

Endothelin antagonism in pulmonary hypertension, heart failure, and beyond

Web only refs

T Attina, R Camidge, DE Newby, DJ Webb

1. Leslie SJ, Rahman MQ, *et al.* Endothelins and their inhibition in the human skin microcirculation: ET [1–31], a new vasoconstrictor peptide. *Br J Clin Pharmacol* 2004;**57**:720–725.
2. Webb DJ, Gray GA. Vascular biology of the endothelin system. In: Webb D, Valance P, eds. Endothelial function in hypertension. Berlin: Springer-Verlag, 1997:71–90.
3. Clarke JG, Benjamin N, Larkin SW, *et al.* Endothelin is a potent long-lasting vasoconstrictor in men. *Am J Physiol* 1989;**257**:H2033–H2035.
4. Pernow J, Kaijser L, *et al.* Comparable potent coronary constrictor effects of endothelin-1 and big-endothelin-1 in humans. *Circulation* 1996;**94**:2077–82.
5. Jeng AJ, Mulder P, *et al.* Nonpeptidic endothelin-converting enzyme inhibitors and their potential therapeutic applications. *Can J Physiol Pharmacol* 2002;**80**:440–49.
6. Goddard J, Webb DJ. Endothelin antagonists and hypertension: a question of dose? *Hypertension* 2002;**40**:e1–2.
7. Spratt JC, Goddard J, *et al.* Systemic ETA receptor antagonism with BQ-123 blocks ET-1 induced forearm vasoconstriction and decreases peripheral vascular resistance in healthy men. *Br J Pharmacol* 2001;**134**:648–54.
8. Fukuroda T, Fujikawa T, Ozaki S, *et al.* Clearance of circulating endothelin-1 by ETB receptors in rats. *Biochem Biophys Res Commun* 1994;**199**:1461–65.
9. Ahn D, Ge Y, *et al.* Collecting duct-specific knockout of endothelin-1 causes hypertension and sodium retention. *J Clin Invest* 2004;**114**:504–511.
10. Gaine S. Pulmonary hypertension. *JAMA* 2000;**284**:3160–8.
11. Budhiraja R, Rubin MT, *et al.* Endothelial dysfunction in pulmonary hypertension. *Circulation* 2004;**109**:159–165.
12. Rubens C, *et al.* Big endothelin-1 and endothelin-1 plasma levels are correlated with the severity of primary pulmonary hypertension. *Chest* 2001;**120**:1562–9.
13. Sitbon O, Badesch DB, *et al.* Effects of the dual endothelin receptor antagonist bosentan in patients with primary pulmonary hypertension: a 1-year follow-up study. *Chest* 2003;**124**:247–54.
14. Barst RJ, Langleben D, *et al.* Sitaxsentan therapy for pulmonary arterial hypertension. *Am J Resp Crit Care Med* 2004;**169**:441–47.
15. Jessup M, Brozena S. Heart failure. *N Engl J Med* 2003;**348**:2007–18.
16. Wei CM, Lerman A, Rodeheffer RJ, *et al.* Endothelin in human congestive heart failure. *Circulation* 1994;**89**:1580–1586.
17. Parker JD, Thiessen JJ. Increased endothelin-1 production in patients with chronic heart failure. *Am J Physiol Heart Circ Physiol* 2004;**286**:H1141–5.
18. MacCarthy PA, Grocott-Mason R, *et al.* Contrasting inotropic effects of endogenous endothelin in the normal and failing human heart: studies with an intracoronary ETA receptor antagonist. *Circulation* 2000;**18**:142–147.
19. Cowburn PJ, Cleland JGF, McArthur JD, *et al.* Short-term haemodynamic effects of BQ-123, a selective endothelin ETA-receptor antagonist, in chronic heart failure. *Lancet* 1998;**352**:201–202.

20. Givertz MM, Colucci WS, LeJemtel TH, *et al.* Acute endothelin A receptor blockade causes selective pulmonary vasodilatation in patients with chronic heart failure. *Circulation* 2000;**101**:2922–2927.
21. Louis A, Cleland JGF, *et al.* Clinical Trial Update: CAPRICORN, COPERNICUS, MIRACLE, STAF, RITZ-2 and REINASSANCE and cachexia and cholesterol in heart failure. *Eur J of Heart Failure* 2001;**3**:381–87.
22. Nguyen QT, Cernacek P, *et al.* Long-term effects of nonselective endothelin A and B receptor antagonism in postinfarction rat: importance of timing. *Circulation* 2001;**104**:2075–81.
23. Schirger JA, Chen HH, *et al.* Endothelin A receptor antagonism in experimental congestive heart failure results in augmentation of the rennin-angiotensin system and sustained sodium retention. *Circulation* 2004;**109**:249–54.
24. Schiffrin EL. Role of endothelin-1 in hypertension and vascular disease. *Am J Hypertens* 2001;**14**:83S–89S.
25. Cardillo C, Kilcoyne CM, *et al.* Role of endothelin in the increased vascular tone of patients with essential hypertension. *Hypertension* 1999;**33**:753–8.
26. Ergul S, Parish DC, *et al.* Racial differences in plasma endothelin-1 concentrations in individuals with essential hypertension. *Hypertension* 1996;**28**:652–5.
27. Campia U, Cardillo C, *et al.* Ethnic differences in the vasoconstrictor activity of endogenous endothelin-1 in hypertensive patients. *Circulation* 2004;**109**:3191–5.
28. Nakov R, Pfarr E, *et al.* Darusentan: an effective endothelin A receptor antagonist for the treatment of hypertension. *Am J Hypertens* 2002;**15**:583–9.
29. Kowala MC, Murugesan N, *et al.* Novel dual action of an AT1 and ETA receptor antagonist reduces blood pressure in experimental hypertension. *J Pharmacol Exp Ther* 2004;**309**:275–84.
30. Kohan DE. Endothelins in the kidney: physiology and pathophysiology. *Am J Kidney Dis* 1993;**22**:493–510.
31. Kanesaka Y, Tokunaga H, *et al.* Endothelin receptor antagonist prevents parathyroid cell proliferation of low calcium diet-induced hyperparathyroidism in the rat. *Endocrinology* 2001;**142**:407–13.
32. Haak T, Jungmann E, *et al.* Increased plasma levels of endothelin in diabetic patients with hypertension. *Am J Hypertens* 1992;**5**:161–66.
33. Ihling C, Loeffler BM, *et al.* Coexpression of endothelin-converting enzyme-1 and endothelin-1 in different stages of human atherosclerosis. *Circulation* 2001;**104**:864–9.
34. Lerman A, Edwards BS, *et al.* Circulating and tissue endothelin immunoreactivity in advanced atherosclerosis. *N Engl J Med* 1991;**325**:997–1001.
35. Kowala M, Rose P, *et al.* Selective blockade of the endothelin subtype A receptor decreases early atherosclerosis in hamsters fed cholesterol. *Am J Pathol* 1995;**146**:819–26.
36. Taner CB, Severson SR, *et al.* Treatment with endothelin-receptor antagonists increases NOS activity in hypercholesterolaemia. *J Appl Physiol* 2001;**90**:816–20.
37. Barton M, Haudenschild CC, *et al.* Endothelin ETA receptor blockade restores NO-mediated endothelial dysfunction and inhibits atherosclerosis in apolipoprotein-E deficient mice. *Proc Natl Acad Sci USA* 1998;**95**:14367–372.

38. Halcox JP, Nour KR, *et al.* Coronary vasodilation and improvement in endothelial dysfunction with endothelin ET_A receptor blockade. *Circ Res* 2001;**89**:969–76.
39. Cowburn PJ, Cleland JG, *et al.* Endothelin B receptors are functionally important in mediating vasoconstriction in the systemic circulation in patients with left ventricular systolic dysfunction. *J Am Coll Cardiol* 1999;**33**:932–8.
40. Iwasa S, Fan J, *et al.* Increased immunoreactivity of endothelin-1 and endothelin B receptor in human atherosclerotic lesions. A possible role in atherogenesis. *Atherosclerosis* 1999;**146**:93–100.