**CURRICULUM VITAE**

**STEPHEN PAUL MALKOSKI, M.D., Ph.D.**

**CURRENT POSITION**

Assistant Professor, Division of Pulmonary Sciences and Critical Care Medicine and Department of Pathology

University of Colorado Denver Health Science Center

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Stephen.Malkoski@ucdenver.edu

**EDUCATION AND TRAINING**

1988-1992 B.S. Biology (summa cum laude), New Mexico Institute of Mining and Technology, Socorro, New Mexico

1994-1998 Ph.D., Biomedical Sciences, University of New Mexico School of Medicine, Albuquerque, New Mexico

1992-2000 M.D., University of New Mexico School of Medicine, Albuquerque, New Mexico

2000-2001 Post-doctoral Fellow, Lovelace Respiratory Research Institute, Albuquerque, NM

2001-2003 Intern and Resident, Internal Medicine: Oregon Health and Sciences University, Portland, OR

2003-2007 Fellow, Pulmonary and Critical Care Medicine: Oregon Health and Sciences University, Portland, OR

**ACADEMIC APPOINTMENTS**

1/2008-8/2008 Assistant Professor, Pulmonary and Critical Care Medicine, Oregon Health and Sciences University, Portland, Oregon

8/2008-present Assistant Professor, Division of Pulmonary Sciences and Critical Care Medicine and Department of Pathology, University of Colorado Denver Health Science Center, Aurora, CO

**HOSPITAL POSITIONS**

6/2005-12/2007 Locums Tenens, Pulmonary and Critical Care Medicine, Kaiser Sunnyside Medical Center, Kaiser NW Permanente, Portland, OR

**HONORS AND AWARDS**

1988-1992 Presidential Scholarship and Tech Scholar, New Mexico Institute of Mining and Technology

1993 Second place, poster section, University of New Mexico School of Medicine Medical Student Research Day

1996 Best overall presentation, University of New Mexico School of Medicine Graduate Student Research Day

1999-2000 Alpha Omega Alpha Medical Honor Society

2005-2007 NIH Loan Repayment Program

**PROFESSIONAL SOCIETIES AND MEMBERSHIPS**

1989-1992 Tri-Beta Biologic Honor Society

1996 American Federation for Clinical Research

1996-1999 Endocrine Society

2004-2008 Society of Critical Care Medicine

2004-present American Thoracic Society

2008-present Full Member, University of Colorado Cancer Center

2011-present Associate Member, Cancer Biology Training Program

**COMMITTEES AND SERVICE RESPONSIBLITIES**

2008 OHSU ICU Quality Improvement Committee

2010-present UCCC Summer Student Fellowship Selection Committee

2010-present UCD School of Medicine Admissions Committee

**COMMUNITY AND ADVOCACY WORK**

2010-present Spokesperson for National Lung Cancer Partnership Free to Breathe Walk

2011 Participant in development of Colorado recommendations for implementation of CT screening for lung cancer

**LICENSES AND CERTIFICATIONS**

Colorado Medical license 11/2008-present

Oregon Medical license 2006-2008

Board Certified in Internal Medicine 10/2004

Board Certified in Pulmonary Medicine 11/2006

Board Certified in Critical Care Medicine 11/2007

ACLS and BCLS certified

**REVIEW AND REFEREE WORK**

2010 Reviewer, National Lung Cancer Partnership Young Investigator Awards

2010 Reviewer, Colorado Clinical and Translational Research Institute Co-Pilot Awards

2011 Poster session facilitator, International Meeting of the American Thoracic Society

2011 Reviewer, Molecular Carcinogenesis

**INVITED PRESENTATIONS**

5/2008 OHSU Department of Medicine Grand Rounds

5/2008 University of Colorado Denver Division of Pulmonary Sciences and Critical Care Medicine, Research in Progress Seminar

5/2009 National Jewish Health Lung Biology Research Forum and Department of Medicine Grand Rounds

1/2011 University of Colorado Denver Cancer Biology Retreat

4/2011 National Lung Cancer Partnership Lung Cancer Advocacy Summit

**TEACHING RECORD**

**Didactic**

2003-2007 Medical Student (MS2) Small Group Facilitator for Respiratory Pathobiology block (2-3 sessions/year)

2009-present Medical Student (phase I) Small Group Facilitator for Pulmonary Block (5 sessions/yr)

**Clinical**

2003-2007 Resident teaching of ICU core curriculum as PCCM Fellow

2008 Attending in OHSU Neurosurgical and Medical ICUs (2wk each)

2009-present Attending on University of Colorado Hospital Medical ICU (8wk/yr)

2009-present Attending in UCCC Pulmonary Nodule Clinic (4hr/wk)

**Mentored trainees**

2007-2008 Jessyka Lighthall, MD (co-mentored with XJ Wang)

2009-present Sarah Haegar, UCCC summer student

2009-2010 Karen Rodriguez, BS

2011-present Jeffery Tran

**GRANT SUPPORT**

Current

TGF and Lung Squamous Cell Carcinoma

PI: S Malkoski

1K08CA131483 NIH/NCI 9/23/08-8/31/13 $637,000

Goals: Determine clinical significance of TGF signaling molecule loss in human LSCC; assess effect of TGF signaling defects on behavior of cultured tracheal epithelial cells; generate a novel mouse model of LSCC.

Defective stromal transforming growth factor beta signaling in NSCLC development

PI: S Malkoski

National Lung Cancer Partnership 1/1/10-12/31/11 $100,000

Goals: Determine whether defective TGF signaling in tumor stroma promotes NSCLC development using chemical carcinogenesis models.

Identification of normal and cancer stem cells and their niche in oral mucosa

Co-Investigator (PI: XJ Wang)

1 RC1 DE020649 NIH/NCI 10/1/09-9/30/11

**Completed**

TGF and PTEN cooperation in lung squamous cell carcinoma

PI: S Malkoski

American Cancer Society/UCCC Seed Grant 1/1/09-12/31/10 $20,000

Goal: Evaluate cooperation between TGF signaling and PTEN in a mouse model of lung squamous cell carcinoma

The Role of TGF Signaling in Human Lung Squamous Cell Carcinoma

PI: S Malkoski

Oregon Medical Research Foundation 9/1/07-8/31/09 $15,000

Goal: Determine mechanisms of TGF signaling molecule loss in human LSCC

TGF and p63 in lung squamous cell carcinoma

PI: S Malkoski

F32 CA 119467 NIH/NCI 8/1/06-7/30/08 $116,000

Goal: Examine relationship between TGF and p63 in lung squamous cell carcinoma

*Mentor:* Xiao-Jing Wang, MD, PhD, Department of Otolaryngology, Oregon Health & Sciences University

**PUBLICATIONS**

1. **Malkoski SP**, Handanos CM, Dorin RI. (1997) Localization of a negative glucocorticoid response element of the human corticotropin releasing hormone gene. *Mol Cell Endocrinol* 127:189-99.
2. **Malkoski SP** and Dorin RI. (1999) Composite glucocorticoid regulation at a functionally defined negative glucocorticoid response element of the human corticotropin releasing hormone gene. *Mol Endocrinol* 13:1629-1644.
3. Bizzozero OA, **Malkoski SP**, Mobarak CD, Bixler HA, Evans J. (2002) Mass spectometric analysis of myelin proteolipids reveals new features of this family of palmitolylated membrane proteins *J. Neurochem* 81:636-645.
4. Bredow S, Falgout MM, March TH, Yingling CM, **Malkoski SP**, Aden J, Bedrick EJ, Lewis JL, Divine KK. (2007) Subchronic Inhalation of Soluble Manganese Induces Expression of Hypoxia-associated Angiogenic Genes in Adult Mouse Lung. *Tox Appl Pharmacol* 221(2):148-57.
5. Bornstein S., White R., **Malkoski SP**, Oka M, Han G, Cleaver T, Reh D, Anderson P, Gross N, Olson S, Deng C, Lu S,  Wang XJ. (2009) Smad4 Loss in Mice Causes Spontaneous Head and Neck Cancer with Increased Genomic Instability and Inflammation. *J Clin Invest* 119(11):3408-3419.
6. **Malkoski SP**, Cleaver TL, Lu SL, Lighthall JG, Wang XJ. (2010) Keratin promoter based gene manipulation in the murine conducting airway *Int J Biol Sci* 6(1):68-79.
7. White RA, **Malkoski SP**, Wang XJ. (2010) TGFbeta signaling in head and neck squamous cell carcinoma (review). Oncogene 29(40):5437-46.
8. Deng Y, Liu J, Hang G, Lu SL, Wang SY, **Malkoski S**, Tan AC, Deng C, Wang XJ, Zhang Q. (2010) Redox-dependent Brca1 transcriptional regulation by an NADH-sensor CtBP1. Oncogene 29(50):6603-8.
9. Jun D, Garat C, West J, Throrn N, Chow K, Cleaver T, Sullivan T, Torchia E, Childs C, Shade T, Lara A, Klemm D, Nozik-Grayck E, **Malkoski S**, Rojas M, Wagner DH, Majka SM. (2011) Administered lung mesenchymal stem cell attenuate bleomycin induced pulmonary fibrosis while endogenous cells are compromised. Stem Cells 29(4):725-35.
10. Mitra D, **Malkoski SP**, Wang XJ (2011) Cancer stem cells in head and neck cancer (review). Cancers 3(1):415-27.
11. Deng Y, Deng H, Liu J, Han G, **Malkoski S**, Liu B, Zhao R, Wang XJ, Zhang Q. (2011) Transcriptional Down-Regulation of Brca1 and E-cadherin by CtBP1 in Breast Cancer. Molecular Carcinogenesis (in press).

**BOOK CHAPTERS**

1. **Malkoski SP,** Lighthall JG, Wang XJ. (2010) TGFβ Signaling in Head and Neck Cancer Development and Metastases in *Oral Cancer Metastasis*, editor: Jeffery Myers.
2. van den Brekel MWM, Zurr CL, **Malkoski SP**, Wang XJ (2010) Preclinical Models of Head and Neck Squamous Cell Carcinoma in Head and Neck Cancer: Multimodality Management, editor Jacques Bernier.

**ABSTRACTS**

1. **Malkoski SP**, Bell KL, Keeney, SG, Smoake, JA. Purification of 3’-5’ cAMP phosphodiesterase from rat liver. *Tri-Beta Biological Honor Society Western Region Meeting*; Gunnison, CO, April 1992.
2. **Malkoski SP** and Dorin RI. Second messenger regulation of human corticotropin releasing hormone gene expression in placenta. *Medical Student Research Day; University of New Mexico School of Medicine*, Albuquerque, NM, February 1994.
3. **Malkoski SP**, Handanos CM, Dorin RI. Localization of a negative glucocorticoid response element of human corticotropin releasing hormone gene. *Tenth International Congress of Endocrinology*; San Francisco, CA, June 1996.
4. **Malkoski SP** and Dorin RI. Glucocorticoid mediated repression of corticotropin releasing hormone gene expression: the role of glucocorticoid receptor DNA binding. *U.S. Endocrine Society*; Minneapolis, MN, June 1997.
5. Bizzozero OA, **Malkoski SP**, Bixler HA, Howard TA, Mobarak CD. Mass spectrometry and functional analysis of myelin proteolipids. *International Society for Neurochemistry/Americal Society for Neurochemistry Satellite Meeting, "Myelin: Development, Disorders, and Neural Repair;”* Colonia, Equador September 2001.
6. Weber S, Herrington H, Bornstein S, **Malkoski S**, Wang D, Wang XJ, Rustgi A, Lu SL. Tobacco-specific carcinogen Nitrosamine 4-(methylnitrosamino)-1-butanone rapidly induces AKT activation in head and neck epithelia. *AACR Special Conference in Cancer Research: Advances and Challenges in Aerodigestive Epithelial Cancer.* Charleston, SC, Feb, 2007.
7. Hagg DS, **Malkoski SP**, Phillips C, Nichols D, Jacoby D. The biphasic aPTT waveform to diagnose sepsis in patients with SIRS, *27th International Symposium on Intensive Care and Emergency Medicine*, Brussels, Belgium, March 2007.
8. **Malkoski SP**, Lu SL, White S, Wang XJ. Multiple Defects in Transforming Growth Factor-beta Signaling in Human Lung Squamous Cell Carcinoma. *International Meeting of the American Thoracic Society*, San Francisco, CA May 2007.
9. **Malkoski SP**, Lighthall JG, Hoot KE, Lu SL, Wang XJ. Implications of Smad2 loss in human lung squamous cell carcinoma. *International Meeting of the American Thoracic Society*, Toronto, Ontario May 2008.
10. White R, Lu SL, Bornstein S, Salter K, Olson S, Anderson P, Reh D, **Malkoski S**, Deng C, Wang XJ. Smad4 Deletion Leads to Spontaneous Head and Neck Cancer Formation associated with Genomic Instability, *American Association of Cancer Research*, Denver, CO, April 2009.
11. Opincariu LI, Hudish TM, Merrick D, **Malkoski S**, Cleaver T, Mozer AB, Keith RL. Characterization of pre-malignant dysplasia and squamous cell carcinoma in the NTCU-induced murine model. *13th World Conference on Lung Cancer,* San Francisco, CA, August 2009.
12. Jun D, **Malkoski S**, Grayck E, Childs C, Sorrentino B, Majka S. The role of lung mesenchymal stem cells in the progression of pulmonary fibrosis. *International Society for Stem Cell Research,* San Francisco, CA, June 2010.
13. Cleaver TG, Haeger SM, Rodriguez KJ, Lighthall JG, Lu SL, Merrick D, Wang XJ, **Malkoski SP**. Transforming growth factor beta receptor type II deletion increases the growth and multiplicity of K-ras induced lung cancers. *International Meeting of the American Thoracic Society*, Denver, CO May 2011 and *Thomas Petty Aspen Lung Conference*, Aspen, CO, June 2011.
14. Bisht B, Gilbert J, Gomperts B, Ha VL, Hegab A, **Malkoski S**, Nickerson D, Ooi A, Pellegrini M, Zhang K. A novel stem/progenitor cell population from murine tracheal submucosal glands with multipotent regenerative potential. *International Meeting of the American Thoracic Society*, Denver, CO May 2011.
15. Chow K, Cleaver T, Harrison D, Jun D, Majka S, **Malkoski S**, Nozik-Grayck E, Rana U, Shade T, Sullivan T, West J. Response of oxidative stress regulates the lung mesenchymal stem cell niche and the onset of pulmonary arterial hypertension. *International Meeting of the American Thoracic Society*, Denver, CO May 2011.

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