

6. Literaturverzeichnis

- Adams, D.J., Barakeh, J., Laskey, R., Van Breemen, C. (1989): Ion channels and regulation of intracellular calcium in vascular endothelium cells. FASEB J. 3: 2389-2400
- Adeagbo, A.S. (1997): Endothelium-derived hyperpolarizing factor: characterization as a cytochrome P450 1A-linked metabolite of arachidonic acid in perfused rat mesenteric prearteriolar bed. Am. J. Hypertens. 10(7 Pt 1): 763-71
- Alhenc-Gelas, F., Tsai, S.J., Callahan, K.S., Campbell, W.B. Johnson, A.R. (1982): Stimulation of prostaglandin formation by vasoactive mediators in cultured human endothelial cells. Prostaglandins 24: 723-742
- Arai, H., Hori, S., Aramori, I., Ohkubo, H., Nakanishi, S. (1990): Cloning and expression of a cDNA encoding and endothelin receptor. Nature 348: 730-732
- Barbee, K.A., Davies, P.F., Lal, R. (1994): Shear stress-induced reorganization of the surface topography of living endothelial cells imaged by atomic force microscopy. Circ. Res. 74: 163-171
- Baron, A., Frieden, M., Chabaud, F., Beny, J.L. (1996): Ca^{2+} -dependent nonselective cation and potassium channels activated by bradykinin in pig coronary endothelial cell. J. Physiol. 49: 699-706
- Barone, G.W., Conerly, J.M., Farley, P.C., Flanagan, T.L., Kron, I.L. (1989): Endothelial injury and vascular dysfunction associated with the Fogarty balloon catheter. J. Vasc. Surg. 10 (5): 596-8
- Blatz, A.L., Magelby, K.L. (1986): Single apamin-blocked Ca^{2+} -activated K^+ channels of small conductance in cultured rat skeletal muscle. Nature 323: 718-720
- Blatz, A.L., Magelby, K.L. (1987): Calcium-activated potassium channels. TINS 11: 463-467
- Bond, C.T., Mayleie, J., Adelman, J.P. (1999): Small-conductance calcium-activated potassium channels. Ann. NY Acad. Sci. 868: 370-8
- Borg-Capra, C., Fournet-Bourguignon, M.P., Janiak, P., Villeneuve, N., Bidouard, J.P., Vilaine, J.P., Vanhoutte, P.M. (1997): Morphological heterogeneity with normal expression but altered function of G_i proteins in cultured regenerated porcine coronary endothelial cells. Br. J. Pharmacol. 122: 999-1008

- Brayden, J.E. (1996): Potassium channels in vascular smooth muscle. *Clin. Exp. Pharmacol. Physiol.* 23: 1069-76
- Busse, R., Tragisch, G., Bassenge, E. (1985): The role of endothelium in the control of vascular tone. *Basic Res. Cardiol.* 80: 475-490
- Busse, R., Fleming, I. (1993): The endothelial organ. *Cardiology* 8: 719-727
- Busse, R., Fleming, I. (1995): Regulation and functional consequences of endothelial nitric oxide formation. *Ann. Med.* 27: 331-340
- Cai, S., Garneau, L., Sauve, R. (1998): Single-channel characterization of the pharmacological properties of the K(2+) channel of intermediate conductance in bovine aortic endothelial cells. *J. Membr. Biol.* 163: 147-58
- Campbell, W.B., Gebremedhin, D., Pratt, P.F., Harder, D.R. (1996): Identification of epoxyeicosatrienoic acids as endothelium-derived hyperpolarizing factors. *Circ. Res.* 78(3): 415-23
- Clowes, A.W., Reidy, M.A., Clowes, M.M. (1983): Kinetics of cellular proliferation after arterial injury. I. Smooth muscle proliferation in the absence of endothelium. *Lab. Invest.* 49: 327-333
- Cohen, R.A. (1995): The role of nitric oxide and other endothelium-derived vasoactive substances in vascular disease. *Prog. Cardiovasc. Dis.* 38: 105-128
- Colden-Stanfield, M., Schilling, W.P., Ritchie, A.K., Eskin, S.G., Navarro, L.T., Kunze, D.L. (1987): Bradykinin-induced increases in cytosolic calcium and ionic currents in cultured bovine aortic endothelial cells. *Circ. Res.* 61: 632-640
- Colden-Stanfield, M., Schilling, W.P., Possani, L.D., Kunze, L.D. (1990): Bradykinin-induced potassium current in cultured bovine aortic endothelial cells. *J. Membr. Biol.* 116: 227-238
- Cooke, J.P., Rossitch, E., Andon, N.A., Loscalzo, J., Dzau, V.J. (1991): Flow activates an endothelial potassium channel to release an endogenous nitrovasodilator. *J. Clin. Invest.* 88: 1663-1671
- Daut, J., Standen, N.B., Nelson, M.T. (1994): The role of the membrane potential of endothelial and smooth muscle cells in the regulation of coronary blood flow. *J. Cardiovasc. Electrophysiol.* 5: 154-181

- Davies, P.F., Dewey, C.F. Jr., Bussolari, S.R., Gordon, E.J., Gimbrone, M.A. Jr. (1984): Influence of hemodynamic forces on vascular endothelial function. In vitro studies of shear stress and pinocytosis in bovine aortic cells. *J. Clin. Invest.* 73: 1121-β
- Davies, P.F. (1995): Flow-mediated endothelial mechanotransduction. *Physiol. Rev.* 75: 519-560
- Devor, D.C., Singh, A.K., Frizzell, R.A., Bridges, R.J. (1996): Modulation of Cl⁻secretion by benzimidazolones. I. Direct activation of Ca(2+)-dependent K⁺ channel. *Am. J. Physiol.* 271: L775-84
- Dong, H., Waldron, G.J., Cole, W.C., Triggle, C.R. (1998): Roles of calcium-activated and voltage-gated delayed rectifier potassium channels in endothelium-dependent vasorelaxation of the rabbit middle cerebral artery. *Br. J. Pharmacol.* 123: 821-32
- Edwards, G., Dora, K.A., Gardener, M.J., Garland, C.J., Weston, A.H. (1998): K⁺ is an endothelium-derived hyperpolarizing factor in rat arteries. *Nature* 396(6708):269-72
- Edwards, G., Feletou, M., Gardener, M.J., Thollon, C., Vanhoutte, P.M., Weston, A.H. (1999): Role of gap junctions in the response to EDHF in rat and guinea-pig small arteries. *Br. J. Pharmacol.* 128: 1788-94
- Falcone, J.C., Kuo, L., Meininger, G.A. (1993): Endothelial cell calcium increases during Flow-induced dilation in isolated arteriols. *Am. J. Physiol.* 264: H653-H659
- Fichtner, H., Fröbe, U., Kohlhardt, M. (1987): Single nonselective cation channels and Ca²⁺-activated K⁺-channels in aortic endothelial cells. *J. Membrane Biol.* 98: 125-153
- Fournet-Bourguignon, M.P., Castedo-Delrieu, M., Bidouard, J.P., Leonce, S., Saboureau, D., Delescluse, I., Vilaine, J.P., Vanhoutte, P.M. (2000): Phenotypic and functional changes in regenerated porcine coronary endothelial cells. Increased uptake of modified LDL and reduced production of NO. *Circ. Res.* 86: 854-861
- Frangos, J.A., Esklin, S.G., McIntire, L.V., Ives, C.L. (1985): Flow effects on prostacyclin production by cultured human endothelial cell. *Science* 227: 1477-1479
- Furchtgott, R.F., Zawadzki, J.V. (1980): The obligatory role of endothelial cells in the relaxation of arterial smooth muscle by acetylcholine. *Nature* 288: 373-376
- Furchtgott, R.F., Vanhoutte, P.M. (1989): Endothelium-derived relaxing and contracting factors. *FASEB J.* 10: 2007-2018
- Galvez, A., Gimenez-Gallego, G., Reuben, J.P., Roy-Contancin, L., Feigenbaum, P., Kaczorowski, G.J., Garcia, M.L. (1990): Purification and characterization of a

- unique, potent, peptidyl probe for the high conductance calcium-activated potassium channel from venom of the scorpion *Buthus tamulus*. *J. Biol. Chem.* 265 (19): 11083-90
- Garcia, M.L., Galvez, A., Garcia-Calvo, M., King, V.F., Vasquez, J., Kaczorowski, G.J. (1991): Use of toxins to study potassium channels. *J. Bioenerg. Biomembr.* 23 (4): 615-46
- Garg, U.C., Hassid, A. (1989): Nitric oxide-generating vasodilators and 8-bromo-cGMP inhibit mitogenesis and proliferation of cultured rat vascular smooth muscle cells. *J. Clin. Invest.* 83: 1774-1777
- Ghanshani, S., Wulff, H., Miller, M.J., Rohm, H., Neben, A., Gutman, G.A., Cahalan, M.D., Chandy, K.G. (2000): Up-regulation of the IKCa1 potassium channel during T-cell activation. Molecular mechanism and functional consequences. *J. Biol. Chem.* 275: 37137-49
- Gimenez-Gallego, G., Navia, M.A., Reuben, J.P., Katz, G.M., Kaczorowski, G.J. (1988): Purification, sequence and model structure of charybdotoxin, a potent selective inhibitor of calcium-activated potassium channels. *Proc. Natl. Acad. Sci. (USA)* 88: 3329-3333
- Gorfien, S., Spector, A., DeLuca, D., Weiss, S. (1993): Growth and physiological functions of vascular endothelial cells in a new serum-free medium (SFM). *Exp. Cell Res.* 206:291-301
- Griendling, K.K., Alexander, R.W. (1996): Endothelium control of the cardiovascular system: recent advances. *FASEB J.* 10:283-292
- Grunnet, M., Jensen, B.S., Olesen, S.P., Klaerke, D.A. (2001): Apamin interacts with all subtypes of cloned small-conductance Ca^{2+} -activated K^+ channels. *Pflügers Arch.* 441 (4): 544-50
- Hamill, A., O.P., Marty, A., Neher, E., Sakmann, B., Sigworth, F.J. (1981): Improved patch-clamp techniques for high resolution current recording from cells and cell-free membrane patches. *Pflügers Arch.* 391:85-100
- Hamon, M., Vallet, B., Bauters, C., Wernert, N., McFadden, E.P., Lablanche, J.M., Dupuis, B., Bertrand, M.E. (1994): Long-term oral administration of L-arginine reduces intimal thickening and enhances neoendothelium-dependent acetylcholine-induced relaxation after arterial injury. *Circulation* 90: 1457-62

- Hardy, P., Abran, D., Hou, X., Lahaie, I., Peri, K.G., Asselin, P., Varma, D.R., Chemtob, S. (1998): A major role for prostacyclin in nitric oxide-induced ocular vasorelaxation in the piglet. *Circ. Res.* 83 (7): 721-9
- Hassid, A. (1986): Atriopeptin II decreases cytosolic free Ca^{2+} in cultured vascular smooth muscle cells. *Am. J. Physiol.* 251: C681-C686
- Haudenschild, C.C., Schwartz, S.M. (1979): Endothelial regeneration. II. Restitution of endothelial continuity. *Lab. Invest.* 41: 407-418
- Hecker, M., Mülsch, A., Bassenge, E., Förstermann, U., Busse, R. (1994): Subcellular localization and characterization of nitric oxide synthase(s) in endothelial cells: physiological implications. *Biochem. J.* 299: 247-252
- Henne, J., Pottering, S., Jeserich, G. (2000): Voltage-gated potassium channels in retinal ganglion cells of trout: a combined biophysical, pharmacological, and single-cell RT-PCR approach. *J. Neurosci. Res.* 62:629-37
- Hille, B. (1984): Ionic channels in excitable membranes. Sinauer Ass. Inc. (ed.), Sunderland, Massachusetts S. 1-19
- Hille, B. (1992): Ionic channels in excitable membranes. Sinauer, Sunderland, MA, ed.2
- Himmel, H.M., Whorton, A.R., Strauss, H.C. (1993): Intracellular calcium, currents and stimulus-response coupling in endothelial cells. *Hypertension* 21: 112-127
- Hong, S.L., Deykin, D. (1982): Activation of Phospholipases A₂ and C in pig aortic endothelial cells synthesizing Prostacyclin. *J. Biol. Chem.* 257: 7151-7154
- Hoyer, J., Popp, R., Haase, W., Distler, A. (1991): Angiotensin II, Vasopressin and GTP \square S inhibit inward rectifying K^+ current in endothelial cells of pig brain blood capillaries. *J. Membrane Biol.* 123: 55-62
- Hoyer, J., Distler, A., Haase, W., Gögelein, H. (1994): Ca^{2+} influx through stretch-activated cation channels activates maxi K^+ channels in porcine endocardial endothelium. *Proc. Natl. Acad. Sci. (USA)* 91: 2367-2371
- Hoyer, J., Köhler, R., Haase, W., Distler, A. (1996): Up-regulation of pressure-activated Ca^{2+} -permeable cation channel in intact vascular endothelium of hypertensive rats. *Proc. Natl. Acad. Sci. (USA)* 93: 11253-11258
- Hoyer, J. (1997): Endothelial vasoregulation and mechanosensitive ion channels in hypertension. *Nephrol. Dial. Transplant.* 12: 6-8

- Hoyer, J., Köhler, R., Distler, A. (1998): Mechanosensitive Ca^{2+} oscillations and STOC activation in endothelial cells. *FASEB J.* 12: 359-366
- Ikeuchi, Y., Nishizaki, T. (1995): ATP activates the potassium channel and enhances cytosolic Ca^{2+} release via P_2U Purinoreceptor linked to pertussis toxin-insensitive G-protein in brain artery endothelial cells. *Biochem. Biophys. Res. Commun.* 215: 1022-1028
- Ishii, T.M., Silvia, C., Hirschberg, B., Bond, C.T., Adelman, J.P., Maylie, J. (1997): A human intermediate conductance calcium-activated potassium channel. *Proc. Natl. Acad. Sci. USA* 94: 11651-6
- Jacob, R. (1990): Agonist-stimulated divalent cation entry into single cultured human umbilical vein endothelial cells. *J. Physiol. (Lond.)* 421
- Jacobs, E.R., Cheliakine, C., Gebremedkin, D., Birks, E.K., Davies, P.F., Harder, D.R. (1995): Shear activated channels in cell-attached patches of cultured bovine aortic endothelial cells. *Pflügers Arch.* 431: 129-131
- Jensen, B.S., Odum, N., Jorgensen, N.K., Christoffersen, P., Olesen, S.P. (1999): Inhibition of t cell proliferation by selective block of Ca^{2+} -activated K^+ channels. *Proc. Natl. Acad. Sci. USA* 96 (19): 10917-21
- Johns, A., Lategan, T.W., Lodge, N.J., Ryan, U.S., van Breemen, C., Adams, D.J. (1987): Calcium entry through receptor operated channels in bovine pulmonary artery endothelial cells. *Tissue Cell* 19: 733-745
- Köhler, R., Degenhardt, C., Kühn, M., Runkel, N., Paul, M., Hoyer, J. (2000): Expression and function of endothelial Ca^{2+} -activated K^+ channels in human mesenteric artery. A single-cell reverse transcriptase-polymerase chain reaction *in situ*. *Circ. Res.* 87: 496-503
- Köhler, R., Brakemeier, S., Kühn, M., Behrens, C., Real, R., Degenhardt, C., Orzechowski, H.D., Pries, A.R., Paul, M., Hoyer, J. (2001): Impaired hyperpolarization in regenerated endothelium after balloon catheter injury. *Circ. Res.* 89: 174-9
- Köhler, R., Brakemeier, S., Kühn, M., Degenhardt, C., Buhr, H., Pries, A.R., Hoyer, J. (2001): Expression of ryanodine receptor type 3 and TRP channels in endothelial cells: comparison of *in situ* and cultured human endothelial cells. *Cardiovasc. Res.* 51: 160-8

- Kohler, M., Hirschberg, B., Bond, C.T., Kinzie, J.M., Marrion, N.V., Maylie, J., Adelman, J.P. (1996): Small-conductance, calcium-activated potassium channels from mammalian brain. *Science* 273: 1709-14
- Komori, K., Vanhoutte, P.M. (1990): Endothelium-derived hyperpolarizing factor. *Blood Vessels*. 27: 238-45
- Kuo, L., Davis, M.J., Chilian, W.H. (1990): Endothelium-dependent, flow-induced nitric oxide production in endothelial cells. *Am. J. Physiol.* 259: H1063-1070
- Lambolez, B., Audinat, E., Bochet, P., Crepel, F., Rossier, J. (1992): Ampa receptor subunit expression by single Purkinje cells. *Neuron* 9: 247-58
- Lancaster, b., Nicoll, R.A., Perkel, D.J. (1991): Calcium activates two types of potassium channels in rat hippocampal neurons in culture. *J. Neurosci.* 11: 23-30
- Lansmann, J.B., Hallam, T.J., Rink, T.J. (1987): Single stretch-activated ion channels in vascular endothelial cells as mechanotransducers. *Nature* 325: 811-813
- Latorre, R., Oberhauser, A., Labarca, P., Alvarez, O. (1989): Varieties of calcium-activated potassium channels. *Annu. Rev. Physiol.* 51: 385-399
- Ling, B.N., O'Neill, W.C. (1992): Ca²⁺-dependent and Ca²⁺-permeable ion channels in aortic endothelial cells. *Am. J. Physiol.* 263: H1827-1838
- Logsdon, N.J., Kang, J., Togo, J.A., Christian, E.P., Aiyar, J. (1997): A novel gene hKCa4, encodes the calcium-activated potassium channel in human T lymphocytes. *J. Biol. Chem.* 272: 32723-32726
- Lückhoff, A., Busse, R. (1990): Calcium influx into endothelial cells and formation of endothelium-derived relaxing factor is controlled by the membrane potential. *Pflügers Arch.* 416(3): 305-311
- Lückhoff, A., Clapham, D.E. (1992): Inositol 1.3.4.5.-tetrakiphosphate activates an endothelial Ca²⁺-permeable channel. *Nature* 355: 356-358
- Lüscher, T.F., Yang, Z., Diederich, D., Bühler, F.R. (1989): Endothelium-derived vasoactive substances: potential role in hypertension, arteriosclerosis and vascular occlusion. *J. Cardiovasc. Pharmacol.* 14: S63-S69
- Lüscher, T.F. (1990): Imbalance of Endothelium-derived relaxing and contracting factors. A new concept in hypertension. *Am. J. Hypertension* 3: 317-330
- Mackie, K., Lai, Y., Nairn, A.C., Grenngard, P., Pitt, B.R., Lazo, J.S. (1986): Protein phosphorylation in cultured endothelial cells. *J. Cell physiol.* 128: 367-374

- MacMillan-Crow, L.A., Murphy-Ullrich, J.E., Lincoln, T.M. (1994): Identification and possible location of cGMP-dependent protein kinase in bovine aortic endothelial cells. *Biochem. Biophys. Res. Commun.* 201: 531-537
- Manabe, K., Ito, H., Matsuda, H., Noma, A. (1995): Hyperpolarization induced by vasoactive substances in intact guinea-pig endocardial cells. *J. Physiol.* 484:25-40
- Marchenko, S.M., Sage, S.O. (1996): Calcium-activated potassium channels in the endothelium of intact rat aorta. *J. Physiol.* 492:53-60
- Marchenko, S.M., Sage, S.O. (2000): Effects of shear stress on $[Ca^{2+}]_i$ and membrane potential of vascular endothelium of intact rat blood vessels. *Exp. Physiol.* 85: 43-8
- Martina, M., Schultz, J.H., Ehmke, H., Monyer, H., Jonas, P. (1998): Functional and molecular differences between voltage-gated K^+ channels of fast-spiking interneurons and pyramidal neurons of rat hippocampus. *J. Neurosci.* 18:8111-25
- McBride, W., Lange, R., Hillis, L. (1988): Restenosis after successful coronary angioplasty: pathology and prevention. *New Engl. J. Med.* 318: 1734-1737
- Melkumyants, A.M., Balashov, S.A., Khayutin, V.M. (1995): Control of arterial lumen by shear stress on endothelium. *NIPS* 10: 204-210
- Mellion, B.T., Ignarro, L.J., Myers, C.B., Ohlstein, E.H., Ballot, B.A., Hyman, A.L., Kadowitz, P.J. (1983): Inhibition of human platelet aggregation by S-nitrosothiols. Heme-dependent activation of soluble guanylate cyclase and stimulation of cyclic GMP accumulation. *Mol. Pharmacol.* 23: 653-664
- Mermelstein, P.G., Song, W.J., Tkatch, T., Yan, Z., Surmeier, D.J. (1998): Inwardly rectifying potassium (IRK) currents are correlated with IRK subunit expression in rat nucleus accumbens medium spiny neurons. *J. Neurosci.* 18: 6650-61
- Miller, C., Moczydowski, E., Latorre, R., Phillips, M. (1985): Charybdotoxin, a protein inhibitor of single Ca^{2+} -activated K^+ channels from mammalian skeletal muscle. *Nature* 313: 316-318
- Mombouli, J.V., Vanhoutte, P.M. (1997): Endothelium-derived hyperpolarization factor(s): updating the unknown. *TiPS* 18: 252-256
- Moncada, S., Gryglewski, R., Bunting, S., Vane, J.R. (1976): An enzyme isolated from arteries transform prostaglandin endoperoxides to an unstable substance that inhibits platelet aggregation. *Nature* 263: 663-665

- Moncada, S., Palmer, R.M.J., Higgs, E.A. (1991): Nitric oxide: physiology, pathophysiology and pharmacology. *Pharmacol. Rev.* 43: 109-134
- Nakache, M., Gaub, H.E. (1988): Hydrodynamic hyperpolarisation of endothelial cells. *Proc. Acad. Sci. USA* 85: 1841-1843
- Namba, T., Ishii, T.M., Ikeda, M., Hisano, T., Itoh, T., Hirota, K., Adelman, J.P., Fukuda, K. (2000): Inhibition of the human intermediate conductance Ca(2+)-activated K(+) channel, hIK1, by volatile anesthetics. *Eur. J. Pharmacol.* 395: 95-101
- Nathan, C. (1993): Nitric oxide as a secretory product of mammalian cells. *FASEB J.* 6: 3051-3064
- Neher, E., Sakmann, B. (1976): Single channel currents recorded from membrane of denervated frog muscle fibres. *Nature* 260: 799-802
- Neher, E. (1992): Controls of calcium influx. *Nature* 355: 298-299
- Nelson, M.T., Quayle, J.M. (1995): Physiological roles and properties of potassium channels in arterial smooth muscle. *Am. J. Physiol.* 268: C799-C822
- Newby, A.C., Henderson, A.H. (1990): Stimulus-secretion coupling in vascular endothelial cells. *Annu. Rev. Physiol.* 52: 661-674
- Neylon, C.B., Lang, R.J., Fu, Y., Bobik, A., Reinhart, P.H. (1999): Molecular cloning and characterization of the intermediate-conductance Ca(2+)-activated K(+) channel in vascular smooth muscle: relationship between K(Ca) channel diversity and smooth muscle cell function. *Circ. Res.* 85: e33-43
- Nilius, B., Riemann, D. (1990): Ion channels in human endothelial cells. *Gen. Physiol. Biophys.* 9: 89-112
- Nilius, B. (1991): Regulation of transmembrane calcium fluxes in endothelium. *News Physiol. Sci.* 6: 110-114
- Nilius, B., Droogmans, G., Gericke, M., Schwarz, G. (1993): Nonselective ion pathways in human endothelial cells. *EXS* 66: 269-280
- Nilius, B., Viana, F., Droogmans, G. (1997): Ion channels in vascular endothelium. *Annu. Rev. Physiol.* 59: 145-170
- Olesen, S., Davies, P.F., Clapham, D.E. (1988): Muscarinic-activated K⁺ current in bovine aortic endothelial cells. *Circ. Res.* 62: 1059-1064
- Palmer, R.M.J., Ferrige, A.G., Moncada, S. (1987): Nitric oxide release accounts for the biological activity of endothelium-derived relaxing factor. *Nature* 327: 524-526

- Palmer, R.M.J., Ashton, D.S., Moncada, S. (1988): Vascular endothelial cells synthesize nitric oxide from L-arginine. *Nature* 333: 664-666
- Papassotiriou, J., Köhler, R., Prenen, J., Krause, H., Akbar, M., Eggermont, J., Paul, M., Distler, A., Nilius, B., Hoyer, J. (2000): Endothelial K(+) channel lacks the Ca(2+) sensitivity-regulating beta subunit. *FASEB J.* 14: 885-94
- Park, YB. (1994): Ion selectivity and gating of small conductance Ca(2+)-activated K⁺ channels in cultured rat adrenal chromaffin cells.
- Pavenstädt, H., Lindemann, S., Lindemann, V., Späth, M., Kunzelmann, K., Greger, R. (1991): Potassium conductance of smooth muscle cells from rabbit aorta in primary culture. *Pflügers Arch.* 419: 57-68
- Pena, T.L., Rane, S.G. (1999): The fibroblast intermediate conductance K_{Ca} channel, FIK, as a prototype for the cell growth regulatory function of the IK channel family. *J. Membr. Biol.* 172: 249-257
- Pennefather, P., Lancaster, B., Adams, P.R., Nicoll, R.A. (1985): Two distinct Ca-dependent K currents in bullfrog sympathetic ganglion cells. *Proc. Natl. Acad. Sci. USA* 82: 3040-4
- Plant, T.D., Schirra, C., Katz, E., Uchitel, O.D., Konnerth, A. (1998): Single-cell RT-PCR and functional characterization of Ca²⁺ channels in motoneurons of the rat facial nucleus. *J. Neurosci.* 18: 9573-84
- Pohl, u., Holtz, J., Busse, R., Bassenge, E. (1986): Crucial role of endothelium in the vasodilator response to increased flow in vivo. *Hypertension* 8:37-44
- Pollock, J.S., Förstermann, U., Mitchell, J.A. (1991): Purification and characterization of particulate endothelium-derived relaxing factors synthase from cultured and native bovine aortic endothelial cells. *Proc. Natl. Acad. Sci. (USA)* 88: 10480-10484
- Popp, R., Hoyer, J., Meyer, J., Galla, H.-J., Gögelein, H. (1992): Stretch-activated channel in pig brain blood capillaries. *J. Physiol. (Lond.)* 454:435-449
- Quaschning, T., Ruschitzka, F.T., Maier, W., Lüscher, T.F. (2000): Die Rolle des Endothels bei der Entstehung und Behandlung von Gefäßerkrankungen. *Internist* 42: 355-362
- Rabe, H., Ritz, H.J., Jeserich, G. (1998): Voltage-gated potassium channels of Schwann cells from trout lateral line nerve: a combined electrophysiological and molecular characterization. *Glia* 23: 329-38

- Radomski, M.W., Palmer, R.M., Moncada, S. (1990): An L-arginine/nitric oxide pathway present in human platelets regulates aggregation. Proc. Natl. Acad. Sci. (USA) 87: 5193-5197
- Rapacon, M., Mieyal, P., McGiff, JC, Fulton, D., Quilley, J. (1996): Contribution of calcium-activated potassium channels to the vasodilator effect of bradykinin in the isolated, perfused kidney of the rat. Br. J. Pharmacol. 118: 155504-8
- Ross, R. (1993): The pathogenesis of atherosclerosis: a perspective for the 1990s. Nature 362: 801-809
- Rusko, J., Tanzi, F., van Breemen, C., Adams, D.J. (1992): Calcium-activated potassium channels in native endothelial cells from rabbit aorta: Conductance, Ca^{2+} sensitivity and block. J. Physiol. (Lond.) 455: 601-621
- Rusko, J., Li, L., van Breemen (1995a): 17-beta-estradiol stimulation of endothelial K^+ channels. Biochem. Biophys. Res. Commun. 214:367-372
- Rusko, J., Vanslooten, G., Adams, D.J. (1995b): Caffeine-evoked, calcium-sensetive membrane currents in rabbit aortic endothelial cells. Br. J. Pharmacol. 115: 133-141
- Sah, P. (1996): $\text{Ca}(2+)$ -activated K^+ currents in neurones: types, Physiological roles and modulation. Trends Neurosci. 19: 150-4
- Sakurai, T., Yangisawa, M., Takuwa, Y., Miyazaki, H., Kimura, S., Goto, K., Masaki, T.K. (1990): Cloning of a cDNA encoding a non-isopeptide-selective subtype of the endothelin receptor. Nature 348: 732-735
- Sanger, F., Nicklen, S., Coulson, A.R. (1977): DNA sequencing with chain-terminating inhibitors. Proc. Natl. Acad. Sci. (USA) 74: 5463-7
- Schiffrin, E.L. (1994): The endothelium control of blood vessel function in health and disease. Clin. Invest. Med. 17: 602-620
- Schiller, N.K., Timothy, A.M., Chen, I.-L., Rice, J.C., Akers, D.L., Kadowitz, P.J., McNamara, D.B. (1999): Endothelial cell regrowth and morphology after balloon catheter injury of alloxan-induced diabetic rabbits. Am. J. Physiol. 277 (Heart Circ. Physiol. 46): H740-H748
- Schilling, W.P., Rajan, L., Strobl-Jager, E. (1989): Characterization of the bradykinin-stimulated calcium influx pathway of cultured vascular endothelial cells: Saturability, selectivity and kinetics. J. Biol. Chem. 264: 12838-12848

- Schini, V.B., Hendrickson, H., Heublein, D.M., Burnett, J.C. Jr, Vanhoutte, P.M. (1989): Thrombin enhances the release of endothelin from cultured porcine aortic endothelial cells. *Eur. J. Pharmacol.* 165(2-3): 333-334
- Scott-Burden, T., Vanhoutte, P.M. (1994): Regulation of smooth muscle cell growth by endothelium-derived factors. *Tex. Heart Inst.* 21: 91-97
- Seifert, G., Kuprianova, E., Zhou, M., Steinhauser, C. (1999): Developmental changes in the expression of Shaker- and Shab-related K⁽⁺⁾ channels in neurons of the rat trigeminal ganglion. *Brain Res. Mol. Brain Res.* 74: 55-68
- Shen, J., Luscinskas, F.W., Connolly, A., Dewey, C.F., Gimbrone, M.A. (1992): Fluid shear stress modulates cytosolic free calcium in vascular endothelial cells. *Am. J. Physiol.* 262: C384-C390
- Shimokawa, H., Aarhus, L., Vanhoutte, PM. (1987): Porcine coronary arteries with regenerated endothelium have a reduced endothelium-dependent responsiveness to aggregating platelets and serotonin. *Circ Res.* 61: 256-270
- Shimokawa, H., Flavahan, N.A., Vanhoutte, P.M. (1989): Natural course of the impairment of endothelium-dependent relaxations after balloon endothelium removal in porcine coronary arteries: possible dysfunction of a pertussis toxin-sensitive G protein. *Circ. Res.* 65: 740-753
- Stemerman, M.B., Spaet, T.H., Pitlick, F., Cintron, J., Lejnieks, I., Tiell, M.L. (1977): Intimal healing: the pattern of reendothelialization and intimal thickening. *Am. J. Pathol.* 87: 125-142
- Thollon, C., Bidouard, J.P., Cambarrat, C., Delescluse, I., Villeneuve, N., Vanhoutte, P.M., Vilaine, J.P. (1999): Alteration of endothelium-dependent hyperpolarizations in porcine coronary arteries with regenerated endothelium. *Circ. Res.* 84: 371-377
- Tracey, W.R., Peach, M.J. (1992): Differential muscarinic receptor mRNA expression by freshly isolated and cultured bovine endothelial cells. *Circ. Res.* 70: 234-240
- Vaca, L., Kunze, D.L. (1994): Depletion of intracellular Ca²⁺ stores activates a Ca²⁺-selective channel in vascular endothelium. *Am. J. Physiol.* 267: C920-C925
- Vaca, L., Licea, A., Possani, L.D. (1996): Modulation of cell membrane potential in cultured vascular endothelium. *Am. J. Physiol.* 270: C819-24
- Vanhoutte, P.M. (1988): The endothelium – modulator of vascular smooth-muscle tone. *Engl. J. Med.* 319: 513-514

- Van Renterghem, C., Vigne, P., Frelin, C. (1995): A charybdotoxin-sensitive, $\text{Ca}^{(2+)}$ -activated K^+ channel with inward rectifying properties in brain microvascular endothelial cells: properties and activation by endothelins. *J. Neurochem.* 65: 1274-81
- von der Weid, P.Y., Beny, J.L. (1993): Simultaneous oscillations in the membrane potential of pig coronary artery endothelial and smooth muscle cells. *J. Physiol.* 471: 13-24
- Walsh, M.P., Kargacin, G.J., Kendrick-Jones, J., Lincoln, T.M. (1995): Intracellular mechanism involved in the regulation of vascular smooth muscle tone. *Can. J. Physiol. Pharmacol.* 73: 565-573
- Walter, U. (1989): Physiological role of cGMP and cAMP-dependent protein kinase in the cardiovascular system. *Rev. Physiol. Biochem. Pharmacol.* 113: 41-88
- Weidinger, F.F., McLenahan, J.M., Cybulsky, M.I., Gordon, J.B., Rennke, H.G., Hollenberg, N.K., Fallon, J.T., Ganz, P., Cooke, J.P. (1990): Persistent dysfunction of regenerated endothelium after balloon angioplasty of rabbit iliac artery. *Circulation* 81: 1667-79
- Weidinger, F.F., McLenahan, J.M., Cybulsky, M.I., Fallon, J.T., Hollenberg, N.K., Cooke, J.P., Ganz, P. (1991): Hypercholesterolemia enhances macrophage recruitment and dysfunction of regenerated endothelium after balloon injury of the rabbit iliac artery. *Circulation* 84: 755-767
- Yamamoto, Y., Imaede, K., Suzuki, H. (1999): Endothelium-dependent hyperpolarization and intercellular electrical coupling in guinea-pig mesenteric arteriols. *J. Physiol.* 514: 505-513
- Yanagisawa, M., Kurihara, H., Kimura, S., Goto, K., Masaki, T. (1988): A novel peptide vasoconstrictor, endothelin, is produced by vascular endothelium and modulates smooth muscle Ca^{2+} channels. *J. Hypertens. Suppl.* 6: S188-91
- Zawar, C., Plant, T.D., Schirra, C., Konnerth, A., Neumcke, B. (1999): Cell-type specific expression of ATP-sensitive potassium channels in the rat hippocampus. *J. Physiol.* 514: 327-41
- Zhang, L., McBain, C.J. (1995): Potassium conductances underlying repolarization and afterhyperpolarization in rat CA1 hippocampal interneurons. *J. Physiol.* 488: 661-72