

Richard A. Cohen, M.D.

Richard A. Cohen, M.D., Professor of Medicine, Physiology, and Pharmacology, is the first occupant of the Jay and Louise Coffman Professorship of Vascular Medicine at Boston University School of Medicine, having pursued interests in the pathophysiology of vascular disease since his clinical fellowship in Vascular Medicine in 1978 at the then-University Hospital, Boston. He directs the Vascular Biology Unit of the Department of Medicine, where studies on nitrotyrosine and thiol metabolism relating to the aims of the Cardiovascular Proteomics Center are carried out. Dr. Cohen obtained his undergraduate degree in chemistry from Bowdoin College, Brunswick, Maine and his medical degree from Johns Hopkins School of Medicine, Baltimore. He received Clinician Scientist and Established Investigator awards from the American Heart Association and is a member of the American Society for Clinical Investigation, the American Association of Physicians, the Executive Committee of the AHA Council on Circulation, the editorial board of *American Journal of Physiology: Heart and Circulatory*, the NIH Experimental Cardiovascular Science Study Section, and is a permanent member of the NIH/NHLBI Reviewer's Reserve.

Selected peer-reviewed publications (in chronological order), representative of over 120 original peer-reviewed research articles:

1. Cohen, R. A., Shepherd, J. T., and Vanhoutte, P. M. Inhibitory role of the endothelium in the response of isolated coronary arteries to platelets. *Science* **221**: 273-274, 1983.
2. Saenz de Tejada, I., Goldstein, I., Azadzi, K., Krane, R. J., and Cohen, R.A. Impaired neurogenic and endothelium-dependent relaxation of human penile smooth muscle: the pathophysiological basis for impotence in diabetes mellitus. *N Engl J Med* **320**: 1025-1030, 1989.
3. Tesfamariam, B., Brown, M. L., Deykin, D., and Cohen, R. A. Elevated glucose promotes generation of endothelium-derived vasoconstrictor prostanoids in rabbit aorta. *J Clin Invest* **85**: 929-932, 1990.
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5. Cohen, R.A., Plane, F., Najibi, S., Huk, I., Malinski, T., Garland, C.J. Nitric oxide is the mediator of both endothelium-dependent relaxation and hyperpolarization of the rabbit carotid artery. *Proc Natl Acad Sci* **94**: 4193-4198, 1997.
6. Wang, H.D., Pagano, P.J., Du, Y., Cayatte, A.J., Quinn, M.T., Brecher, P., Cohen, R.A. Superoxide anion from the adventitia of the rat thoracic aorta inactivates nitric oxide. *Circ Res* **82**: 810-818, 1998.
7. Cohen, R.A., Weisbrod, R.M., Gericke, M., Yaghoubi, M., Bierl, C., Bolotina, V.M. Mechanism of nitric oxide-induced vasodilatation. Refilling of intracellular stores by sarcoplasmic reticulum Ca^{2+} ATPase and inhibition of store-operated Ca^{2+} influx. *Circ Res* **84**: 210-219, 1999.
8. Eberhardt, R.T., Forgione, M.A., Cap, A., Leopold, J.A., Rudd, M.A., Trolliet, M., Heydrick, S., Stark, R., Klings, E.S., Moldovan, N.I., Yaghoubi, M., Goldschmidt-Clermont, P.J., Farber, H.W., Cohen, R.A., Loscalzo, J. Endothelial dysfunction in a murine model of mild hyperhomocyst(e)inemia. *J Clin Invest* **106**(4): 483-491, 2000.
9. Trepakova, E.S., Csutora, P., Hunton, D.L., Marchase, R.B., Cohen, R.A., Bolotina, V.M. Calcium influx factor directly activates store-operated cation channels in vascular smooth muscle cells. *J Biol Chem*, **275**(34): 26158-26163, 2000.

10. Cayatte, A., Du, Y., Oliver-Krasinski, J., Lavielle, G., Verbeuren, T., Cohen, R.A. The thromboxane receptor antagonist S18886 but not aspirin inhibits atherogenesis in Apo E-deficient mice. Evidence that eicosanoids other than thromboxane contribute to atherosclerosis. *Arterioscler Thromb Vasc Biol* 20: 1724-1728, 2000.
11. Wang, H.D., Xu, S., Johns, D., Du, Y., Quinn, M., Cayatte, A., Cohen, R. Role of NADPH oxidase in the vascular hypertrophic and oxidative stress response to angiotensin II in mice. *Circ Res* 88: 947-953, 2001.
12. Adachi, T., Matsui, R., Weisbrod, R., Najibi, S., Cohen, R. Reduced sarco/endoplasmic reticulum Ca²⁺ uptake activity can account for the reduced response to NO, but not sodium nitroprusside, in hypercholesterolemic aorta. *Circulation* 104: 1040-1045, 2001.
13. Cayatte, A., Rupin, A., Oliver-Krasinski, J., Maitland, K., Sansilvestri-Morel, P., Boussard, M., Wierzbicki, M., Verbeuren, T., Cohen, R. S17834, a new inhibitor of cell adhesion and atherosclerosis that targets NADPH oxidase. *Arterioscler Thromb Vasc Biol* 21: 1577-1584, Oct 2001.
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15. Zou, M.-H., Shi, C., Cohen, R.A. High glucose via peroxynitrite causes tyrosine nitration and inactivation of prostacyclin synthase that is associated with thromboxane/prostaglandin H₂ receptor-mediated apoptosis and adhesion molecule expression in cultured human aortic endothelial cells. *Diabetes* 51: 198-203, January 2002.
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