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DAVID NELSON KU

Resume

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EDUCATIONAL BACKGROUND

Degree	Year	University	Field
M.D.	1984	Emory University School of Medicine	Medicine
Ph.D.	1983	Georgia Institute of Technology	Biofluid Dynamics
M.S. in A.E.	1982	Georgia Institute of Technology	Aerospace Engineering
B.A., magna cum laude	1978	Harvard University	Engineering and Applied Sciences

PROFESSIONAL EXPERIENCE

Title	Organization	Years
Lawrence P. Huang Chair Professor	Georgia Institute of Technology	1999-present
Regents' Professor of Mechanical Engineering	Georgia Institute of Technology	1998-present
CEO and President	SaluMedica, LLC	1998-present
Professor of Surgery	Emory University	1997-present
Chief Technology Officer	SaluSpine, Inc.	2005-present
Chairman of Board	Medizeus	2000-2003
Director	Vascular Laboratory, Emory Clinic	1986-1995
Consultant	Piedmont Hospital	1987-1995
Professor of Mechanical Engineering	Georgia Institute of Technology	1995-1998
Woodruff Faculty Fellow	Georgia Institute of Technology	1991-1996
Fellow, Cardiovascular Pathology	University of Chicago	1985-86
Director, Vascular Laboratory	Hyde Park Community Hospital	1985-86
Fulbright Gastprofessor	Munich, Germany	1985

PUBLISHED BOOKS AND PARTS OF BOOKS

1. Giddens, D.P., Zarins, C.K., Glagov, S., Bharadvaj, B.K., Ku, D.N., "Flow and atherogenesis in the human carotid bifurcation," in Fluid Dynamics as a Localizing Factor for Atherogenesis, (D. Schettler, et al., eds.) Berlin: Springer-Verlag pp. 38-45, 1983.

2. Giddens, D.P., Bharadvaj, B.K., Ku, D.N., "Cerebral and peripheral hemodynamics, " in Cardiovascular Ultrasonic Flowmetry, eds. S.A., Altobelli, W.F. Voyles, E.R. Greene, Elsevier, New York, pp. 125-147, 1985.

3. Ku, D.N., Zarins, C.K., Giddens, D.P., Glagov, S., "Separated and secondary flow and early atherosclerosis in the human carotid bifurcation," in Role of Blood Flow in Atherogenesis, (Y. Yoshida, et al, eds.) Tokyo, Springer-Verlag, pp. 73-80, 1988.

4. Glagov, S., Zarins, C.K., Giddens, D.P., Ku, D.N. "Hemodynamic determinants of the breaking train, configuration, composition and complication of human atherosclerotic plaques," in Role of Blood Flow in Atherogenesis, pp. 3-10, 1988.

5. Giddens, D.P., Zarins, C.K., Ku, D.N., Glagov, S., "The utility of correlations between made flow studies and vessel pathology in describing atherosclerosis," in Role of Blood Flow in Atherogenesis, pp. 63-66, 1988.

6. Zarins, C.K., Glagov, S., Giddens, D.P., Ku, D.N. "Hemodynamic factors and atherosclerotic change in the aorta," in Aortic Surgery: New Diagnostic and Operative Techniques, (J.J. Bergan and J.S.T. Yao Eds.) Chicago: W.B. Saunders Co. pp. 17-26, l988.

7. Glagov, S., Bassiouny, H., Masawa, N., Ku, D.N., Vito, R.P. Giddens, D.P., Zarins, C.K. "Hemodynamic and structural determinants of human plaque stability," in Atherosclerosis VIII, (G. Crepaldi et al, eds) Amsterdam, Elsevier Science Publ pp. 411-415, l989.

8. Glagov, S., Zarins, C.K., Giddens, D.P., Ku, D.N., "Mechanical factors in the pathogenesis, localization and evolution of atherosclerotic plaques" in Diseases of the Arterial Wall, (Springer-Verlag, N.Y.), pp. 2l7-239, l989.

9. Ku, D.N., Zeigler M., Stewart, M., "A study of predicted and experimental wall collapse in models of highly stenotic arteries." in 2nd International Symposium on Biofluid Mechanics,(D. Liepsch, ed) Munich, Karger Scientific Publ., pp. 409-416, l989.

10. Poiseau, E., Yoganathan, A., Ku, D.N., Dixon, T., "Magnetic resonance imaging of cardiac blood flow: An in vitro study." in 2nd International Symposium on Biofluid Mechanics, (D. Liepsch, ed) Munich, Karger Scientific Publ., pp. 241-248, l989.

11. Ku, D.N., Peifer, J., Biancheri, C., Pettigrew, R.I., Engels, H. "Potential Value of Magnetic Resonance Angiography in Patients with Vascular Disease", in Current Critical Problems in Vascular Surgery (F.J. Veith, ed), Vol. II, pp. 36-4l, l990.

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19. Bergman, H., Chesler, N., Ku, D.N., Wootton, D. "Hemodynamics and Atherosclerosis" in Cerebrovascular Ultrasound, (Hennerici, M.C., ed.), Cambridge University Press.

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1. Churchill, F.C., Ku, D.N., Miles, J.W., "Gas-liquid chromatographic inlet block derivation of organophosphorus pesticides and related dialkyl phosphothiolates," Journal of Agriculture and Food Chemistry, vol. 26, no. 5, pp. 1108-1112, 1978.

2. Churchill, F.C., Ku, D.N., "Extractive alkylation of 5.2'-dicholoro-4' nitrosalicylanilide (Niclosamide) for gas-liquid chromatographic analysis," Journal of Chromatography, vol. 189, pp. 375-388, 1980.

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151. Mavromatis, K., Tate, M., Chesler, N., Ku, D.N., Galis, Z.S., “Effects of Arterial Hemodynamic Conditions on Early Remodeling in Ex-Vivo Perfused Human Saphenous Vein”, Workshop on Tissue Engineering, Gene Delivery, and Regenerative Healing, Hilton Head, SC, February 17-21, 1999.

152. Han, H-C., Ku, D.N., “Hypertensive Arterial Wall Remodeling”, Workshop on Tissue Engineering, Gene Delivery, and Regenerative Healing, Hilton Head, SC, February 17-21, 1999.

153. Ku, D.N., “Development of Tissue Engineered Vascular Grafts”, Euromech Coll 389, Graz, Austria, April 20-24, 1999.

154. Covert, RJ, Ku, DN. Wear Testing of Articular Cartilage and Articular Cartilage Substitutes,” Educational partners Symposium. Atlanta, GA, October, 1999.

155. Chin-Quee, Shawn, Han, H-C., Ku, D. N., Bench-Top Validation Tests for Tissue-Engineered Arteries”, 2000 ASME I.M.E.C.E, Orlando, FL, Nov. 5-10, 2000, p59-60.

156. Han, H-C., Vito, R.P., Michael, K., Ku, D.N., “Axial Stretch Increases Cell Proliferation in Arteries in Organ Culture”, 2000 ASME I.M.E.C.E, Orlando, FL, Nov. 5-10, 2000, p 63-64.

157. Ku, David N., “Design and Evaluation of Tissue Engineered Arteries”, 2000 ASME I.M.E.C.E, Orlando, FL, Nov. 5-10, 2000, p 73.

158. Covert, RJ, Ku , DN. “Pin-on-Flat Friction and Wear Tests of a Potential Articular Cartilage Substitute, Educational Partners Symposium. Atlanta, GA, September, 2000.

159. Tang, Dalin, Yang, Chun, Kobayashi, Shunichi, Ku, David, “Generalized Finite Difference Method for 3-D Viscous Flow in Stenotic Tubes with Large Wall Deformation and Collapse,” Applied Numerical Mathematics 38 (2001): 49-68.

160. Tang, Dalin, Yang, Chun, Walker, Homer, Kobayashi, Shunichi, Ku, David N., “A 3-D Model with Fluid-Structure Interactions for Unsteady Blood Flow in Stenotic Arteries with Cyclic Wall Collapse,” First MIT Conference on Computational Fluid and Solid Mechanics, pp 1388-1392, 2001.

161. Covert, RJ, Ku, DN. Friction and Wear Testing of a New Biomaterial for use as an Articular Cartilage Substitute,” ASME Summer Bioengineering Conference, Snowbird, UT, June 27-July 1, 2001.

162. Covert, RJ, Ku, DN “Standardized Compression, Shear, and Wear Test Development for Potential Articular Cartilage Replacements,” Educational Partners Symposium. Atlanta, GA. October, 2001.

163. Covert, RJ, Ku, DN. “Tribological Testing of a New Biomaterial for use as an Articular Cartilage Substitute,” presented at Smith + Nephew, Orthopaedic Division, Memphis, TN, May 22, 2001.

164. Covert, Rebeccah and Ku, David, "Dynamic Compression Test for Articular Cartilage Replacements", International Workshop on Tissue Engineering, St. Gallen, Switzerland, February 2002.

165. Covert, RJ, Ku, DN. “ Development of Standardized Mechanical Tests for Articular Cartilage Biomaterials,” Society for Biomaterials, 28th Annual Meeting, Tampa, Fl, April 24-27, 2002

166. Covert, RJ, Ott, RD, Ku, DN. “Friction Characteristics of a Potential Articular Cartilage Biomaterial,” 14th International Conference on Wear of Materials, Washington, D.C., March 30-April 3, 2003.

167. Ku DN and McIntosh C, Design of a Novel Tissue Engineered Vascular Graft, Special Issue on Medical Device Design, ASME J Biomech Engng *(submitted).*

168. Kobayashi S, Fukazawa Y, Ayama Y, Morikawa H, Tang D, Ku DN, Pulsatile Flow and Deformation in Curved Stenosis Models of Arterial Disease, ASME IMECE2004 59649, 2004.

169. Rachev A, ElShazly, Ku DN, Constituitive Formulation of the Mechanical Properties of Synthetic hydrogels, ASME IMECE2004 59795, 2004.

170. Ku DN, Biomedical Engineering Entrepreneurship: Multidisciplinary Teaching at Georgia Tech, *invited talk*, 2005 Summer Bioengineering Conference, 2005.

171. Flannery C, Ku DN, Thrombosis in Stenoses under High Shear, 2005 Summer Bioengineering Conference, 2005.

172. Rachev A, Felden L, Ku DN, Design and Fabrication of Mechanics Matching Arterial Grafts, 2005 Summer Bioengineering Conference, 2005.

173. Kobayashi S, Fukazawa Y, Ayama Y, Morikawa H, Tang D, Ku DN, Pulsatile Flow and Deformation in Curved Stenosis Models of Arterial Disease Influence of Cyclic Change of Curvature on Flow and Deformation -, 2005 Summer Bioengineering Conference, 2005.

174. Brown RB, Ku DN, Durability Testing of Articular Cartilage Replacements, 2005 Summer Bioengineering Conference, 2005.

175. Denoziere G. and Ku DN, Biomechanical Comparison between Normal and Artificial Intervertebral Disc, 2005 Summer Bioengineering Conference, 2005.

176. Kobayashi S, Ayama Y, Morikawa H, Tang D, Ku DN. Flow and Deformation in Initially Curved Stenosis Model of Arterial Disease, 5th World Congress of Biomechanics, July 2006

177. Rachev A, Gleason R, Ku DN. A 1-D phenomenological model for soft tissue damage and repair, 5th World Congress of Biomechanics, July 2006

178. Sarabia X, Ku DN. An elastic meniscal replacement, 5th World Congress of Biomechanics, July 2006

179. Flannery C, Para A, Ku DN. Shear Dependant Platelet Accumulation in Hemodynamic Stenoses, 5th World Congress of Biomechanics, July 2006\

180. Sathe R, Ku DN. Design of a novel prosthetic vein valve. 2006 ASME Summer Bioengineering Conference, Amelia Island, GA, June 23, 2006.

181. Para A, Ku DN. An in-vitro model of thrombosis using highly stenotic tubing. 2006 ASME Summer Bioengineering Conference, Amelia Island, GA, June 23, 2006.

CONFERENCE PRESENTATIONS WITHOUT PROCEEDINGS

1. Ku, D.N., "The mechanical properties of eye tissue," 1st Place Student Paper, presented at the 31st ACEMB, October 1978, Atlanta.

2. Giddens, D.P., Zarins, D.K., Mabon, R.F., Ku, D.N., Sottiurai, V., Glagov, S., "Acute and chronic flow disturbances due to aortic coarctations in monkeys," Vascular Research Forum, Dallas, 1981.

3. Ku, D.N., Beere, P.A., Zarins, C.K., Giddens, D.P., Glagov, S., "Role of the pulsatile fluid shear in the localization of atherosclerotic plaques," 10th Annual Hugh Lofland Conference, Boston, 1985.

4. Zarins, D.K., Giddens, D.P., Zatina, M.A., Ku, D.N., Glagov, S., "Effect of increased arterial flow on plaque formation," 10th Annual Hugh Lofland Conference, Boston, 1985.

5. Ku, D.N., Giddens, D.P., Glagov, S., Zarins, C.K., "Flow field and artery wall alterations produced by stenosis," 11th Annual Hugh Lofland Conference, Albany, 1986.

6. Ku, D.N., "Specific hemodynamic variables in atherosclerotic plaque," Chicago Vascular Research Seminar, Chicago, 1986.

7. Ku, D.N., Pettigrew, R.I., "MRI Angiography," Emory Vascular Surgery and Radiology Conference, Atlanta, 1987.

8. Ku, D.N., "Arteriosclerosis - A macroscopic view," Emory Vascular Biology Club, Atlanta, 1989.

9. Ku, D.N., Binns, R.L., "Systolic and diastolic wall collapse from high grade stenoses." American Heart Association, Keystone, Co., 1989.

10. Ku , D.N. "MRI Angiography." Emory Vascular Society. November, 1989.

11. Ku, D.N., "Why does atherosclerosis affect only specific arteries?" Massachusetts Institute of Technology, Cambridge, Massachusetts, 1990.

12. Ku, D.N., "Why does atherosclerosis affect only specific arteries?" Emory Surgical Grand Rounds, Atlanta, 1990.

13. Ku, D.N., "Oscillatory shear stress and atherosclerosis." Seminar, Laboratoire de GÈnie MÈdical - EPFL, Swiss Federal Institute, Lausanne, 1991.

14. Ku D.N., "Hemodynamics and Atherosclerosis." Emory Surgical Grand Rounds, Atlanta, Ga. 1992.

15. Ku, D.N., "Non-invasive diagnosis of carotid and aortic disease." Society of Vascular Technologists, Atlanta, Ga., 1992.

16. Ku, D.N., "Hemodynamics and Atherosclerosis." Kawasaki Medical School, Kurashiki, Japan, 1992.

17. Ku, D.N., "Hemodynamics and Atherosclerosis." Hokkaido University, Sapporo, Japan, 1992.

18. Ku, D.N., "Flow in collapsible stenosis." Laboratoire de Genie Medical - EPFL, Swiss Federal Institute, Lausanne, Switzerland 1992.

19. Ku, D.N., "Hemodynamics and atherosclerosis." Atlanta Vascular Society, 1993.

20. Ku, D.N., "Hemodynamics and atherosclerosis." Emory Vascular Nursing Symposium, 1993.

21. Ku, D.N., "Hemodynamics and atherosclerosis." Emory Medical School Sophomore Course, 1994.

22. Ku, D.N., “The Final Stroke”. Emory Grand Rounds. Dept. of Surgery, 1996.

23. Ku, D.N., “Vascular Graft Design,” Advanced Tissue Sciences, Inc., 1997

24. Ku, D.N., “Hemodynamics and Atherosclerosis”, Sulzer Innotec, 1997.

25. Ku, D.N., “The Role of hemodynamics in cardiovascular disease”. Emory MD/PhD Graduate Student Retreat, Emory Conference Center, July 24, 1998.

26. Ku, D.N., “The Mechanics Behind Heart Attacks”. Harvard University, December 9, 1998

27. Ku, D.N., Han, H-C., “Assessment of Function in Tissue Engineered Vascular Grafts,” Functional Tissue Engineering Workshop, Sept 14-17, 2000, Tampa, FL

28. Ku, David N., "Biomedical Market Issues in Japan," The 7th Annual Georgia Tech Global Forum, March 14, 2001, Atlanta, GA

29. Ku, D.N., "Sudden Cardiac Death," NSF workshop on Biofluid Dynamics, and Mass Transport. May , 2004, Bethesda, MD.

30. Ku, D.N., "Engineering Entrepreneurship, the Texas A&M seminar on Technology Commercialization, Dec 7, 2004, College Station, TX.

31. Ku, D.N. "The Business Plan," Georgia Entrepreneurship Society, February 15, 2005, Atlanta, GA

32. Ku, D.N. "Plaque Cap Rupture and Hemodynamics", Brown University Division of Engineering, Providence RI, February, 2005.

33. Ku, D.N. "Medical Devices for the Future - Soft Tissue Replacements", Distinguished Visiting Professor, Emory Surgical Grand Rounds, Atlanta GA, February 16, 2006.

34. Ku, D.N. "Medical Devices for the Future - Soft Tissue Replacements", Bio-Interest Group Seminar Series, University of Illinois, Champagne, IL 12 April, 2006.

PATENTS

Powers, JJ., Kam, C., Oweida, S.W., and Ku, D.N., "Isocoumarins with basis substituents as serine protease inhibitors, anticoagulants, and anti-inflammatory agents," Patent No. 4,954,519, issued September 4, 1990.

Siegel, J.M., Jr., Ku, D.N., Oshinski, J.N., Pettigrew, R.I., "Flow-induced artifact elimination in magnetic resonance images," U.S. Patent No. 5,438,992, issued August 8, 1995.

Siegel, J.M, Jr., Ku, D.N., "Flow differentiation scheme for magnetic resonance angiography," U.S. Patent No. 5,521.502, issued May 28, 1996.

Mowrey-McKee, M., Andino, R.V., Ku, D.N., Mulhauser, P.J., Schiff, D.R., "Apparatus and method for treating articles in solution with effervescent tablets," Patent No. 97810191.3-2313, issued May 28, 1997.

Ku, D.N., Wootton, D.M., Greer-Braddon, L., "Poly(vinyl Alcohol) Cryogel," No. 5,981,826, issued November 9, 1999.

Bergman, H.L., Ku, D.N., "System and Method for Analyzing a Medical Image," issued U.S. Patent No. 6,377,832, April 23, 2002.

Ku, D.N., "Poly(vinyl alcohol) hydrogel," U.S. Patent No. 6,231,605, issued May 15, 2001.

PATENT DISCLOSURES

A Novel Technique for the Measurement of Platelet Aggregation and Mass, with William D. Hunt, 1997.

Knowledge-Based Magnetic Resonance Angiography, with Harris Bergman, 1997.

Venous Valve, with Rahul Sathe, 2005

PROFESSIONAL ACTIVITIES

Sigma Xi
American Society of Mechanical Engineers
ASME, Bioengineering Division, Fluid Mechanics Committee
Council on Arteriosclerosis, American Heart Association
American Medical Association
Georgia Medical Association
American Society of Engineering Education
Fellow, American College of Angiology
Member, NIH Study Section - Surgery and Bioengineering, (1991-94)
Special Reviewer, NIH: 1990, 1995
Associate Editor, Journal of Vascular Investigation, (1994-2000)
Associate Editor, Journal of Biomechanical Engineering, (1995-2000)
Reviewer, Whitaker Foundation (1996-Present)
Reviewer, NIH Study Section (2000- Present)
Advisor to Program Project on Mechanotransduction (Roger Kamm, MIT)

REVIEWER

Journal of Vascular Surgery, Journal of Surgical Research, Arteriosclerosis, Atherosclerosis, Biorheology, Circulation Research, Journal of Biomechanics, Journal of Biomechanical Engineering, Annals of Biomedical Engineering, Journal of Heat and Fluids, International Journal of Heat and Mass Transfer, Journal of Fluid Mechanics, Biorheology, J Fluids Engineering, Lemmelson Foundation

SEMINAR PARTICIPATION

Hemodynamics & Atherosclerosis: Emory University (January 1984); University of Washington (February 1984); University of Chicago (March 1984); Georgia Institute of Technology (March 1986); University of Houston (April 1986); Georgia Institute of Technology (May 1989); Emory University (June 1989).

SPECIAL ACTIVITIES

Atlanta Symphony Orchestra Chorus, l989-l990. Four compact disc recordings.
Founder, SaluMedica
Founder, Medizeus

HONORS AND AWARDS

Harvard Book Award, 1974
Harvard University Scholarships, 1974-78
Magna cum laude in Engineering and Applied Sciences (Harvard, 1978)
First place in student paper competition of the Alliance of Engineers in Medicine, 1978
Joseph Barrett Award, Harvard University, 1978
NIH Medical Scientist Traineeship, 1978-82
Who's Who Among Students in American Universities and Colleges, 1983
Best Engineering Dissertation, Sigma Xi, 1984
Fulbright Gastprofessor, Munich, Germany, 1985
President's Award, Southern Association of Vascular Surgery, 1986
NSF Presidential Young Investigator Award, 1987
Young Engineer of the Year, 1989 - Engineers of Greater Atlanta
American Heart Association Young Investigator Award, 1989
Y.C. Fung Young Investigator Award - Bioengineering Division, ASME, 1989
Distinguished Professor Award, School of Mechanical Engng., Georgia Institute of Technology, 1994
Georgia Tech Outstanding Doctoral Thesis Advisor, 1995
ASME Gustus Larson Memorial Award, 1996
Fellow, American Institute for Medical & Biological Engineering, 1998
Faculty Member of the Year, Student Government Association Award, 1999
Board of Directors, Horizon Medical Products, Inc. (AMEX) (2003-4)
Chairman, Board of Managers, SaluMedica (1998-Pres)
Board of Directors, SaluSpine, Inc. (2005-Pres)

GRANTS

Funded

1. NSF Presidential Young Investigator Award, National Science Foundation, P.I. David N. Ku, $312,500 (9/1/87-12/31/92).
2. "Human Atherosclerosis: Role of Pulsatile Flow", National Institutes of Health, P.I. David N. Ku, $516,000 (8/1/87-7/31/92).
3. "Magnetic Resonance Imaging of Blood Flow", Whitaker Foundation, P.I. David N. Ku, $180,000 (5/1/89-4/30/92).
4. "The Role of Wall Shear Stress in the Development of Neointima and Pseudointima in Tapered PTFE Grafts," Georgia Heart Association, P. I. David N. Ku, $33,000 (7/1/90-6/30/91).
5. "Wall Oscillation and Collapse in Stenotic Arteries", Georgia Heart Association, P.I. David N. Ku, $18,073 (8/1/88-7/31/89).
6. "Embolization of Atherosclerotic Plaque from Collapse of the Arterial Wall", Emory University Research, $9,500 (9/1/88-8/1/89).
7. DuPont Young Faculty Grant, E.I DuPont de Nemours & Co., Inc., P.I. David N. Ku, $12,500 (9/1/86-8/30/88).
8. "Optimal Vascular Graft Size", National Institute of Health, Georgia Tech Biomedical Research Support Grant Committee, P.I. David N. Ku, $5,000 (6/1/87-3/31/88).
9. "Oropharyngeal Swallowing", Calvin and Marisa Allen Fund, P.I. David N. Ku, $6,300 (8/1/87-7/31/88).
10. "Summer Student Award", Georgia Heart Association, $5,500 (7/1/91-9/8/91).
11. "Research Experiences for Undergraduates", National Science Foundation, $4,000 (6/90-6/91).
12. "Research Experiences for Undergraduates", National Science Foundation, $8,000 (6/87-6/88).
13. "Synthetic Antithrombotic Agents", National Institutes of Health, P.I. James C. Powers, Co-Investigator, David N. Ku, $871,782 (7/1/91- /30/95).
14. "Natural History of Neointimal Hyperplasia in Human AV Grafts", Emory/Georgia Tech Biomedical Technology Research Center, P.I. David N. Ku, $25,300 (7/1/91-6/30/92).
15. "Intimal Hyperplasia from Reduction of Mean Flow Role in the Canine", American Heart Association, P.I. David N. Ku, $66,000 (7/1/92-6/30/94).
16. "Interactive 3-D MR Imaging, Angiography, and Verification of Hemodynamics in Congenital Cardiovascular Disease", Emory/Georgia Tech Biomedical Technology Research Center, P.I. David N. Ku, $50,000, (7/1/92-6/30-93).
17. "Research Experiences for Undergraduates", National Science Foundation, $10,000 (2/93-12/93).
18. "Flow in Collapsible Stenosis", Systems Research Laboratories, $36,000 (2/93-1/94).
19. "Studies on Thrombosis", Emory Medical School, P.I. David N. Ku, $70,000 (7/93-7/95).
20. "Ultrasound Studies of AV Grafts", L. Neely, MD, Fund, P.I. David N. Ku,$5,000 (1/93-1/95).
21. "Can Pre-exposure of Platelets to Shear Forces Affect Thrombus Formation at Sites of Multiple Arterial Stenoses?", Emory/Georgia Tech, P.I. David N. Ku, $15,000 (7/94-6/95).
22. "Arterial Spasm", Medical College of Georgia/Georgia Tech, P.I. David N. Ku, $15,000 (7/94-6/95).
23. "Role of Hemodynamic Mass Transfer in Atherogenesis," National Heart, Lung, and Blood Institute, P.I. David N. Ku, $678,314 (6/1/95-5/31/98).
24. "Laboratory Research on Catheters," Interventional Innovations, Inc., P.I. David N. Ku, $30,000 (12/93-12/94).
25. "Research Support on Vascular Grafts," Advanced Tissue Sciences, Inc., Co-I. David N. Ku, $16,000 (12/94-6/95).
26. "Creation of Predictive Database for Time of Peak of Contrast Enhancement Fast Body Computed Tomography," Medical College of Georgia/Georgia Tech, Co P.I. David N. Ku, $15,000 (7/95-6/96).
27. "Thrombosis in tissue engineered grafts," Advanced Tissue Sciences, Inc., P.I. David N. Ku, $45,000 (12/95-6/98).

28. "Design and testing of an arterial culture system," Institute for Bioengineering and Biosciences, Co-P.I. David N. Ku, $6,000 (12/95-6/96).
29. "Arterial Adaptation to Flow: An Ex Vivo Paradigm", National Institutes of Health, Co-PI David N. Ku, $60,000 (7/1/96-6/30/98).
30. "Simultaneous measurement of angiogenesis and VEGF concentration in an abdominal wall wound in the living pig". Medical College of Georgia, Co-PI. David N. Ku, $15,000 (7/96-6/97).
31. "Blood Flow in Carotid Arteries with Stenosis", National Science Foundation, PI David N. Ku, $75,000 (9/1/96-8/31/99).
32. "Commercialization of a Novel Vascular Graft". Advanced Technology Development Center, P.I. David N. Ku, $50,000 (7/1/97-6/30/98).
33. "Hemodynamic Effects on Gene Transfer". Emory/Georgia Tech, Co-P.I. David N. Ku, $29,000 (7/1/97-6/30/98).
34. "Determination of Blood-Brain Barrier Permeability Using Magnetic Resonance Imaging". Georgia Tech/Medical College of Georgia Seed Grant, Co-P.I. David N. Ku, $15,000 (9/1/97-6/30/98).
35. "Computational and Experimental Studies of Blood Flow in Collapsible Carotid Arteries with Stenoses", Worcester Polytechnic Institute, $72,111 (9/1/95-8/30/98), (Subcontract GT) PI David N. Ku.
36. "Commercialization of a New Biomaterial", Georgia Tech Research Foundation, PI David N. Ku, $30,000, (9/1/97 - 6/30/98).
37. "Biomedical Engineering Special Opportunity Award", Whitaker Foundation, Co-PI David N. Ku, $1,000,000. (2/1/98-2/1/01).
38. "Hemodynamic Effects on Gene Transfer Efficiency", Emory/Georgia Tech, Co-PI David N. Ku, $30,000 (7/1/98 - 6/30/99).
39. "Engineering of Living Tissues", Engineering Research Center, National Science Foundation, Deputy Director, David N. Ku, $12,500,000 (9/1/98-8/30/03).
40. "The Medical Device Development Program at the Georgia Institute of Technology," The Lemelson Foundation, $39,800 (1/1/05-6/30/06).
41. "Novel Vascular Grafts", French Embassy, $5000 (6/05-12/05).
42. "Development of an Implantable Artificial Kidney", Mason Foundation, Co-PI, David N. Ku, $450,000 (1/1/07-12/31/09).
43. "Pre-clinical Development of a Prosthetic Vein Valve", Johnson & Johnson Healthcare Innovation Award, $75,000 (submitted).