

Biographical Sketch

Provide the following information for the key personnel in the order listed for Form Page 2.
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NAME Fred Jeff Clubb, Jr.		POSITION TITLE Professor, Veterinary Pathobiology, College of Veterinary Medicine and Biomedical Sciences, Texas A&M University	
EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)			
INTITUTION AND LOCATION	DEGREE	YEAR(s)	FIELD OF STUDY
Auburn University, Auburn, AL	D.V.M.	1971	Veterinary Science
University of Alabama in Birmingham, Birmingham, AL	M.S.	1979	Experimental Pathology
University of Alabama in Birmingham, Birmingham, AL	Ph.D.	1982	Experimental Pathology

NOTE: The Biographical Sketch may not exceed four pages. Items A and B may not exceed two of the four-page limit.

A. Positions and Honors. List in chronological order previous positions, concluding with your present position. List any honors. Include present membership on any Federal Government public advisory committee.

PROFESSIONAL/ACADEMIC APPOINTMENTS:

1976-77	Instructor, Department of Pathology, School of Veterinary Medicine, Auburn University, Auburn, Alabama
1977-80	Postdoctoral Research fellow in Cardiovascular Pathology, Department of Pathology, University of Alabama in Birmingham, Birmingham, Alabama
1980-82	NSRA Postdoctoral Support (Individual Fellowship Award), Department of Pathology, University of Alabama in Birmingham, Birmingham, Alabama
1982-89	Assistant Professor, Department of Pathology and Division of Comparative Medicine Center, Dallas, Texas
1992-present	Director, Department of Electron Microscopy, St. Luke's Episcopal Hospital, Houston, Texas
1990-1996	Director, Experimental Cardiovascular Pathology
1996-present	Director, Cardiovascular Pathology Research, Texas Heart Institute, Houston, Texas
2005	Professor, Veterinary Pathobiology, College of Veterinary Medicine and Biomedical Sciences, Texas A&M University

SOCIETIES AND ORGANIZATIONS:

American Assoc. for Laboratory Animal Science
 American Assoc. for the Advancement of Science
 American Association of Pathologists
 American College of Lab Animal Medicine
 American Heart Association
 American Society of Lab Animal Practitioners
 American Veterinary Medical Association
 C. L. Davis Foundation
 Houston Society of Clinical Pathologist
 International Society for Heart Research
 Microscopy Society of America
 Scientists Center for Animal Welfare
 Sigma Xi Research Society
 Society for Cardiovascular Pathology
 Texas Society for Electron Microscopy
 Texas Veterinary Medical Association
 U. S. and Canadian Academy of Pathology

B. Selected (>180) peer-reviewed publications (in reverse chronological order). Do not include publications submitted or in preparation.

1. Clubb, FJ Jr. and Bishop, SP. 1984. Formation of binucleated myocardial cells in the neonatal rat: An index for growth hypertrophy. *Lab Invest* 50:571-7.
2. Oparil, S, Bishop, SP, and Clubb, FJ Jr. 1984. Myocardial cell hypertrophy or hyperplasia *Hypertension* 6 (suppl III):38-43.
3. Clubb, FJ Jr, Penney, DB, Baylerian, MS and Bishop, SP. 1986. Cardomegaly due to myocyte hyperplasia in perinatal rats exposed to 200 ppm carbon monoxide. *J Mol Cell Cardiol* 18:477-86.
4. Lubin MS, Tibor N, Miller CW, Wringley, R and ClulD FJ Jr. 1986. Chronic Antithrombic Biomaterial Screen. *PACE* 9:1154-9.
5. Clubb, FJ Jr, Bell, PD, Kriseman, JD and Bishop, SP. 1987. Myocardial cell growth and blood pressure development in neonatal spontaneously hypertensive rats. *Lab Invest* 56:189-97.
6. Eberhart RC, Munro, MS, Frautschi, JR, Lubin, M, and Clulbb, FJ Jr. 1978. Influence of endogenous albumin binding on blood material interactions. *Ann NY Acad Sci* 516:78-95.
7. Redfern, JS, Blair, AJ, III, Clubb, FJ Jr, Lee, E, Feldnan, M. 1987. Gastroduodenal ulceration following active immunization with prostaglandin E₂ in dogs. Role of gastric acid secretion. *Prostaglandins* 34:623-32.
8. Wines, PA, Schmitz, JM, Pfister, SL, Clubb, FJ Jr., Buja, LM, Willerson, JT, and Campbell, WB. 1989. Augmented vasoconstrictor responses to serotonin precede the development of atherosclerosis in the aorta of the WHHL rabbit. *Arteriosclerosis* 9:195-202.
9. Pfister, SL, Rosolowsky, M, Schmitz, JM, Clulbb, FJ Jr, Campbell, WB. 1989. Eicosapenmoic acid alters vascular reactivity and platelet adhesion in Watanabe Heritable Hyperlipidemic rabbits. *Eur J Pham* 161:85-9.
10. Clubb, FJ Jr., Schmitz, JM, Butler, MM, Buja, LM, Willerson, JT and Campbell, WB. 1989. The effects of omega-3 fatty acids on atherogenesis in an animal model of homozygous familial hypercholesterolemia. *Arteriosclerosis* 9:529-37.
11. Penney, DG, Clubb, FJ Jr., Allen, RC, Hull, JA, Karlinski, PC, Banerjee, S, Gargulinski, RB, and Jen, C. 1989. Persistent early heart changes do alter the cardiac response to exercise training in adulthood. *J Appl Cardiol* 4:223-37.
12. Clubb, FJ Jr., Penney, DG, and Bishop SP. 1989. Effects of 500 ppm carbon monoxide exposure on neonatal heart development. *J Mol Cell Cardiol* 21:945-55.
13. Butler, MM and Clubb, FJ Jr. 1989. Diagnostic Exercise: Vascular disease in a New Zealand White rabbit. *Lab An Sci* 39:607-9.
14. Feldman, SA, Richardson, JA, and Clubb, FJ Jr. 1990. Necrotizing viral bronchopneumonia in a guinea pig colony. *Lab An Sci* 40:82-83.
15. Butler, MM, Griffey, SM, Clubb FJ Jr., Gerrity, LW, and CampbeII, WB. 1990. Effect of euthanasia technique on vascular arachidonic acid metabolism and vascular and intestinal smooth muscle contraction in rabbits and rats. *Lab An Sci* 40:277-83.
16. Buja, LM, Clubb, FJ Jr., Bilheimer, DW, and Willerson, JT. 1990. Pathology of human familial hypercholesterolemia and a related animal model, the Watanabe heritable hyperlipidemic rabbit. *Euro Heart J* 11:41-52.
17. Baldwin, RT, Kadipasaoglu, KA, Radovanceic, B, Gordon, LL, Furusho, N, Matsuwaka, R., Conger, JL, Parris, SM, Hare, WD, Clubb, FJ Jr., Frazier, OH and Slogoff, S. 1991. The development of a clinically relevant canine model of postperfusion syndrome. *ASAIO Tram* 37:484-5.
18. Boluyt, MO, Penney, DG, Clubb, FJ Jr, and White, TP. 1991. Exposure of neonatal rats to CO alters cardiac adaptation to aortic constriction. *J Applied Physiol* 70:2697-702.
19. Rosdowsky, M, Pfister, SL, Buja, LM, Clubb, FJ Jr, and Campbell, WB. 1991. Method of removal of aortic endothelium affects arachidonic acid metabolism and vascular reactivity. *Eur J Pharmacol* 193:293-300.
20. Reedy, LA and Clubb, FJ Jr. 1991. Microwave burn in a toy poodle: A case report *J Am Anim Hosp Assoc* 27:497-500.

21. Kadipasaoglu, K, Rastegar, S, Sartori, M, Watson, LE, Clubb, FJ Jr., Conger, JL, Hare, WD, Edelen, B, Moore, MS, and Frazier, OH. 1992. In vitro ablation of fresh human aorta under saline and blood with the Holmium: YAG Laser. *Lasers Life Sci* 5:95-112.
22. Rosdowsky M, Pfister, SL, Buja, LM, Clubb, FJ Jr. and Campbell, WB. 1991. Method of removal of endothelium affects synthesis of lipoxygenase metabolites in rabbit aorta. *Eur J Pharmacol*, 193:293-300.
23. Kadipasaoglu, KA, Rastegar, S, Sartori, M, Watson, LE, Clubb, FJ Jr., Conger, JL, Hare, WD, Edelen, B, Moore, MS, and Frazier, OH. 1992. In vitro ablation of fresh human aorta under saline and blood with the Holmium: YAG Laser. *Lasers Life Sci* 5:95-112.
24. Capek, P, Kadipasaoglu, KA, Radovancevic, B, Furusho, N, Clubb, FJ Jr., et al. 1992. Human intraperitoneal response to a left ventricular assist device with a Ti-6Al-4V alloy surface. *ASA OJ J*. 38:543-549.
25. Kadipasaoglu, KA, Benrink, GW, Conger, JL, Birovljev, S, Sartori, M, Clubb, FJ Jr. 1993. An ex-vivo model for the reperfusion of explanted human hearts. *Tex Heart Inst J*, 20:33-39.
26. Yao, SK, Ober, JC, Gonenne, A, Clubb, FJ Jr., et al. 1993. Active oxygen species play a role in mediating platelet aggregation and cyclic flow variations in severely stenosed and endothelium-injured coronary arteries. *Circ Res* 73:952-967.
27. Peralta-Venturina, MN, Clubb, FJ Jr., Kielhofner, MA. 1994. Pulmonary malacoplakia associated with *Rhodococcus equi* infection in a patient with acquired immunodeficiency syndrome. *Am J Clin Pathol* 102(4):459-463.
28. Lapeyre, DM, Frazier, OH, Conger, JL, Macris, MP, Perrier, P, Reul, H, Rolland, B, Clubb, FJ Jr., Parris, SM, Fuqua, JM, Cooley, DA. 1994. In vivo evaluation of a trileaflet mechanical heart valve. *ASAIO Journal* 40:M707-M713.
29. Grifka, RG, Mullins, CE, Gianturco, C, Nihill, MR, O'Laughlin, MP, Slack, MC, Clubb, FJ Jr., Myers TJ. 1995. New Gianturco-Grifka vascular occlusion device. Initial studies in a canine model. *Circulation* 91(6):1840-6.
30. Zoldhelyi, P, McNeil, J, Xu, X-M, Loose-Mitchell, D, Meidell, RS, Clubb, FJ Jr., Buja, LM, Willerson, JT, Wu, KK. 1996. Prevention of arterial thrombosis by adenovirus-mediated transfer of cyclooxygenase gene. *Circulation* 93: 10-17.
31. Ballantyne, CM, Masri, BM, Clubb, FJ Jr., Radovancevic, B, Smith, CW, Hawkjns, HK, Frazier, OH, Willerson, JT. 1996. Increased expression of ICAM-1 in a case of accelerated coronary artery disease after heart transplantation. *Tex Heart Inst J* 23:293-5.
32. Kadipasaoglu KA, Pehlvanoglu S, Conger JL, Sascki E, de Vilalobos DH, Cloy M, Piluko V, Clubb FJ Jr, Cooley DA, Frazier OH. 1997. Long- and short-term effects of transmyocardial laser revascularization in acute myocardial ischemia. *Lasers Surg Med* 20:6-14.
33. Bozkurt B, Kribbs SB, Clubb FJ Jr, Michael LH, Didenko W, Hornsby PJ, Seta Y, Oral H, Spinale FG, Mann DL. 1998 Apr 14. Pathophysiologically relevant concentrations of tumor necrosis factor-alpha promote progressive left ventricular dysfunction and remodeling in rats. *Circulation*. 97(14):1382-91.
34. Scott-Burden T, Toock CL, Bosely JP, Clubb FJ Jr, Parnis SM, Schwarz JJ, Engler DA, Frazier OH, Casscells SW 3rd. 1998 Nov 10. Nonthrombogenic, adhesive cellular lining for left ventricular assist devices. *Circulation*. 98(19 Suppl):11339-45.
35. Kadipasaoglu KA, Sartori M, Masai T, Cihan HB, Clubb FJ Jr, Conger JL, Frazier OH. 1999 Feb. Intraoperative arrhythmias and tissue damage during transmyocardial laser revascularization. *Ann Thorac Surg*; 67(2):423-31.
36. McGhie AI, Radovancevic B, Capek P, Moore WH, Kasi L, Lamki L, Clubb FJ Jr, Frazier OH, Willerson JT 1997. Major histocompatibility complex class II antigen expression in rejecting cardiac allografts: detection using in vivo imaging with radiolabeled monoclonal antibody. *Circulation* 96: 1605-11.
37. Kipshidze N, Ferguson JJ, Macris MP, Clubb FJ Jr, Cloy M, Horn J, Sperl F, Sahota H, Keelan MH Jr, and Nikolaychik V. 1998 Apr 10. Percutaneous application of fibrin sealant to achieve hemostasis following arterial catheterization. *J Invasive Cardiol*. (3):133-141.

38. Tock CL, Bosley JP, Parnis SM, Clubb FJ Jr, Macris MP, Frazier OH, Scott-Burden T. 1999 May-June. A genetically engineered, nonthrombogenic cellular lining for LVADs: in vitro preconditioning before in vivo implantation. *ASAIO J* 45(3):172-7.
39. Clubb FJ Jr., Clapper DL, Deferrari DA. Hu SP, Seare WJ, Capek PP, Armstrong J, McGee MG, Bilings LA, Fuqua JM, Jr. Parris SM. 1999 July-August. Surface Texturing and Coating of Biomaterial Implants: Effects on Tissue Integration and Fibrosis. *ASAIO J.* 45(4):281-7.
40. Li X, Moody MR, Engel D, Walker S, Clubb FJ Jr, Sivasubramanian N, Mann DL, Reid MB. 2000 October 3. Cardiac-specific overexpression of tumor necrosis factor-alpha causes oxidativestress and contractile dysfunction in mouse diaphragm. *Circulation.*102(14):1690-6.
41. Scott-Burden T, Bosley JP, Clubb FJ Jr, Parnis SM, Macris MP, Frazier OH, Engler DA, Schwarz JJ, Casscells SM, Tock CL. 1999. Smooth muscle cells expressing nitric oxide synflase provide an adherent non-thrombogenic lining for the Heartmate left ventricular assistance. *ASAIO J* 45:172-177.
42. Zoldhelyi P, Beck PJ, Bjercke RJ, Ober JC, Hu X, McNatt JM, Akhtar S, Ahmed M, Clubb FJ Jr, Chen ZQ, Dixon RA, Yeh ET, Willerson JT 2000 December. Inhibition of coronary thrombosis and local inflammation by a noncarbohydratelectin inhibitor. *Am J Physiol Heart Circ Physiol.* 279(6):H3065-75.
43. Clubb FJ Jr, Butler MM, Willerson JT, and Buja LM. 2001. Surface distribution of leukocytes and foam cells in young Watanabe Heritable Hyperlipidemic (WHHL) rabbit aortas. *Cardiovascular Pathology* 9: 1-11.
44. Connelly J, Clubb FJ Jr, Vaughn W, Duncan M. 2001. Morphologic changes in atrial appendages removed during the maze procedure: a comparison with autopsy controls. *Cardiovascular Pathology* 10: 39-42.
45. LeMaire SA, Schmittling ZC, Coselli JS, Undar A, Deady BA, Clubb FJ, Koksoy C, Fraser CD, Jr. 2002. Bovine albumin-glutaraldehyde surgical adhesive impairs aortic growth and causes anastomotic stricture. *Annals of Thoracic Surgery* 73:1500-6.
46. LeMaire SA, Schmittling ZC, Undar A, Coselli JS, Koksoy C, Deady BA, Clubb FJ, Fraser CD. 2001. BioGlue causes acute phrenic nerve injury and diaphragmatic paralysis. *Journal of Surgical Research.*
47. Undar A, Eichstaedt HC, Clubb FJ, Fung M, Lu M, Bigley JE, Vaughn WK, Fraser CD, Jr. 2002. Novel anti-factor D monoclonal antibody inhibits complement and leukocyte activation in a baboon model of cardiopulmonary bypass. *Annals of Thoracic Surgery.*
48. LeMaire SA. Schmittling ZC, Coselli JS, Undar A, Deady BA, Clubb FJ, Koksoy C, Fraser CD Jr. 2001. Bovine albumin-glutaraldehyde surgical adhesive (BioGlue) impairs aortic growth and causes anastomotic stricture. *Proceedings of the 37th Annual Meeting of the Society of Thoracic Surgeons* 37: 78-9.
49. LeMaire SA, Schmittling ZC, Undar A, Caselli JS, Deady BA, Koksoy C, Clubb FJ, Fraser CD Jr. 2001. Bovine albumin-glutaraldehyde surgical adhesive impairs growth and causes strictures at aortic anastomoses in neonatal piglets. *Cardiology in the Young* 11 (supplement 1):135.
50. LeMaire SA, Schmittling ZC, Undar A, Coselli JS, Deady BA, Koksoy C, Clubb FJ, Fraser CD, Jr. 2001. Bovine albumin-glutaraldehyde surgical adhesive causes acute phrenic nerve injury and paralysis of the diaphragm in young pigs. *Cardiology in the Young* 11 (supplement 1):135.
51. LeMaire SA, Schmittling ZC, Undar A, Coselli JS, Deady BA, Koksoy C, Clubb FJ, Fraser CD, Jr. 2001. Topical bovine-albumin-glutaraldehyde surgical adhesive causes sinoatrial node degeneration and persistent bradycardia in young pigs. *Cardiology in the Young* 11 (supplement 1):135.
52. LeMaire SA, Conklin LD, Schmittling ZC, Undar A, Clubb FJ, Coselli JS, Deady BA. Fraser CD. Jr. 2001. Chlorohexidine gluconate gel protects the myocardium and sinoatrial node during application of BioGlue surgical adhesive. *Journal of Surgical Research* 100: 290-1.
53. Undar A, Eichstaedt HC, Clubb FJ, Fung M. Lu. M, Bigley JE, Vaughn WK, Fraser CD, Jr. 2002. Novel anti-factor D monoclonal antibody inhibits complement and leukocyte activation in a baboon model of cardiopulmonary bypass. *Proceedings of the 38th Annual Meeting of the Society of Thoracic Surgeons.* 38: 234-235.
54. Wu SL, Vang R, Clubb FJ Jr, Connelly JH. 2002. Solitary fibrous tumor of the tongue: report of a case with immunohistochemical and ultrastructural studies. *Ann Diagn Pathol.* 6(3): 168-71.

55. Undar A, Eichstaedt HC, Clubb FJ, Fung M, Lu, M, Bigley JE, Deady B, Porter A, Vaughn WK, Fraser CD, Jr. 2002. Use of a novel anti-factor D monoclonal antibody to inhibit complement and leukocyte activation in a baboon model of cardiopulmonary bypass. *ASAIO Journal* 74(2):355-62.
56. Wu SL, Vang R, Clubb FJ Jr, Connelly JH. 2002 June. Solitary fibrous tumor of the tongue: report of a case with immunohistochemical and ultrastructural studies. *Ann Diag Pathol* 6(3):168-71.
57. Angelini P, Haas PC, Ducci CB, Adams S, Ober J, Bigley J, Clubb FJ, Frazier OH. 2003 Sept. Metabolically controlled reperfusion in acute myocardial infarction: should the polarizing solution be given subselectively? *J Invasive Cardiol* 15(9):491-6.
58. Sharma S, Razeghi P, Shakir A, Keneson BJ 2nd, Clubb FJ, Taegtmeyer H. 2003. Regional heterogeneity in gene expression profiles: a transcript analysis in human and rat heart. *Cardiology*. 100(2):73-9.
59. Rosenstrauch D, Akay HM, Bolukoglu H, Behrens L, Bryant L, Herrera P, Eya K, Tuzun E, Clubb FJ Jr, Radovancevic B, Frazier OH, Kadipasaoglu KA. 2003. Ex vivo resuscitation of adult pig hearts. *Tex Heart Inst J*. 30(2):121-7.
60. Sharma S, Razeghi P, Shakir A, Keneson BJ 2nd, Clubb F, Taegtmeyer H. 2003. Regional heterogeneity in gene expression profiles: a transcript analysis in human and rat heart. *Cardiology*. 100(2):73-9.
61. Hanneman SK, Clubb FJ, McKay, Costas G. 2004. Feasibility of a porcine adult intensive care model. *Comp Med*. 54 (1): 36-43.
62. Gregoric ID, Eya K, Tamez D, Cervera R, Byler D, Conger J, Tuzun E, Chee HK, Clubb FJ, Kadipasaoglu K, Frazier OH. 2004 Mar. Preclinical hemodynamic assessment of a new trileaflet mechanical valve in the aortic position in a bovine model. *J Heart Valve Dis*. 13(2):254-9.
63. Gregoric ID, Frazier OH, Tamez D, Tuzun E, Shah NL, Clubb FJ, Chee HK, Eya K, Byler D, Conger J, Cervera R, Kadipasaoglu KA. 2004 Jul-Aug. Thrombogenicity of mechanical aortic valves in an animal model: site specific testing is crucial. *ASAIO J*. 50(4):376-80.
64. Undar A, Eichstaedt HC, Clubb FJ Jr, Lu M, Bigley JE, Deady BA, Porter A, Vaughn WK, Fung M. 2004 Oct. Anesthetic induction with ketamine inhibits platelet activation before, during, and after cardiopulmonary bypass in baboons. *Artif Organs*. 28(10):959-62.
65. Tuzun E, Conger J, Gregoric ID, Eya K, Clubb FJ Jr, Flamm SD, Frazier OH, Radovancevic B. 2004 Nov-Dec. Evaluation of a new cardiac recovery system in a bovine model of volume overload heart ASAIO J. 50(6):557-62.failure.
66. Bick RJ, Bagwell SH, Jones CE, Poindexter BJ, Buja LM, Youker KA, Grigore A, Clubb F, Radovancevic B, Frazier OH. 2005 Apr. Fluorescence imaging microscopy of cellular markers in ischemic vs non-ischemic cardiomyopathy after left ventricular unloading. *J Heart Lung Transplant* 24(4):454-61.