

References

- Lavall D, Schäfers HJ, Böhm M, Laufs U. Aneurysms of the ascending aorta. *Dtsch Arztebl Int* 2012;109:227-33.
- Jones JA, Spinale FG, Ikonomidis JS. Transforming growth factor-beta signaling in thoracic aortic aneurysm development: a paradox in pathogenesis. *J Vasc Res* 2009;46:119-37.
- Tadros TM, Klein MD, Shapira OM. Ascending aortic dilatation associated with bicuspid aortic valve: pathophysiology, molecular biology, and clinical implications. *Circulation* 2009;119:880-90.
- Blunder S, Messner B, Aschacher T, Zeller I, Turkcan A, Wiedemann D, et al. Characteristics of TAV- and BAV-associated thoracic aortic aneurysms-smooth muscle cell biology, expression profiling, and histological analyses. *Atherosclerosis* 2012;220:355-61.
- Forte A, Della Corte A, De Feo M, Cerasuolo F, Cipollaro M. Role of myofibroblasts in vascular remodelling: focus on restenosis and aneurysm. *Cardiovasc Res* 2010;88:395-405.
- Albano F, Arcucci A, Granato G, Romano S, Montagnani S, De Vendittis E, et al. Markers of mitochondrial dysfunction during the diclofenac-induced apoptosis in melanoma cell lines. *Biochimie* 2013; 95:934-45.
- Fukai T, Ushio-Fukai M. Superoxide dismutases: role in redox signaling, vascular function, and diseases. *Antioxid Redox Signal* 2011;15:1583-606.
- Nozik-Grayck E, Suliman HB, Piantadosi CA. Extracellular superoxide dismutase. *Int J Biochem Cell Biol* 2005;37:2466-71.
- Arcucci A, Ruocco MR, Amatruda N, Biondi A, Tarantino G, Albano F, et al. Analysis of extracellular superoxide dismutase in fibroblasts from patients with systemic sclerosis. *J Biol Regul Homeost Agents* 2011;25:647-54.
- Petersen SV, Oury TD, Ostergaard L, Valnickova Z, Wegrzyn J, Thogersen IB, et al. Extracellular superoxide dismutase (EC-SOD) binds to type I collagen and protects against oxidative fragmentation. *J Biol Chem* 2004;279:13705-10.
- Laatikainen LE, Inconato M, Castellone MD, Laurila JP, Santoro M, Laukkanen MO. SOD3 decreases ischemic injury derived apoptosis through phosphorylation of Erk1/2, Akt, and FoxO3a. *PLoS One* 2011;6:e24456.
- Hers I, Vincent EE, Tavarè JM. Akt signalling in health and disease. *Cell Signal* 2011;23:1515-27.
- Shen YH, Zhang L, Ren P, Nguyen MT, Zou S, Wu D, et al. AKT2 confers protection against aortic aneurysms and dissections. *Circ Res* 2013;112:618-32.
- Holm TM, Habashi JP, Doyle JJ, Bedja D, Chen Y, van Erp C, et al. Noncanonical TGF- β signaling contributes to aortic aneurysm progression in Marfan syndrome mice. *Science* 2011 332:358-61.
- Bradford MM. A rapid and sensitive method for the quantitation of microgram quantities of protein utilizing the principle of protein-dye binding. *Anal Biochem* 1976;72:248-54.
- Della Corte A, Quarto C, Bantone C, Castaldo C, Di Meglio F, Nurzynska D, et al. Spatiotemporal patterns of smooth muscle cell changes in ascending aortic dilatation with bicuspid and tricuspid aortic valve stenosis: focus on cell-matrix signaling. *J Thorac Cardiovasc Surg* 2008;135:8-18.
- Ruddy JM, Jones JA, Spinale FG, Ikonomidis JS. Regional heterogeneity within the aorta: relevance to aneurysm disease. *J Thorac Cardiovasc Surg* 2008; 136:123-30.
- Jandmesser U, Merten R, Spiekermann S, Buttner K, Drexler H, Hornig B. Vascular extracellular superoxide dismutase activity in patients with coronary artery disease: relation to endothelium-dependent vasodilation. *Circulation* 2000;101:2264-70.
- Laurila JP, Castellone MD, Curcio A, Laatikainen LE, Haaparanta-Solin M, Gronroos TJ, et al. Extracellular superoxide dismutase is a growth regulatory mediator of tissue injury recovery. *Mol Ther* 2009;17:448-54.
- Xiong W, Meisinger T, Knispel R, Worth JM, Baxter BT. MMP-2 regulates Erk1/2 phosphorylation and aortic dilatation in Marfan syndrome. *Circ Res* 2012;110:e92-e101.
- Ha JM, Kim YW, Lee DH, Yun SJ, Kim EK, Hye Jin I, et al. Regulation of arterial blood pressure by Akt1-dependent vascular relaxation. *J Mol Med* 2011;89:1253-60.
- Chung AW, Au Yeung K, Cortes SF, Sandor GG, Judge DP, Dietz HC, et al. Endothelial dysfunction and compromised eNOS/Akt signaling in the thoracic aorta during the progression of Marfan syndrome. *Br J Pharmacol* 2007;150:1075-83.
- Ushio-Fukai M, Alexander RW, Akers M, Yin Q, Fujio Y, Walsh K, et al. Reactive oxygen species mediate the activation of Akt/protein kinase B by angiotensin II in vascular smooth muscle cells. *J Biol Chem* 1999;274:22699-704.
- Phillippi JA, Klyachko EA, Kenny JP 4th, Eschay MA, Gorman RC, Gleason TG. Basal and oxidative stress-induced expression of metallothionein is decreased in ascending aortic aneurysms of bicuspid aortic valve patients. *Circulation* 2009;119:2498-506.
- Boyd NL, Park H, Yi H, Boo YC, Sorescu GP, Sykes M, Jo H. Chronic shear induces caveolae formation and alters ERK and Akt responses in endothelial cells. *Am J Physiol Heart Circ Physiol* 2003;285: H1113-22.
- Balistreri CR, Pisano C, Candore G, Maresi E, Codispoti M, Ruvolo G. Focus on the unique mechanisms involved in thoracic aortic aneurysm formation in bicuspid aortic valve versus tricuspid aortic valve patients: clinical implications of a pilot study. *Eur J Cardiothorac Surg* 2013;43: e180-6.
- Jones JA, Stroud RE, Kaplan BS, Leone AM, Bavaria JE, Gorman JH 3rd, Gorman RC, et al. Differential protein kinase C isoform abundance in ascending aortic aneurysms from patients with bicuspid versus tricuspid aortic valves. *Circulation* 2007;116:1144-9.