

6 Literaturverzeichnis

Agabiti-Rosei E, Muiesan ML, Salvetti M. Evaluation of subclinical target organ damage for risk assessment and treatment in the hypertensive patients: left ventricular hypertrophy. *J Am Soc Nephrol.* 2006; 17 (4 Suppl 2): S104-8.

Armoundas AA, Wu R, Juang G, Marban E, Tomaselli GF. Electrical and structural remodeling of the failing ventricle. *Pharmacol Ther* 2001; 92: 213-230.

Bache RJ, Dai XZ, Alyono D, Vrobel TR, Homans DC. Myocardial blood flow during exercise in dogs with left ventricular hypertrophy produced by aortic banding and perinephritic hypertension. *Circ* 1987; 76 (4): 835-42.

Baker KM, Aceto JF. Angiotensin II stimulation of protein syntheses and cell growth in chick heart cells. *AM J Physiol* 1990; 259: H610-H618.

Balcells E, Meng QC, Johnson Jr. WH, Oparil S, Dell'Italia LJ. Angiotensin II formation from ACE and chymase in human and animal hearts: methods and species considerations. *Am J Physiol* 1997; 42: H1769-H1774.

Baule G, McFee R. Detection of the magnetic field of the heart. *Am Heart J* 1963; 66: 95-96.

Bohlender J, Fukamizu A, Lippoldt A, Nomura T, Dietz R, Ménard J, Murakami K, Luft FC, Ganen D. High human rennin hypertension in transgenic rats. *Hypertension* 1997; 29: 428-434.

Bohlender J, Hildenbrand U, Wagner KD, Günther J, Hempel P, Schlegel WP, Luft FC, Krause EG, Bartel S. Myocardial adrenergic dysfunction in rats with transgenic, human renin-dependent hypertension. *J Hypertens* 2001; 19: 1-11.

Bonne G, Carrier L, Richard P, Hainque B, Schwartz K. Familial hypertrophic cardiomyopathy: from mutations to functional defects. *Circ Res.* 1998; 83: 580-93.

Brilla CG, Janicki JS, Weber KT. Cardioreparative effects of lisinopril in rats with genetic hypertension and left ventricular hypertrophy. *Circulation* 1991; 83: 1771-1779.

Brisinda D, Meloni AM, Fenici R. Contactless magnetocardiographic study of ventricular repolarization in intact Wistar rats: Evidence of gender-related differences. *Basic Res Cardiol* 2004; 99: 193-203.

Brisinda D, Meloni AM, Fenici R. Magnetocardiographic differences of ventricular repolarization parameters between Wistar rats and guinea pigs. *Neuro and Clin Neurophysiol* 2004a; 9: 1-4.

Brisinda D, Meloni AM, Fenici R. Magnetocardiographic study of ventricular repolarization in hypertensive patients with and without left ventricular hypertrophy. *Neurol Clin Neurophysiol* 2004b Nov 30; 2004: 13.

Caballero R, Gomez R, Moreno I, Nunez L, Gonzalez T, Arias C, Guizy M, Valenzuela C, Tamargo J, Delpon E. Interaction of angiotensin II with the angiotensin type 2 receptor inhibits the cardiac transient outward potassium current. *Cardiovasc Res* 2004; 62: 86-95.

Carson P, Giles T, Higginbotham M, Hollenberg N, Kannel W, Siragy HM. Angiotensin Receptor Blockers: evidence for preserving target organs. *Clin Cardiol* 2001; 24: 183-190.

Cohen D, Edelsack EA, Zimmermann JE. Magnetocardiograms taken inside a shielded room with a superconducting point-contact magnetometer. *Appl Phys Lett* 1970; 16: 278-80.

Cohen D, Kaufman LA. Magnetic Determination of the relationship between the S-T segment shift and the injury current produced by coronary artery occlusion. *Circ Res* 1975; 36: 414-424.

Cohen D. Steady Fields of the heart: Coronary Artery Occlusion in Dogs: in : Biomagnetism an interdisciplinary approach, Plenum Press. New York 1983; 267-270.

Comani S, Gallina S, Lagatta A, Orlandi M, Morana G, De Luzio S, Brisinda D, De Caterina R, Fenici R, Romani GL. Concentric remodelling detection by magnetocardiography in patients with recent-onset arterial hypertension. *PACE* 2004; Jun;27(6 Pt 1):709-18.

Crozier I, Ikram H, Awan N, Cleland J, Stephen N, Dickstein K, Frey M, Young J, Klinger G, Makris L, Rucinska E, for the Losartan Hemodynamic Study Group. Losartan in heart failure. Hemodynamic effects and tolerability. *Circulation* 1995; 91: 691-697.

De Paolis P, Porcellini A, Gigante B, Giliberti R, Lombardi A, Savoia C, Rubattu S, Volpe M. Modulation of AT2 subtype receptor gene activation and expression by AT1 receptor in endothelial cells. *J Hypertens* 1999; 17: 1873-1877.

Del Monte F, Butler K, Boecker W, Gwathmey JK, Hajjar RJ. Novel technique of aortic banding followed by gene transfer during hypertrophy and heart failure. *Physiol. Genomics* 2002; 9: 49-56.

Delpón E, Caballero R, Gómez R, Núñez L, Tamargo J. Angiotensin II, angiotensin II antagonists and spironolactone and their modulation of cardiac repolarization. *Trends in Pharmacological Sciences* 2005; 26 (3): 155-161.

DiBona GF, Kopp UC. Neural control of renal function. *Physiol Rev* 1997; 77: 75-197.

Dietz R. AT 1-blocker can be given in addition to ACE inhibitor and beta blocker. "Triple therapy decidedly well tolerated even in severe heart failure". *MMW Fortschr Med.* 2004 May 27; 146 (22):50.

Dietz R, Haebara H, Luth B, Mast G, Nemes Z, Schomig A, Szokol M. Does the renin-angiotensin system contribute to the vascular lesions in renal hypertensive rats? *Clin Sci Mol Med Suppl.* 1976 Dec; 3: 33s-35s.

Dostal DE, Baker KM. Angiotensin II stimulation of left ventricular hypertrophy in adult rat heart: mediation by the AT1 receptor. *Am J Hypertens* 1992; 5: 276-280.

Dzau VJ, Bernstein K, Celermajer D, Cohen J, Dahlof B, Deanfield J, Diez J, Drexler H, Ferrari R, van Gilst W, Hansson L, Hornig B, Husain A, Johnston C, Lazar H, Lonn E, Luscher T, Mancini J, Mimran A, Pepine C, Rabelink T, Remme W, Ruilope L, Ruzicka M, Schunkert H, Swedberg K, Unger T, Vaughan D, Weber M; Working Group on Tissue Angiotensin-converting enzyme, International Society of Cardiovascular Pharmacotherapy. The relevance of tissue

angiotensin-converting enzyme: manifestations in mechanistic and endpoint data. Am J Cardiol 2001; 88 (Suppl): 1L-20L.

Dzau VJ. Tissue angiotensin and pathobiology of vascular disease: a unifying hypothesis. Hypertension 2001a; 37: 1047-1052.

Fiebeler A, Luft FC. The mineralocorticoid receptor and oxidative stress. Heart Fail Rev. 2005; 10 (1): 47-52.

Fiebeler A, Shagdarsuren E, Rong S, Al-Saadi N, Gapelyuk A, Schirdewan A, Dechend R, Wellner M, Jeng AY, Webb RL, Luft FC, Muller DN. Aldoserone synthase inhibitor FAD286 ameliorates angiotensin II-induced end-organ damage. Hypertension 2004; 44 (4): 514-515.

Flesch M, Schwinger RH, Schiffer F, Frank K, Sudkamp M, Kuhn-Regnier F, Arnold G, Bohm M. Evidence for functional relevance of an enhanced expression of the $\text{Na}^+ \text{-Ca}^{2+}$ -exchanger in failing human myocardium. Circulation 1996; 94: 992-1002.

Fujino K, Sumi M, Saito K, Murakami M, Higuchi T, Nakaya Y, Mori H. Magntocardiograms of patients with left ventricular overloading recorded with a second-derivative SQUID gradiometer. J Electrocardiol 1984; 17 (3): 219-228.

Ganten, D, Lindpaintner K, Ganter U, Peters J, Zimmerman F, Bader M, Mullins J. Transgenic rats: new animal models in hypertension research. Hypertension 1991; 17: 843-855.

Garg R, Yusuf S, for the Collaborative Group on ACE-Inhibitor Trials. Overview of randomized trials of angiotensin converting enzyme inhibitors on mortality and morbidity in patients with heart failure. JAMA 1995; 273: 1450-6.

Gonzalez A, Lopez B, Diez J. Fibrosis in hypertensive heart disease: role of the renin-angiotensin-aldosterone system. Med Clin North Am. 2004 Jan; 88(1):83-97.

Gottlieb SS, Dickstein K, Fleck E, Kostis J, Levine TB, Le Jemtel T, De Kock M. Hemodynamic and neurohumoral effects of the angiotensin antagonist losartan in patients with congestive heart failure. Circulation 1993; 88: 1602-1609.

Griendling KK, Minieri CA, Ollerenshaw JD, Alexander RW. Angiotensin II stimulates NADH and NADPH oxidase activity in cultured vascular smooth muscle cells. *Circ Res* 1994; 74: 1141-1148.

Gudden F, Hoenig E, Reichenberger H, Schittenhelm R, Schneider A. A multichannel system for use in biomagnetic diagnosis. *Electromedica* 1989; 57: 2-7.

Hackenthal E, Paul M, Ganten D, Taugner R. Morphology, physiology, and molecular biology of renin secretion. *Physiol Rev* 1990; 70: 1067-1116.

Hill JA. Electrical remodeling in cardiac hypertrophy. *Trends Cardiovasc Med* 2003; 13: 316-322.

Horiuchi M, Akishita M, Dzau VJ. Recent progress in angiotensin II type 2 receptor research in the cardiovascular system. *Hypertension* 1999; 33: 613-621.

Hu P, Zhang D, Swenson L, Chakrabarti G, Abel ED, Litwin SE. Minimally invasive aortic banding in mice: effects of altered cardiomyocyte insulin signaling during pressure overload. *Am J Physiol heart Circ Physiol* 2003; 285: HI261-HI269.

Hulthen UL, Cao Z, Rumble JR, Cooper ME, Johnston CI. Vascular hypertrophy and albumin permeability in a rat model combining hypertension and diabetes mellitus: effects of calcium antagonism, Angiotensin converting enzyme inhibition, and Angiotensin II-AT1-receptor blockade. *Am J Hypertens* 1996; 9: 895-901.

Jalowy A, Schulz R, Heusch G. AT1 receptor blockade in experimental myocardial ischemia/reperfusion. *Basic Res Cardiol* 1998; 93: 85-91.

Kang YJ. Cardiac hypertrophy: a risk factor for QT-prolongation and cardiac sudden death. *Toxicol Pathol*. 2006; 34 (1): 58-66.

Kannel WB, Doyle JT, McNamara PM, Quicketon P, Gordon T. Precursors of sudden coronary death. Factors related to the incidence of sudden death. *Circulation* 1975; 51: 606-613.

Kannel WB. Role of blood pressure in cardiovascular morbidity and mortality. Progress in Cardiovascular Diseases. 1974; 17: 5-24.

Kariniemi V, Ahopelto J, Karp PJ, Katila TE. The fetal magnetocardiogram. J Perinat Med 1974; 2: 214-6.

Karvonen M Takala P, Kaartinen M, Korhonen P, Montonen J, Oikarinen L, Rossinen J, Nieminen MS, Katila T. Magnetocardiographic indices of left ventricular hypertrophy. J Hypertens 2002; 20: 2285-92.

Kato H, Suzuki H, Tajima S, Ogata Y, Tominaga T, Sato A, Saruta T. Angiotensin II stimulates collagen synthesis in cultured vascular smooth muscle cells. Journal of Hypertension 1991; 9: 17-22.

Katwa LC, Ratajska A, Cleutjens JP, Sun Y, Zhou G, Lee SJ, Weber KT. Angiotensin converting enzyme and kininase-II-like activites in cultured valvular interstitial cells of the rat heart. Cardiovascular Research 1995; 29: 57-64.

Kessler-Icekson G, Schlesinger H, Cohen F. Effect of Ang II and losartan on protein accumulation in cultured heart myocytes and nonmyocytes. FASEB J 1992; 6: A1872.

Lahera V, Cachofeiro V, Balfagon G, Rodicio JL. Aldosterone and its blockade: a cardiovascular and reanl perspective. Scientific World Journal 2006; 6: 413-24.

Laragh JH, Sealey JE. The renin-angiotensin-aldosterone hormonal system and regulation of sodium, potassium, and blood pressure homeostasis. In: Handbook of Physiology, edited by Orloff J, Berliner RW, Bethesda, MD, American Physiological Society, 1973, pp 831-907.

Levy D, Anderson KM, Savage DD, Kannel WB, Christiansen JC, Castelli WP. Electrocardiographically detected left ventricular hypertrophy: prevalence and risk factors (The Framingham Heart Study)". Ann Int Med 1988; 108: 7-13.

Levy D, Labib SB, et al. Determinants of sensitivity and specificity of electrocardiographic criteria for left ventricular hypertrophy. Circulation 1990; 81 (3): 815-820.

Lindholm LH, Ibsen H, Dahlof B, Devereux RB, Beevers G, de Faire U, Fyrquist F, Julius S, Kjeldsen SE, Kristiansson K, Lederballe-Pedersen O, Nieminen MS, Omvik P, Oparil S, Wedel H, Aurup P, Edelman J, Snapinn S; LIFE Study Group. Cardiovascular morbidity and mortality in the Losartan Intervention For Endpoint reduction in hypertension study (LIFE): a randomised trial against atenolol. *Lancet* 2002; 359 (9311): 995-1010.

Matsubara K, Brilla CG, Weber KT. Ang II-mediated inhibition of collagenase activity in cultured cardiac fibroblasts. *FASEB J* 1992; 6: A941.

Mazzolai L, Nussberger J, Aubert JF, Brunner DB, Gabbiani G, Brunner HR, Pedrazzini T. Blood pressure independent cardiac hypertrophy induced by locally activated renin-angiotensin system. *Hypertension* 1998; 31: 1324-1330.

Mitarai S, Reed TD, Yatani A. Changes in ionic currents and β -adrenergic receptor signaling in hypertrophied myocytes overexpressing $G\alpha_q$. *Am J Physiol* 2000; 279: H139-H148.

Muller DN, Shagdarsuren E, Park JK, Dechend R, Mervaala E, Hampich F, Fiebeler A, Ju X, Finckenberg P, Theuer J, Viedt C, Kreuzer J, Heidecke H, Haller H, Zenke M, Luft FC. Immunosuppressive Treatment protects against Angiotensin II-induced renal damage. *AJP* 2002; 161 (5): 1679-1693.

Munzenmaier DH, Greene AS. Opposing actions of Angiotensin II on microvascular growth and arterial blood pressure. *Hypertension* 1996; 27: 760-765.

Nakajima M, Hutchinson HG, Fujinaga M, Hayashida W, Morishita R, Zhang L, Horiuchi M, Pratt RE, Dzau VJ. The Angiotensin II type 2 (AT2) receptor antagonizes the growth effects of the AT1 receptor: gain-of-function study using gene transfer. *Proc Natl Acad Sci USA* 1995; 92 (23): 10663-10667.

Navar LG, Harrison-Bernard LM, Nishiyama A, Kobori H. Regulation of intrarenal Angiotensin II in hypertension. *Hypertension* 2002; 39: 316-322.

Navar LG, Nishiyama A. Intrarenal formation of Angiotensin II. *Contrib Nephrol* 2001; (135): 1-15.

Nenonen J, Montonen J, Mäkijärvi M. Principles of Magnetocardiographic mapping. In: Shenasa M, Borgreff M, Breithardt G, eds. Futura Publishing Co, Mount Kisco, NY. 2002.

Nicholls MG, Robertson JIS. The renin-angiotensin system in the year 2000. *J Hum Hypertens* 2000; 14: 649-66.

Nickenig G, David G, Harrison DG. AT1-type Angiotensin receptor in oxidative stress and atherogenesis. Part II: AT1 receptor regulation. *Circulation* 2002a; 105: 530-536.

Nickenig G, Harrison DG. AT1-type Angiotensin receptor in oxidative stress and atherogenesis. Part I: Oxidative stress and atherogenesis. *Circulation* 2002; 105: 393-396.

Nikitin IP, Shabalin AV, Ermakova EN, Kytmanov AV, Golyshev NV, Rogachevskii BM, Motorin SV. Magneto-, electro- and echocardiography in detecting symptoms of the „hypertensive heart“. *Clin Med* 1996; 74: 29-31.

Olivetti G, Cigola E, Maestri R, Lagrasta C, Corradi D, Quaini F. Recent advances in cardiac hypertrophy. *Cardiovasc Res* 2000; 45: 68-75.

Oparil S, Erinoff L, Cutilett A. Catecholamines, blood pressure, renin and myocardial function in the spontaneously hypertensive rat. *Clin Sci Mol Med*. 1976; 3: 445s-459s.

Pals DT, Denning GS Jr, Keenan RE. Historical development of saralasin. *Kidney Int Suppl* 1979 Mar; 9: 7-10.

Peters NS, Wit AL. Myocardial architecture and ventricular arrhythmogenesis. *Circulation* 1998; 97: 1746-1754.

Pfeffer JM, Pfeffer MA, Mirsky I; Braunwald E. Progression of left ventricular hypertrophy and prevention of left ventricular dysfunction by captopril in the spontaneously hypertensive rat. *Proc. Natl Acad Sci USA*. 1982; 79: 3310-3314.

Rabkin SW, Mathewson FA, Tate RB. Prognosis after acute myocardial infarction: relation to blood pressure values before infarction in a prospective cardiovascular study. American Journal of Cardiology. 1977; 40: 604-610.

Sadoshima J, Izumo S. Mechanical stretch rapidly activates multiple signal transduction pathways in cardiac myocytes: potential involvement of an autocrine/paracrine mechanism. EMBO Journal. 1993a; 12: 1681-92.

Sadoshima J, Izumo S. Molecular characterization of angiotensin II-induced hypertrophy of cardiac myocytes and hyperplasia of cardiac fibroblasts. Critical role of the AT1 receptor subtype. Circ Res 1993; 73: 413-423.

Sasayama S, Yamano Y, Bardhan S, Murry IN; Hasegawa JJ, Matsuda M, Ingami T. Cloning and expression of a complementary DNA encoding a bovine adrenal angiotensin II typ-1 receptor. Nature 1991; 351: 230-232.

Schelling P, Fischer H, Ganzen D. Angiotensin and cell growth: a link to cardiovascular hypertrophy? J Hypertens 1991; 9: 3-15.

Schmidt RF, Thews G. Physiologie des Menschen. 1997; 27.Auflage. S. 67.

Schmieder RE. Mechanisms for the clinical benefits of angiotensin II receptor blockers. AJH 2005; 18: 720-730.

Schneider S, Hoenig E, Reichenberger H, Abraham-Fuchs, Moshage W, Oppelt W, Stefan A, Weikl A, Wirth A. Multichannel biomagnetic system for study of electrical activity of the brain and the heart. Radiology 1990; 176: 825-830.

Schulz R. Pathophysiologie und Pharmakotherapie von koronarer Herzkrankheit und Herzinsuffizienz. UNI-MED 2001, 1.Auflage, p: 68.

Schunkert H, Sadoshima JI, Cornelius T, Kagaya Y, Weinberg EO, Izumo S, Rieger G, Lorell BH. Angiotensin II-induced growth responses in isolated adult rat hearts: evidence for load-

independent induction of cardiac protein syntheses by Angiotensin II. *Circ Res*. 1995; 76: 489-497.

Sen S, Tarazi RC, Khairallah PA, Bumpus FM. Cardiac hypertrophy in spontaneously hypertensive rats. *Circ Res*. 1974; 35: 775-781.

Siltanen P. Magnetocardiography. In *Comprehensive Electrocardiology*, Vol.2, ed. MacFarlane, Lawrie; Pergamon Press 1989, pp. 1405-1438.

Steinhoff U. MCG as a tool for drug safety testing and knock-out model animal studies. *Electrocardiol*. 2004; 37 Suppl: 187-92.

Sudgen PH, Clerk A. Cellular mechanisms of cardiac hypertrophy. *J Mol Med*. 1998; 76: 725-46.

Surawicz B. Electrophysiologic basis of ECG and arrhythmias. William & Wilkins, Malvern, PA, USA 1995.

Tan LB, Schlosshan D, Barker D. Fiftieth anniversary of aldosterone: from discovery to cardiovascular therapy I *J Card* 2004; 96 (3): 321-333.

Tavarozzi I, Comani S, Del Gratta C, Di Luzio S, Luca Romani G, Gallina S, Zimarino M, Brinsinda D, Fenici R, De Caterina R. Magnetocardiography: current status and perspectives. Part II: clinical applications. *Ital Heart J* 2002; 3: 151-165.

Teunissen BEJ, Jongsma HJ, Bierhuizen MFA. Regulation of myocardial connexins during hypertrophic remodelling. *European Hear Journal* 2004; 25: 1979-1989.

Theuer J, Dechend R, Muller DN, Park JK, Fiebeler A, Barta P, Ganter D, Haller H, Dietz R, Luft FC. Angiotensin II induced inflammation in the kidney and in the heart of double transgenic rats. *BMC Cardiovascular Disorders* 2002; 2:3. www.biomedcentral.com/1471-2261/2/3.

Timmermans PB, Wong PC, Chiu AT, Herblin WF, Benfield P, Carini D, Lee RJ, Wexler RR, Sayre JA, Smith RD. Angiotensin II receptors and Angiotensin II antagonist. *Pharmacol Rev* 1993; 45: 205-211.

Tweedie D, Henderson CG, Kane KA. Assessment of subrenal banding of the abdominal aorta as a method of inducing cardiac hypertrophy in the guinea pig. *Cardioscience* 1995; 6 (2): 115-9.

Uchida S, Goto K, Tachikawa A, Iramina K. Magnetocardiographic Imaging for ischemic myocardial muscles on rats. *IEICE Trans. Inf. & Syst.* 2002; Vol E85, No.1: 30-34.

Urata H, Nishimura H, Ganter D: Chymase-dependent Angiotensin II formation systems in humans. *Am J Hypertens* 1996; 9: 277-284.

Van Kesteren CA, van Heugten HA, Lamers JM, Saxena PR, Schalekamp MA, Danser AH. Angiotensin II-mediated growth and antigrowth effects in cultured neonatal rat cardiac myocytes and fibroblasts. *J Mol Cell Cardiol.* 1997; 29: 2147-2157.

Villarreal FJ, Kim NN, Ungab GD, Printz MP, Dillmann WH. Identification of functional angiotensin II receptors on rat cardiac fibroblasts. *Circulation* 1993; 88: 2849-2861.

Vincent GM, Abildskov JA, Burgess MJ. Mechanisms of ischemic ST-segment displacement. Evaluation by direct current recordings. *Circulation* 1977; 56: 559-566.

Volpe M, Savoia C, De Paolis P, Ostrowska B, Tarasi D, Rubattu S. The renin-angiotensin system as a risk factor and therapeutic target for cardiovascular and renal disease. *J Am Soc Nephrol* 2002; 13: S173-S178.

Wendell S Akers, Andrew Cross. Renin-angiotensin system and sympathetic nervous system in cardiac pressure-overload hypertrophy. *Am J Physiol Heart Circ Physiol* 2000; 279 (6): H2797-H2806.

Wess G, Killeil M. Herzinsuffizienz: Definition und Pathophysiologie. In press.

Wolny A, Clozel JP, Rein J, Mory P, Vogt P, Turino M, Kiowski W, Fischli W. Functional and biochemical analysis of Angiotensin II-forming pathways in the human heart. *Circ Res* 1997; 80: 219-227.

Yamazaki T, Komuro I, Yazaki Y. Signalling pathways for cardiac hypertrophy. *Cell Signal*. 1998; 10: 693-8.

Yonezawa T, Umemoto S, Fujii A, Katayama K, Matzsaki M. Comparative effects of type 1 angiotensin II-receptor blockade with Angiotensin-converting enzyme inhibitor on left ventricular distensibility and collagen metabolism in spontaneously hypertensive rats. *J Cardiovasc Pharmacol* 1996; 27: 119-124.

Yusuf S, Sleight P, Pogue J, Bosch J, Davies D, Dagenais G. Effects of an angiotensin converting enzyme inhibitor, ramipril, on cardiovascular events in high-risk patients: The Heart Outcome Prevention Evaluation Study Investigators. *N Engl J Med* 2000; 342: 145-53.