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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

Professor, Principal investigator, Supervisor
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
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2023 Jan 1 → 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**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.

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.

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

Edvinsson, L. & Krause, D. N., 2024, (E-pub ahead of print) In: Translational Stroke Research.

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 P2Y₆ 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-HT₁ 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.

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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
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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

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Vancouver Declaration II on Global Headache Patient Advocacy 2019

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C-fibers may modulate adjacent A δ -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/ERK1/2 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 PAC₁ 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 α CGRP induced vasorelaxation and intracellular Ca^{2+} levels in the perfused and non-perfused isolated rat middle cerebral artery

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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.

Perivascular Neurotransmitter Regulation of Cerebral Blood Flow

Edvinsson, L., 2017 Mar 7, *Primer on Cerebrovascular Diseases: Second Edition*. Elsevier, p. 70-74 5 p.

Myocardial ischemia-reperfusion enhances transcriptional expression of endothelin-1 and vasoconstrictor ET_B receptors via the protein kinase MEK-ERK1/2 signaling pathway in rat

Skovsted, G. F., Kruse, L. S., Berchtold, L. A., Grell, A.-S., Warfvinge, K. & Edvinsson, L., 2017 Mar 1, In: PLoS ONE. 12, 3, e0174119.

Alterations in the Cerebral Microvascular Proteome Expression Profile After Transient Global Cerebral Ischemia in Rat

Spray, S., Johansson, S. E., Edwards, A. V. G., Larsen, M. R., Radziwon-Balicka, A., Povlsen, G. K. & Edvinsson, L., 2017, In: Journal of Molecular Neuroscience. 61, 3, p. 396-411

Downregulation of Thromboxane A₂ Receptor Occurs Mainly via Nuclear Factor-KappaB Signaling Pathway in Rat Renal Artery

Zhang, Y., Mi, M.-T., Xie, Y.-H., Wang, S.-W., Edvinsson, L. & Xu, C. B., 2017, In: Advances in Pharmacological Sciences. 2017, 6507048.

Enhanced contractility of intraparenchymal arterioles after global cerebral ischaemia in rat - new insights into the development of delayed cerebral hypoperfusion

Spray, S., Johansson, S. E., Radziwon-Balicka, A., Haanes, K. A., Warfvinge, K., Povlsen, G. K., Kelly, P. A. T. & Edvinsson, L., 2017, In: Acta Physiologica. 220, 4, p. 417-431

Proteomic Expression Changes in Large Cerebral Arteries After Experimental Subarachnoid Hemorrhage in Rat Are Regulated by the MEK-ERK1/2 Pathway

Müller, A. H., Edwards, A. V. G., Larsen, M. R., Nielsen, J., Warfvinge, K., Povlsen, G. K. & Edvinsson, L., 2017, In: Journal of Molecular Neuroscience. 62, 3-4, p. 380-394

Expression of messenger molecules and receptors in rat and human sphenopalatine ganglion indicating therapeutic targets

Steinberg, A., Frederiksen, S. D., Blixt, F. W., Warfvinge, K. & Edvinsson, L., 2016 Dec 1, In: Journal of Headache and Pain. 17, 1, 78.

KYNA analogue SZR72 modifies CFA-induced dural inflammation- regarding expression of pERK1/2 and IL-1 β in the rat trigeminal ganglion

Lukács, M., Warfvinge, K., Kruse, L. S., Tajti, J., Fülöp, F., Toldi, J., Vécsei, L. & Edvinsson, L., 2016 Dec 1, In: Journal of Headache and Pain. 17, 1, 64.

Peripheral sensory neurons expressing melanopsin respond to light

Matynia, A., Nguyen, E., Sun, X., Blixt, F. W., Parikh, S., Kessler, J., de Sevilla Müller, L. P., Habib, S., Kim, P., Wang, Z. Z., Rodriguez, A., Charles, A., Nusinowitz, S., Edvinsson, L., Barnes, S., Brecha, N. C. & Gorin, M. B., 2016 Aug 10, In: Frontiers in Neural Circuits. 10, AUG, 60.

Characterization of Relaxant Responses to Natriuretic Peptides in the Human Microcirculation In Vitro and In Vivo
Edvinsson, M.-L., Ahnstedt, H., Edvinsson, L. & Andersson, S. E., 2016 Aug 1, In: *Microcirculation*. 23, 6, p. 438-446 9 p.

The effects of MEK1/2 inhibition on cigarette smoke exposure-induced ET receptor upregulation in rat cerebral arteries
Cao, L., Ping, N. N., Cao, Y. X., Li, W., Cai, Y., Warfvinge, K. & Edvinsson, L., 2016 Aug 1, In: *Toxicology and Applied Pharmacology*. 304, p. 70-78 9 p.

Immunohistochemical localization of the calcitonin gene-related peptide binding site in the primate trigeminovascular system using functional antagonist antibodies
Miller, S., Liu, H., Warfvinge, K., Shi, L., Dovlatyan, M., Xu, C. & Edvinsson, L., 2016 Jul 22, In: *Neuroscience*. 328, p. 165-183 19 p.

Enhanced endothelin-1 mediated vasoconstriction of the ophthalmic artery may exacerbate retinal damage after transient global cerebral ischemia in rat
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Analysis of protein kinase Raf-MEK1/2-ERK1/2 and protein kinase C in early treatment to prevent late cerebral Ischemia in stroke

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