

**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 <b>Alice P. Pentland, M.D.</b>		POSITION TITLE Chair & James H. Sterner Professor of Dermatology	
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
University of Michigan Medical School Ann Arbor, Michigan	B.S., M.D.	1978	Biology and Medicine

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 TWO PAGES.**

**PROFESSIONAL EXPERIENCE**

- 7/78-6/79 Medical Internship, University of North Carolina, Chapel Hill, N.C.  
 7/79-6/83 Dermatology Residency, University of Michigan, Ann Arbor, MI  
 6/80-7/82 Postdoctoral Fellow, University of Michigan, Ann Arbor, MI  
 1984-6/86 Postdoctoral Fellow, Department of Pharmacology, Washington University School of Medicine, St. Louis, MO  
 7/86-6/92 Assistant Professor of Medicine (Dermatology) and Pharmacology, Washington University School of Medicine, St. Louis, MO  
 7/92-8/96 Associate Professor of Medicine (Dermatology) and Pharmacology, Washington University School of Medicine, St. Louis, MO  
 9/96-present James H. Sterner Professor and Chair, Department of Dermatology, University of Rochester, Rochester, NY  
 9/97-present Director of Telemedicine Strong Health System  
 1997-present Medical Director, Center For Future Health

**HONORS, AWARDS AND SOCIETIES**

NIH RO1 AR01849 7/1/90-6/30/00, NIH Program Project 5PO1DK38111-02, 12/1/86 - 11/30/96, NIH RCDA KO4ARO1849, 7/1/90 - 6/30/95, Veterans Administration Research Grant, Diplomate of American Academy of Dermatology, 1983, Society for Investigative Dermatology, American Academy of Dermatology, American Dermatology Association, American Society of Clinical Investigators, Member of Dermatology Foundation Grant Review Board, 1990-1993, 1991-1992, Editorial Board Journal of Investigative Dermatology, Reviewer: New England Journal of Medicine, Biophysica Acta, Journal of the American Academy of Dermatology, Archives of Biochemistry and Biophysics, Member of GMA-1 Study Section, October 1994-October 1998

**PUBLICATIONS (SELECTED)**

- Pentland A and Marcelo C. Modulation of proliferation in epidermal keratinocyte cultures by lowered oxygen tension. **Exp Cell Res.** 145:31-43, 1983.
- Eisen AZ, Pentland AP, Bauer EA and Goldberg GI. Behavior of epidermolysis bullosa fibroblasts in a hydrated collagen lattice. **J Invest Dermatol.** 88:741-746, 1987.
- Pentland AP. Collagen lattice effects on fibroblast arachidonic acid metabolism. **J Cell Physiol.** 139(2):392-7. 1989.
- Holtzman MJ, Turk J, Pentland A. A regiospecific monooxygenase with novel stereopreference is the major pathway for arachidonic acid oxygenation in isolated epidermal cells. **J Clin Invest.** 84(5):1446-53. 1989.
- Pentland AP and Mahoney M. Keratinocyte prostaglandin synthesis is enhanced by IL-1. **J Invest Dermatol.** 94(1):43-46. 1990.
- Pentland AP, Mahoney M, Jacobs SC, Holtzman MJ. Enhanced prostaglandin synthesis after ultraviolet injury is mediated by endogenous histamine stimulation. A mechanism for irradiation erythema. **J Clin Invest.** 86(2):566-74. 1990.
- Udey MC, Peck RD, Pentland AP, Schreiner GF, Lefkowitz JB. Antigen-presenting cells in essential fatty acid-deficient murine epidermis: keratinocytes bearing class II (Ia) antigens may potentiate the accessory cell function of Langerhans cells. **J Invest Dermatol.** 96(6):950-8. 1991.
- Pentland AP, Jacobs SC. Bradykinin-induced prostaglandin synthesis is enhanced in keratinocytes and fibroblasts by UV injury. **Am J Physiol.** 261(3 Pt 2):R543-7, 1991.

9. Schiro JA, Chan BM, Roswit WT, Kassner PD, Pentland AP, Hemler ME, Eisen AZ, Kupper TS. Integrin  $\alpha 2 \beta 1$  (VLA-2) mediates reorganization and contraction of collagen matrices by human cells. **Cell**. 67(2):403-10, 1991.
10. Pentland AP, Morrison AR, Jacobs SC, Hruza LL, Hebert JS, Packer L. Tocopherol analogs suppress arachidonic acid metabolism via phospholipase inhibition. **J Biol Chem**. 267(22):15578-84, 1992.
11. Kang-Rotondo CH, Miller CC, Morrison AR, Pentland AP. Enhanced keratinocyte prostaglandin synthesis after UV injury is due to increased phospholipase activity. **Am J Physiol**. 264(2Pt 1):C396-401, 1993.
12. Shapiro SD, Kobayashi DK, Pentland AP, Welgus HG. Induction of macrophage metalloproteinases by extracellular matrix. Evidence for enzyme- and substrate-specific responses involving prostaglandin-dependent mechanisms. **J Biol Chem**. 268(11):8170-5, 1993.
13. Saarialho-Kere UK, Kovacs SO, Pentland AP, Olerud JE, Welgus HG, Parks WC. Cell-matrix interactions modulate interstitial collagenase expression by human keratinocytes actively involved in wound healing. **J Clin Invest**. 92(6):2858-66, 1993.
14. Miller CC, Hale P, Pentland AP. Ultraviolet B injury increases prostaglandin synthesis through a tyrosine kinase-dependent pathway. Evidence for UVB-induced epidermal growth factor receptor activation. **J Biol Chem**. 269(5):3529-33, 1994.
15. Andley UP, Hebert JS, Morrison AR, Reddan JR, Pentland AP. Modulation of lens epithelial cell proliferation by enhanced prostaglandin synthesis after UVB exposure. **Invest Ophthalmol Vis Sci**. 35(2):374-81, 1994.
16. Hussain H, Shornick LP, Shannon VR, Wilson JD, Funk CD, Pentland AP, Holtzman MJ. Epidermis contains platelet-type 12-lipoxygenase that is overexpressed in germinal layer keratinocytes in psoriasis. **Am J Physiol**. 266(1 Pt 1):C243-53, 1994.
17. Sudbeck BD, Parks WC, Welgus HG and Pentland AP. Collagen-stimulated induction of keratinocyte collagenase is mediated via tyrosine kinase and protein kinase C activities. **J Biol Chem**. 269:30022-30029, 1994.
18. Saarialho-Kere UK, Pentland AP, Birkedal-Hansen H, Parks WC, Welgus HG. Distinct populations of basal keratinocytes express stromelysin-1 and stromelysin-2 in chronic wounds. **J Clin Invest**. 94(1):79-88, 1994.
19. Okada N, Pentland AP, Falk P, and Caparon MG: M protein and protein F act as important determinants of cell-specific tropism of streptococcus pyogenes in skin tissue. **J Clin Invest** 94:965-977, 1994.
20. Pentland AP, Shapiro SD and Welgus HG. Agonist-induced expression of tissue inhibitor of metalloproteinases and metalloproteinases by human macrophages is regulated by endogenous prostaglandin E<sub>2</sub> synthesis. **J Invest Dermatol**. 104(1):52-7, 1995.
21. Andley UP, Becker B, Hebert JS, Reddan JR, Morrison AR and Pentland AP. Enhanced prostaglandin synthesis after ultraviolet-B exposure modulates DNA synthesis of lens epithelial cells and lowers intraocular pressure in vivo. **Invest Ophthalmol Vis Sci**. 37(1):142-53, 1996.
22. Gresham A, Masferrer J, Chen X, Leal-Khoury S, Pentland AP. Increased synthesis of high-molecular-weight cPLA<sub>2</sub> mediates early UV-induced PGE<sub>2</sub> in human skin. **Am J Physiol**. 270(4 Pt 1):C1037-50, 1996.
23. Chen X, Gresham A, Morrison A, Pentland AP. Oxidative stress mediates synthesis of cytosolic phospholipase A<sub>2</sub> after UVB injury. **Biochim Biophys Acta**. 1299:1:23-33, 1996.
24. Malaviya R, Morrison AR, Pentland AP. Histamine in human epidermal cells is induced by ultraviolet light injury. **J Invest Dermatol**. 106:4:785-9, 1996.
25. Sudbeck BD, Pilcher BK, Pentland AP and Parks WC. Modulation of Intracellular Calcium Levels Inhibits Secretion of Collagenase 1 by Migrating Keratinocytes. **Mol Biol Cell**. 8:811-824, 1997.
26. Ruiz N, Pentland AP, Caparon M. Keratinocyte Responses To Adherent and Non-Adherent Group A Streptococci. **J Inf Immun**. 65:2119-2126, 1997.
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28. Konger R, Malaviya R, Pentland AP. Growth regulation of primary human keratinocytes by prostaglandin E receptor EP<sub>2</sub> and EP<sub>3</sub> subtypes. **Biochim Biophys Acta**. 1401:221-234, 1998.
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30. Ruiz N, Wang B, Pentland A, and Caparon M. Streptolysin O and Adherence Synergistically Modulate Proinflammatory Responses of Keratinocytes to Group A Streptococci. **Mol Microbiol** 27:337-46, 1998.
31. Guan Z, Buckman SY, Pentland AP, Templeton DJ, Morrison AR. Induction of cyclooxygenase-2 by the activated MEK1→SEK1/MKK4→p38 MAPK pathway. **J Bio Chem** 273:12901-8, 1998.
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33. Buckman SY, Koki AT, Edwards DA, Pentland AP. Immunohistochemical analysis of cyclooxygenase expression in human skin. **Methods Mol Biol** 120:35-43, 1999.

34. Rys-Sikora KE, Konger RL, Schoggins JW, Malaviya R, Pentland AP: Coordinate expression of secretory phospholipase A<sub>2</sub> and cyclooxygenase-2 in activated human keratinocytes. **Am J Physiol Cell Physiol** 278:C822-C833, 2000.