

BIOGRAPHICAL SKETCH

Provide the following information for the key personnel in the order listed on Form Page 2.

Photocopy this page or follow this format for each person

NAME		POSITION TITLE	
JEFFREY MARK DAVIDSON, PH.D.		Professor/Research Career Scientist	
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
Tufts University	B.S.	1967	Biology
Stanford University	M.S.	1969	Biol. Sciences
Stanford University	Ph.D.	1975	Biol Sciences
University of Washington	postdoc	1973-78	Biochemistry

RESEARCH AND PROFESSIONAL EXPERIENCE: Concluding with present position, list, in chronological order, previous employment, experience, and honors. Include present membership on any Federal Government public advisory committee. List, in chronological order, the titles, all authors, and complete references to all publications during the past three years and to representative earlier publications pertinent to this application. If the list of publications in the last three years exceeds two pages, select the most pertinent publications. DO NOT EXCEED THREE PAGES.

Professional Experience:

Senior Staff Fellow, Pulmonary Branch, NHLBI, Bethesda, Maryland, 1978-1981; Associate Chief, Clinical Chemistry, VA Medical Center, Salt Lake City, Utah, 1981-1983 ; Asst. Prof. of Pathology, Univ. of Utah Sch. of Med., Salt Lake City, Utah, 1981-1983; Associate Professor of Pathology, Univ. of Utah, Salt Lake City, Utah, 1983 – 1985; Associate Chief for Research, Lab. Svc, VA Med. Ctr., Salt Lake City, Utah, 1983-1984; Associate Professor of Pathology, Vanderbilt Univ., Nashville, TN, . 1986-1987; Ad Hoc Reviewer, Site Visitor, NIH Pathobiochemistry Study Section, 1985,1987,1990, 1997; Member, Career Development Committee, Department of Veterans Affairs, 1987-91; Member, NIH Pathobiochemistry Study Section, 1991-96; Chairman 1995-96; Visiting Scientist, Fidia Research Laboratories, Abano Terme, Italy, 1990; Professor of Pathology, Vanderbilt University School of Medicine, Jan. 1988 –present; Board of Directors, Wound Healing Society, 1994-97; Associate Director for Research, W.M.Keck-Vanderbilt Free-Electron Laser Center, 1996-2000

Professional Societies and Memberships

AAAS; American Society for Cell Biology; The Wound Healing Society; Society for Investigative Dermatology; European Tissue Repair Society; International Society for Matrix Biology

Honors and Awards:

Associate. Res. Career Scientist (Res. Chemist) Dept. of Veterans Affairs 1984-1997.

Research Career Scientist (Res. Chemist) Dept. of Veterans Affairs 1998 - present

Bibliography, 1994-01 (106 articles, 27 chapters, 4 edited books)

77. Edwards, G., Logan, R., Copeland, M., Reinisch, L., Davidson, J.M., Johnson, B., Maciunas, R., Mendenhall, M., Ossoff, R., Tribble, J., Werkhaven, J., O'Day, D. Tissue ablation by a free-electron laser tuned to the amide II band. *Nature* 371:416-419, 1994
78. Zhang, M.C., Giro, M.G., Quaglino, D., Jr., Davidson, J.M. TGF- β reverses a posttranscriptional defect of elastin synthesis in two cutis laxa skin fibroblast strains. *J. Clin. Invest.*95:986-994, 1995
79. Gossage, J.R., Perkett, E.A., Davidson, J.M., Starcher, B.C., Carmichael, D., Brigham, K.L., Meyrick, B. Secretory leukoprotease inhibitor attenuates lung injury induced by continuous air embolization in sheep. *J. Appl. Physiol*, 79:1163-1172, 1995.
80. Spindler, K.P., Nanney, L.B., Davidson, J.M. Proliferative responses to platelet-derived growth factor in young and old rat patellar tendon. *Connect Tiss Res* 31:1-7, 1995
81. Broadley, C., Broadley, K.N., DiSimone, G, Reinisch, L., Davidson, J.M. Low energy helium-neon laser irradiation and the tensile strength of incisional wounds. *Wound Rep. Regen.*, 3:512-517, 1995
82. Quaglino, D. Jr., Bergamini, G., Boraldi, F., Manzini, E., Davidson, J.M., Pasquali Ronchetti, I. Connective tissue in skin biopsies from patients suffering systemic sclerosis. *J. Submicrosc. Cytol. Pathol.* 28:1-7, 1996
83. Spindler, K.P., Imro, A.K., Mayes, C.E., Davidson, J.M. Patellar tendon and anterior cruciate ligament have different mitogenic responses to platelet-derived growth factor and transforming growth factor β . *J. Orth. Res.*,14:542-546, 1996.
84. Speyer, M., Joe, J., Davidson, J.M., Ossoff, R.H., Reinisch, L. Thermal injury patterns and tensile strength of canine oral mucosa after carbon dioxide laser incisions *Laryngoscope*, 106:845-850, 1996

85. Spindler, K.P., Clark, S.W., Nanney, L.B., Davidson, J.M. Expression of collagen and matrix metalloproteinases in ruptured human anterior cruciate ligament: an in situ hybridization study. *J. Orth. Res.*, 14:857-861, 1996
86. McCarthy, M.J., Davidson, J.M., Cardone, J.S., Anderson, L.L. Cutis laxa aquisita associated with multiple myeloma: A case report and review of the literature. *Cutis* 57(4):267-270, 1996
87. Davidson, J.M., Broadley, K.N., Quaglini Jr., D. Reversal of the wound healing deficit in diabetic rats by combined basic fibroblast growth factor and transforming growth factor- β therapy . *Wound Rep. Regen*, 5:77-88, 1997
88. Davidson, J.M., LuValle, P.A., Zoia, O., Quaglini, Jr., D., Giro, M.G. Ascorbate down regulates collagen and elastin biosynthesis in vascular smooth muscle cells and skin fibroblasts by a pretranslational mechanism. *J. Biol. Chem.*272:345-352, 1997
89. Clymer, M., Reinisch, L., Ossoff, R., Davidson, J.M. Effects of keratinocyte growth factor on healing of tympanic membrane perforations. *Laryngoscope*, 106:280-285, 1996
90. Charous, S.J., Ossoff, R.H., Davidson, J.M. Canine subglottic stenosis as a model for hypertrophic scarring: histological and immunochemical analysis. *Wound Repair Regen*, 4:444-453, 1996
91. Benn, S.I., Whitsitt, J.S., Broadley, K.N., He, L., Nanney, L.B., Perkins, D, Patel, M., Davidson, J.M. Particle mediated gene transfer with TGF- β 1 cDNAs enhances wound repair in rat skin *J. Clin. Invest.*, 98(12):2894-2902, 1996
92. Hoff, C.R. and Davidson, J.M. Elastin expression in murine pulmonary fibrosis. *Connect. Tiss. Res.*, 40:145-153, 1999
93. Bryant, G.L., Davidson, J.M., Ossoff, R.H., Garrett, G. and Reinisch, L. Histologic study of oral mucosa wound healing: A comparison of a 6.0- to 6.8- μ m pulsed laser and a carbon dioxide laser. *Laryngoscope* 108: 13-17, 1998.
94. Liaw, L., Birk, D.E., Whitsitt, J.S., Ballas, C.B., Davidson, J.M., Hogan, B.L.M. Altered wound healing in mice lacking a functional osteopontin gene (*spp1*). *J. Clin. Invest.*101: 1468-1478, 1998.
95. Davidson, J.M. Animal models for wound repair. *Arch. Dermatol Res*, 290:S1-S11, 1998.
96. Zhang, M.C., He L., Giro M, Yong S-L, Tiller G.E., and Davidson J.M.. Cutis laxa arising from frame shift mutations in the elastin gene (ELN). *J. Biol. Chem*, 274, 981-986, 1999.
97. Davidson, J.M., Aquino, A.M., Woodward, S.C., Wilfinger, W.W. Sustained microgravity reduces intrinsic wound healing and growth factor responses in the rat. *FASEB J*, 13:325-329, 1999.
98. Eming, S.A., Whitsitt, J.S., He, L., Krieg, T., Morgan, J.R., Davidson, J.M. Particle-mediated gene transfer of PDGF isoforms promotes wound repair. *J. Invest. Dermatol.*, 112:297-302, 1999
99. Light, R.W., Cheng, D-S., Lee, Y.C., Rogers, J., Davidson, J.M., Lane, K.B. A single intra pleural injection of transforming growth factor β 2 produces an excellent pleurodesis in rats. *Am J Resp Clin Care Med*, in press
100. Nanney, L.B., Paulsen, S., Davidson, M.K., Cardwell, N.L., Whitsitt, J.S., Davidson, J.M. Boosting EGF receptor expression by gene gun transfection stimulates epidermal growth in vivo. *Wound Rep. Regen.*, 8:117-127, 2000
101. Ma, L.-J., Nakamura, S., Whitsitt, J.S., Marcantoni, C., Davidson, J.M., Fogo, A.B. Regression of sclerosis in aging by an angiotensin inhibition-induced decrease in PAI-1. *Kidney Int.* 56:2425-2436, 2000.
102. Davidson, J.M. Experimental animal wound models. *Wounds* 13:9-23, 2001
103. Ballas, C.B., Davidson, J.M. Delayed wound healing in aged rats is associated with increased collagen gel remodeling and contraction by skin fibroblasts, not with differences in apoptotic or myofibroblast cell populations. *Wound Rep. Regen.*, in press, 2001.
104. Drew, A.F., Liu, H., Davidson, J.M., Daugherty, C.C., Degen, J.L. Wound healing defects in mice lacking fibrinogen. *Blood*, in press, 2001.

REVIEWS, ARTICLES, BOOK CHAPTERS (of 27):

21. Hoff, CR, and Davidson, JM. Biochemical and cellular aspects of wound repair. *In: Mammalian Development*, P Lonai, ed. Harwood, Amsterdam, 293-320, 1996.
23. Davidson, JM. Growth Factors. *In Wound Healing: Alternatives in Management*, 3rd ed, J.M. McCulloch, L.C.Kloth, J.A.Feedar, eds., Philadelphia, F.A.Davis, in press, 1999.
24. Davidson, JM and Giro, MG. Cutis laxa and premature aging syndromes. *In Connective Tissue and Its Heritable Disorders: Molecular, Genetic, and Medical Aspects*. PM Royce, B Steinmann, eds. New York, Wiley, in press, 2001
25. Slama, J., Davidson, J.M., Eriksson, E. Gene transfer in cutaneous wound healing. *In "Wound Healing and the Skin"* (Falanga V, ed.) Martin Dunitz, London, 2001