BIOGRAPHICAL SKETCH

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NAME	POSITION TITLE
Glenn D. Rosen, M.D.	Associate Professor of Medicine
eRA COMMONS USER NAME gdrosen	

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 Pennsylvania, Philadelphia, PA	B.A.	1979	History
University of Pennsylvania, Philadelphia, PA	M.D.	1983	Medicine

A. Positions and Honors:

Professional Experience

6/83 - 7/86 Residency in Internal Medicine, Graduate Hospital, Philadelphia, PA.
6/86 - 7/87 Clinical Fellow, Pulmonary Medicine, Department of Medicine, UCSF, CA
7/87 - 11/87 Research Fellow in Pulmonary Medicine, Cardiovascular Research Institute, UCSF, CA
1/88 - 12/90 Research Fellow in Pulmonary Medicine, Washington University School of Medicine, St. Louis, MO
12/90 - 6/93 Instructor in Medicine, Washington University School of Medicine, St. Louis, MO.
7/93 - 8/00 Assistant Professor of Medicine, Pulmonary and Critical Care Medicine, Stanford University, CA
9/00 - present Associate Professor of Medicine, Pulmonary and Critical Care Medicine, Stanford University, CA
1/04 – 1/06 & 1/07- present Program Director, Pulmonary & Critical Care Fellowship, Stanford University, Stanford, CA
7/04 - present Acting Joint Chief, Pulmonary & Critical Care Division, Stanford University, Stanford, CA

Honors

1979 Magna Cum Laude, University of Pennsylvania.
1979 Phi Betta Kappa, University of Pennsylvania.
1990 American Lung Association Research Fellowship Award.
1994 American Cancer Society Pilot Study Grant, Stanford University, Michael Cleary, Director.

B. Peer-reviewed publications

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). Characterization of the alpha 4 integrin gene promoter. 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. 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.
6. **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.

7. 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.
8. **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 α4 integrin gene promoter. J. Biol. Chem. 269, 15652-15660.
9. Sheppard, A.M., Onken, M.D., **Rosen, G.D**., Noakes, P.G., and Dean, D.C. (1994). Expanding roles for α 4 integrin and its ligands in development. Cell Adhesion and Communication 2, 27-43.
10. 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 α4 integrin gene. DNA and Cell Biology 12, 1071-1085.
11. Matthay, M.A., and **G. Rosen**. (1996). Acid Aspiration Induced Lung Injury: New Insights and Therapeutic Options. Amer. J. Respir. Crit. Care Med. 154, 277-279.
12. 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.
13. 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.
14. 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.
15. 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- gamma and Fas. Amer. J. Physiol. 273, L921-929.
16. 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.
17. 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.
18. 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(19):13451-13455.
19. 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.
20. 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.
21. Leonard, C.T., Soccal, 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.
22. Chang, W., Kang, J.J., 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.
23. 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 Path. 158:997-1004.
24. 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.
25. Garber, M.E.,Troyanskaya, O.G., Schluens, K., Petersen, S., Thaesler, 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.
26. Duncan, S.R., Leonard, C., Theodore, J., Lega, M., Girgis, R.E., **Rosen, G.D.**, and Theofilopoulos, A.N. (2002). Oliogoclonal CD4(+) T Cell Expansions in Lung Transplant Recipients with Obliterative Bronchiolitis. Am. J. Respir. Crit. Care Med. 165: 1439-1444.
27. 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.
28. 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-κB activation. Exp. Mol. Med. 34: 462-468.
29. 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.

30. 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.
31. Upadhyay D., Chang W., Gao M., Wei K., and **Rosen G.D**. (2007). FGF-10 prevents H2O2-induced AEC Cycle Arrest by Regulation of G1 cyclins and CDKs. FEBS Letters 581:248-252.
32. Zhang J, Kamdar O, Ghio A.J., **Rosen G.D.,** Upadhyay D. (2007) Bim Mediates Mitochondria-Regulated Particulate Matter-Induced Apoptosis in Alveolar Epithelial Cells. FEBS Letters 581: 4148-4152.
33. Zhang J, Ghio A.J., Gao M., Wei K., **Rosen G.D.,** and Upadhyay D. (2007). Ambient particulate matter induces alveolar epithelial cell cycle arrest: role of G1 cyclins. FEBS Letters 581:5515-5320.
34. 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.
35. Zhang, J., Kamdar, O., Le, W., **Rosen, G.,** and Upadhyay D. (2008) Nicotine Induces Resistance to Chemotherapy by Modulating Mitochondrial Signaling in Lung Cancer. Am J Respir Cell Mol Biol (in press).
36. Chang, W., Wei, K., Upadhyay, D., and **Rosen, G.D.** (2008) Constitutive Activation of β-catenin in IPF Fibroblasts Suppresses Plasminogen-induced Apoptosis and Maintains the Myofibroblast Phenotype (submitted).

C. Research Support (within the last 3 years)
Ongoing Research Support

Type: 5 T32 HL007948-04 Period: 08/01/02 – 08/31/12
Agency: NIH
"Academic Research Training in Pulmonary Medicine"
Role: Principal Investigator

The major goal of this project is to train pulmonary and critical care fellows in basic research, clinical research and biomedical ethics and prepare them as independent, productive and innovative researchers.

Type: KO8, Clinical Investigator Award Period: 09/23/2005 – 07/31/2010
Agency: NIH
"Ambient air pollution particle induced altered regulation of G1 Cyclins in Alveolar Epithelial Cells"
Principal Investigator: Daya Upadhyay, MD.
Role: Mentor

Completed Research Support (within the last 3 years)

Type: Contract Period: 02/01/05 – 01/30/09
Agency: Celgene Corporation
"JNK Pathway in Pulmonary Fibrosis"
Role: Principal Investigator

The major goals of this project are: 1) study the role of the enzyme c-Jun-Kinase (JNK) and related pathways in uncontrolled formation of scar tissue in the lung. 2) isolate fibroblasts from lung tissue of patients undergoing biopsy for diagnosis of Idiopathic Pulmonary Fibrosis (IPF) and study the above mentioned enzyme. 3) examine expression of members of the JNK pathway in the isolated lung tissue and 4) isolate fibroblast cells from normal areas of lungs in patients undergoing surgery for reasons other than diagnosis of pulmonary fibrosis e.g., lung cancer, and use them as controls.

Type: 5 R01 HL070021-3 Period: 07/01/03 - 06/30/08
Agency: NIH
"JUN Kinase Signaling in the Lung"
Role: Principal Investigator

The major goals of this project are 1) Analysis of Ras signaling modifier (RSM) in the JNK pathway; 2) Characterize the mechanism of RSM activation of the Raf/ERK pathway; and 3) Examine RSM function in lung fibroblasts.

Type: ALA Research Grant Period: 07/01/2004 – 06/30/2006
Agency: American Lung Association
“Modulation of oxidant-induced cell cycle arrest by FGF-10: Role of G1 cyclins”
Principal Investigator: Daya Upadhyay, MD.
Role: Mentor

Type: Contract Period: 05/17/04 -11/30/06
Agency: Predicant Biosciences
"Proteomics in Lung Cancer"
Role: Principal Investigator

The major goals of this project are: 1a) validation of serum molecular patterns previously identified by Predicant using lung cancer samples collected at a third institution, 1b) identification of additional serum molecular patterns that differentiate patients with lung cancer from healthy individuals, and 2) initial investigation into differences in serum of lung cancer patients at different stages of disease and with different survival.

Type: Career Investigator, Period: 07/01/01 - 06/30/04
Agency: ALA-CIA
"Triptolide-mediated Apoptosis in Lung Cancer"
Role: Principal Investigator

The major goals of this project are: 1) To examine how triptolide inhibits transactivation of NF-κB; 2) To characterize the mechanisms of induction of p53 by triptolide.

Type: 5RO1 (HL60012) Period: 04/01/98 – 03/31/03
Agency: NIH, Heart, Lung and Blood Institutes.
"Apoptotic Pathways in Lung Epithelial Cells"
Role: Principal Investigator

The major goals of this project are to: 1) Characterize the role of caspase-mediated cleavage of focal adhesion kinase (FAK) during Fas-mediated apoptosis in lung epithelial cells; 2) Charaterize the mechanism by which IFN-γ induces apoptosis in lung epithelial cells and sensitizes the cells to Fas-mediated apoptosis; and 3) Characterize the role of human inhibitor of apoptosis (hIAP-1) as a mediator of glucocorticoid-induced inhibition of apoptosis in lung epithelial cells.

Type: 5RO1 (CA74275-05) Period: 08/01/98 – 07/31/02
Agency: National Institutes of Health.
"Signaling of Apoptosis in Cancer"
Role: Principal Investigator

The major goals of this project are to: 1) Examine how interferon regulatory factor-1 (IRF-1) mediates the sensitization of tumor cells by IFN-γ to TRAIL/Apo2L-induced apoptosis; 2) Characterize the role of caspase-mediated cleavage of rasGTPase-activating protein (rasGAP) during TRAIL/Apo2L-induced apoptosis; and 3) Identify the targets of dexamethasone in the TRAIL/Apo2L pathway.