

7 Literaturverzeichnis*

- 1 Andreas, K. (1994): Nervensystem. In: Marquardt, H., Schäfer, S.G. (Hrsg.): Lehrbuch der Toxikologie. Mannheim: Wissenschaftsverlag, 291-312
- 2 Antoni, H. (2000): Mechanik der Herzaktion. In: Schmidt, R.F., Thews, G., Lang, F. (Hrsg.): Physiologie des Menschen. 28. Aufl., Berlin: Springer, 448-471
- 3 Ashikawa, K., Kanatsuka, H., Suzuki, T., Takishima, T. (1984): A new microscope system for the continuous observation of the coronary microcirculation in the beating canine left ventricle. *Microvasc Res* 28, 387-394
- 4 Ashikawa, K., Kanatsuka, H., Suzuki, T., Takishima, T. (1986): Phasic blood flow velocity pattern in epicardial microvessels in the beating canine left ventricle. *Circ Res* 59, 704-711
- 5 Bayliss, W.M. (1902): On the local reactions of the arterial wall to changes of internal pressure. *J Physiol* 28, 220-231
- 6 Busse, R. (2000): Gefäßsystem und Kreislaufregulation. In: Schmidt, R.F., Thews, G., Lang, F. (Hrsg.): Physiologie des Menschen. 28. Aufl., Berlin: Springer, 498-561
- 7 Cannon, R.O., Camici, P.G., Epstein, S.E. (1992): Pathophysiological dilemma of syndrome X. *Circulation* 85, 883-892
- 8 Chierchia, S.L., Fragasso, G. (1996): Angina with normal coronary arteries: diagnosis, pathophysiology and treatment. *Eur Heart J* 17 (*Supplement G*), 14-19
- 9 Chilian, W.M. (1991): Functional distribution of α_1 - and α_2 -adrenergic receptors in the coronary microcirculation. *Circulation* 84, 2108-2122
- 10 Chilian, W.M. (1997): Coronary microcirculation in health and disease. Summary of an NHLBI workshop. *Circulation* 95, 522-528
- 11 Chilian, W.M., Eastham, C.L., Marcus, M.L. (1986): Microvascular distribution of coronary vascular resistance in beating left ventricle. *Am J Physiol* 251, H779-H788
- 12 Chilian, W.M., Layne, S.M., Klausner, E.C., Eastham, C.L., Marcus, M.L. (1989): Redistribution of coronary microvascular resistance produced by dipyridamole. *Am J Physiol* 256, H383-H390
- 13 Chilian, W.M., Layne, S.M. (1990): Coronary microvascular responses to reductions in perfusion pressure. Evidence for persistent arteriolar vasomotor tone during coronary hypoperfusion. *Circ Res* 66, 1227-1238
- 14 Collins, D.M., McCullough, W.T., Ellsworth M.L. (1998): Conducted vascular responses. *Microvasc Res* 56, 43-53

* Zeitschriftentitelkürzungen gemäß: List of journals indexed in Index Medicus. Bethesda, MD: National Library of Medicine, 2002.

- 15 Cornelissen, A.J.M. (2001): Distribution and control of coronary blood flow. Amsterdam: PhD Thesis, Universität Amsterdam
- 16 Davies, P.F. (1989): How do vascular endothelial cells respond to flow. NIPS 4, 22-25
- 17 Davis, M.J., Hill, M.A. (1999): Signaling mechanisms underlying the vascular myogenic response. Physiol Rev 79, 387-423
- 18 DeFily, D.V., Patterson, J.L., Chilian, W.M. (1995): Endogenous adenosine modulates α_2 - but not α_1 -adrenergic constriction of coronary arterioles. Am J Physiol 268, H2487-H2494
- 19 Dekker, L.R.C. (1996): Role of intracellular calcium in ischemic damage and preconditioning in cardiac muscle. Amsterdam: PhD Thesis, Universität Amsterdam
- 20 Döring, H.J., Dehnert, H. (1987): The isolated perfused warm-blood heart according to Langendorff. Reprint d. 1. Aufl., March: Biomesstechnik-Verlag March
- 21 Duncker, D.J., Bache, R.J. (2000): Regulation of coronary vasomotor tone under normal conditions and during acute myocardial hypoperfusion. Pharmacol Ther 86, 87-110
- 22 Feigl, E.O. (1983): Coronary Physiology. Physiol Rev 63, 1-205
- 23 Flannery, B.P., Deckman, H.W., Roberge, W.G., D'Amico, K.L. (1987): Three-Dimensional X-ray Microtomography. Science 237, 1439-1444
- 24 Gaede, W., Kühnert, M., Lange, N., Lohs, K., Richter, H., Werner, E., Wilsdorf, G. (1991): Spezielle Toxikologie (ökonomisch bedeutsame Tiervergiftungen). In: Kühnert, M. (Hrsg.): Veterinärmedizinische Toxikologie. Allgemeine und klinische Toxikologie. Grundlagen der Ökotoxikologie. 1. Aufl., Jena: Fischer, 83-465
- 25 Gaehtgens, P. (1992): Why networks? Int J Microcirc Clin Exp 11, 123-132
- 26 Gaehtgens, P. (2001): Das Kreislaufsystem. In: Klinke, R., Silbernagl, S. (Hrsg.): Lehrbuch der Physiologie. 3. Aufl., Stuttgart: Thieme, 145-188
- 27 Gräfe, M., Auch-Schweik, W., Graf, K., Terbeek, D., Hertel, H., Unkelbach, M., Hildebrandt, A., Fleck, E. (1994): Isolation and characterization of macrovascular and microvascular endothelial cells from human hearts. Am J Physiol 267, H2138-H2148
- 28 Griffith, T.M., Edwards, D.H., Davies, R.L., Harrison, T.J., Evans, K.T. (1987): EDRF coordinates the behaviour of vascular resistance vessels. Nature 329, 442-445
- 29 Habazettl, H., Conzen, P.F., Vollmar, B., Baier, H., Christ, M., Goetz, A.E., Peter, K., Brendel, W. (1992): Dilation of coronary microvessels by adenosine induced hypotension in dogs. Int J Microcirc Clin Exp 11, 51-65
- 30 Habazettl, H., Vollmar, B., Christ, M., Baier, H., Conzen, P.F., Peter, K. (1994): Heterogeneous microvascular coronary vasodilation by adenosine and nitroglycerin in dogs. J Appl Physiol 76, 1951-1960
- 31 Hester, R.L. (1990): Venular-arteriolar diffusion of adenosine in hamster cremaster microcirculation. Am J Physiol 258, H1918-H1924
- 32 Hoffman, J.I.E., Spaan, J.A.E. (1990): Pressure-flow relations in coronary circulation. Physiol Rev 70, 331-390

- 33 Holtz, J., Forstermann, U., Giesler, M., Bassenge, E. (1984): Flow-dependent, endothelium-mediated dilation of epicardial coronary arteries in conscious dogs: effects of cyclooxygenase inhibition. *J Cardiovasc Pharmacol* 6, 1161-1169
- 34 Johnson, P.C. (1964): Review of previous studies and current theories of autoregulation. *Circ Res* 15, 1-9
- 35 Jones, C.J.H., Kuo, L., Davis, M.J., Chilian, W.M. (1993): Myogenic and flow-dependent control mechanisms in the coronary microcirculation. (Editorial). *Basic Res Cardiol* 88, 2-10
- 36 Jones, C.J.H., Kuo, L., Davis, M.J., DeFily, D.V., Chilian, W.M. (1995): Role of nitric oxide in the coronary microvascular responses to adenosine and increased metabolic demand. *Circulation* 91, 1807-1813
- 37 Kanatsuka, H., Lampert, K.G., Eastham, C.L., Dellperger, K.C., Marcus, M.L. (1989): Comparison of the effects of increased myocardial oxygen consumption and adenosine on the coronary microvascular resistance. *Circ Res* 66, 1296-1305
- 38 Kanatsuka, H., Lampert, K.G., Eastham, C.L., Marcus, M.L. (1990): Heterogeneous changes in epimyocardial microvascular size during graded coronary stenosis. Evidence of the microvascular site for autoregulation. *Circ Res* 66, 389-396
- 39 Kemp, H.G. (1973): Left ventricular function in patients with the anginal syndrome and normal coronary arteriograms. *Am J Cardiol* 32, 375-376
- 40 Kuo, L., Chancellor, J.D. (1995a): Adenosine potentiates flow-induced dilation of coronary arterioles by activating ATP-sensitive K^+ -channels in endothelium. *Am J Physiol* 269, H541-H549
- 41 Kuo, L., Davis, M.J., Chilian, W.M. (1988): Myogenic activity in isolated subepicardial and subendocardial coronary arterioles. *Am J Physiol* 255, H1558-H1562
- 42 Kuo, L., Chilian, W.M., Davis, M.J. (1990a): Coronary arteriolar myogenic response is independent of endothelium. *Circ Res* 66, 860-866
- 43 Kuo, L., Davis, M.J., Chilian, W.M. (1990b): Endothelium-dependent, flow-induced dilation of isolated coronary arterioles. *Am J Physiol* 259, H1063-H1070
- 44 Kuo, L., Chilian, W.M., Davis, M.J. (1991): Interaction of pressure- and flow-induced responses in porcine coronary resistance vessels. *Am J Physiol* 261, H1706-H1715
- 45 Kuo, L., Davis, M.J., Cannon, M.S., Chilian, W.M. (1992a): Pathophysiological consequences of atherosclerosis extend into the coronary microcirculation. Restoration of endothelium-dependent responses by L-arginine. *Circ Res* 70, 465-476
- 46 Kuo, L., Davis, M.J., Chilian, W.M. (1992b): Endothelial modulation of arteriolar tone. *NIPS* 7, 5-9
- 47 Kuo, L., Arko, F., Chilian, W.M., Davis, M.J. (1993): Coronary venular responses to flow and pressure. *Circ Res* 72, 607-615
- 48 Kuo, L., Davis, M.J., Chilian, W.M. (1995b): Longitudinal gradients for endothelium-dependent and -independent vascular responses in the coronary microcirculation. *Circulation* 92, 518-525

- 49 Kupatt, C., Zahler, S., Seligmann, C., Massoudy, P., Becker, B.F., Gerlach, E. (1996): Nitric oxide mitigates leukocyte adhesion and vascular leak after myocardial ischemia. *J Mol Cell Cardiol* 28, 643-654
- 50 Kurz, M.A., Lamping, K.G., Bates, J.N., Eastham, C.L., Marcus, M.L., Harrison, D.G. (1991): Mechanisms responsible for the heterogeneous coronary microvascular response to nitroglycerin. *Circ Res* 68, 847-855
- 51 Lamontagne, D., Pohl, U., Busse, R. (1992): Mechanical deformation of vessel wall and shear stress determine the basal release of endothelium-derived relaxing factor in the intact rabbit coronary vascular bed. *Circ Res* 70, 123-130
- 52 Langendorff, O. (1895): Untersuchungen am überlebenden Säugetierherzen. *Pflügers Arch* 61, 291-332
- 53 Larach, D.R., Schuler, H.G., Skeehan, T.M., Peterson, C.J. (1990): Direct effects of myocardial depressant drugs on coronary vascular tone: anesthetic vasodilation by halothane and isoflurane. *J Pharmacol Exp Ther* 254, 58-64
- 54 Levick, J.R. (2000): An introduction to cardiovascular physiology. 3. Aufl., London:Arnold
- 55 Liao, J.C., Kuo, L. (1997): Interaction between adenosine and flow-induced dilation in coronary microvascular network. *Am J Physiol* 272, H1571-H1581
- 56 Liebich, H.-G. (1993): Funktionelle Histologie. Farbatlas und Kurzlehrbuch der mikroskopischen Anatomie der Haussäugetiere. 2. Aufl., Stuttgart: Schattauer
- 57 Miller, F.J., Dellasperger, K.C., Guterman, D.D. (1997): Myogenic constriction of human coronary arterioles. *Am J Physiol* 273, H257-H264
- 58 Mosher, P., Ross Jr., J., McFate, P.A., Shaw, R.F. (1964): Control of coronary blood flow by an autoregulatory mechanism. *Circ Res* 14, 250-259
- 59 Nellis, S.H., Liedtke, A.J., Whitesell, L. (1981): Small coronary vessel pressure and diameter in an intact beating rabbit heart using fixed-position and free-motion techniques. *Circ Res* 49, 342-353
- 60 Nellis, S.H., Whitesell, L. (1989): Phasic pressure and diameters in small epicardial veins of the unrestrained heart. *Am J Physiol* 257, H1056-H1061
- 61 Nickel, R., Schummer, A., Seiferle, E. (1984): Lehrbuch der Anatomie der Haustiere. Band 3: Kreislaufsystem, Haut, Hautorgane. 2. Aufl., Berlin: Parey
- 62 Nishida, M., Carley, W.W., Gerritsen, M.E., Ellingsen, O., Kelly, R.A., Smith, T.W. (1993): Isolation and characterization of human and rat cardiac microvascular endothelial cells. *Am J Physiol* 264, H639-H652
- 63 Olesen, S.-P., Clapham, D.E., Davies, P.F. (1988): Haemodynamic shear stress activates a K^+ current in vascular endothelial cells. *Nature* 331, 168-170
- 64 Palm, D., Hellenbrecht, D., Quiring, K. (1992): Pharmakologie noradrenerger und adrenerger Systeme. In: Forth, W., Henschler, D., Rummel, W., Starke, K. (Hrsg.): Allgemeine und spezielle Pharmakologie und Toxikologie. 6. Aufl., Mannheim: BI-Wissenschaftsverlag, 148-199

- 65 Pries, A.R. (1988): A versatile video image analysis system for microcirculatory research. *Int J Microcirc Clin Exp* 7, 327-345
- 66 Pries, A.R., Secomb, T.W., Gaehtgens, P. (1996): Relationship between structural and hemodynamic heterogeneity in microvascular networks. *Am J Physiol* 270, H545-H553
- 67 Quayle, J.M., Nelson, M.T., Standen, N.B. (1997): ATP-sensitive and inwardly rectifying potassium channels in smooth muscle. *Physiol Rev* 77, 1165-1232
- 68 Saito, Y., Eraslan, A., Hester, R.L. (1993): Importance of venular flow in control of arteriolar diameter in hamster cremaster muscle. *Am J Physiol* 265, H1294-H1300
- 69 Smith Jr., T.P., Carty Jr., J.M. (1993): Modulation of coronary autoregulatory responses by nitric oxide. Evidence for flow-dependent resistance adjustments in conscious dogs. *Circ Res* 73, 232-240
- 70 Starke, K. (1992): Pharmakologie cholinriger Systeme. In: Forth, W., Henschler, D., Rummel, W., Starke, K. (Hrsg.): Allgemeine und spezielle Pharmakologie und Toxikologie. 6. Aufl., Mannheim: BI-Wissenschaftsverlag, 125-147
- 71 Steinhausen, M., Tillmanns, H., Thederan, H. (1978): Microcirculation of the epimyocardial layer of the heart. *Pflügers Arch* 378, 9-14
- 72 Stepp, D.W., Nishikawa, Y., Chilian, W.M. (1999): Regulation of shear stress in the canine coronary microcirculation. *Circulation* 100, 1555-1561
- 73 Tigno, X.T., Ley, K., Pries, A.R., Gaehtgens, P. (1989): Venulo-arteriolar communication and propagated response. A possible mechanism for local control of blood flow. *Pflügers Arch* 414, 450-456
- 74 Tillich, G., Mendoza, L., Bing, R.J. (1971): Total and nutritional coronary flow. *Circ Res* 28 (*Supplement I*), I-148-I-153
- 75 Tillmanns, H., Ikeda, S., Hansen, H., Sarma, J.S.M., Fauvel, J.-M., Bing, R.J. (1974): Microcirculation in the ventricle of the dog and turtle. *Circ Res* 34, 561-569
- 76 Tillmanns, H., Steinhausen, M., Leinberger, H., Thederan, H., Kübler, W. (1981): Pressure measurements in the terminal vascular bed of the epimyocardium of rats and cats. *Circ Res* 49, 1202-1211
- 77 Toyota, E., Fujimoto, K., Ogasawara, Y., Kajita, T., Shigeto, F., Matsumoto, T., Goto, M., Kajiya, F. (2002): Dynamic changes in three-dimensional architecture and vascular volume of transmural coronary microvasculature between diastolic- and systolic-arrested rat hearts. *Circulation* 105, 621-626
- 78 Voigtlander, J. (2000): Die initiale Reperfusion mit 2,3-Butandion-Monoxim begrenzt den Reperfusionschaden des Herzens nach Kardioplegie. München: Diss., Ludwig-Maximilians-Universität zu München
- 79 Werner, J. (2001): Die Bedeutung endothelialer Autakoide für die Regulation des arteriären Gefäßtonus im Skelettmuskel in vivo. Berlin: Diss., Freie Universität Berlin
- 80 Yada, T., Hiramatsu, O., Kimura, A., Goto, M., Ogasawara, Y., Tsujioka, K., Yamamori, S., Ohno, K., Hosaka, H., Kajiya, F. (1993): In vivo observation of subendocardial microvessels of the beating porcine heart using a needle-probe videomicroscope with a CCD camera. *Circ Res* 72, 939-946