

I. BIOGRAPHICAL INFORMATION

A. Identifying Data

1. Glenn D. Rosen, M.D.
2. CA License # G57077

B. Complete Academic History

1. Colleges and Universities Attended

B.A. 1979
University of Pennsylvania, Philadelphia, PA

M.D. 1983
University of Pennsylvania, Philadelphia, PA

2. Scholarships and Honors

Magna Cum Laude, University of Pennsylvania 1979
Phi Beta Kappa, University of Pennsylvania 1979

3. Fellowship and Residency Training

Resident in Internal Medicine 1983 – 1986
Graduate Hospital, Philadelphia, PA

Pulmonary Medicine Clinical Fellow 1986 – 1987
University of California at San Francisco, CA

Pulmonary Medicine Research Fellow 1987
University of California at San Francisco, CA

Pulmonary Medicine Research Fellow 1988 – 1990
Washington University, St. Louis, MO

4. Board Certification and Licensure

National Board of Medical Examiners 1984
American Board of Internal Medicine 1986
Pulmonary Disease: American Board of Internal Medicine 1990

C. Employment History

Instructor in Medicine Washington University School of Medicine, St. Louis, MO	1990 – 1993
Acting Assistant Professor of Medicine Stanford University School of Medicine, Stanford, CA	7/1/93 - 8/31/93
Assistant Professor of Medicine Stanford University School of Medicine, Stanford, CA	9/1/93 - 8/31/00
Associate Professor of Medicine with tenure Stanford University School of Medicine, Stanford, CA	9/1/00 - present

D. Public and Professional Service

Member - Cancer Biology Graduate Student Selection Committee	1999
Editorial Board- Cancer Biology and Therapy	2001-present
Member of American Cancer Society Cell Cycle and Growth Control Advisory Committee	2000-present
Review Panel Member- NIH Special Emphasis Panel-Minority Training Program	2002-present
Program Director, Pulmonary and Critical Care Fellowship, Stanford University	2004-2006, 2007-present
Acting Interim Chief, Pulmonary and Critical Care Division, Stanford University	2004-present

E. Post-Degree Honors and Awards

1. Memberships in Professional Organizations

Phi Beta Kappa
American Thoracic Society
American Federation for Clinical Research

2. Grants/Studies

American Lung Association Research Grant “ $\alpha 4 \beta 1$ Lymphocyte Adhesion Receptors: Analysis of the $\alpha 4$ Gene.” Washington University, St. Louis, MO (PI)	7/91 – 6/93
NIH Clinical Investigator Award “Characterization of Different Forms of the $\alpha 4 \beta 1$ Integrin” Washington University, St. Louis, MO (PI)	1/91 – 12/95
Research Incentive Fund Award (OTL) “A Novel Approach to Induce Apoptosis in Lung Cancer Cells” Stanford University, Stanford, CA (PI)	2/96 – 1/97
American Heart Association Grant (California) “Regulation of $\alpha 4$ Integrin Expression in Cardiac Development” Stanford University, Stanford, CA (PI)	7/96 – 6/98
University of California at Berkeley, Breast Cancer Research Program “A Novel Drug Induces Apoptosis in Breast Cancer Cells.” Stanford University, Stanford, CA (PI)	7/98 – 6/00

NIH RO1 “Signaling of Apoptosis in Cancer” Stanford University, Stanford, CA (PI)	8/98 – 7/02
NIH RO1 “Apoptotic Pathways in Lung Epithelial Cells” Stanford University, Stanford, CA (PI) One year no cost extension until 3/03	4/98 – 3/03
ALA-CIA “Triptolide-mediated Apoptosis in Lung Cancer” Stanford University, Stanford, CA (PI)	7/01 – 6/04
NIH T32 “Academic Research Training in Pulmonary Medicine” Stanford University, Stanford, CA (PI)	8/02-7/07
NIH-R01 “JUN Kinase Signaling in the Lung” Stanford University, Stanford, CA (PI)	8/03-7/07
Predicant Biosciences “Proteomics in Lung Cancer” Stanford University, Stanford, CA (PI)	5/04-11/06
ALA Research Grant “Modulation of oxidant-induced cell cycle arrest by FGF-10: Role of G1 cyclins” (Mentor) (Principal Investigator: Daya Upadhyay, MD)	7/04 – 6/06
Celgene Corporation “JNK Pathway in Pulmonary Fibrosis” Stanford University, Stanford, CA (PI)	2/05-5/09
Celgene Corporation “PDA001 in bleomycin-induced murine lung fibrosis” Stanford University, Stanford, CA (PI)	4/09-3/10
NIH-KO8 “Ambient air pollution particle induced altered regulation of G1 Cyclins in Alveolar Epithelial Cells” Stanford University, Stanford, CA (Mentor) (Principal Investigator: Daya Upadhyay, MD)	9/05 – 7/10

3. Honors and Awards

American Lung Association Research Fellowship Award	1990
Stanford Institutional American Cancer Award	1994 – 1995
Jack Elway Memorial Fund/Award for Lung Cancer Research	2002 – 2003

4. Patents

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| “Uses of diterpenoid triepoxides as an antiproliferative agent”
#6,294,546 | 2001 |
| “Combined Therapy of diterpenoid triepoxides and death domain
receptor ligands for synergistic killing of tumor cells”- #6,329,148 | 2002 |

F. BIBLIOGRAPHICAL INFORMATION

Journal Articles (Peer-Reviewed)

1. Holtzman, M.J., Hansbrough, J.R., **Rosen, G.D.**, and Turk, J. (1988). Uptake, release and novel species-dependent oxygenation of arachidonic acid in human and animal airway epithelial cells. Biochem. Biophys. Acta 963:401-413.
2. **Rosen, G.D.**, Birkenmeier, T.M., Raz, A., and Holtzman, M.J. (1989). Identification of a cyclooxygenase-related gene and its potential role in prostaglandin formation. Biochem. Biophys. Res. Comm. 164:1358-1365.
3. **Rosen, G.D.**, Birkenmeier, T.M., and Dean, D.C. (1991). $\alpha 4 \beta 1$ Integrin: Characterization of the $\alpha 4$ gene. Proc. Natl. Acad. Sci. USA. 88:4094-4098.
4. McQuillan, J.J., **Rosen, G.D.**, Birkenmeier, T.M., and Dean, D.C. (1991). Identification of a protein that interacts with the nuclear factor-1 (NF-1) binding site in cells that do not express NF-1: Comparison to NF-1, cellular distribution, and effect on transcription. Nucleic Acids Res. 19:6627-6631.
5. Dean, D.C., Birkenmeier, T.M., **Rosen, G.D.**, and Weintraub, S.J. (1991). Expression of the genes for fibronectin and its cell surface receptors. Am. Rev. Resp. Dis. 144:25-29.
6. Akers, S., Kucich, U., Swartz, M., **Rosen, G.**, Glass, M., Rosenbloom, J., Kimbel, P., and Weinbaum, G. (1992). Specificity and sensitivity of the assay for elastin-derived peptides in chronic obstructive pulmonary disease. Am. Rev. Resp. Dis. 145:1077-1081.
7. **Rosen, G.D.**, Sanes, J.R., LaChance, R., Cunningham, J.M., Roman, J., and Dean, D.C. (1992). Roles for integrin VLA-4 and its counter receptor VCAM-1 in Myogenesis. Cell 69:1107-1119.
8. Iademarco, M.F., McQuillan, J.J., **Rosen, G.D.**, and Dean, D.C. (1992). Characterization of the promoter for vascular adhesion molecule-1 (VCAM-1). J. Biol. Chem. 267:16323-16329.
9. **Rosen, G.D.**, Barks, J.L., Iademarco, M.F., Fisher, R.J., and Dean, D.C. (1994). An intricate arrangement of binding sites for the ets family of transcription factors regulates activity of the $\alpha 4$ integrin gene promoter. J. Biol. Chem. 269:15652-15660.
10. Sheppard, A.M., Onken, M.D., **Rosen, G.D.**, Noakes, P.G., and Dean, D.C. (1994). Expanding roles for $\alpha 4$ integrin and its ligands in development. Cell Adhesion and Communication 2:27-43.
11. Audet, J.F., Masson, J.Y., **Rosen, G.D.**, Salesse, C., and Guerin, S.L. (1994). Multiple regulatory elements control the basal promoter activity of the human $\alpha 4$ integrin gene. DNA and Cell Biology 12:1071-1085.

12. Matthay, M.A., and **Rosen, G.** (1996). Acid Aspiration Induced Lung Injury: New Insights and Therapeutic Options. Amer. J. Respir. Crit. Care Med. 154:277-279.
13. Wen, L.P., Fahrni, J.A., Matsui, S., and **Rosen, G.D.** (1996). Airway epithelial cells produce stem cell factor. Biochem. Biophys. Acta 1314:183-186.
14. Fahrni, J. A., Berry, G.J., Morris, R.E., and **Rosen G.D.** (1997). Rapamycin inhibits the development of obliterative bronchiolitis in a murine heterotopic airway transplant model. Transplantation 63:533-537.
15. Wen, L.P., Fahrni, J.A., Troie, S., Guan, J.-L., Orth, K., and **Rosen, G.D.** (1997). Cleavage of Focal Adhesion Kinase by Caspases during Apoptosis. J. of Biol. Chem 272:26056-26061.
16. Wen, L.P., Madani, K., Fahrni, J.A., Duncan, S.R., and **Rosen, G.D.** (1997). Dexamethasone inhibits lung epithelial cell apoptosis induced by IFN- γ and Fas. Amer. J. Physiol. 273(5 Pt 1):L921-L929.
17. Wen, L.P., Madani, K. and **Rosen, G.D.** (1998) Proteolytic Cleavage of Ras GTPase-activating Protein during Apoptosis. Cell Death and Differentiation. 5:729-734.
18. Krishna, G., Berry, G., Kao, P., **Rosen, G.** and Raffin, T. (1999). Update on the treatment of lymphangioleiomyomatosis. Clin. Pulm. Med. 6(2):126-132.
19. Lee, K.-Y., Chang, W.-T., Qiu, D., Kao, P.N. and **Rosen, G.D.** (1999). PG490 (Triptolide) Cooperates with TNF- α to Induce Apoptosis in Tumor Cells. J. of Biol. Chem. 274:13451-13455.
20. Lee, K-Y, Anderson, E., Madani, K. and **Rosen, G.D.** (1999) Loss of STAT1 Expression Confers Resistance to IFN- γ -induced Apoptosis in ME-180 Cells. FEBS Letters 459:323-326.
21. Faul, J.L., Berry, G.J., Colby, T.V., Ruoss, S.J. **Rosen, G.D.**, Walter, M.B. and Raffin, T.A. (2000) Thoracic Lymphangiomas, lymphangiomatosis, and lymphatic dysplasia syndrome. Am. J. Respir. Crit. Care. Med 161(3):1037-1046.
22. Leonard, C.T., Soccia, P.M., Singer, L., Berry G.J., Theodore, J., Holt, P.G., Doyle, R.L. and **Rosen, G.D.** (2000) Dendritic cells and macrophages in lung allografts: A role in chronic rejection? Am. J. Respir. Crit. Care Med 161(4):1349-1354.
23. Kang, J.J., Chang Wen-The, Lee, K-Y, Wei, K., Anderson, E., Gotmare, S., Ross, J.A. and **Rosen, G.D.** (2001) Triptolide and chemotherapy cooperate in tumor cell apoptosis: a role for the p53 pathway. J. of Bio. Chem. 276:2221-2227.
24. Krishna, G., Liu, K., Shigemitsu, H., Gao, M., and **Rosen, G.D.** (2001). PG490-88, a derivative of triptolide, blocks bleomycin-induced lung fibrosis. Amer. J. of Pathology 158:997-1004.
25. Liu, W., Bodle, E., Chen, J.Y., **Rosen, G.D.**, and Broaddus, V.C. (2001). TNF-Related Apoptosis Inducing Ligand and Chemotherapy Cooperate in Killing Human Mesothelioma Cell Lines. Amer J. of Resp. Cell and Mol. Biol. 25:111-118.
26. Garber, M.E., Troyanskaya, O.G., Schluens, K., Petersen, S., Thaessler, Z., Pacyna-Gengelbach, M., van De Rijn, M., **Rosen, G.D.**, Perou, C. M., Whyte, R. I., Altman, R. B., Brown, P. O, Botstein, D., and Petersen, I. (2001). Diversity of gene expression in adenocarcinoma of the lung. Proc. Natl. Acad. Sci. USA 98: 13784-13789.

27. Duncan, S.R., Leonard, C., Theodore, J., Lega, M., Girgis, R.E., **Rosen, G.D.**, and Theofilopoulos, A.N. (2002) Oligoclonal CD4(+) T Cell Expansions in Lung Transplant Recipients with Obliterative Bronchiolitis. Am. J. Respir. Crit. Care Med. 165: 1439-1444.
28. Leonard, C.T., Soccal, P.M., Berry, G.J., Doyle, R.L., Duncan, S.R., and **Rosen, G.D.** (2002). PG490-88, a derivative of triptolide, attenuates obliterative airway disease in a mouse heterotopic tracheal allograft model. J. Heart Lung Transplant. 21: 1314-1318.
29. Lee, K.Y., Park, J.S., Jee, Y.K., and **Rosen, G.D.** (2002). Triptolide sensitizes lung cancer cells to TNF-related apoptosis-inducing ligand (TRAIL)-induced apoptosis by inhibition of NF- κ B activation. Exp. Mol. Med. 34: 462-468.
30. Fidler, J. M., Li, K., Chung, C., Wei, K., Ross, J.A., Gao, M. and **Rosen, G.D.** (2003). PG490-88, a derivative of triptolide, Causes Tumor Regression and Sensitizes Tumors to Chemotherapy. Mol. Cancer Ther. 2: 855-862.
31. Upadhyay D., Panduri V., **Rosen G.D.** and Kamp D.W. (2005) FGF-10 attenuates asbestos-induced alveolar epithelial cell DNA damage and Apoptosis via MAPK pathway. Am J Respir Cell Mol Biol, 32(3): 232-238.
32. Chen, T.-M., Donnington, J., Mak, G., Berry, G.J., Ruoss, S.J., **Rosen, G.D.** and Upadhyay, D. (2006). Recurrence of pulmonary intravascular bronchoalveolar tumor with mediastinal metastasis 20 years later. Respir. Med. 100: 367-370.
33. Upadhyay D., Chang W., Gao M, Wei K. and **Rosen G.D.** (2007). Fibroblast growth factor-10 prevents H₂O₂-induced alveolar epithelial cell cycle arrest by regulation of G1 cyclins and cyclin-dependent kinases. FEBS Letters 581:248-252.
34. Zhang J, Kamdar O, Ghio AJ, Rosen GD, **Upadhyay D.** (2007) Bim Mediates Air Pollution Particulates-Induced Apoptosis in AEC. FEBS Letters 581: 4148-4152.
35. Zhang J, Ghio AJ, Kamdar O, Le w, Chang W., Gao M., Wei K. and **Rosen G.D.** (2007). Ambient particulate matter induces alveolar epithelial cell cycle arrest: Role of G1 cyclins FEBS Letters 581:5515-5320.
36. Kamdar O., Le W., Zhang J., Ghio A.J., **Rosen G.D.**, and Upadhyay D. (2008). Air pollution induces enhanced mitochondrial oxidative stress in cystic fibrosis airway epithelium. FEBS Letters 582:3601-3606.
37. Zhang, J., Kamdar, O., Le, W., **Rosen, G.**, and Upadhyay D. (2009). Nicotine Induces Resistance to Chemotherapy by Modulating Mitochondrial Signaling in Lung Cancer. Am J Respir Cell Mol Biol 40:135-146.
38. Chang, W., Wei, K., Upadhyay, D., and **Rosen, G.D.** (2009). SPARC Suppresses Apoptosis of IPF Myofibroblasts Through Activation of β -catenin (submitted).

Review Articles

1. Dean, D.C., Birkenmeier, T.M., **Rosen, G.D.**, and Weintraub, S.J. (1991). Expression of the genes for fibronectin and its cell surface receptors. Am. Rev. Resp. Dis. 144, 25-29.

2. Ross, J.A., and **Rosen, G.D.** (2002) Molecular Biology of Lung Cancer. Current Opinion Pulmonary Medicine 8, 265-270.
3. Vaszar, L.T., **Rosen, G.D.**, and Raffin, T.A. (2002). Pharmacogenomics and the challenge to privacy. The Pharmacogenomics Journal 2, 144-147.

Chapters

1. Dube, D.S. and **Rosen, G.D.** (2006). Radiation Induced Lung Disease. In: Laurent G and Shapiro S (eds.) Encyclopedia of Respiratory Medicine. Elsevier Academic Press: pp. 601-609.
2. Dube, D.S. and **Rosen, G.D.** (2006). Focal Contacts and Signaling. In: Laurent G and Shapiro S (eds.) Encyclopedia of Respiratory Medicine. Elsevier Academic Press: pp. 41-47.

rev: 05/04/09