

**BIOGRAPHICAL SKETCH**

Provide the following information for the key personnel in the order listed for Form Page 2.  
Follow the sample format for each person. **DO NOT EXCEED FOUR PAGES.**

NAME Zarins, Christopher K, MD		POSITION TITLE Chidester Professor of Surgery, Chief of Vascular Surgery, Stanford University	
EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)			
INSTITUTION AND LOCATION	DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY
Lehigh University, Bethlehem, PA	BA	1964	
Johns Hopkins Univ., School of Med, Baltimore, MD	MD	1968	Medicine
University of Michigan Hospital, Ann Arbor, MI		1968-69	Surgical Internship
University of Michigan Hospital, Ann Arbor, MI		1969-73	General Surg. Residency
Johns Hopkins Hospital, Baltimore, MD		1971-72	Surgical Research Fellow
University of Michigan Hospital, Ann Arbor, MI		1973-74	Chief Resident in Surgery

**A. Positions and Honors.**

1974-1976 Research Director, Trauma Research Unit, Naval Regional Medical Center, San Diego, CA  
 1976-1993 Chief of Vascular Surgery, University of Chicago Hospitals, Chicago, IL  
 1976-1979 Assistant Professor of Surgery, The University of Chicago,  
 1979-1982: Associate Professor of Surgery, The University of Chicago,  
 1982 - 1993 Professor of Surgery, The University of Chicago,  
 1983-1996 Editor, Journal of Surgical Research  
 1995-1997 Acting Chairman, Department of Surgery, Stanford University,  
 1993- Chidester Professorship in Surgery, Stanford University, Stanford, CA  
 1993- Chief, Division of Vascular Surgery, Stanford Univ Medical Center, Stanford, CA

**B. Selected peer-reviewed publications (in chronological order).**

(Selected from more than 250 peer-reviewed publications)

1. **C.K. Zarins**, S. Glagov, D. Vesselinovitch and R. W. Wissler. Aneurysm formation in experimental atherosclerosis: Relationship to plaque evolution. *J Vasc Surg* 12(3):246-256, 1990.
2. **C.K. Zarins**, C-P. Xu and S. Glagov. Aneurysmal enlargement of the aorta during regression of experimental atherosclerosis. *J Vasc Surg*, 15:90-101, 1992.
3. **C.K. Zarins** and C.A. Taylor. Hemodynamic Factors in Atherosclerosis. In *Vascular Surgery / A Comprehensive Review*. Ed. W.S. Moore; W.B. Saunders Company, Philadelphia, PA, pp. 97-110, 1996.
4. C.A. Taylor, T.J.R. Hughes and **C.K. Zarins**. Finite element modeling of blood flow in arteries. *Comput Methods Appl Mech Engr* 158:155-196, 1998.
5. C.A. Taylor, T.J.R. Hughes and **C.K. Zarins**. Finite element modeling of three-dimensional pulsatile flow in the abdominal aorta: Relevance to atherosclerosis. *Ann Biomed Eng* 26:975-987, 1998.
6. Taylor CA, Hughes TJ, **Zarins CK**. Effect of exercise on hemodynamic conditions in the abdominal aorta. *J Vasc Surg* 1999 Jun;29(6):1077-1089.
7. C.A. Taylor, M.T. Draney, J.P. Ku, D. Parker, B.N. Steele, K. Wang and **C.K. Zarins**. Predictive medicine: Computational techniques in therapeutic decision-making. *Comp Aid Surg* 4:231-247, 1999.
8. Xu, **C.K. Zarins**, H.S. Bassiouny, W.H. Briggs, C. Reardon and S. Glagov. Differential transmural distribution of gene expression for collagen types I and III proximal to aortic coarctation in the rabbit. *J Vasc Res* 37:170-182, 2000.
9. B.I. Tropea, S.P. Schwarzacher, A. Chang, C. Asvar, P. Huie, R.K. Sibley and C.K. Zarins. Reduction of aortic wall motion inhibits hypertension-mediated experimental atherosclerosis. *Arterioscler, Thromb Vasc Biol* 20:2127-2133, 2000.

10. Xu, **C.K. Zarins**, P.S. Pannaraj, H. S. Bassiouny and S. Glagov. Hypercholesterolemia superimposed by experimental hypertension induces differential distribution of collagen and elastin. *Arterioscler Thromb And Vasc Biol* 20:2566-2572, 2000.
11. C. Xu, **C.K. Zarins** and S. Glagov. Aneurysmal and occlusive atherosclerosis of the human abdominal aorta. *J Vasc Surg* 33:91-96, 2001.
12. **Zarins CK**, Xu C, Glagov S. Atherosclerotic enlargement of the human abdominal aorta. *Atherosclerosis*. 2001 Mar;155(1):157-164.
13. Xu C, Lee S, Singh TM, Sho E, Li X, Sho M, Masuda H, **Zarins CK**. Molecular mechanisms of aortic wall remodeling in response to hypertension. *J Vasc Surg*. 2001 Mar;33(3):570-578.
14. Sho E, Sho M, Singh TM, Xu C, **Zarins CK**, Masuda H. Blood flow decrease induces apoptosis of endothelial cells in previously dilated arteries resulting from chronic high blood flow. *Arterioscler Thromb Vasc Biol*. 2001 Jul;21(7):1139-45.
15. Xu C, **Zarins CK**, Glagov S. Gene expression of tropoelastin is enhanced in the aorta proximal to the coarctation in rabbits. *Exp Mol Pathol*. 2002 Apr;72(2):115-23.
16. Sho M, Sho E, Singh TM, Komatsu M, Sugita A, Xu C, Nanjo H, **Zarins CK**, Masuda H. Subnormal shear stress-induced intimal thickening requires medial smooth muscle cell proliferation and migration. *Exp Mol Pathol*. 2002 Apr;72(2):150-60.
17. Xu C, Lee S, Shu C, Masuda H, **Zarins CK**. Expression of TGF- $\beta$ 1 and  $\beta$ 3 but not apoptosis factors relates to flow-induced aortic enlargement. *BMC Cardiovasc Disord*. 2002 Jul 31;2(1):11.
18. Xu C, **Zarins CK**, Glagov S. Biphasic response of tropoelastin at the poststenotic dilation segment of the rabbit aorta. *J Vasc Surg*. 2002 Sep;36(3):605-612.
19. Sho E, Sho M, Singh TM, Nanjo H, Komatsu M, Xu C, Masuda H, **Zarins CK**. Arterial enlargement in response to high flow requires early expression of matrix metalloproteinases to degrade extracellular matrix. *Exp Mol Pathol*. 2002 Oct;73(2):142-153.
20. Ku JP, Draney MT, Arko FR, Lee WA, Chan FP, Pelc NJ, Zarins CK, Taylor CA. In vivo validation of numerical prediction of blood flow in arterial bypass grafts. *Ann Biomed Eng*. 2002 Jun;30(6):743-52.
21. Draney MT, Herfkens RJ, Hughes TJ, Pelc NJ, Wedding KL, **Zarins CK**, Taylor CA. Quantification of vessel wall cyclic strain using cine phase contrast magnetic resonance imaging. *Ann Biomed Eng*. 2002 Sep;30(8):1033-45.
22. Arko FR, Hill BB, Olcott C, Harris EJ, Fogarty TJ, **Zarins CK**. Endovascular repair reduces early and late morbidity compared to open surgery for abdominal aortic aneurysm. *J Endovasc Ther*. 2002 Nov-Dec;9(6):711-8.
23. Filis KA, Arko FR, Rubin GD, Raman B, Fogarty TJ, **Zarins CK**. Aortoiliac angulation and the need for secondary procedures to secure stent graft fixation: which angle is important? *Int Angiol*. 2002 Dec;21(4):349-54.
24. Bassiouny HS, **Zarins CK**, Lee DC, Skelly CL, Fortunato JE, Glagov S. Diurnal heart rate reactivity: a predictor of severity of experimental coronary and carotid atherosclerosis. *J Cardiovasc Risk*. 2002 Dec;9(6):331-8.
25. Arko FR, Filis KA, Siedel SA, Johnson BL, Drake AR, Fogarty TJ, **Zarins CK**. Intrasac flow velocities predict sealing of type II endoleaks after endovascular abdominal aortic aneurysm repair. *J Vasc Surg*. 2003 Jan;37(1):8-15.
26. Filis KA, Arko FR, Rubin GD, **Zarins CK**. Three-dimensional CT evaluation for endovascular abdominal aortic aneurysm repair. Quantitative assessment of the infrarenal aortic neck. *Acta Chir Belg*. 2003 Feb;103(1):81-6.
27. **Zarins CK**. The US AneuRx Clinical Trial: 6-year clinical update 2002. *J Vasc Surg*. 2003 Apr;37(4):904-8.
28. Arko FR, Hill BB, Reeves TR, Olcott C, Harris EJ, Fogarty TJ, **Zarins CK**. Early and late functional outcome assessments following endovascular and open aneurysm repair. *J Endovasc Ther*. 2003 Jan-Feb;10(1):2-9.
29. Arko FR, Filis KA, Hill BB, Fogarty TJ, **Zarins CK**. Morphologic changes and outcome following endovascular abdominal aortic aneurysm repair as a function of aneurysm size. *Arch Surg*. 2003 Jun;138(6):651-6.
30. Sho E, Komatsu M, Sho M, Nanjo H, Singh TM, Xu C, Masuda H, **Zarins CK**. High flow drives vascular endothelial cell proliferation during flow-induced arterial remodeling associated with the expression of vascular endothelial growth factor. *Exp Mol Pathol* 2003 Aug 75(1) 1–11.

31. Martinez BD, **Zarins CK**, Daunt DA, Coleman LA, Saenz Y, Fogarty TJ, Hermann GD, Nezhat CR, Olsen EK. A porcine model for endolaparoscopic abdominal aortic repair and endoscopic training. *JSLs*. 2003 Apr-Jun;7(2):129-36. [[abs](#), [pdf\(-\)](#)]
32. Arko FR, Cipriano P, Lee E, Filis KA, **Zarins CK**, Fogarty TJ. Treatment of axillosubclavian vein thrombosis: a novel technique for rapid removal of clot using low-dose thrombolysis. *J Endovasc Ther*. 2003 Jul-Aug;10(4):733-8. [[abs](#), [pdf](#)]
33. Johnson BL, Arko FR, Wolf Y, Harris EJ, **Zarins CK**: Update: Quantitative Duplex Ultrasound Assessment of Aortic Aneurysms After Endovascular Repair. *JVU* 27(3):165-170, 2003. [[abs](#), [pdf](#)]
34. **Zarins CK**, Bloch DA, Crabtree T, Matsumoto AH, White RA, Fogarty TJ. Stent graft migration after endovascular aneurysm repair: Importance of proximal fixation. *J Vasc Surg*. 2003 Dec;38(6):1264-72. [[abs](#), [pdf](#)]
35. CARESS Steering Committee. Carotid revascularization using endarterectomy or stenting systems (CARESS): phase I clinical trial. *J Endovasc Ther*. 2003 Dec;10(6):1021-30. [[abs](#), [pdf](#)]
36. **Zarins CK**, Bloch DA, Crabtree T, Matsumoto AH, White RA, Fogarty TJ. Aneurysm enlargement following endovascular aneurysm repair: AneuRx clinical trial. *J Vasc Surg*. 2004 Jan;39(1):109-17. [[abs](#), [pdf](#)]
37. Arko FR, Lee WA, Hill BB, Fogarty TJ, **Zarins CK**. Hypogastric artery bypass to preserve pelvic circulation: Improved outcome after endovascular abdominal aortic aneurysm repair. *J Vasc Surg*. 2004 Feb;39(2):404-8. [[abs](#), [pdf](#)]
38. Arko FR, Filis KA, Seidel SA, Gonzalez J, Lengle SJ, Webb R, Rhee J, **Zarins CK**. How many patients with infrarenal aneurysms are candidates for endovascular repair? The northern California experience. *J Endovasc Ther*. 2004 Jan-Feb;11(1):33-40. [[abs](#), [pdf](#)]
39. Sarac TP, Hilleman D, Arko FR, **Zarins CK**, and Ouriel K. Clinical and economic evaluation of the trellis thrombectomy device for arterial occlusions: preliminary analysis. *J Vasc Surg*. 2004 Mar;39(3): 556-559. [[abs](#), [pdf](#)]
40. Sho E, Nanjo H, Sho M, Kobayashi M, Komatsu M, Kawamura K, Xu C, **Zarins CK**, and Masuda H. Arterial enlargement, tortuosity, and intimal thickening in response to sequential exposure to high and low wall shear stress. *J Vasc Surg*. 2004 Mar;39(3):601-612. [[abs](#), [pdf](#)]
41. Chang DW, Schubart PJ, Veith FJ, **Zarins CK**. A new approach to carotid angioplasty and stenting with transcervical occlusion and protective shunting: Why it may be a better carotid artery intervention. *J Vasc Surg*. 2004 May;39(5):994-1002. [[abs](#), [pdf](#)]
42. Arko FR, Lee E, **Zarins CK**, Fogarty TJ. Controlled localized thrombolysis with the "turbo" trellis to treat acute arterial occlusions following major surgery. *J Endovasc Ther*. 2004 May-Jun;11(3):339-43. [[abs](#), [pdf](#)]
43. Arko FR, Filis KA, Heikkinen MA, Johnson BL, **Zarins CK**. Duplex scanning after endovascular aneurysm repair: An alternative to computed tomography. *Semin Vasc Surg*. 2004 Jun;17(2):161-5. [[abs](#), [pdf](#)]
44. **Zarins CK**. The new gold standard? The AneuRx clinical trial at 8 years - Lessons learned following the US AneuRx clinical trial from 1996 to 2004. *Supplement to Endovascular Today* July 2004:7-11. [[abs](#), [pdf](#)]
45. Lee ES, **Zarins CK**. Endograft migration: Incidence, causes, and clinical significance. *Perspectives in Vascular Surgery and Endovascular Therapy*. 2004 July 16(3): . [[abs](#), [pdf](#)]
46. **Zarins CK**, Arko FR, Crabtree T, Bloch DA, Ouriel K, Allen RC, White RA. Explant analysis of AneuRx stent grafts: relationship between structural findings and clinical outcome. *J Vasc Surg*. 2004 Jul;40(1):1-11. [[abs](#), [pdf](#)]
47. Draney MT, Arko FR, Alley MT, Markl M, Herfkens RJ, Pelc NJ, **Zarins CK**, Taylor CA. Quantification of vessel wall motion and cyclic strain using cine phase contrast MRI: In vivo validation in the porcine aorta. *Magn Reson Med* 2004 Aug;52(2):286-295. [[abs](#), [pdf](#)]

48. **Zarins CK**. Stent-graft migration: How do we know when we have it and what is its significance? *J Endovasc Ther*. 2004 Jul-Aug;11(4):364-5. [[abs](#), [pdf](#)]
49. **Zarins CK**, Heikkinen MA, Lee ES, Alsac JM, Arko FR. Short- and long-term outcome following endovascular aneurysm repair. How does it compare to open surgery? *J Cardiovasc Surg (Torino)*. 2004 Aug;45(4):321-33. [[abs](#), [pdf](#)]
50. **Zarins CK**, Bloch DA. Letter to Editor: Misperceptions regarding the long term safety of the AneuRx stent graft. *J Vasc Surg*. 2004 Sep;40(3):594-595. [[pdf](#)]
51. Heikkinen MA, Arko FR, **Zarins CK**. What is the significance of endoleaks and endotension. *Surg Clin North Am*. 2004 Oct;84(5):1337-52. [[abs](#), [pdf](#)]