

**CURRICULUM VITAE**  
**Jonathan C Fox, MD, PhD, FACC**

Current Position: Vice President, Clinical Therapeutic Area,  
Cardiovascular & Gastrointestinal Diseases  
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Wilmington, DE USA 19850-5437

Education:  
1975-79 AB, Biology (Honors), University of Chicago  
1981-85 Ph.D., Pathology, University of Chicago  
1979-81; M.D. (Honors), Pritzker School of Medicine,  
1985-87 University of Chicago

Postgraduate Training and Fellowship Appointments:

1987 Postdoctoral Research Fellowship, Department of Pathology  
University of Chicago  
1987-88 Internship in Medicine, Department of Medicine  
Duke University Medical Center  
1988-90 Residency in Medicine, Department of Medicine  
Duke University Medical Center  
1990-93 Fellowship in Cardiovascular Diseases, Department of Medicine  
Duke University Medical Center

Academic Appointments:

1993-1998 Assistant Professor of Medicine  
Cardiovascular Division, Department of Medicine  
University of Pennsylvania School of Medicine  
1998- Clinical Assistant Professor of Medicine  
Cardiovascular Division, Department of Medicine  
University of Pennsylvania School of Medicine

Hospital and Administrative Appointments:

1993- Staff Cardiologist, Hospital of the University of Pennsylvania  
1993-1998 Attending Cardiologist, Philadelphia VA Medical Center  
1996-1998 Attending Cardiologist, Presbyterian Medical Center of Philadelphia  
2003- Member, Board of Trustees, Lankenau Institute for Medical Research  
2007- Industry Representative (non-voting), Cardiovascular and Renal Drugs  
Advisory Committee, United States Food and Drug Administration

Industry Positions Held:

1998-1999	Associate Director, Clinical Pharmacology SmithKline Beecham Pharmaceuticals Philadelphia, PA
1999-2000	Director, Clinical Pharmacology SmithKline Beecham Pharmaceuticals Philadelphia, PA
2000-2003	Director, Cardiovascular Clinical Research Merck Research Laboratories West Point, PA
2003-2004	Senior Director, Cardiovascular Clinical Research Merck Research Laboratories West Point, PA
2004-2007	Executive Director, Clinical Development AstraZeneca LP Wilmington, DE
2/2007-7/2007	Vice President, Clinical Development Projects Cardiovascular & Gastrointestinal Established Brands AstraZeneca lp Wilmington, DE
7/2007-	Vice President, Clinical Therapeutic Area Cardiovascular & Gastrointestinal Diseases AstraZeneca lp Wilmington, DE

Medical Specialty Certifications:

1990	Internal Medicine, American Board of Internal Medicine
1993; 2003	Cardiovascular Diseases, American Board of Internal Medicine

Medical Licensure:

1989	North Carolina
1993	Pennsylvania

Awards, Honors, and Membership in Honorary Societies:

1986	Alpha Omega Alpha Medical Honor Society
1987	Sigma Xi Scientific Research Society
1992	Young Investigator's Award, Molecular and Cellular Cardiology American College of Cardiology
1995	Fellow, American College of Cardiology

## Bibliography

### Research Publications, peer reviewed

1. Fox, JC, McGill, HC, Jr., Carey, KD and Getz, GS (1987). *In vivo* regulation of LDL-receptor mRNA in the baboon: differential effects of saturated and unsaturated fat. *J. Biol. Chem.* 262:7014-7020.
2. Fox, JC, and Hay, RV (1992). Eicosapentaenoic acid inhibits triglyceride secretion and cell growth in McA-RH7777 cultured rat hepatoma cells. *Biochemical J.* 286:305-312.
3. Fox, JC, and Swain, JL (1993). Auto and transactivation of FGF expression: potential mechanism for regulation of myogenic differentiation. *In Vitro* 29A:228-230.
4. Fox, JC, Hsu, AY, and Swain, JL (1994). Myogenic differentiation triggered by antisense RNA to acidic FGF. *Mol. Cell. Biol.* 14:4244-4250.
5. Fox, JC, and Shanley, JR (1996). Antisense inhibition of basic fibroblast growth factor induces apoptosis in vascular smooth muscle cells. *J. Biol. Chem.* 271:12578-12584.
6. Kato, S, Shanley, JR, and Fox, JC (1996). Serum stimulation, cell-cell interactions, and extracellular matrix independently influence smooth muscle cell phenotype *in vitro*. *Am. J. Pathol.* 149:687-697.
7. Hanna, AK, Fox, JC, Neschis, DG, Safford, SD, Swain, JL, and Golden, MA (1997). Antisense basic FGF gene transfer reduces neointimal thickening after arterial injury. *J. Vasc. Surg.* 25:320-325.
8. Neschis, DG, Safford, SD, Hanna, AK, Fox, JC, and Golden, MA (1997). Antisense basic FGF gene transfer reduces intimal thickening in a rabbit femoral artery balloon injury model. *J. Vasc. Surg.* 27:126-134.
9. Kato, S, Muraishi, A, Miyamoto, T, and Fox, JC (1998). Basic fibroblast growth factor regulates extracellular matrix and contractile protein expression independent of proliferation in vascular smooth muscle cells *In Vitro* 34:341-346.
10. Coughlin, CM, Salhany, KE, Wysocka, M, Aruga, E, Kurzawa, H, Chang, AE, Hunter, CA, Fox, JC, Trinchieri, G, and Lee, WMF (1998). Interleukin-12 and interleukin-18 synergistically induce murine tumor regression which involves inhibition of angiogenesis. *J Clin Invest* 101:1441-1452.
11. Miyamoto, T, Leconte, I, Swain, JL, and Fox, JC (1998). Autocrine FGF signaling is required for vascular smooth muscle cell survival *in vitro*. *J Cell Physiol* 177:58-67.
12. Leconte, I, Baldwin, HS, Fox, JC, Buck, CA, and Swain, JL (1998). Antisense inhibition of FGF expression arrests development in cultured mouse embryos. *Develop. Dynamics* 213: 421-430.
13. Miyamoto, T and Fox, JC (2000). Autocrine signaling through Ras prevents apoptosis in vascular smooth muscle cells *in vitro*. *J Biol Chem* 275:2825-2830.
14. Hanna AK, Duran WN, Leconte I, Fox JC, Neschis DG, Hobson RW, Golden MA (2000). Adenoviral-mediated expression of antisense RNA to basic fibroblast growth factor reduces tangential stress in arterialized vein grafts. *J Vascular Surg* 31(4):770-780.
15. Kato, S, Yasukawa, H, Fujii, T, Yamaguchi, M, Miyagi, N, Okamoto, K, Wada, Y, Miyamoto, T, Morimatsu, M, and Fox, JC (2000). Coordinate regulation of Matrix Metalloproteinase-1 and Tissue Inhibitor of Metalloproteinase-1 expression in human vascular smooth muscle cells. *Connective Tissue Res* 41:143-153.

Research Publications, peer reviewed (cont)

16. Williams, WV, Fullerton, T, Fox, JC, Enslin, MB, Murray, L, and Jorkasky, D (2000). Asystole following endotoxin administration. *J Endotoxin Res* 6(4):303-306.
17. Blake, GJ, Dada, N, Fox, JC, Manson, JE, and Ridker, PM (2001). A prospective evaluation of lipoprotein-associated phospholipase A2 levels and the risk of future cardiovascular events in women. *J Am Coll Cardiol* 238:1302– 6.
18. Meitinger, D, Hunt, DM, Shih, DT, Fox, JC, and Hunt, RC (2001). Vitreous-induced Modulation of integrins in retinal pigment epithelial cells: effects of fibroblast growth factor-2. *Exp Eye Res* 73 (5): 681-692.
19. Aoki, T, Kato, S, Fox, JC, Okamoto, K, Sakata, T, Shigemori, S, and Morimatsu, M (2002). Inhibition of autocrine fibroblast growth factor signaling by the adenovirus-mediated expression of an antisense transgene or a dominant negative receptor in human glioma cells in vitro. *Int J Oncology* 21(3): 629-636.
20. Dickstein, K, Kjeksus, J, and the OPTIMAAL Steering Committee, for the OPTIMAAL Study Group (2002). Effects of losartan and captopril on mortality and morbidity in high-risk patients after acute myocardial infarction: the OPTIMAAL randomised trial. *Lancet* 360(9335):752-760.
21. Sakata, K, Kato, S, Fox, JC, Shigemori, M, Morimatsu, M (2002). Autocrine signaling through Ras regulates cell survival activity in human glioma cells: potential cross-talk between Ras and the phosphatidylinositol 3-kinase-Akt pathway. *J Neuropathol Exp Neurol* 61(11):975-83
22. Schuster, H and Fox, JC (2004). Investigating cardiovascular risk reduction – the Rosuvastatin GALAXY Programme. *Expert Opin Pharmacother* 5(5):1187-1200.
23. Fox, JC, Leight, K, Sutradhar, SC, Demopoulos, LA, Gleim, GW, Lewin, AJ, Bakris, GL (2004). The JNC 7 approach compared to conventional treatment in diabetic patients with hypertension: a double-blind trial of initial monotherapy vs. combination therapy. *J Clin Hypertension* 6(8):437-42.
24. McAfee, AT, Ming, EE, Seeger, JD, Quinn, SG, Ng, EW, Danielson, JD, Cutone, JA, Fox, JC, and Walker, AM (2006). The comparative safety of rosuvastatin: a retrospective matched cohort study in over 48 000 initiators of statin therapy. *Pharmacoepidemiol. Drug Safety* 15(7):444-453.
25. Saito, Y, Yamada, N, Shirai, K, Sasaki, J, Ebihara, Y, Yanase, T, and Fox, JC (2007). Effect of rosuvastatin 5–20 mg on triglycerides and other lipid parameters in Japanese patients with hypertriglyceridemia. *Atherosclerosis* 194(2): 505-511.

Abstracts

1. Fox, JC, Reardon, CA, Tsai, YC, Hay, RV, Aggarwal, LK and Getz, GS (1981). In vitro translation of monkey plasma apolipoprotein precursors. *Federation Proc.* 40:329 [abstract]. Presented at the 44th Annual FASEB Meeting, Atlanta, Georgia, April 1981.
2. Fox, JC, Carey, KD, McGill, HC and Getz, GS (1984). Hepatic apolipoprotein A-I mRNA levels in baboons fed polyunsaturated fat or saturated fat. *Circulation* 70(Supp):II-8 [abstract]. Presented at the 57th Annual Scientific Sessions, AHA, Miami, Florida, November 1984.
3. Fox, JC, McGill, HC and Getz, GS (1985). Dietary regulation of apolipoprotein A-I in baboons. *Circulation* 72(Supp):III-119 [abstract]. Presented at the 58th Annual Scientific Sessions, AHA, Washington, D.C., November 1985.
4. Kato, S, Shanley, J, Swain, J, and Fox, JC (1995) Autocrine FGF regulates collagen production by vascular smooth muscle cells. Presented at the Seventh Restenosis Summit, Cleveland OH, April 1995.
5. Kato, S, Swain, JL, and Fox, JC (1995). Smooth muscle cell collagen synthesis is independently coupled to proliferation and cell density. *J Invest Med* 43(Supp2):309A. Presented at the Clinical Research Meeting, San Diego, CA, May 1995.
6. Fox, JC and Shanley, JR. Apoptosis in vascular smooth muscle cells: inhibition of autocrine FGF signaling disrupts cell cycle regulation. Presented at the Keystone Symposium: "Molecular Biology of the Cardiovascular System", January, 1996.
7. Leconte, I, Fox, JC, Baldwin, HS, Buck, CA, and Swain, JL. Adenoviral mediated expression of antisense FGF RNA during murine development disrupts embryogenesis and vasculogenesis. *Circulation* 94(SuppI):I-11 [abstract]. Presented at the 69th Annual Scientific Sessions, AHA, New Orleans, LA, November 1996.
8. Bernard, DW, Scata, KA, Fox, JC, and Swain, JL. Regulation of skeletal myogenesis by a secreted fibroblast growth factor receptor. *Circulation* 94(SuppI):I-355 [abstract]. Presented at the 69th Annual Scientific Sessions, AHA, New Orleans, LA, November 1996.
9. Raju, GP, Woo, YJ, Fox, JC, and Swain, JL. TGF-beta type I receptor signaling inhibits both proliferation and differentiation of skeletal myocytes. *Circulation* 94(SuppI):I-355 [abstract]. Presented at the 69th Annual Scientific Sessions, AHA, New Orleans, LA, November 1996.
10. Hanna, AK, Fox, JC, Swain, JL, Neschis, DG, Safford, SD, and Golden, MA. Antisense basic FGF (bFGF) gene transfer reduces intimal thickening. *Circulation* 94(SuppI):I-705 [abstract]. Presented at the 69th Annual Scientific Sessions, AHA, New Orleans, LA, November 1996.
11. Miyamoto, T, Leconte, I, Swain, JL, and Fox, JC. FGF receptor signaling is required for vascular smooth muscle cell survival *in vitro*. *J Invest Med* 45:274A. Presented at the Clinical Research Meeting, Washington, DC, April 1997.
12. Miyamoto, T, Leconte, I, Swain, JL, and Fox, JC. Interruption of autocrine FGF signaling triggers vascular smooth muscle cell apoptosis: analysis of MAP kinase activation. *Circulation* 96(8):I-115[abstract]. Presented at the 70th Annual Scientific Sessions, AHA, Orlando, FL, November 1997.

Abstracts (cont):

13. Miyamoto, T, and Fox, JC. Autocrine signaling via p21 Ras regulates apoptosis in vascular smooth muscle cells. *Circulation* 98(15): [abstract]. Presented at the 71st Annual Scientific Sessions, AHA, Dallas, TX, November 1998.
14. Miyamoto, T, and Fox, JC. Ras regulates apoptosis through both MAPK and PI-3-K/akt in vascular smooth muscle cells. *Circulation* 98(15): [abstract]. Presented at the 71st Annual Scientific Sessions, AHA, Dallas, TX, November 1998.
15. Anand, V, Chen, W, Miyamoto, T, Levy, RJ, and Fox, JC. Dominant negative receptor inhibition of FGF signaling provokes cardiomyocyte apoptosis in vivo. *Circulation* 98(15): [abstract]. Presented 71st Annual Scientific Sessions, AHA, Dallas, TX, November 1998.

Editorials, Reviews, Chapters

1. Fox, JC and Swain, JL. "Gene Therapy of Cardiovascular Disease", in *Cardiovascular Therapeutics*, Smith, T., Ed., WB Saunders, Philadelphia, 1996, pp. 663-678.
2. Fox, JC. "Cardiovascular Gene Therapy: Current Concepts" (1996). *Therapeutic Drug Monitoring* 18:410-422.
3. Fox, JC and Swain, JL. "Angiogenic Gene Therapy: A Leg to Stand On?" [editorial] (1996). *Circulation* 94:3065-3066.
4. Fox, JC. "Clinical Applications of Gene Therapy: Cardiovascular Disease", in *Stem Cell Biology*, Quesenberry, PJ, Stein, GS, Forget, B, and Weissman, S, Eds., John Wiley & Sons, NY, 1998, pp. 471-502.
5. Fox, JC. "Cardiovascular Gene Therapy: Principles and Clinical Applications", in *Stable Coronary Artery Syndromes: Pathology, Diagnosis and Treatment*, Wilensky, R. Ed. Kluwer Academic Publishers, Boston, 1998, pp. 315-341.
6. Fox, JC. "Cardiovascular Gene Therapy", in *New Advances in Vascular Biology and Cardiovascular Medicine*, Schwinn, DA, Ed., Williams & Wilkins, Baltimore (in press).
7. Fox, J and Patel, V. "Apoptosis and the Cardiovascular System" (1998). *ACC Current Journal Review* 7(2):13-15.
8. Olsson, GO and Fox, JC (2004). Rosuvastatin-Warfarin Drug Interaction (Correspondance). *Lancet* 363:897.
9. Olsson, GO and Fox, JC (2004). Should rosuvastatin be withdrawn from the market? (Correspondance). *Lancet* 364:1579-1580.

Books

- Fox, JC Dietary regulation of apolipoprotein A-I biosynthesis in nonhuman primates. Ph.D. thesis. University of Chicago (1985).