

# College of Medicine Curriculum Vitae

## Douglas Keith Trask

April 19, 2007

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### I. Educational and Professional History

#### Education

##### *Higher Education*

1980	B.A. <i>with honors</i>	Kenyon College, Gambier, Ohio
1982	M.S.	The Ohio State University, Columbus, Ohio
1987	Ph.D.	The Ohio State University, Columbus, Ohio
1992	Physician Scientist Program	University of Miami Medical School, Miami, Florida
1994	M.D.	Dartmouth Medical School, Hanover, New Hampshire

##### *Postgraduate Medical Education*

1987-90	Postdoctoral Fellowship	Dana-Farber Cancer Institute, Harvard Medical School
1994-99	Residency	University of Michigan Medical Center, Ann Arbor, Michigan

##### *Board Certification and Licensure*

American Board of Otolaryngology	<i>through</i> May 2012
Iowa Board of Medical Examiners	<i>through</i> July 2008

#### Professional and Academic Positions Held

##### *Academic*

1979–1980	Undergraduate Research Assistant, Department of Biology Kenyon College, Gambier, Ohio
1980–1985	Graduate Teaching Associate, Department of Microbiology The Ohio State University, Columbus, Ohio
1986–1987	Graduate Research Associate, Department of Microbiology The Ohio State University, Columbus, Ohio,
1987–1990	Post-Doctoral Fellow, Department of Microbiology & Molecular Genetics Harvard Medical School, Boston, Massachusetts
1994–1999	Resident, Department of Otolaryngology–Head & Neck Surgery University of Michigan Medical Center, Ann Arbor, Michigan
1999–2000	Chief Resident, Department of Otolaryngology–Head & Neck Surgery University of Michigan Medical Center, Ann Arbor, Michigan
2000-2006	Assistant Professor, Department of Otolaryngology–Head & Neck Surgery University of Iowa Hospitals and Clinics, Iowa City, Iowa
2002-2006	Assistant Professor, secondary appointment, Department of Radiation Oncology University of Iowa Hospitals and Clinics, Iowa City, Iowa
2002- <i>present</i>	Staff Physician, Veterans Administration Medical Center, Iowa City, Iowa

## Professional and Academic Positions Held *(cont'd)*

### *Academic (cont'd)*

- 2006-present Associate Professor, Department of Otolaryngology—Head & Neck Surgery  
University of Iowa Hospitals and Clinics, Iowa City, Iowa
- 2006-present Associate Professor, Department of Radiation Oncology  
University of Iowa Hospitals and Clinics, Iowa City, Iowa

### *Administrative*

- 2001-present Director, Head and Neck Oncology Research  
Department of Otolaryngology—Head and Neck Surgery  
University of Iowa College of Medicine, Iowa City, Iowa
- 2001-present Director, Sleep Disordered Breathing Clinic  
Department of Otolaryngology—Head and Neck Surgery  
University of Iowa Health Care, Iowa City, Iowa
- 2001-present Director, Otolaryngology Physicians' Assistant Program  
Department of Otolaryngology—Head and Neck Surgery  
University of Iowa College of Medicine, Iowa City, Iowa
- 2002-present Member & Reviewer, Protocol Review and Monitoring Committee  
Holden Comprehensive Cancer Center  
University of Iowa Hospitals & Clinics, Iowa City, Iowa
- 2003-present Member, Translational Research Team  
Department of Radiation Oncology  
University of Iowa Health Care, Iowa City, Iowa

## Honors, Awards, Recognitions, and Outstanding Achievements

- 1977-1980 Merit List, Kenyon College
- 1978-1980 Kenyon College Scholarship
- 1979 Phi Kappa Sigma Fraternity National Scholarship
- 1984 Winner of Bio-Medical Graduate Student Forum, ICSABER Society  
The Ohio State University, 1984
- 1985 The Ohio State University Alumni Research Award, The Ohio State University
- 1986 Inducted, Sigma Xi: The Scientific Research Society
- 1987-1990 Tumor Biology Research Fellowship, Dana-Farber Cancer Institute  
Harvard Medical School
- 1990-1992 Physician Scientist Program Scholar, The University of Miami School of Medicine
- 1996 Norwich-Eaton/Procter and Gamble Outstanding Resident Research Grant Award  
American Academy of Otolaryngology—Head and Neck Surgery Foundation
- 1997 John Kemink Resident Research Award, The Walter Work Society
- 1999-2000 Chief Resident, Department of Otolaryngology—Head & Neck Surgery  
University of Michigan Medical Center, Ann Arbor, Michigan
- 1999 Ortho-McNeal Travel Grant Award  
American Academy of Otolaryngology—Head and Neck Surgery

## Honors, Awards, Recognitions, and Outstanding Achievements *(cont'd)*

2000	Molecular Biology in Clinical Oncology Workshop Scholar Award American Association for Cancer Research
2004	Elected, full member, American Head & Neck Society
2004	Invited member, The American Laryngological, Rhinological and Otolological Society (The Trilogical Society)
2004	Fellow, American College of Surgeons

## II. Teaching

### Teaching Assignments

Year	Institutional Teaching
1980-1983	Graduate teaching assistant, Department of Microbiology, The Ohio State University, Columbus, Ohio
2001-present	Course Director, Annual Iowa Head and Neck Laser Course University of Iowa Health Care, Iowa City, Iowa
2001-present	Assistant Course Director, Iowa Head and Neck Cancer & Reconstructive Surgery Course University of Iowa Health Care, Iowa City, Iowa
2007-current	Course Director, Basic Science Course in Otolaryngology University of Iowa Health Care, Iowa City, Iowa

Year	Clinical Teaching	hrs/week
2000-present	Operating room	16
2000-present	Inpatient ward	6
2000-present	Otolaryngology clinic	10
2000-present	Sleep disordered breathing clinic	3
2000-present	Head & neck multidisciplinary treatment planning conference	2

Year	Classroom, Seminar, or Teaching Lab	Hours
1980-1983	Instructor, <i>Introduction to Microbiology</i> , Department of Microbiology, The Ohio State University, Columbus, OH	20 per wk
1982-1983	Instructor, <i>Tissue Culture Methods</i> , Department of Microbiology, The Ohio State University, Columbus, OH	6 per wk
1997-1999	Instructor, <i>Introduction to the Head &amp; Neck Examination</i> University of Michigan Medical School, Ann Arbor, MI	4 per term
2000-present	Instructor, Basic Otolaryngologic Science [068:199] University of Iowa College of Medicine, Iowa City, IA	4
2000-present	Clinical Otolaryngology [068:003] University of Iowa College of Medicine, Iowa City, IA	2 per wk

Year	Classroom, Seminar, or Teaching Lab	Hours
2002- <i>present</i>	Instructor, Independent Study in Otolaryngology [068:120] University of Iowa College of Medicine, Iowa City, IA	2 per student (4 students)
2005- <i>present</i>	Resident lecture series: <i>General Clinical Otolaryngology</i>	12
2005- <i>present</i>	Physical diagnosis, 2 <sup>nd</sup> year medical students	6

## Students Supervised

### *Undergraduate*

Mark Johnson	1995-1996	University of Michigan
<i>Immunohistochemical analysis of Bcl-2 family proteins in laryngeal carcinoma</i>		
Michael Shaw	1998-2000	University of Michigan
<i>Adenoviral transfer of apoptotic genes</i>		
Jason Speltz	2001-2002	University of Iowa
<i>Protein analysis of topoisomerase I/II expression in squamous cell carcinoma</i>		
Jennifer Paulsen	2004-2005	University of Iowa
<i>Assessment of response to treatment by quantitative RT-PCR</i>		
Taylor Heim	2005	University of Iowa
<i>Cost-benefit analysis of PET scanning in the diagnosis and treatment of head and neck cancer</i>		
Douglas Johnson	2005- <i>present</i>	University of Iowa
<i>Profile of antioxidant enzyme expression in head and neck cancer</i>		

### *Medical students*

Jason Meier	2001-2002	University of Iowa
<i>Analysis of chemotherapy sensitivity of squamous cell carcinoma</i>		
Brian Freeman	2002-2004	University of Iowa
<i>Validation of topoisomerase III beta and MnSOD as predictors of head and neck cancer progression</i>		
Robert Jackson	2003	University of Iowa
<i>Determination of altered phenotypes in head and neck squamous cell carcinoma cell lines following VEGF-C transfection</i>		
Jorge Flores	2003-2005	University of Iowa
<i>Small inhibitory RNA (siRNA)-mediated gene silencing of glutathione peroxidase in head and neck cancer</i>		
Lori Sinclair	2005	University of Iowa
<i>Head and neck cancer treated with radiation therapy in combination with NSAID</i>		
Craig Gurney	2005	University of Iowa
<i>The effect of COX-2 and src kinase inhibitors on VEGF-C production</i>		
Nathan Joos	2005-2006	University of Iowa
<i>Personal stereo listening behavior, risk awareness, and noise exposure levels</i>		
Jorge Flores	2005-2006	University of Iowa
<i>Regulation of the extracellular matrix by VEGF-C</i>		

Clint Hawthorne	2006	University of Iowa
<i>Celecoxib increases the efficacy of radiation therapy for squamous cell carcinoma of the head and neck.</i>		
Clint Hawthorne	2007-2008	University of Iowa
<i>Research Mentor, Research Distinction Track, Carver College of Medicine.</i>		
Sobia F Khaja	2007-2008	University of Iowa
<i>Redox alteration of miR-98 expression and the effects on the chemo-sensitivity in head and neck squamous cell carcinoma.</i>		
Chad I. Hines	2007-2008	University of Iowa
<i>Analysis of chemotherapy and radiation resistance of CD44+ cancer stem cells in oral cavity and oral pharynx squamous cell carcinoma.</i>		
Trevor Schmitz	2007-2008	University of Iowa
<i>Role of microRNA 221 Expression in Papillary Thyroid Carcinoma</i>		

### Residents

Mark Griffin, M.D.	2001-2003	University of Iowa Hospitals & Clinics
<i>Development of tissue microarray of squamous cell carcinoma of the larynx, oral cavity, and analysis of tumor heterogeneity</i>		
Peter Benson, M.D.	2003	University of Iowa Hospitals & Clinics
<i>Alteration of antioxidant enzyme expression in squamous cell carcinoma</i>		
Timothy Dettmer, MD	2003-2005	University of Iowa Hospitals & Clinics
<i>Analysis of focal adhesion kinase expression in head and neck tumors</i>		
Mark El-Deiry, M.D.	2004-2005	University of Iowa Hospitals & Clinics
<i>The effect of celecoxib and sulindac on HPV+ and HPV- head and neck squamous cell carcinoma cell lines</i>		
Michael Telisak, M.D.	2006-present	University of Iowa Hospitals & Clinics
<i>miRNA analysis of let-7 and mir-145 expression in head and neck cancer</i>		

### T-32 Training Grant

Jonathan Bock, M.D.	2002-present	direct mentorship
<i>Synergistic activity with standard chemotherapeutic agents and COX-2 inhibition in squamous cell carcinoma of the head and neck.</i>		
Mace B. Brindley, M.D.	2003-present	direct mentorship
<i>Antioxidant enzyme profiling in head and neck cancer</i>		
Andrew W. Gaut, M.D.	2003-2005	direct co-mentorship
<i>Genetically targeted radiotherapy of head and neck squamous cell carcinoma using the sodium-iodide symporter (NIS)</i>		
Matthew J. Provenzano, M.D.	2005-present	committee member
<i>Induced expression of the sodium-iodide symporter in thyroid cancer cells</i>		
Andrew C. Heaford, M.D.	2006-present	direct mentorship
<i>Involvement of VEGF-C in metastasis of squamous cell carcinoma of the head and neck</i>		

### Residency Mentorship

Su Min P Yi, M.D.	2003-2005
David Luke Shellenberger, M.D.	2003-2006
Maithilee Menezes, M.D.	2005-present
Andrew C. Heaford, M.D.	2006-present

*PhD Dissertation Committees*

Hong Duan <i>Regulation of tumor suppressor gene maspin expression in human breast and prostate cancer cells.</i> Free Radical and Radiation Biology Program, Department of Radiation Oncology, UIHC	<i>conferred</i> August 2002
Sarita Menon, M.S. <i>Regulatory role of MnSOD and cyclin D1 during thiol antioxidant induced G1 arrest.</i> Free Radical and Radiation Biology Program, Department of Radiation Oncology, UIHC	<i>conferred</i> May 2006
Kimberly Krager <i>Genetically targeted radiotherapy utilizing the sodium iodide symporter.</i> Free Radical and Radiation Biology Program, Department of Radiation Oncology, UIHC	<i>anticipated</i> 2007

*Clinical & Translational Research Mentorship*

D. Luke Shellenberger, M.D. <i>Transnasal endoscopic injection laryngoplasty</i>	IRB200507760
D. Luke Shellenberger, M.D. <i>Pilot study to evaluate esomeprazole (Nexium) in treating gastro-esophageal reflux in patients with head and neck cancer with prior external beam radiation therapy: a randomized, prospective, placebo-controlled, double-blind study.</i>	IRB200308067
Nathan Joos, B.S. <i>Acoustic measurement of MP3 player headphones and hearing risk assessment</i>	IRB200508789
Brian A. Andrews, M.D. <i>Argon plasma coagulation for treatment of oral cavity leukoplakia</i>	IRB200508759
D. Luke Shellenberger, M.D. <i>Perioperative use of celecoxib to improve pain control in patients undergoing tonsillectomy: a randomized, double blind, placebo-controlled trial</i>	IRB200508719
Michael S. Telisak M.D. <i>Perioperative use of celecoxib to improve pain control in patients undergoing tonsillectomy: a randomized, double blind, placebo-controlled trial</i>	IRB200508719
Justin Hill, M.D. <i>Pilot study to evaluate esomeprazole (Nexium) in treating gastro-esophageal reflux in patients with head and neck cancer with prior external beam radiation therapy: a randomized, prospective, placebo-controlled, double-blind study.</i>	IRB200308067

*Awards Endowed (Preceptorship)*

Jonathan Bock, M.D. <i>Synergistic activity with standard chemotherapeutic agents and COX-2 inhibition in squamous cell carcinoma of the head and neck</i> Combined Otolaryngology Spring Meeting, Nashville, Tennessee	2003	Outstanding Poster Award
Mark Griffin <i>Validation of tissue microarrays for head and neck cancer</i> Resident Research Day, Department of Otolaryngology, University of Iowa, Iowa City, Iowa	2003	Alfreda Van Wart Resident Research Award
Robert Jackson <i>Determination of altered phenotypes in head and neck squamous cell carcinoma cell lines following VEGF-C transfection</i> Medical Student Research Day, Carver College of Medicine, University of Iowa, Iowa City, Iowa	2003	Melvin Marcus Clinical Research Award
Jonathan Bock, MD <i>Celecoxib alters proliferation of squamous cell carcinoma of the head and neck via a p21-dependent and p53-independent mechanism</i> 6th Annual Student Interdisciplinary Health Research Poster Session, University of Iowa, Iowa City, Iowa	2004	Outstanding Poster Award
Jorge Flores <i>Regulation of the extracellular matrix by VEGF-C</i> American Medical Association Foundation, Chicago, Illinois	2005	Medical Student Seed Grant Award

David Shellenberger, M.D. 2005 Alfreda Van Wart Resident Research Award  
*Preliminary findings in a pilot study to evaluate esomeprazole in treating gastro-esophageal reflux in patients with head and neck cancer with prior radiation therapy: a randomized, prospective placebo-controlled, double-blind study*  
 Resident Research Day, Department of Otolaryngology, University of Iowa, Iowa City, Iowa

Clint Hawthorne 2006 General Oral Presentation Award  
*Celecoxib increases the efficacy of radiation therapy for squamous cell carcinoma of the head and neck*  
 Medical Student Research Day, Carver College of Medicine, University of Iowa, Iowa City, Iowa

## Other Contributions to Institutional Programs

### *Institutional Conferences, Grand Rounds, and Journal Clubs*

- 2000-present (annual) *Office Procedures in Otolaryngology*  
 University of Iowa Basic Science Course
- 2000-present (annual) *Surgical Treatment of Obstructive Sleep Apnea*  
 University of Iowa Basic Science Course
- 2000-present (annual) *General Concepts in Sinus Surgery*  
 University of Iowa Basic Science Course
- March 7, 2002 *Recurrent, Acute, and Chronic Rhinosinusitis: Diagnostic and Treatment Approaches*  
 University of Iowa, Iowa City, Iowa
- June 14, 2002 *Emerging Surgical Treatment for Obstructive Sleep Apnea*  
 University of Iowa, Iowa City, Iowa
- November 15, 2002 *Respiratory Effort Related Arousal Monitoring*  
 University of Iowa, Iowa City, Iowa
- February 7, 2003 *Practice Parameters for the Treatment of OSA in Adults: The Efficacy of Surgical Modifications of the Upper Airway*  
 University of Iowa, Iowa City, Iowa
- September 5, 2003 *Surgical Treatment of the Palate*  
 University of Iowa, Iowa City, Iowa
- June 15, 2004 *Genetically Targeted Radiotherapy for Head & Neck Cancer Using the Sodium Iodide Symporter*  
 Holden Comprehensive Cancer Center  
 University of Iowa Hospitals & Clinics, Iowa City, Iowa
- June 28, 2004 *Moderator, Visiting Professor Program*  
 Department of Otolaryngology–Head & Neck Surgery  
 University of Iowa Hospitals & Clinics, Iowa City, Iowa
- August 4, 2004 *Surgical Approaches to Obstructive Sleep Apnea*  
 University of Iowa Hospitals & Clinics, Iowa City, Iowa
- May 27, 2005 *Otolaryngology and Sleep Medicine*  
 Department of Neurology  
 University of Iowa Hospitals & Clinics, Iowa City, Iowa
- April 19, 2006 *Synergistic agents for the treatment of oral cancer*  
 Holden Comprehensive Cancer Center  
 University of Iowa Hospitals & Clinics, Iowa City, Iowa
- April 9, 2007 *Multidisciplinary Head & Neck Cancer Treatment at the University of Iowa*  
 Holden Comprehensive Cancer Center  
 University of Iowa Hospitals & Clinics, Iowa City, Iowa

*Teaching Committees & Activities*

2001- <i>present</i>	American Head and Neck Society	Fellowship and Scholarship Committee
2002- <i>present</i>	Medical Student Research Day Judge	University of Iowa College of Medicine

*CME talks held at University of Iowa***Director and Lecturer**

University of Iowa Head and Neck Laser Course, University of Iowa Health Care, Iowa City, Iowa	
9th Annual Course	June 10-11, 2001
10th Annual Course	June 9-10, 2002
11th Annual Course	June 8-9, 2003
12th Annual Course	June 6, 2004
13th Annual Course	June 5, 2005
14th Annual Course	June 11, 2006

**Assistant Course Director and Lecturer**

University of Iowa Head and Neck Cancer Course, University of Iowa Health Care, Iowa City, Iowa	
34th Annual Course	June 15, 2001
35th Annual Course	June 14, 2002
36th Annual Course	June 12, 2003
37th Annual Course	June 9, 2004
38th Annual Course	June 6, 2005
39th Annual Course	June 17, 2006

**Faculty and Lecturer**

University of Iowa Laryngopharyngeal Reflux (LPR) and Transnasal Esophagoscopy (TNE) Course, University of Iowa Health Care, Iowa City, Iowa	December 11, 2004
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*Local, Regional and International CME talks***Regulation of Resistance to Cisplatin in Human Squamous Cell Carcinoma Cell Lines**

American Academy of Otolaryngology—Head & Neck Surgery Foundation	San Francisco, CA; September 1997
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**bcl-2 and bcl-X<sub>L</sub> Protein Expression for Organ Preservation in Advanced Laryngeal Cancers**

American Academy of Otolaryngology—Head & Neck Surgery Foundation	New Orleans, LA; September 1999
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**Laryngeal Cancer: Markers for Larynx Preservation and Chemoresistance**

Otolaryngology—Head & Neck Surgery for the Next Surgery, University of Iowa	Iowa City, IA; April 2000
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**Biofilm Formation on Implants**

24th Annual Frank A. Lamberson Lectureship, University of Michigan	Ann Arbor, MI; June 2000
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**Parotid Tumors**

6th Annual Otorhinolaryngology Update	Iowa City, IA; April 2001
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**Allergic Rhinitis: An Ear, Nose and Throat Doctor's Perspective**

Department of Internal Medicine, St. Francis Hospital	Peoria, IL; April 2002
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**Update on Allergic Rhinitis**

Medical Grand Rounds, Trinity Medical Center	Rock Island, IL; May 2002
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- Understanding Allergic Rhinitis and Its Treatment, Medicine For Today**  
Illini Hospital Moline, IL; September 2002
- Targeted Therapy in Head and Neck Cancer**  
Keynote speaker: An Update in Head and Neck Cancer, Stritch School of Medicine  
Loyola University Chicago Maywood, IL, April 2003
- Antioxidant Enzyme Therapy for Squamous Cell Carcinoma of the Head and Neck**  
University of Minnesota & University of Iowa Joint Meeting of Head and Neck Oncology  
Minneapolis, MN; February 2003
- Airway Laser Applications**  
Invited lecturer, University of Alabama Birmingham, AL; February 2004
- An Infectious Disease Update: Sinusitis**  
Invited lecturer, Covenant Hospitals & Clinics Oelwein, IA; March 2004
- Epistaxis in the ER**  
Invited lecturer-Family Physician Refresher Course, University of Iowa Iowa City, Iowa, April 2004
- New Treatments for Sleep Apnea**  
Combined Otolaryngology Spring Meeting and Society of Otorhinolaryngology and Head-Neck Nurses, Inc.  
Phoenix, AZ; May 2004
- Transnasal Vocal Fold Injections**  
3rd Annual Laryngopharyngeal Reflux (LPR) and Transnasal Esophagoscopy (TNE) Course  
The University of Iowa Hospitals and Clinics Iowa City, IA; December 2004
- Genetically Targeted Radiotherapy of Head and Neck Squamous Cell Carcinoma using the Sodium-Iodide Symporter (NIS)**  
The Third Annual Opinion Leader Consortium on Novel and Targeted Therapies in Head and Neck Cancer  
Cancun, Mexico; February 2005
- Medialization: Frontier Between Endoscopy and Thyroplasty; and Phonosurgical Challenging Cases: Failures**  
The Tenth International Workshop on Laser Voice Surgery and Voice Care Paris, France; April 2005
- Treatment of Community Acquired Respiratory Tract Infections in an Era of Emerging Resistance**  
Acute Care Physician Society Bettendorf, IA; June 2005
- Allergens, Immunogens, and Illusions: The Origin of Rhinosinusitis**  
Genesis Family Practice Group Davenport, IA; August 2005
- Epistaxis in the ER**  
Invited lecturer-Family Physician Refresher Course, University of Iowa Iowa City, Iowa, April 2007

### III. Scholarship/Professional History

#### *Publications (peer reviewed)*

1. **Trask D. K.**, Muller M. T. Biochemical characterization of topoisomerase I purified from avian erythrocytes. *Nucleic Acids Res.* 11:2779-800. 1983.
2. **Trask D. K.**, DiDonato J. A., Muller M. T. Rapid detection and isolation of covalent DNA/protein complexes: application to topoisomerase I and II. *EMBO J.* 3:671-6. 1984.
3. Muller M. T., Pfund W. P., Mehta V. B., **Trask D. K.** Eukaryotic type I topoisomerase is enriched in the nucleolus and catalytically active on ribosomal DNA. *EMBO J.* 4:1237-43. 1985.
4. **Trask D. K.**, Muller M. T. Stabilization of type I topoisomerase-DNA covalent complexes by actinomycin D. *Proc. Natl. Acad. Sci. U.S.A.* 85:1417-21. 1988.
5. Boothman D. A., **Trask D. K.**, Pardee A. B. Inhibition of potentially lethal DNA damage repair in human tumor cells by beta-lapachone, an activator of topoisomerase I. *Cancer Res.* 49:605-12. 1989.

6. **Trask D. K.**, Band V., Zajchowski D. A., Yaswen P., Suh T., Sager R. Keratins as markers that distinguish normal and tumor-derived mammary epithelial cells. *Proc. Natl. Acad. Sci. U.S.A.* 87:2319-23. 1990.
7. Band V., Zajchowski D., Swisshelm K., **Trask D.**, Kulesa V., Cohen C., Connolly J., Sager R. Tumor progression in four mammary epithelial cell lines derived from the same patient. *Cancer Res.* 50:7351-7. 1990.
8. Zajchowski D. A., Band V., **Trask D. K.**, Kling D., Connolly J. L., Sager R. Suppression of tumor-forming ability and related traits in MCF-7 human breast cancer cells by fusion with immortal mammary epithelial cells. *Proc. Natl. Acad. Sci. U.S.A.* 87:2314-8. 1990.
9. Yaswen P., Smoll A., Peehl D. M., **Trask D. K.**, Sager R., Stampfer M. R. Down-regulation of a calmodulin-related gene during transformation of human mammary epithelial cells. *Proc. Natl. Acad. Sci. U.S.A.* 87:7360-4. 1990.
10. Sager R., Haskill S., Anisowicz A., **Trask D.**, Pike M. C. GRO: a novel chemotactic cytokine. *Adv. Exp. Med. Biol.* 305:73-7. 1991.
11. Green K., Cheeks L., Stewart D. A., **Trask D.** Role of toxic ingredients in silicone oils in the induction of increased corneal endothelial permeability. *Lens Eye Toxic. Res.* 9:377-84. 1992.
12. Green K., Cheeks L., Slagle T., Paul H., **Trask D. K.** Blood-ocular barrier permeability and electroretinogram after intravitreal silicone oils of varying composition. *J. Ocul. Pharmacol.* 9:355-63. 1993.
13. Green K., Cheeks L., Slagle T., Stewart D. A., **Trask D. K.** Corneal endothelial permeability after silicone oil exposure: Role of low-molecular-weight components and catalyst. *J. Toxicol. - Cutan. Ocular Toxicol.* 12:313-21. 1993.
14. Green K., Cheeks L., Deitch M., Long B., **Trask D. K.** Effect of silicone oil components on corneal endothelial passive permeability and ion transport. *J. Toxicol. - Cutan. Ocular Toxicol.* 13:279-87. 1994.
15. Davis J. L., Serfass M. S., Lai M. Y., **Trask D. K.**, Azen S. P. Silicone oil in repair of retinal detachments caused by necrotizing retinitis in HIV infection. *Arch. Ophthalmol.* 113:1401-9. 1995.
16. Green K., Tsai J., Kears E. C., **Trask D. K.** Silicone oil emulsification: Effects on corneal endothelial permeability. *J. Toxicol. - Cutan. Ocular Toxicol.* 15:325-30. 1996.
17. Green K., Cope A. B., Kears E. C., **Trask D. K.** Influence of emulsification on silicone oil additive effects on rabbit corneal endothelial permeability. *J. Toxicol. - Cutan. Ocular Toxicol.* 16:267-74. 1997.
18. Azen S. P., Scott I. U., Flynn H. W., Jr., Lai M. Y., Topping T. M., Benati L., **Trask D. K.**, Rogus L. A. Silicone oil in the repair of complex retinal detachments. A prospective observational multicenter study. *Ophthalmology.* 105:1587-97. 1998.
19. Green K., Kears E. C., **Trask D. K.** Concentration-dependent effects of silicone oil components on corneal endothelial permeability. *J. Toxicol. - Cutan. Ocular Toxicol.* 17:141. 1998.
20. Koch B. B., **Trask D. K.**, Hoffman H. T., Karnell L. H., Robinson R. A., Zhen W., Menck H. R. National survey of head and neck verrucous carcinoma: patterns of presentation, care, and outcome. *Cancer.* 92:110-20. 2001.
21. Funk G. F., Karnell L. H., Robinson R. A., Zhen W. K., **Trask D. K.**, Hoffman H. T. Presentation, treatment, and outcome of oral cavity cancer: a National Cancer Data Base report. *Head Neck.* 24:165-80. 2002.

22. **Trask D. K.**, Wolf G. T., Bradford C. R., Fisher S. G., Devaney K., Johnson M., Singleton T., Wicha M. Expression of Bcl-2 family proteins in advanced laryngeal squamous cell carcinoma: correlation with response to chemotherapy and organ preservation. *Laryngoscope*. 112:638-44. 2002.
23. Griffin M. C., Robinson R. A., **Trask D. K.** Validation of tissue microarrays using p53 immunohistochemical studies of squamous cell carcinoma of the larynx. *Mod. Pathol.* 16:1181-8. 2003.
24. Schmalbach C. E., Chepeha D. B., Giordano T. J., Rubin M. A., Teknos T. N., Bradford C. R., Wolf G. T., Kuick R., Misek D. E., **Trask D. K.**, Hanash S. Molecular profiling and the identification of genes associated with metastatic oral cavity/pharynx squamous cell carcinoma. *Arch. Otolaryngol. Head Neck Surg.* 130:295-302. 2004.
25. Gaut A. W., Niu G., Krager K. J., Graham M. M., **Trask D. K.**, Domann F. E. Genetically targeted radiotherapy of head and neck squamous cell carcinoma using the sodium-iodide symporter (NIS). *Head Neck*. 26:265-71. 2004.
26. Bauer J. A., **Trask D. K.**, Kumar B., Los G., Castro J., Lee J. S., Chen J., Wang S., Bradford C. R., Carey T. E. Reversal of cisplatin resistance with a BH3 mimetic, (-)-gossypol, in head and neck cancer cells: role of wild-type p53 and Bcl-X<sub>L</sub>. *Mol. Cancer Ther.* 4:1096-104. 2005.
27. Andrews B. T., **Trask D. K.** Oral melanoacanthoma: a case report, a review of the literature, and a new treatment option. *Ann. Otol. Rhinol. Laryngol.* 114:677-80. 2005.
28. El-Deiry M., Funk G. F., Nalwa S., Karnell L. H., Smith R. B., Buatti J. M., Hoffman H. T., Clamon G. H., Graham S. M., **Trask D. K.**, Dornfeld K. J., Yao M. Long-term quality of life for surgical and nonsurgical treatment of head and neck cancer. *Arch. Otolaryngol. Head Neck Surg.* 131:879-85. 2005.
29. **Trask D. K.**, Shellenberger D. L., Hoffman H. T. Transnasal, endoscopic vocal fold augmentation. *Laryngoscope*. 115:2262-65. 2005.
30. Bock J. M., Menon S. G., Goswami P. C., Sinclair L. L., Bedford N. S., Jackson R. E., **Trask D. K.** Differential activity of sulindac metabolites against squamous cell carcinoma of the head and neck is mediated by p21(waf1/cip1) induction and cell cycle inhibition. *Cancer Biol Ther* 6:30-39. 2007.
31. Bock J. M., Menon S. G., Goswami P. C., Sinclair L. L., Bedford N. S., Domann F. E., **Trask D. K.** Relative non-steroidal anti-inflammatory drug (NSAID) antiproliferative activity is mediated through p21-induced G1 arrest and E2F inhibition. *Mol. Carcinog.* 2007.
32. Bock J. M., Menon S. G., Sinclair L. L., Bedford N. S., Goswami P. C., Domann F. E., **Trask D. K.** Celecoxib toxicity is cell cycle phase specific. *Cancer Res.* 67:3801-8. 2007.
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### *Book Chapters*

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### *Abstracts*

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3. Talhouk R., Neiswander R., Schanbacher F., **Trask D.** Secretion of lactoferrin and casein by bovine mammary cells cultured on collagen gels. J. Biol. Chem. 103:A208. 1986.
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7. **Trask D.** Regulation of Resistance to Cisplatin in Human Squamous Cell Carcinoma Cell Lines. Paper presented at: American Academy of Otolaryngology--Head and Neck Surgery Foundation, 1997; San Francisco, CA.
8. Bradford C. R., Zhu S., **Trask D.**, Wicha M., Carey T. E., Fisher S. G., Wolf G. T. Expression of p53 and Bcl-xL may predict treatment response in advanced laryngeal carcinoma. Paper presented at: Annual Meeting of the American Association for Cancer Research, 1999; Philadelphia, PA.
9. **Trask D.**, Wolf G. T., Bradford C. R. Bcl-2 and bcl-XL protein expression for organ preservation in advanced laryngeal cancers. Otolaryngol. Head Neck Surg. 121:P71. 1999.
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14. Bock J. M., Sinclair L. L., Bedford N., **Trask D. K.** Sulindac sulfide alters COX-2 expression and induces apoptosis both alone and in combination with standard chemotherapeutic agents in head and neck squamous cell carcinoma. [Abstract]. Paper presented at: 94th Annual Meeting of the American Association for Cancer Research; July 11-14, 2003; Washington D.C.

15. El-Deiry M. W., Funk G. F., Nalwa S., Karnell L. H., Smith R. B., Buatti J. M., Hoffman H. T., Clamon G. H., Graham S. M., **Trask D. K.**, Dornfeld M. Y., Yao M. Long-term, health-related quality of life outcomes following surgical versus non-surgical management for advanced-stage head and neck cancer. Paper presented at: Combined Otolaryngological Spring Meetings, 2003; Atlanta, GA.
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21. Bock J. M., **Trask D. K.** VEGF-C expression alters tumor cell invasion in squamous cell carcinoma of the head and neck. In: 2006 American Head & Neck Society Annual Meeting and Research Workshop on the Biology, Prevention and Treatment of Head and Neck Cancer Chicago, IL; 2006.
22. Bock J. M., Goswami P. C., Domann R., **Trask D. K.** NSAID activity is mediated through cell cycle phase-specific toxicity in squamous cell carcinoma of the head and neck. In: The 96th Annual American Association of Cancer Research Meeting, Washington D.C.; 2006.
23. Bock J. M., **Trask D. K.** NSAIDS enhance radiation response *in vitro* and *in vivo*. In: The 2006 AHNS/AAO-HNS Annual Meeting, Toronto, Canada; 2006.
24. **Trask D. K.**, Abkes B, Joos N. Listening habits and noise exposure of MP3 player users. In: The 2006 AHNS/AAO-HNS Annual Meeting, Toronto, Canada; 2006.
25. **Trask D. K.**, Oberley, L. W. Alteration of Antioxidant Enzymes in Head and Neck Cancer. *Free Rad. Biol. Med.* 41:s114. 2006.

#### *Medical devices, inventions, and patents*

1. Silikon 1000™/Silikon 5000™ fluid for repair of retinal detachment (FDA approved application). Also, in use as a dermal-filling substance for facial rhytids. Richard James Inc.
2. Avian topoisomerase I. Amersham Corporation
3. Sager R., **Trask D. K.**, Le P.; Dana-Farber Cancer Institute, Inc. (Boston, MA), assignee. Promotion of maturation of hematopoietic progenitor cells. US Patent 5,154,921. 1990.
4. **Trask D. K.**, Bock J. M.; University of Iowa, assignee. Methods of Inhibiting Manganese-Containing Superoxide Dismutase 2 (MnSOD). US Patent 11/194,275. 2005.
5. **Trask D. K.**, Bock J. M.; University of Iowa, assignee. Methods of inhibiting VEGF-C. US Patent 11/194,276. 2005.
6. **Trask D. K.**, Bock J. M.; University of Iowa, assignee. Methods of Inhibiting COX-2. US Patent 11/194,316. 2005.

7. Domann F., Gaut A., **Trask D. K.**, Niu G., Krager K.; University of Iowa, assignee. Use of the sodium iodine symporter to effect uptake of iodine. US Patent 60/650,400. 2005.

## Areas of Research Interest and Current Projects

### *Research*

My research investigations seek to better understand head and neck cancer biology in order to improve preventative measures, detection, treatment, and overall outcomes of patients. We are investigating head and neck cancer in a multifaceted approach. We have shown that antioxidant enzymes are differentially regulated compared to normal epithelium and are an excellent target for therapeutic intervention. We are studying the control of expression of antioxidant enzymes and the phenotypic changes they regulate.

We have discovered various COX-2 inhibitors synergize with standard chemotherapeutic agents and radiation to induce apoptosis in squamous cell carcinoma. We are identifying the effector molecules for this phenomenon and plan to initiate clinical trials to improve the treatment of head and neck cancer.

Head and neck cancer is characterized by lymphatic metastasis. This new area of investigation has identified VEGF-C and its receptors to be important in this process. We are examining how to control lymphangiogenesis with the goal to prevent lymphatic spread of cancer in head and neck patients.

### *Laboratory Focus*

- Measuring the function/activity of antioxidant enzymes and oxidative stress in oral cancer.
- Altering the invasive phenotype of squamous cell carcinoma by antioxidant enzyme expression.
- Using antioxidant enzyme gene therapy to treat head and neck cancer and determine the changes in the tumorigenic phenotype with induced changes in the oxidative stress of tumors. Also, to determine growth changes associated with overexpression of antioxidant enzymes in oral squamous cell carcinoma cell lines.
- Studying the signaling pathway and mechanism of lymphangiogenesis in head and neck cancer with the goal to improve the detection and prevention of metastasis.
- Examining the impact of COX-2 expression in squamous cell carcinoma and using selective inhibitors to improve the therapeutic index of standard chemotherapeutic regimes.

### *Investigator Initiated Clinical Trials [principal investigator]*

- Transnasal endoscopic injection laryngoplasty (IRB 200507760)
- Pilot study to evaluate esomeprazole (Nexium®) in treating gastro-esophageal reflux in patients with head and neck cancer with prior external beam radiation therapy: a randomized, prospective, placebo-controlled, double-blind study (IRB 200308067)
- Acoustic measurement of MP3 player headphones and hearing risk assessment (IRB 200508789)
- Argon plasma coagulation for treatment of oral cavity leukoplakia (IRB 200508759)
- Perioperative use of celecoxib to improve pain control in patients undergoing tonsillectomy: a randomized, double blind, placebo-controlled trial (200508719)

- Pre-clinical, toxicological FDA studies of genetically targeted radiotherapy using intratumoral administration of adenovirus expressing the sodium-iodide symporter (ad-NIS) plus systemic <sup>131</sup>I in subjects with refractory squamous cell carcinoma of the head and neck (NIH RAC approval obtained; FDA pending)
- Retrospective analysis of head and neck cancer tissues (IRB 200510792)
- Reactive oxygen species inhibition of oral cancer growth: quantitative comparison of antioxidant enzyme levels between squamous cell carcinoma and normal mucosa (IRB 200508748)
- Reactive oxygen species inhibition of oral cancer growth: immunohistochemical analysis for the major antioxidant enzymes (IRB 200508746)
- Retrospective analysis of head and neck cancer tissues (IRB 200409728; closed to accrual)
- Normal Mucosa Tissue Procurement (IRB 200211022)

#### *Investigator Initiated Clinical Trials [co-investigator]*

- Masticatory modeling of living humans (IRB 200511775; Holton PI)
- Assessment of tissue response to hyperbaric oxygen therapy for osteoradionecrosis (IRB 200510757; Smith PI)
- Biodistribution and radiation dosimetry of F-18 fluorothymidine (FLT) imaged with positron emission tomography (PET) in patients with head and neck cancer: a radioactive drug research committee (RDRC) study (IRB 200502799; Dornfeld, PI)
- Head and neck muscle typing: response to external beam radiation (IRB 200312071, Van Daele PI)
- A phase I study of fractionated radiation therapy combined with 2-deoxyglucose for treatment of squamous cell carcinoma of the head and neck (IRB 200502799; Dornfeld, PI)
- Head and neck oncology and reconstructive surgery outcomes analysis (IRB 199412746; Funk, PI)

#### *Sponsored National Clinical Trials [local principal investigator]*

- Detection of pre-cancerous lesions of the oropharynx with OpCDx: a multi-center prospective clinical trial (*closed to accrual*) [CDX Laboratories, sponsor]
- A phase III, multi-center, open-label, randomized study to compare the overall survival and safety of bi-weekly intratumoral administration of INGN 201 versus weekly methotrexate in 240 patients with recurrent squamous cell carcinoma of the head and neck (SCCHN) [Study T-301] (*closed to accrual*) [Introgen, sponsor]
- A phase III, multi-center, open label, randomized study to compare the effectiveness and safety of intra-tumoral administration of RPR/INGN 201 in combination with chemotherapy *versus* chemotherapy alone in 288 patients with recurrent squamous cell carcinoma of the head and neck (SCCHN) [T-302] (*closed to accrual*) [Introgen, sponsor]
- A phase II, open-label trial of the safety and biological effect of pre-operative peri-lymphatic ultralow dose IRX-2 (with cyclophosphamide, indomethacin, and zinc) in patients with locally advanced, resectable cancer of the head and neck [IRX, sponsor]

## Grants Received

### **Modulation of Chemosensitivity in Squamous Cell Tumors**

Research Resident Grant, American Academy of Otolaryngology—Head & Neck Surgery Foundation

Period of Support: 7/1995 - 6/1997

Principle Investigator: Trask (5%)

**Markers for Laryngeal Carcinoma Response to Organ-preserving Therapy**

Biosciences Initiative. University of Iowa, Iowa City, Iowa

Period of Support: 8/2000-7/2001 Principle Investigator: Trask (5%)

**Combined Docetaxel and COX-2 Inhibitor Therapy to Induce Apoptosis in Squamous Cell Carcinoma of the Head and Neck. IIT# 10197**

Aventis Pharmaceuticals, Inc.

Period of Support: 9/2003– 8/2005 Principle Investigator: Trask (5%)

**Pilot Study to Evaluate Esomeprazole in Treating Gastro-esophageal Reflux in Patients with Head and Neck Cancer with Prior External Beam Radiation Therapy: A Randomized, Prospective, Placebo-controlled, Double-blind Study**

AstraZeneca LP

Period of Support 2/03-2/05 Principle Investigator: Trask (2%)

**Adenoviral siRNA Silencing of VEGF-C in Head and Neck Cancer to Reverse the Neoplastic Phenotype**

IRG-77-004-25

American Cancer Society.

Period of Support: 12/01/03-11/30/04 Principle Investigator: Trask (5%)

**A Preclinical Toxicity Analysis for Genetically Targeted Radiotherapy in Head and Neck Cancer**

Roy J. Carver Charitable Trust Collaborative Pilot Grant

Period of Support: 2/1/05-1/31/07 Principle Investigator: Trask (5%)

**Genetically Targeted Radiotherapy in Head and Neck Cancer: Preclinical Biodistribution and Toxicity Analysis**

Holden Comprehensive Cancer Center (NIH funding)

Period of Support: 3/01/05-02/28/06 Principle Investigator: Trask (2%)

**Reactive Oxygen Species Inhibition of Oral Cancer Growth**

K08: NCI, U.S. National Institutes of Health

Period of Support: 9/01/05-8/31/10 Principle Investigator: Trask (75%)

**A Phase 2, Open-Label Trial of the Safety and Biological Effect of Pre-operative Peri-lymphatic Ultralow Dose IRX-2 (with Cyclophosphamide, Indomethacin, And Zinc) in Patients with Locally Advanced, Resectable Cancer of the Head and Neck**

IRX Therapeutics

Period of Support: 11/04/05-11/30/11 Principle Investigator: Trask (2%)

**Perioperative Use of Celecoxib to Improve Pain Control In Patients Undergoing Tonsillectomy: A Randomized, Double Blind, Placebo-Controlled Trial**

Pfizer

Period of Support: 10/1/06-09/30/07 Principle Investigator: Trask (2%)

**Pilot Driving Simulator Analysis to Evaluate the Cognitive and Motor Impairment of Individuals Affected By Obstructive Sleep Apnea**

College of Engineering

Period of Support: 10/1/06-9/30/07 Principle Investigator: Trask (2%)

**Invited lectures**

*Conference presentations*

- 2001 Panel Moderator, Head and Neck Cancer Research Forum  
American Academy of Otolaryngology—Head & Neck Surgery  
Denver, Colorado
- 2003 *Sulindac Sulfide Alters COX-2 Expression and Induces Apoptosis Both Alone and In Combination with Standard Chemotherapeutic Agents in Squamous Cell Carcinoma of the Head and Neck.*  
American Academy of Cancer Research  
Washington, DC
- 2004 Panel Moderator, Head and Neck Surgery and Oncology Research Forum  
American Academy of Otolaryngology—Head & Neck Surgery  
New York, NY
- 2005 *Transnasal Endoscopic Injection Laryngoplasty.*  
The 2005 AAO-HNSF Annual Meeting  
Los Angeles, CA.
- 2006 *Novel Therapies in Thyroid Cancer.*  
An Otolaryngology Update, and The Colorado Audiology-Otology Conference  
University of Colorado School of Medicine  
Vail, CO
- 2006 *Alteration of Antioxidant Enzymes in Head and Neck Cancer*  
The 13<sup>th</sup> Annual Meeting of The Society for Free Radical Biology and Medicine  
Denver, CO
- 2007 *What's New in General Otolaryngology*  
An Otolaryngology Update, and The Colorado Audiology-Otology Conference  
University of Colorado School of Medicine  
Vail, CO
- 2007 *Advances in Office Based Laryngoscopy*  
An Otolaryngology Update, and The Colorado Audiology-Otology Conference  
University of Colorado School of Medicine  
Vail, CO

*Invited Lectures*

- June 14, 2002 *Emerging Surgical Treatment of Obstructive Sleep Apnea.*  
Neurology Conference, Sleep Disorders Team  
University of Iowa, Iowa City, Iowa
- August 29, 2002 *Antihistamine Update 2002.*  
Obstetric/Gynecology Residents, University of Iowa Hospitals and Clinics  
University of Iowa, Iowa City, Iowa
- October 28, 2002 *Repose<sup>®</sup> Surgery.*  
Heartland Regional Chapter of Society of Otorhinolaryngology and Head & Neck  
Nurses, Inc  
University of Iowa, Iowa City, Iowa
- May 1, 2003 *Approaches to Obstructive Sleep Apnea.*  
The Des Moines Oto Club  
Des Moines, Iowa
- May 28, 2003 *Allergic Rhinitis Treatment.*  
Johnson County Pharmacy Association (JCPA)  
Iowa City, Iowa

January 29, 2004	<i>The Allergic Rhinitis and Rhinosinusitis Connection: Diagnosis and Treatment</i> Internal Medicine, University of Iowa Hospitals and Clinics Iowa City, Iowa
February 2, 2004	<i>Laser Physics and Light-Tissue Interactions.</i> University of Alabama Birmingham, Alabama
March 10, 2004	<i>The Genesis of a Project: Conception/Implementation/Success.</i> Medical Student Research Club. University of Iowa, Iowa City, Iowa
October 27, 2005	<i>Pharmacology of a New Class of Antimicrobials</i> Quad Cities Pharmacists' Association Davenport, Iowa
October 14, 2006	<i>Surgical Procedures for Sleep Apnea and Update</i> Iowa Association of Electroneurodiagnostic Technicians (IAET) Iowa City, Iowa
February 9, 2007	<i>Anatomy of the Upper Airway and (roll eyes) Surgical Options for the Treatment of Obstructive Sleep Apnea</i> Kirkwood Electroneurodiagnostic Technician Program Iowa City, Iowa

#### *Visiting Professorships*

November 3, 2001	Broadlawns' Medical Center, Evaluation of the Neck Mass. Des Moines, Iowa
March 9, 2006	St. Luke's Methodist Medical Center, Current Management of the Solitary Neck Mass. Cedar Rapids, Iowa
October 30, 2006	Broadlawns' Medical Center, Evaluation of the Neck Mass. Des Moines, Iowa

## IV. Service

### *Memberships in Professional Organizations*

1983-1984	Member, Council of Graduate Students, The Ohio State University
1983-1984	Member, University Senate, The Ohio State University
1997-present	Member, Residents and Fellows in Training Committee American Academy of Otolaryngology-Head and Neck Surgery
1997-2000	Member, Subcommittee on Research Grants and Prizes American Academy of Otolaryngology-Head and Neck Surgery
2000-present	Member, Fellowship and Scholarship Committee, American Head and Neck Society
2000-present	Member, American Head and Neck Society, Fellowship and Scholarship Committee
2000-present	Member, American Association for Cancer Research
2001-present	Member, American Academy of Sleep Medicine
2001-present	Member, Iowa Medical Society
2001-present	Member, Holden Comprehensive Cancer Center
2002-present	Member, Head and Neck Cancer Subcommittee, American College of Surgeons Oncology Group
2003-present	Member, American Board of Otolaryngology
2004-present	Member, American College of Surgeons
2004-present	Member, American Society of Clinical Oncology
2004-present	Associate Member, American Academy of Otolaryngic Allergy

2004- <i>present</i>	Member, The American Laryngological, Rhinological, and Otological Society (The Triological Society)
2005- <i>present</i>	Member, Iowa Chapter, American College of Surgeons
2006- <i>present</i>	Member, Society for Free Radical Biology and Medicine [The Oxygen Society]
2006-2008	Member, Education Committee, American Head and Neck Society
2007- <i>present</i>	Senior Biological Judge, Eastern Iowa Science and Engineering Committee

### *Ad hoc Journal Reviews*

- Annals of Otology, Rhinology & Laryngology
- Archives of Otolaryngology—Head & Neck Surgery
- Cancer
- Head & Neck
- Journal of Registry Management
- The Journal of Pathology
- Laryngology

### *Grant Review Committees*

1997-2000	Reviewer: American Academy of Otolaryngology—Head and Neck Foundation; subcommittee on Grants & Prizes
2006	Ad Hoc reviewer: American Academy of Otolaryngology—Head and Neck Foundation; CORE study section
2007	Reviewer: American Academy of Otolaryngology—Head and Neck Foundation; CORE study section
2007	Reviewer: Diana Benz Seed Grants, The Diana Benz Memorial Fund
2007	Reviewer: Junior Faculty Seed Grants, The American Cancer Society

### *American Cancer Society*

Appointed as a council member for the legislative directive session for management of cancer within the State of Iowa. This August 2001 meeting resulted in a report to the state legislature targeting approaches to help in the prevention, detection, and treatment of cancer in the State of Iowa.