP and anti-CGRP receptor antibodies**  
Haanes, K. A., Edvinsson, L. & Sams, A., 2020 Mar 16, In: Journal of Headache and Pain. 21, 1, 26.

**Calcitonin gene-related peptide (CGRP) and cluster headache**  
Belin, A. C., Ran, C. & Edvinsson, L., 2020 Jan 6, In: Brain Sciences. 10, 1, 30.

**CGRP in rat mesenteric artery and vein - receptor expression, CGRP presence and potential roles**  
Le, T. L., Grell, A. S., Sheykhzade, M., Warfvinge, K., Edvinsson, L. & Sams, A., 2020, In: European Journal of Pharmacology. 875, 173033.

Estrogen receptors  $\alpha$ ,  $\beta$  and GPER in the CNS and trigeminal system - molecular and functional aspects  
Warfvinge, K., Krause, D. N., Maddahi, A., Edvinsson, J. C. A., Edvinsson, L. & Haanes, K. A., 2020, In: Journal of Headache and Pain. 21, 1, 131.

**Increased mortality in elderly heart failure patients receiving infusion of furosemide compared to elderly heart failure patients receiving bolus injection**

Sager, R., Lindstedt, I., Edvinsson, L. & Edvinsson, M. L., 2020, In: Journal of Geriatric Cardiology. 17, 6, p. 359-364 6 p.

**Oxytocin as a regulatory neuropeptide in the trigeminovascular system: Localization, expression and function of oxytocin and oxytocin receptors**

Warfvinge, K., Krause, D. N., Maddahi, A., Grell, A. S., Edvinsson, J. C. A., Haanes, K. A. & Edvinsson, L., 2020, In: Cephalalgia. 40, 12, p. 1283-1295

**Smoking and endothelial dysfunction**

Golbidi, S., Edvinsson, L. & Laher, I., 2020, In: Current Vascular Pharmacology. 18, 1, p. 1-11 11 p.

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

Rehnström, M., Frederiksen, S. D., Ansar, S. & Edvinsson, L., 2020, In: BMC Genomics. 21, 1, 883.

**Vancouver Declaration II on Global Headache Patient Advocacy 2019**

Dodick, D. W., Ashina, M., Sakai, F., Grisold, W., Miyake, H., Henscheid-Lorenz, D., Craven, A., Ruiz de la Torre, E., Koh, R., Reznik, N., Bance, L., Leroux, E., Edvinsson, L. & International Headache Society Global Patient Advocacy Coalition, 2020, In: Cephalalgia. 40, 10, p. 1017-1025

**C-fibers may modulate adjacent Aδ-fibers through axon-axon CGRP signaling at nodes of Ranvier in the trigeminal system**

Edvinsson, J. C. A., Warfvinge, K., Krause, D. N., Blixt, F. W., Sheykhzade, M., Edvinsson, L. & Haanes, K. A., 2019 Nov 12, In: Journal of Headache and Pain. 20, 1, 105.

**Synergistic effects of a cremophor EL drug delivery system and its U0126 cargo in an ex vivo model**

Christensen, S. T., Grell, A. S., Johansson, S. E., Andersson, C. M., Edvinsson, L. & Haanes, K. A., 2019 Jul 5, In: Drug delivery. 26, 1, p. 680-688 9 p.

**Does inflammation have a role in migraine?**

Edvinsson, L., Haanes, K. A. & Warfvinge, K., 2019 Jul 1, In: Nature Reviews Neurology.

**The changing faces of migraine**

Martelletti, P., Ashina, M. & Edvinsson, L., 2019 May 10, In: Journal of Headache and Pain. 20, 1, 52.

**MEK1/2 inhibitor U0126, but not nimodipine, reduces upregulation of cerebrovascular contractile receptors after subarachnoid haemorrhage in rats**

Christensen, S. T., Johansson, S. E., Radziwon-Balicka, A., Warfvinge, K., Haanes, K. A. & Edvinsson, L., 2019 Apr 12, In: PLoS ONE. 14, 4, e0215398.

**Discovery of CGRP in relation to migraine**

Edvinsson, L. & Goadsby, P. J., 2019, In: Cephalalgia. 39, 3, p. 331-332 2 p.

**Distribution of CGRP and CGRP receptor components in the rat brain**

Warfvinge, K. & Edvinsson, L., 2019, In: Cephalalgia. 39, 3, p. 342-353 12 p.

**Dr James Lance, Professor of Neurology in Sydney, Australia, died on 20 February 2019, age 92**

Edvinsson, L., Evers, S. & Goadsby, P. J., 2019, In: Cephalalgia. 39, 5, p. 681-682 2 p.

**Erenumab (AMG 334), a monoclonal antagonist antibody against the canonical CGRP receptor, does not impair vasodilatory or contractile responses to other vasoactive agents in human isolated cranial arteries**

Ohlsson, L., Haanes, K. A., Kronvall, E., Xu, C., Snellman, J. & Edvinsson, L., 2019, In: Cephalalgia. 39, 14, p. 1745-1752

**Exploration of Physiological and Pathophysiological Implications of miRNA-143 and miRNA-145 in Cerebral Arteries**  
Christensen, S. T., Johansson, S. E., Warfvinge, K., Braun, T., Boettger, T., Edvinsson, L. & Haanes, K. A., 2019, In: *Journal of Cardiovascular Pharmacology*. 74, 5, p. 409-419 11 p.

**Exploration of purinergic receptors as potential anti-migraine targets using established pre-clinical migraine models**  
Haanes, K. A., Labastida-Ramírez, A., Blixt, F. W., Rubio-Beltrán, E., Dirven, C. M., Danser, A. H. J., Edvinsson, L. & MaassenVanDenBrink, A., 2019, In: *Cephalalgia*. 39, 11, p. 1421-1434

**MEK/ERK/1/2 sensitive vascular changes coincide with retinal functional deficit, following transient ophthalmic artery occlusion**  
Blixt, F. W., Haanes, K. A., Ohlsson, L., Dreisig, K., Fedulov, V., Warfvinge, K. & Edvinsson, L., 2019, In: *Experimental Eye Research*. 179, p. 142-149 8 p.

**PAC1 receptor mRNA and protein distribution in rat and human trigeminal and sphenopalatine ganglia, spinal trigeminal nucleus and in dura mater**  
Hensley, K., Pretorius, J., Chan, B., Page, K., Liu, H., Choi, C., Shi, D., Xu, C., Edvinsson, L. & Miller, S., 2019, In: *Cephalalgia*. 39, 7, p. 827-840

**Perivascular neurotransmitters: Regulation of cerebral blood flow and role in primary headaches**  
Frederiksen, S. D., Haanes, K. A., Warfvinge, K. & Edvinsson, L., 2019, In: *Journal of Cerebral Blood Flow and Metabolism*. 39, 4, p. 610-632

**Pre-clinical effects of highly potent MEK1/2 inhibitors on rat cerebral vasculature after organ culture and subarachnoid haemorrhage**  
Christensen, S. T., Haanes, K. A., Spray, S., Grell, A. S., Warfvinge, K., Edvinsson, L. & Johansson, S. E., 2019, In: *Clinical Science*. 133, 16, p. 1797-1811 15 p.

**Rimegepant oral disintegrating tablet for migraine**  
Edvinsson, L., 2019, In: *The Lancet*. 394, 10200, p. 711-712 2 p.

**Role of cgrp in migraine**  
Edvinsson, L., 2019, *Handbook of Experimental Pharmacology*. Springer, p. 121-130 10 p. (Handbook of Experimental Pharmacology; vol. 255).

**Shaping the future of migraine targeting Calcitonin-Gene-Related-Peptide with the Disease-Modifying Migraine Drugs (DMMDs)**  
Martelletti, P., Edvinsson, L. & Ashina, M., 2019, In: *Journal of Headache and Pain*. 20, 1, 60.

**Some aspects on the pathophysiology of migraine and a review of device therapies for migraine and cluster headache**  
Rapoport, A. M. & Edvinsson, L., 2019, In: *Neurological Sciences*. 40, S1, p. 75-80

**The Presence of Calcitonin Gene-Related Peptide and Its Receptors in Rat, Pig and Human Brain: Species Differences in Calcitonin Gene-Related Peptide Pharmacology**  
Warfvinge, K., Edvinsson, L., Pickering, D. S. & Sheykhzade, M., 2019, In: *Pharmacology*. 104, 5-6, p. 332-341

**Vascular pathology of large cerebral arteries in experimental subarachnoid hemorrhage: Vasoconstriction, functional CGRP depletion and maintained CGRP sensitivity**  
Johansson, S. E., Abdolalizadeh, B., Sheykhzade, M., Edvinsson, L. & Sams, A., 2019, In: *European Journal of Pharmacology*. 846, p. 109-118 10 p.

**Fremanezumab blocks CGRP induced dilatation in human cerebral, middle meningeal and abdominal arteries**  
Ohlsson, L., Kronvall, E., Stratton, J. & Edvinsson, L., 2018 Aug 14, In: *Journal of Headache and Pain*. 19, 1, 66.

**PACAP38 and PAC<sub>1</sub> receptor blockade: a new target for headache?**

Rubio-Beltrán, E., Correnti, E., Deen, M., Kamm, K., Kelderman, T., Papetti, L., Vigneri, S., MaassenVanDenBrink, A., Edvinsson, L. & European Headache Federation School of Advanced Studies (EHF-SAS), 2018 Aug 7, In: Journal of Headache and Pain. 19, 1, 1 p.

**CGRP as the target of new migraine therapies — successful translation from bench to clinic**

Edvinsson, L., Haanes, K. A., Warfvinge, K. & Krause, D. N., 2018 Jun, In: Nature Reviews Neurology. 14, 6, p. 338-350

**The CGRP Pathway in Migraine as a Viable Target for Therapies**

Edvinsson, L., 2018 May 1, In: Headache. 58, p. 33-47 15 p.

**PACAP and its role in primary headaches**

Edvinsson, L., Tajti, J., Szalárdy, L. & Vécsei, L., 2018 Mar 9, In: Journal of Headache and Pain. 19, 1, 7 p., 21.

**Headache advances in 2017: a new horizon in migraine therapy**

Edvinsson, L., 2018 Jan 1, In: The Lancet Neurology. 17, 1, p. 5-6

**Acute mitogen-activated protein kinase 1/2 inhibition improves functional recovery and vascular changes after ischaemic stroke in rat-monitored by 9.4 T magnetic resonance imaging**

Mostajeran, M., Wetterling, F., Blixt, F. W., Edvinsson, L. & Ansar, S., 2018, In: Acta Physiologica. 223, 1, e12985.

**CGRP Antibodies as Prophylaxis in Migraine**

Edvinsson, L., 2018, In: Cell. 175, 7, p. 1719 1 p.

**Contractile Responses in Spontaneously Hypertensive Rats after Transient Middle Cerebral Artery Occlusion**

Grell, A. S., Mostajeran, M., Edvinsson, L. & Ansar, S., 2018, In: Pharmacology. 101, p. 120-132

**Expression of Pituitary Adenylate Cyclase-activating Peptide, Calcitonin Gene-related Peptide and Headache Targets in the Trigeminal Ganglia of Rats and Humans**

Frederiksen, S. D., Warfvinge, K., Ohlsson, L. & Edvinsson, L., 2018, In: Neuroscience. 393, p. 319-332 14 p.

**Increased endothelin-1-mediated vasoconstriction after organ culture in rat and pig ocular arteries can be suppressed with MEK/ERK1/2 inhibitors**

W Blixt, F., Kristian Haanes, A., Ohlsson, L., Tolstrup Christiansen, A., Warfvinge, K. & Edvinsson, L., 2018, In: Acta Ophthalmologica. 96, 5, p. e619-e625

**Cerebrovascular Gene Expression in Spontaneously Hypertensive Rats After Transient Middle Cerebral Artery Occlusion**

Grell, A. S., Mostajeran, M., Frederiksen, S. D., Edvinsson, L. & Ansar, S., 2017 Dec 26, In: Neuroscience. 367, p. 219-232 14 p.

**Blocking CGRP in migraine patients – a review of pros and cons**

Deen, M., Correnti, E., Kamm, K., Kelderman, T., Papetti, L., Rubio-Beltrán, E., Vigneri, S., Edvinsson, L. & Maassen Van Den Brink, A., 2017 Dec 1, In: Journal of Headache and Pain. 18, p. 1-9 96.

**Differential inhibitory response to telcagepant on  $\alpha$ CGRP induced vasorelaxation and intracellular Ca<sup>2+</sup> levels in the perfused and non-perfused isolated rat middle cerebral artery**

Erdling, A., Sheykhzade, M. & Edvinsson, L., 2017 Dec 1, In: Journal of Headache and Pain. 18, 1, p. 1-9 61.

**Topical dura mater application of CFA induces enhanced expression of c-fos and glutamate in rat trigeminal nucleus caudalis: attenuated by KYNA derivate (SZR72)**

Lukács, M., Warfvinge, K., Tajti, J., Fülöp, F., Toldi, J., Vécsei, L. & Edvinsson, L., 2017 Dec 1, In: Journal of Headache and Pain. 18, 1, 39.

**A novel multicolor flow-cytometry application for quantitative detection of receptors on vascular smooth muscle cells**  
Radziwon-Balicka, A., Degn, M., Johansson, S. E., Warfvinge, K. & Edvinsson, L., 2017 Oct 1, In: PLoS ONE. 12, 10, e0186504.

**Cerebrovascular gene expression in spontaneously hypertensive rats**  
Grell, A.-S., Frederiksen, S. D., Edvinsson, L. & Ansar, S., 2017 Sept 1, In: PLoS ONE. 12, 9, e0184233.

**Distribution of CGRP and its receptor components CLR and RAMP1 in the rat retina**  
Blixt, F. W., Radziwon-Balicka, A., Edvinsson, L. & Warfvinge, K., 2017 Aug 1, In: Experimental Eye Research. 161, p. 124-131 8 p.

**Migraine associated with altitude: results from a population-based study in Nepal**  
Linde, M., Edvinsson, L., Manandhar, K., Risal, A. & Steiner, T. J., 2017 Aug 1, In: European Journal of Neurology. 24, 8, p. 1055-1061 7 p.

**The Trigeminovascular Pathway: Role of CGRP and CGRP Receptors in Migraine**  
Edvinsson, L., 2017 May 1, In: Headache. 57, p. 47-55 9 p.

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## **Awards**

**Research and development of new treatments of Stroke**

Edvinsson, L. (PI)

Edvince AB: SEK8,000,000.00

2026/02/05 → 2028/12/31