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|-----------------|----------------------------------------------------------------------------|-------------------------------------|
| 01/1986-03/1986 | University Hospital Department of Otolaryngology Zurich, Switzerland | Ugo Fisch, MD Otology Fellowship |
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APPOINTMENTS AND POSITIONS

ACADEMIC:

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| 1982-1984 | Georgetown University Medical Center Department of Otolaryngology Washington, DC | Assistant Professor |
| 1984-1992 | University of Pittsburgh School of Medicine Department of Otolaryngology Pittsburgh, PA | Assistant Professor |
| 1993-1999 | University of Pittsburgh School of Medicine Department of Otolaryngology Pittsburgh, PA | Associate Professor |
| 1999 | University of Pittsburgh School of Medicine Department of Otolaryngology Pittsburgh, PA | Professor |
| 1999 | University of Pittsburgh School of Health and Rehabilitation Sciences Department of Communication Sciences and Disorders Pittsburgh, PA | Professor |
| 1999 | Department of Otolaryngology | Director, Division of Otology |
| 2001 | University of Pittsburgh School of Medicine Department of Neurological Surgery Pittsburgh, PA | Professor |
| 2007 | Neurotology Fellowship Program Department of Otolaryngology University of Pittsburgh School of Medicine | Director |

NON-ACADEMIC:

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|-----------|---------------------------------------------------------------|---------------------------|
| 1982-1984 | Georgetown University Hospital Washington, DC | Active Medical Staff |
| 1982-1984 | Washington Hospital Center Washington, DC | Active Medical Staff |
| 1982-1984 | Children's Hospital National Medical Center Washington, DC | Courtesy Medical Staff |

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|--------------|-----------------------------------------------------------|----------------------------|
| 1982-1984 | Veteran's Administrative Hospital Washington, DC | Courtesy Medical Staff |
| 1984-1990 | Eye and Ear Hospital of Pittsburgh Pittsburgh, PA | Active Medical Staff |
| 1984-Present | Veteran's Administration Medical Center Pittsburgh, PA | Attending Medical Staff |
| 1987-1990 | Veteran's Administration Medical Center Pittsburgh, PA | Director, Otolaryngology |
| 1987-1991 | Montefiore Hospital Pittsburgh, PA | Active Medical Staff |
| 1989-Present | Children's Hospital of Pittsburgh Pittsburgh, PA | Active Medical Staff |
| 1990-1991 | Presbyterian-University Hospital Pittsburgh, PA | Active Medical Staff |
| 1991-Present | University of Pittsburgh Medical Center Pittsburgh, PA | Active Medical Staff |
| 1994-Present | Harmarville Rehabilitation Center Pittsburgh, PA | Consulting Staff |
| 1996-Present | St. Margaret's Memorial Hospital Pittsburgh, PA | Active Medical Staff |
| 1997-Present | UPMC Health System - Shadyside Hospital Pittsburgh, PA | Active Medical Staff |
| 1997-2007 | Western Pennsylvania Hospital Pittsburgh, PA | Medical Staff |

CERTIFICATION AND LICENSURE

SPECIALTY CERTIFICATION:

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|-----------------------------------------------------------|------------|
| American Board of Otolaryngology | 1982, 2014 |
| American Board of Otolaryngology Neurotology Subspecialty | 2005 |

MEDICAL LICENSURE:

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|----------------|------|
| Pennsylvania | 1977 |
| Washington, DC | 1982 |

MEMBERSHIPS IN PROFESSIONAL AND SCIENTIFIC SOCIETIES

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|--------------------------------------------------------------|---------------|
| American College of Surgeons | 1980- Present |
| Pennsylvania Academy of Otolaryngology Head and Neck Surgery | 1982- Present |
| American Academy of Otolaryngology - Head and Neck Surgery | 1982- Present |
| American Medical Association | 1984- Present |
| Pennsylvania Medical Society | 1984- Present |
| Allegheny County Medical Society | 1984- Present |
| Otosclerosis Study Group | 1987- Present |
| American Otologic Society | 1996- Present |
| American Neurotology Society | 2003- Present |

HONORS AND AWARDS

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|-------------------------------------------------------------------------------------------------------------------------------|------------|
| Phi Beta Kappa University of Connecticut | 1972 |
| Phi Kappa Phi University of Connecticut | 1972 |
| Alpha Omega Alpha University of Pennsylvania School of Medicine | 1977 |
| Resident's Competition - First Place Pittsburgh Otologic Society Neoglottic Reconstruction Following Total Laryngectomy | 1980 |
| Resident's Book Award Outstanding Resident University of Pittsburgh School of Medicine Department of Otolaryngology | 1982 |
| Distinguished Service Award American Academy of Otolaryngology - Head and Neck Surgery | 1990 |
| Outstanding Professor Award Senior Residents, Department of Otolaryngology University of Pittsburgh School of Medicine | 1992 |
| Listed: <u>The Best Doctors in America</u> Otology/Neurotology, Naifeh S, White Smith G (eds) Woodard/White, Aiken, SC | 1994 |
| American Academy of Otolaryngology – Head and Neck Surgery Distinguished Service Award | 2003, 2016 |
| Pennsylvania Academy of Otolaryngology - Head and Neck Surgery Distinguished Service Award | 2005 |

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| University of Pittsburgh Medical Center's Award for Commitment and Excellence in Service (ACES) | 2007, 2009 |
| Outstanding Professor Award Senior Residents, Department of Otolaryngology University of Pittsburgh School of Medicine | 2008 |
| Angie's List 'A' Rating | 2009 |
| Top Docs, Pittsburgh Magazine | 2006, 2007, 2009, 2010, 2011 |
| Pittsburgh Magazine's Best Doctors Designation | 2013, 2014, 2015, 2016, 2017, 2018 |
| Best Doctors in America | 2012, 2013, 2014, 2017 |
| Patient's Choice Award Recipient | 2009, 2010, 2011, 2012 |
| Castle Connolly America's Top Doctors | 2009, 2010, 2011, 2012, 2013, 2014 2015, 2016, 2017 |
| Castle Connolly America's Top Doctors for Cancer | 2011, 2016, 2017 |
| Marquis Who's Who 10-year Anniversary Listing | 2011 |
| America's Top Physicians | 2014 |
| Outstanding Professor Award Department of Otolaryngology University of Pittsburgh School of Medicine | 2015 |

PUBLICATIONS

Refereed Articles

1. **Hirsch BE**, Johnson JT: Pathologic Quiz: Papillary Adenocarcinoma in Thyroglossal Duct Cyst. Resident's Page, *Arch Otolaryngol Head Neck Surg* 108:750, 1982.
2. **Hirsch BE**, Johnson JT, Myers EN, Black FO: Paragangliomas of Vagal Origin. *Otolaryngol Head Neck Surg* 90(6):708, 1982.

3. **Hirsch BE**, Johnson JT, Rabin B: Immunostimulation of Head and Neck Cancer Patients: Vitro and Preliminary Clinical Experiences. *Arch Otolaryngol Head Neck Surg* 109:298-301, 1983.
4. Johnson JT, Rabin B, **Hirsch BE**, Thearle P: T-Cell Subpopulations in Head and Neck Carcinoma. *Otolaryngol Head Neck Surg* 92(4):381, 1984.
5. McDaniel A, **Hirsch BE**, Kornblut A, Armbrustmacher V: Torticollis in Infancy and Adolescence. *Ear Nose Throat J* 63:478-487, 1984.
6. **Hirsch BE**, Stair T, Horowitz BZ, Brooks C: Toxic Shock Syndrome from Staphylococcal Pharyngitis. *Ear Nose Throat J*, 63:494-497, 1984.
7. Stair TO, **Hirsch BE**: Adult Supraglottitis. *Am J Emerg Med* 3(6):512-518, 1985.
8. **Hirsch BE**: Computed Sinusoidal Harmonic Acceleration. *Ear Hear* 7(3):198-203, 1986.
9. **Hirsch BE**, Kamerer DB: Experience in Cochlear Implantation. *Ear Nose Throat J*, 65(12):10-16, 1986.
10. Derkay C, **Hirsch BE**, Abell E: Pathologic Quiz Case: Mycosis Fungoides. *Arch Otolaryngol Head Neck Surg*, Resident's Page, 113(3):332-336, 1987.
11. Kamerer DB, Sando I, **Hirsch BE**, Takagi A: Perilymph Fistula Resulting from Microfissures. *Am J Otol* 8(6):489-494, 1987.
12. deVries EJ, Sekhar LN, Schramm VL, Jones NF, **Hirsch BE**: Nasopharyngeal Teratoma Involving the Temporal Bone. *Int J Pediatr Otolaryngol* 16:167-173, 1988.
13. Arriaga M, **Hirsch BE**, Myers EN, Kamerer DB: Squamous Cell Carcinoma of the External Auditory Meatus (Canal). *Otolaryngol Head Neck Surg* 101(3):330-337, 1989.
14. DeVries EJ, Derkay C, Bontempo FA, and **Hirsch BE**: Surgery using DDAVP in patients with coagulopathies. *Audio-Digest, Otolaryngol Head Neck Surg* 22(14), 1989.
15. Derkay CS, Johnson JT, **Hirsch BE**, Wagner RL: Posterior Nasal Packing: Are Intravenous Antibiotics Really Necessary? *Arch Otolaryngol Head Neck Surg* 115:439-441, 1989.
16. Jungreis CA, Sekhar LN, Martinez AJ, **Hirsch BE**: Metastatic Cardiac Myxoma to the Temporal Bone: A Case Report. *Radiology* 170:244, 1989.
17. Katzenberg B, **Hirsch B**, Piela P, Faett J, Durrant JD: The Development of an Educational Module for Surgical Training: A Case Study. *J Audiov Media Med*, 12:147-152, 1989.
18. Tabor EK, Curtin HD, **Hirsch BE**, May M: Osteogenesis Imperfecta Tarda: Appearance of the Temporal Bones at CT. *Radiology* 175:181-183, 1990.
19. Arriaga M, Curtin H, **Hirsch BE**, Takahashi H, and Kamerer DB: Staging proposal for external auditory meatus carcinoma based on preoperative clinical examination and computed tomography findings. *Ann Otol Rhinol Laryngol* 99(9):714-721, 1990.
20. Nelson PB, **Hirsch BE**, DeVries EJ: Abscess of the Sphenoid Sinus after Transsphenoidal Surgery. *Neurosurgery* 28(1):152-153, 1991.
21. **Hirsch BE**, Sekhar L, Kamerer DB: Metastatic Atrial Myxoma to the Temporal Bone. *Amer. Journal of Otology. Am J Otol* 12(3):207-209, 1991.
22. MacDonald CB, **Hirsch BE**, Kamerer DB, Sekhar L: Acoustic Neuroma Surgery: Predictive Criteria for Hearing Preservation. *Otolaryngol Head Neck Surg* 104(1):128, 1991.
23. Petruzzelli GJ, **Hirsch BE**: Bell's Palsy: A diagnosis of exclusion. *Postgraduate Medicine*, 90(2):115-127, 1991.

24. Weisman JL, Arriaga M, Curtin HD, and **Hirsch BE**: Duplication anomaly of the internal auditory canal. *Am J Neuroradiol* 12:867-869, 1991.
25. Weisman JL, **Hirsch BE**, Chan K, Tabor EK, Curtin HD: Dehiscent Temporomandibular Joint. *Radiology* 180:211-213, 1991.
26. Fernau JL, **Hirsch BE**, Derkay C, Ramasastry S, Schaefer SE: Hyperbaric Oxygen Therapy-Effect on Middle Ear and Eustachian Tube Function. *Laryngoscope* 102(1):48-52, 1991.
27. Prasad S, **Hirsch BE**, Kamerer DB, Curtin H: Odontoma of the Middle Ear Cleft. *Am J Otol* 12(6):452-454, 1991.
28. Sekhar LN, Pomeranz S, Janecka IP, **Hirsch BE**, Ramasastry S: Temporal bone neoplasms: a report on 20 surgically treated cases. *J Neurosurg* 76:578-587, 1992.
29. Weissman JL, Curtin HD, **Hirsch BE**, Hirsch WL: High signal from the otic labyrinth on unenhanced magnetic resonance imaging. *Am J Neuroradiol* 13:1183-1187, 1992.
30. **Hirsch BE**: Infections of the external ear. *Am J Otolaryngol* 13(3):145-155, 1992.
31. **Hirsch BE**, Weismann JL, Curtin HD: MRI findings in large vestibular aqueduct syndrome, *Arch Otolaryngol Head Neck Surg* 118(10):1124-1127, 1992.
32. **Hirsch BE**, Kamerer DB, Doshi S: Single stage management of cholesteatoma. *Otolaryngol Head Neck Surg* 106(4):351-354, 1992.
33. Bassiouny M, **Hirsch BE**, Kelly RH, Kamerer DB, Cass SP: Beta₂ Transferrin: Application in Otology. *Am J Otol* 13(6):552-555, 1992.
34. Goel A, Sekhar LN, Langheinrich W, Kamerer D, **Hirsch BE**: Late course of preserved hearing and tinnitus after acoustic neurilemmoma surgery. *J Neurosurg*, 77:685-689, 1992.
35. Prasad S, Kamerer DB, **Hirsch BE**, Sekhar LM: Preservation of vestibular nerves in surgery of the cerebellopontine angle: Effect on hearing and balance function. *Am J Otol* 14(1):15-20, 1993.
36. Prasad S, **Hirsch BE**, Kamerer DB, Durrant J, Sekhar LN: Facial nerve function following cerebellopontine angle surgery: Prognostic value of electroneurography. *Am J Otol*, 14(4):326-329, 1993.
37. Prasad S, **Hirsch BE**, Kamerer DB, Durrant J, Sekhar LN: Facial nerve function following cerebellopontine angle surgery: Prognostic value of intraoperative thresholds. *Am J Otol* 14(4):330-333, 1993.
38. Grandis JR, **Hirsch BE**, Wagener MM: Treatment of idiopathic sudden sensorineural hearing loss. *Am J Otol* 14(2):183-185, 1993.
39. Durrant JD, Martin WH, **Hirsch B**, Schwegler J: 3CLT ABR analyses in a human subject with unilateral extirpation of the inferior colliculus. *Hear Res* 72:99-107, 1993.
40. Stephanian E, Sekhar LN, Janecka IP, **Hirsch B**: Facial nerve repair by interposition nerve graft: Results in 22 patients. *Neurosurgery* 31(1):73-77, 1992.
41. Rosseau GL, Jannetta PJ, **Hirsch B**, Moller MB, Moller AR: Restoration of useful hearing after microvascular decompression of the cochlear nerve. *Am J Otol* 14(4):392-397, 1993.
42. Kamerer DB, **Hirsch BE**, Snyderman CH, Costantino P, Friedman CD: Hydroxyapatite Cement: A new method for achieving watertight closure in transtemporal surgery. *Am J Otol* 15(1):47-49, 1993.
43. Grandis JR, **Hirsch BE**, Yu VL: The simultaneous presentation of malignant external otitis and

- squamous cell carcinoma of the temporal bone in a non-diabetic host. *Arch Otolaryngol Head Neck Surg* 119:687-689, 1993.
44. Yasumura S, Takahashi H, Sando I, Aoki H, **Hirsch BE**: Facial nerve near the external auditory meatus in man -computer aided reconstruction study - Preliminary Report. *Laryngoscope* 103:1043-1047, 1993.
 45. Skedros DG, Cass SP, **Hirsch BE**, Kelly RH: Beta-2 transferrin assay in clinical management of cerebral spinal fluid and perilymphatic fluid leaks. *J Otolaryngol* 22(5):341-344, 1993.
 46. Gold S, Kameroner DB, **Hirsch BE**, Cass SP: Hypercoagulability in otologic patients. *Am J Otol* 14(5):327-331, 1993.
 47. **Hirsch BE**, Cass SP, Sekhar LN, Wright DC: Translabyrinthine approach to skull base tumors with hearing preservation. *Am J Otol* 14(6):433-453, 1993.
 48. Skedros DG, Cass SP, **Hirsch BE**, Kelly RH: Sources of air in use of Beta-2 transferrin analysis for diagnosis of perilymphatic and cerebrospinal fluid leaks. *Otolaryngol Head Neck Surg* 109:861-864, 1993.
 49. Patel SJ, Sekhar LN, Patel SJ, Cass SP, **Hirsch BE**: Combined approaches for resection of extensive glomus jugulare tumors: A review of 12 cases. *J Neurosurg* 80:1026-1038, 1994.
 50. **Hirsch BE**, Weissman JL, Curtin HD, Kameroner DB: Imaging of ossicular prostheses. *Otolaryngol Head Neck Surg* 111(4):494-496, 1994.
 51. Dettelbach MA, **Hirsch BE**, Weissman JL: Pseudomonas cepacia of the temporal bone: Malignant external otitis in a patient with cystic fibrosis. *Otolaryngol Head Neck Surg* 111(4):528-532, 1994.
 52. Clark DB, **Hirsch BE**, Smith MG, Furman JMR, Jacob RG: Panic in otolaryngology patients presenting with dizziness or hearing loss. *m J Psychiatry* 115(8):1223-1225, 1994.
 53. Cass SP, Sekhar LN, Pomeranz S, **Hirsch BE**, Snyderman CH: Excision of petroclival tumors by a total petrosectomy approach. *Am J Otol* 15(4):474-484, 1994.
 54. Jacob RJ, Woody SR, Clark DB, **Hirsch BE**, Lilienfeld SC, Kucera GD, Furman JM, Durrant JD: Discomfort with space and motion: A possible marker of vestibular dysfunction assessed by the situational characteristics questionnaire. *J Psychopathology Behavioral Assessment* 15:299-324, 1994.
 55. Cass SP, **Hirsch BE**, Stechison MT: Evolution and advances of the lateral surgical approaches to cranial base neoplasms. *J Neurooncology* 20(3):337-361, 1994.
 56. **Hirsch BE**, Durrant JD, Yetiser S, Kameroner DB, Martin WH: Localizing retrocochlear hearing loss. *Am J Otol* 17:537-546, 1996.
 57. Pou AM, **Hirsch BE**, Durrant JD, Gold SR, Kameroner DB: The efficacy of tympanic electrocochleography in the diagnosis of endolymphatic hydrops. *Am J Otol* 17:607-611, 1996.
 58. Lassen LF, Kameroner DB, **Hirsch BE**: Use of Nimodipine in the medical treatment of Meniere's Disease. *Am J Otol* 17(4):577-580, 1996.
 59. Schwarze HP, **Hirsch BE**, Johnson PC: Oculostapedial synkinesis. *Otolaryngol Head Neck Surg* 113:802-806, 1995.
 60. Weissman JL, Snyderman CH, **Hirsch BE**: Hydroxyapatite cement to repair skull base defects: Radiologic Appearance. *J Neuroradiol* 17:1569-1574, 1996.

61. **Hirsch BE**, Kamerer DB: Intratympanic Gentamicin therapy for Meniere's disease. *Am J Otol* 18:44-51, 1997.
62. Weissman JL, **Hirsch BE**, Fukui MB, Rudy TE: The evolving MR appearance of structures in the internal auditory canal after removal of an acoustic neuroma. *Am J Neuroradiol* 18:313-323, 1997.
63. Fagan JJ, **Hirsch BE**: Facial nerve paralysis: Initial evaluation and management. *Emergency Medicine* 29(10):52-70, 1997.
64. **Hirsch BE**, Kamerer DB: Role of chemical labyrinthectomy in the treatment of Meneires disease. *Otolaryngol Clin North Am* 30(6):1039-1049, 1997.
65. Weissman JL, **Hirsch BE**: Beyond the promontory: Where in the middle ear tiny glomus tympanicum tumors occur, and why. *Am J Neuroradiol* 19:119-122, 1998.
66. Thompson SW, **Hirsch BE**: Otolgia from near and far. *Emergency Medicine* 30(1):52-70, 1998.
67. Buchman CA, Luxford WM, **Hirsch BE**, Fucci MJ, Kelly RH: Beta-2 transferrin assay in the identification of perilymph. *Am J Otol* 20(2):174-178, 1999.
68. O'Reilly RC, **Hirsch BE**, Kapadia SB: Ossifying Fibroma of the Temporal Bone. *Am J Otol* 21(2):131-135, 2000.
69. Takasaki K, Sando I, **Hirsch BE**: Loss of facial nerve fibers in a case of otosclerosis. *Am J Otol* 21(5):766-768, 2000.
70. Weissman JL, **Hirsch BE**: Imaging of tinnitus: a review. *Radiology* 216(2):342-249, 2000.
71. Takasaki K, **Hirsch BE**, Sando I: Histopathologic study of the human eustachian tube and its surrounding structures following irradiation for carcinoma of the oropharynx. *Arch Otolaryngol Head Neck Surg* 126(4):543-546, 2000.
72. Touma BJ, **Hirsch BE**: Treating benign paroxysmal positional vertigo. *Emergency Medicine*, 33(1):93-103, 2001.
73. Moody SA, **Hirsch BE**, Myers EN: Squamous cell carcinoma of the external auditory canal: an evaluation of a staging system. *Am J Otol* 21(4):582-588, 2000.
74. Miura M, Sando I, Takasaki K, Haginomori S, **Hirsch BE**: Histopathologic study of temporal bone and Eustachian tube in oculoauriculovertebral spectrum. *Ann Otol Rhinol Laryngol* 110(10):922-927, 2001.
75. Haginomori S, Sando I, Miura M, Orita Y, **Hirsch BE**: Medial high jugular bulb. *Otology & Neurotology*, 22(3):423-425, 2001.
76. Miura M, Sando I, Orita Y, **Hirsch BE**: Histopathological study of the temporal bones and Eustachian tubes in children with cholesterol granuloma. *Ann Otol Rhinol Laryngol* 111(7 Pt 1):609-615, 2002.
77. Miura M, Sando I, Orita Y, **Hirsch BE**: Temporal bone histopathological study of Noonan syndrome. *Int J Pediatr Otorhinolaryngol* 60(1):73-82, 2001.
78. Miura M, Sando, I, **Hirsch BE**, Orita Y: Analysis of spiral ganglion cell populations in children with normal and pathological ears. *Ann Otol Rhinol Laryngol* 111(12 pt 1):1059-1065, 2002.
79. Gastman, BR, **Hirsch BE**, Sando I, Fukui MB, Wargo ML: The potential risk of carotid injury in cochlear implant surgery. *Laryngoscope* 112:262-266, 2002.

80. Sando I, Orita Y, **Hirsch BE**: Pathology and pathophysiology of Meniere's disease. [Journal article – review] *Otolaryng Clinics N America* 35(3):517-528, 2002.
81. **Hirsch BE**: Staging system revision. *Arch Otolaryngol Head Neck Surg* 128:93-94, 2002.
82. Branch MP, **Hirsch BE**: Management of unilateral acoustic neuroma in a 72-year old patient with contralateral congenital deafness. *Otolaryngol Head Neck Surg* 127(5):483-486, 2002.
83. Sando I, Orita Y, **Hirsch BE**: Pathology and pathophysiology of Meniere's disease. *Otolaryngol Clin N Am* 35:517-528, 2002.
84. Orita Y, Sando I, **Hirsch BE**, Miura M, Hasebe S, Balaban CD: Postnatal development of the eustachian tube glands. *Laryngoscope* 112(9):1647-52, 2002.
85. Miura M, Sando I, **Hirsch BE**, Orita Y: Anomaly of the eustachian tube and its associated structures in patients with multiple congenital malformation: a histopathological and morphometric study. *International Journal of Pediatric Otorhinolaryngology* 64(3):207-16, 2002 Jul 9.
86. Moody SA, Branstetter BF, **Hirsch BE**: Mesenchymal chondrosarcoma presenting as an external auditory canal mass. *Otology & Neurotology* 24(2):344-345, 2003.
87. Kassam AB, Horowitz M, Carrau R, Snyderman C, **Hirsch BE**, Chang YF: The use of tisseel fibrin sealant in neurosurgical procedures: Incidence of cerebrospinal fluid leak and cost benefit analysis. *Neurosurgery* 52(5):1102-1105, 2003.
88. Antonio SM, Branstetter BF, **Hirsch BE**: Mesenchymal chondrosarcoma presenting as an external auditory canal mass. (Case Reports) *Otology & Neurotology* 24(2):344-345, 2003.
89. **Hirsch BE**: Letter to the Editor, "Certification of Added Qualification in otology and neurotology". *ENT Journal* 82(7):481-482, 2003.
90. Horowitz M, Levy E, Hathaway B, Jovin T, **Hirsch BE**: Endovascular treatment of a petrous internal carotid artery aneurysm with hemotympanum and epistaxis using a coronary stent and detachable platinum coils. *Arch Otolaryngol Head Neck Surg* 131:61-63, 2005
91. Simons JP, Whitaker ME, **Hirsch BE**: Cochlear implantation in a patient with bilateral temporal bone fractures. *Otolaryngol Head Neck Surg* 132:809-811, 2005.
92. Kassam A, Horowitz M, Welch W, Scwabassi R, Carrau R, Snyderman C, **Hirsch BE**: The role of endoscopic assisted microneurosurgery (Image Fusion Technology) in the performance of neurosurgical procedures. *Minim Invas Neurosurg* 48:191-196, 2005.
93. Kassam AB, Patel A, Welch W, Balzer J, Snyderman C, **Hirsch B**, Carrau R: The carotid-vertebral space: an extended lateral window to the ventromedial cranial base and lower craniocervical junction. *Ear, Nose, & Throat Journal* 84(5):312-315, 2005.
94. Balkany TJ, Hodges AV, Buchman CA, Luxford WM, Pillsbury CH, Roland PS, Shallop JK, Backous DD, Franz D, Graham JM **Hirsch B**, Luntz M, Niparko JK, Patrick J, Payne SL, Telischi FF, Tobey EA, Truy E, Staller S: Cochlear implant soft failures consensus development conference statement. *Otology & Neurotology* 26(4):815-818, 2005.
95. Prokopakis EP, Chimona T, Tzagournisakis M, Christodonlou P, **Hirsch BE**, Plaitakis A, Velegarakis GA: Benign paroxysmal positional vertigo: 10-year experience in treating 592 patients with canalith repositioning procedure. *Laryngoscope* 115(9):1667-1671, 2005.
96. Kassam A, Horowitz M, Welch W, Scwabassi R, Carrau R, Snyderman C, **Hirsch BE**: The role of endoscopic assisted microneurosurgery (Image Fusion Technology) in the performance of neurosurgical procedures. *Minim Invas Neurosug* 48(4):191-196, 2005.

97. O'Reilly RC, Cass SP, **Hirsch BE**, Kamerer DB, Bernat RA, Poznanovic SP: Ossiculoplasty using incus interposition: Hearing results and analysis of the middle ear risk index. *Otology & Neurotology* 26(5):853-858, 2005.
98. **Hirsch BE**: Surgical management of Meniere's disease in the era of gentamicin. *Otolaryngol Head Neck Surg* 133(6):997; author reply 997-998, 2005.
99. Balkany TJ, Hodges AV, Buchman CA, Luxford WM, Pillsbury CH, Roland PS, Shallop JK, Backous DD, Franz D, Graham JM, **Hirsch BE**, Luntz M, Niparko JK, Patrick J, Payne SL, Staller S, Telischi FF, Tobey EA, Truy E: Cochlear implant soft failures consensus development conference statement. *Cochlear Implants International* 6(3):105-122, 2005.
100. Hathaway B, **Hirsch BE**, Branstetter, B: Successful cochlear implantation in a patient with superficial siderosis. *Am J Otolaryngol* 27(4):255-258, 2006.
101. St. Martin MB, **Hirsch BE**: Cochlear implantation in a patient with bilateral deep brain stimulators. *Laryngoscope* 117:183-185, 2007.
102. **Hirsch BE**, Blikas A, Whitaker M: Antibiotic prophylaxis in cochlear implant surgery. *Laryngoscope* 117(5):864-867, 2007.
103. St. Martin MB, **Hirsch BE**: High frequency sensorineural hearing loss following stapedectomy. *Otology & Neurotology* 29:447-452, 2008.
104. Fraioli RE, **Hirsch BE**, Kassam AB: Fibrin sealant for control of cerebrospinal fluid otorrhea. *Amer J Otolaryn* 29(2):135-137, 2008.
105. Roland PS, Smith TL, Schwartz SR, Rosenfeld RM, Ballachanda B, Earll JM, Fayad J, Harlor AD, **Hirsch BE**, Jones SS, Krouse HJ, Magit A, Nelson C, Stutz DR, Wetmore S: Clinical practice guideline: cerumen impaction. *Otolaryngol Head Neck Surg* 139(3 Suppl 2):S1-S21, 2008.
106. Ying YM, **Hirsch BE**: Atypical Cogan's syndrome: A case report. *Amer J Otolaryn Head & Neck Surgery*, 31(4):279-282, 2010. PMID: 20015756
107. Yoshikawa N, **Hirsch BE**: Cochlear implantation in a patient with superficial siderosis: an update. *Amer J Otolaryn Head & Neck Surgery*, 31(5):390-391 2010. PMID 20015783
108. Balkany TJ, Hodges AV, Buchman CA, Luxford WM, Pillsbury CH, Roland PS, Shallop JK, Backous DD, Franz D, Graham JM **Hirsch B**, Luntz M, Niparko JK, Patrick J, Payne SL, Telischi FF, Tobey EA, Truy E, Staller S: Cochlear implant soft failures consensus development conference statement . [Consensus Development Conference], cited in *International Journal of Pediatric Otorhinolaryngology* 73(10):1470-1473, 2009.
109. Engh JA, Kostov D, St Martin MB, Yeane G, Rothfus W, **Hirsch B**, Kassam AB. Cavernous malformation tumors: a case study and review of the literature. *Otol Neurotol* 31(2):294-298, 2010. PMID: 19887972
110. Yoshikawa N, **Hirsch BE**, Telischi FF: Cochlear implant fixation and dura exposure. *Otol Neurotol* 31(8):1211-4, 2010. PMID 20393371
111. Moskowitz HS, Jaffe R, **Hirsch BE**: Epithelioid hemangioendothelioma of the middle ear in a child. *Am J Otolaryngol*. 2011 May-Jun;32(3):259-62. PMID 20444524
112. Fowler JC, **Hirsch BE**, White PF: Case of the Month. Glomus tympanicum tumor. *Journal of the American Academy of Physician Assistants* 23(6):65, June 2010. PMID 20653266
113. Conley GS, **Hirsch BE**: Stereotactic radiation treatment of vestibular schwannoma: Indications, limitations, and outcomes. *Curr Opin Otolaryngol Head Neck Surg* 18:351-356, 2010. PMID 20613529

114. Heron DE, Wegner RE, Rodriguez KD, **Hirsch BE**, Ferris R. Linac-based stereotactic body radiation therapy for treatment of glomus jugulare tumors. *Radiotherapy and Oncology* 97(3):395-8, 2010. PMID 20950881
115. Cohen NL, **Hirsch BE**. Current status of bacterial meningitis after cochlear implantation. *Otol Neurotol*, 31(8):1325-8, Oct 2010. PMID 20818287
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121. Vivas EX, Wegner R, Conley G, Torok J, Heron DE, Kabolizadeh P, Burton S, Ozhasoglu C, Quinn A, **Hirsch BE**. Treatment outcomes in patients treated with CyberKnife radiosurgery for vestibular schwannoma. *Otol Neurotol*. 2014 Jan; 35(1):162-70. PMID: 24335934
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128. McCall AA, Hobson CE, Moy JD, Byers KE, Raz Y, **Hirsch BE**. Response to "management and outcomes in patients affected by malignant otitis externa". *Otolaryngol Head Neck Surg*. 2014 Nov;151(5):890-1. PMID: 25344096

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132. Govil N, DeMayo WM, **Hirsch BE**, McCall AA. Optimizing positioning for in-office otology procedures. *Otolaryngol Head Neck Surg.* 2017 Jan;156(1):156-160 PMID:27650804
133. Linkov F, Valappil B, McAfee JS, Goughnour SL, Hildrew DM, McCall AA, Linkov I, **Hirsch BE**, Snyderman C. Development of an evidence-based decision pathway for vestibular schwannoma treatment options. *American Journal of Otolaryngology.* 2016 Sep 30 PMID 27780583
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135. Keller JH, **Hirsch BE**, Marovich RS, Branstetter BF. Detection of Endolymphatic Hydrops Using Traditional MR Imaging Sequences. *Am J Oto American Journal of Otolaryngology – Head and Neck Medicine and Surgery* 2017 Jul-Aug;38(4):442-446. Epub 2017 Apr 6 PMID: 28413076
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Invited Qualifications, Reviews and Books and Book Chapters

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2. **Hirsch BE**: The Human Body - Hearing, Taste and Smell: Pathways of Perception. Consultant. Torstar Books Inc, 1984.
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5. **Hirsch BE**: Antimicrobial therapy for external ear infections. Antibiotic Therapy in Head and Neck Surgery. (Ed. JT Johnson) Marcel Decker Inc, New York, 209-227, 1987.

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7. **Hirsch BE**, Sekhar LN, Kamerer DB: Transtemporal and Infratemporal Approach for Benign Tumors of the Jugular Foramen and Temporal Bone. Surgery of Cranial Base Tumors. (Eds. L Sekhar, I Janecka) Raven Press, New York, 1992.
8. Sekhar LN, Pomeranz S, Janecka IP, and **Hirsch BE**: Classification, Technique, and Results of Surgical Resection of Petrous Bone Tumors. Surgery of Cranial Base Tumors. (Eds. L Sekhar, I Janecka) Raven Press, New York, 1992.
9. **Hirsch BE**, Weber PC: Diagnosis of Perilymphatic Fistula. In: Dizziness and Balance Disorders. (Ed. I Kaufman Arenberg) Kugler Publications, New York, 637-640, 1993.
10. **Hirsch BE**: Cerebrospinal fluid otorrhea. Current Therapy in Otolaryngology - Head and Neck Surgery. 5th Ed. (Ed. GA Gates) Mosby-Year Book Inc, St Louis, 62-66, 1994.
11. **Hirsch BE**: Otogenic Skull Base Osteomyelitis. Neurotology. (Eds. RK Jackler, DE Brackmann) Mosby Year Book Inc, Chicago IL, 1157-1168, 1994.
12. **Hirsch BE**: Diseases of the External Ear. Pediatric Otolaryngology, Third Edition. (Eds. CD Bluestone, SE Stool) WB Saunders Company, Philadelphia PA, 1994.
13. Weber PC, **Hirsch BE**: Congenital Perilymphatic Fistula. Advances in Otolaryngology - Head and Neck Surgery. (Eds. EN Myers, CD Bluestone, DE Brackmann, CJ Krause) Mosby Year Book Inc, Chicago IL, 1995.
14. **Hirsch BE**: Acoustic Neuroma. Operative Otolaryngology - Head and Neck Surgery. (Ed. EN Myers) WB Saunders Company, Philadelphia PA, 1997.
15. Kamerer DB, **Hirsch BE**: Cancer of the Temporal Bone. Current Therapy in Otolaryngology - Head and Neck Surgery. (Ed. GA Gates) Mosby Year Book Inc, St. Louis MO, 221-224, 1998.
16. **Hirsch BE**: Cholesterol Granuloma and Congenital Epidermoid Tumors of the Temporal Bone. Operative Otolaryngology - Head and Neck Surgery, Vol II (Ed. EN Myers) WB Saunders Company, Philadelphia PA, 1997.
17. **Hirsch BE**: External Canal Osteoma and Exostoses. Operative Otolaryngology - Head and Neck Surgery, Vol II (Ed. EN Myers) WB Saunders Company, Philadelphia PA, 1997.
18. **Hirsch BE**: Foreign Bodies of the External Auditory Canal. Operative Otolaryngology - Head and Neck Surgery, Vol II (Ed. EN Myers) WB Saunders Company, Philadelphia PA, 1997.
19. **Hirsch BE**: Glomus Tumors. Operative Otolaryngology - Head and Neck Surgery, Vol II (Ed. EN Myers) WB Saunders Company, Philadelphia PA, 1997.
20. **Hirsch BE**: Myringoplasty, Tympanoplasty. Operative Otolaryngology - Head and Neck Surgery, Vol II (Ed. EN Myers) WB Saunders Company, Philadelphia PA, 1997.
21. **Hirsch BE**: Ossicular Chain Reconstruction. Operative Otolaryngology - Head and Neck Surgery, Vol II (Ed. EN Myers) WB Saunders Company, Philadelphia PA, 1997.
22. **Hirsch BE**: Otitis Media, Myringotomy and Tympanostomy Tubes. Operative Otolaryngology - Head and Neck Surgery, Vol II (Ed. EN Myers) WB Saunders Company, Philadelphia PA, 1997.
23. **Hirsch BE**: Perilymphatic Fistulas. Operative Otolaryngology - Head and Neck Surgery, Vol II (Ed. EN Myers) WB Saunders Company, Philadelphia PA, 1997.
24. **Hirsch BE**, Chang CYJ: Carcinoma of the Temporal Bone. Operative Otolaryngology - Head and Neck Surgery, Vol II (Ed. EN Myers) WB Saunders Company, Philadelphia PA, 1997.

25. **Hirsch BE:** Tumors of the Facial Nerve. Operative Otolaryngology - Head and Neck Surgery, Vol II (Ed. EN Myers) WB Saunders Company, Philadelphia PA, 1997.
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28. **Hirsch BE:** Certification of added qualification in otology and neurotology. *Ear, Nose, & Throat Journal* 82(7):477:481-482, 2003.
29. **Hirsch BE:** Otogenic skull base osteomyelitis. In: Neurotology, 2nd Edition (Eds. RK Jackler, DE Brackmann) Elsevier, Philadelphia, 2004.
30. **Hirsch BE:** Paraganglioma. American Academy of Otolaryngology – Head and Neck Surgery Foundation Otolaryngology/Neurotology Unit of the National Resident Online Study Guide, 2004.
31. Dohar J, Hawke M: Managing the draining ear. BC Decker, Inc 2004, **Hirsch BE**, book reviewer.
32. Hawke M: Ear disease – A clinical guide. BC Decker, Inc. 2004. **Hirsch BE**, book reviewer.
33. Kassam AB, Gardner P, Snyderman C, Carrau R, Zimmer L, **Hirsch BE**, Mintz A: Endoscopic, expanded endonasal approach to the jugular foramen. *Operative Techniques in Neurosurgery* 8(1):35-41, 2005.
34. **Hirsch BE:** Surgical Treatment of Vestibular Disorders. In: Neurologic Clinics of North America (Eds. Furman JF, Whitney SL). WB Saunders Company, Philadelphia PA 23(3)875-891, 2005.
35. Lundsford LD, Niranjana A, Noren G, Loeffler J, deLotginiere A, Grabel J, Regis J, Roche PH, Smee R, Speiser B, Alden M, Vermeulen S, Regine WF, **Hirsch BE**, Ledbetter TK, Emerick RL: International RadioSurgery Association (IRSA) Medical Advisory Board. Stereotactic Radiosurgery for Patients with Vestibular Schwannomas (Radiosurgery Practice Guideline Initiative /Report #4-06), March 2006.
36. Toh EH, **Hirsch BE:** Facial nerve decompression and repair. Otolaryngology: A Surgical Notebook, Thieme Medical Publishers Inc, New York, 2006.
37. Toh EH, **Hirsch BE:** Temporal bone resection. Otolaryngology: A Surgical Notebook, Thieme Medical Publishers Inc, New York, 2007.
38. **Hirsch, BE:** “Book Review”: The Facial Nerve in Temporal Bone and Lateral Skull Base Microsurgery, *Laryngoscope* 117, 2007.
39. **Hirsch BE:** Foreign bodies of the external auditory canal. Operative Otolaryngology –Head and Neck Surgery, 2nd edition (Ed EN Myers) 2007.
40. **Hirsch BE:** External canal osteomas and exostoses. Operative Otolaryngology –Head and Neck Surgery, 2nd edition (Ed. EN Myers) 2007.
41. **Hirsch BE:** Otitis media, myringotomy, and tympanostomy tubes. Operative Otolaryngology –Head and Neck Surgery, 2nd edition (Ed. EN Myers) 2007.
42. **Hirsch BE:** Myringotomy and tympanoplasty. Operative Otolaryngology –Head and Neck Surgery, 2nd edition (Ed. EN Myers) 2007.
43. **Hirsch BE:** Reconstruction of the ossicular chain. Operative Otolaryngology –Head and Neck Surgery, 2nd edition (Ed. EN Myers) 2007.
44. **Hirsch BE:** Otosclerosis. Operative Otolaryngology –Head and Neck Surgery, 2nd edition (Ed. EN Myers) 2007.

45. **Hirsch BE**: Perilymphatic fistula. Operative Otolaryngology –Head and Neck Surgery, 2nd edition (Ed. EN Myers) 2007.
46. **Hirsch BE**, St Martin M: Tumors of the facial nerve. Operative Otolaryngology –Head and Neck Surgery, 2nd edition (Ed. EN Myers) 2007.
47. **Hirsch BE**, Chang CYJ, Moody Antonio S: Carcinoma of the temporal bone. Operative Otolaryngology –Head and Neck Surgery, 2nd edition (Ed. EN Myers) 2007.
48. **Hirsch BE**, St Martin M, Kassam AB: Acoustic neuroma. Operative Otolaryngology –Head and Neck Surgery, 2nd edition (Ed. EN Myers) 2007.
49. **Hirsch BE**: Glomus tumors. Operative Otolaryngology –Head and Neck Surgery, 2nd edition (Ed. EN Myers) 2007.
50. **Hirsch BE**, Vaezi A: Cholesterol granuloma and congenital epidermoid tumors of the temporal bone. Operative Otolaryngology –Head and Neck Surgery, 2nd edition (Ed. EN Myers) 2007.
51. St. Martin MB, **Hirsch BE**: Imaging of Hearing Loss. Otolaryngologic Clinics of North America (Ed. Branstetter IV BF). B Saunders Company, Philadelphia PA, 41(1)157-178, 2008.
52. Moody Antonio SA, **Hirsch BE**. Malignant tumors of the temporal bone. *eMedicine from WebMD*, Otolaryngology and Facial Plastic Surgery. <http://emedicine.medscape.com/article/845777-overview>, Mar 2009; updated Mar 2012.
53. Borkar DM, **Hirsch BE**: Otogenic skull base osteomyelitis. Chapter 38. Comprehensive Textbook of Otolaryngology, (Eds. Kirtane M, Brackmann D, Borkar D, deSouza C) Bhalani Medical Publishers, India, 2009.
54. Sando I, Takasaki K, **Hirsch BE**. Clinical Atlas of the Temporal Bone and Eustachian Tube, Kanehara & Co., Ltd, Tokyo, Japan, 2011.
55. Vivas EX, **Hirsch BE**; Book Review: Atlas of Acoustic Neurinoma Microsurgery 2nd ed. Sanna M, et al. *Otology & Neurotology*. 2012 June; 33(4):493.
56. **Hirsch BE**, Moskowitz HS. Benign Neoplasia-Schwannoma-Neurofibromatosis Type 1. Encyclopedia of Otolaryngology, Head and Neck Surgery, (Ed. SE Kountakis), 2013.
57. **Hirsch BE**, Moskowitz HS. Benign Neoplasia-Schwannoma-Neurofibromatosis Type 2. Encyclopedia of Otolaryngology, Head and Neck Surgery, (Ed. SE Kountakis), 2013.
58. **Hirsch BE**, Immunization guidelines for cochlear implant recipients. *Ear Nose Throat J*. 2013 Oct-Nov 92(10-11):486. PMID: 24170455.
59. **Hirsch BE**, Jackler RK. Section Editors: IX Otology, Bailey Head & Neck Surgery – Otolaryngology Review, (Eds. Rosen & Johnson), Lippincott Williams & Wilkins, Philadelphia, 2014.
60. Palmer K, **Hirsch BE**. Hearing Aids & Assistive Listening Devices. Chapter 164, Bailey Head & Neck Surgery Review, (Eds. Rosen & Johnson), Lippincott Williams & Wilkins, Philadelphia, 2014.
61. McAfee JS, **Hirsch BE**. Chapter: The Facial Nerve in Otologic Infection and Iatrogenic Injury in Facial Nerve Disorders and Diseases: Diagnosis and Management. Thieme Publishers, Germany, 2015.

PROFESSIONAL ACTIVITIES

TEACHING

Courses, Lectures, Seminars and Tutorials

Pittsburgh Otologic Society, "Neoglottic Reconstruction Following Total Laryngectomy"; Resident's Competition - First Place, Pittsburgh PA, May 1980

American Academy of Otolaryngology - Head and Neck Surgery Annual Meeting, Poster Presentation: "Paragangliomas of Vagal Origin"; New Orleans LA, September 20-24, 1981

American College of Surgeons, Southwestern Pennsylvania Chapter Meeting, "Paragangliomas of Vagal Origin"; November 1981

Eye and Ear Hospital of Pittsburgh, Department of Nursing Service, "ENT Emergencies"; Pittsburgh PA, March 1982

Triologic Combined Spring Meeting, "Immunostimulation of Head and Neck Cancer Patients: In Vitro and Preliminary Experiences"; Palm Beach FL, May 1982

Georgetown University Medical School, "Ear Pain and Hearing Loss"; Washington DC, December 1982

Georgetown University Hospital, "Acute Airway Management in Infants"; Washington DC, February 1983

Three Rivers Conference on Communicative Disorders sponsored by the University of Pittsburgh Chapter of the National Speech, Language and Hearing Association, "Acoustic Tumors"; Pittsburgh PA, November 2, 1984

University of Pittsburgh School of Medicine, Department of Medicine, Clinical Skills Course, "The Dizzy Patient"; Pittsburgh PA, February 27, 1985

Abington Surgical/Medical Exchange Conference, "Acoustic Neuroma" and "Overview of Ear Pathology"; South Lake Tahoe NV, March 1-8, 1985

University of Pittsburgh School of Medicine, Department of Anesthesia - Critical Care Medicine, "Vocal Cord Paralysis - Etiology, Diagnosis and Management"; Pittsburgh PA, April 12, 1985

Pennsylvania Academy of Ophthalmology and Otolaryngology Annual Scientific Meeting, "Experiences in Cochlear Implantation"; Bedford PA, June 21-23, 1985

University of Pittsburgh School of Medicine, Department of Otolaryngology in conjunction with the Pennsylvania Academy of Ophthalmology and Otolaryngology, The Vestibular System: Clinical Electronystagmography, "Clinical Laboratory Tests" and "Ototoxicity"; Pittsburgh PA, August 9-10, 1985

University of Pittsburgh School of Medicine, Department of Medicine, Rheumatology Grand Rounds, "Immunologic Hearing Loss"; Pittsburgh PA, September 23, 1985

American Neurotology Society Annual Meeting, "Pulsatile Tinnitus with Unusual Temporal Bone Pathology"; Atlanta GA, October 19, 1985

University of Pittsburgh School of Medicine, Department of Otolaryngology, Co-Director of course, "Surgical Anatomy and Techniques of the Temporal Bone"; Presented "Cochlear Implantation" and "Acoustic Tumors"; Pittsburgh PA, October 1985

University of Pittsburgh School of Medicine, Department of Otolaryngology, Eye and Ear Hospital, "Acute Vertigo and Sudden Hearing Loss"; 1st Year Otolaryngology Residents presentation, July 2, 1986

The Department of Otolaryngology, University of Pittsburgh School of Medicine and Eye and Ear Hospital with the Pennsylvania Academy of Ophthalmology and Otolaryngology, The Vestibular System: Clinical

Testing, Diagnosis, and Treatment, "Blood Tests?" and "Is It Ototoxicity?"; August 1-2, 1986

Self Help for Hard of Hearing Organization, "Hearing Loss - Types and Treatment"; October 15, 1986

University of Pittsburgh School of Medicine, Division of Continuing Education Outreach Program in Conjunction with Mayview State Hospital, "Current Treatment of the Deaf Patients"; January 23, 1987

The University of Oklahoma Health Sciences Center, Department of Otorhinolaryngology, "Computer Rotational Testing"; March 6, 1987

Abington Memorial Hospital Spring Conference, "Diagnosis and Management of Sensorineural Hearing Loss"; Steamboat Springs CO, March 14-21, 1987

The Pennsylvania Academy of Ophthalmology and Otolaryngology Annual Meeting, "Clinical Experiences with Horizontal Rotation"; Bedford Springs PA, June 13, 1987

Eye and Ear Hospital of Pittsburgh, Department of Staff Development, "Acoustic Neuroma"; Pittsburgh PA, July 14, 1987

B'nai B'rith, "Medical and Surgical Treatment of Sensorineural Hearing Loss"; Pittsburgh PA, September 20, 1987

University of Pittsburgh School of Medicine, Gross Anatomy Lecture, "Cancer of the Head and Neck"; Pittsburgh PA, October 26, 1987

American College of Surgeons, Southwestern Chapter, 20th Annual Residents' Day Program, Discussant for Robert Rothfield, MD, "Surgical Management of Early Vocal Cord Carcinoma"; Pittsburgh PA, November 11, 1987

Center for Cranial Base Surgery, Presbyterian-University Hospital, Eye and Ear Hospital and the University of Pittsburgh School of Medicine Division of Continuing Education, Cranial Base Tumors: Diagnosis and Treatment, "Glomus Tumors"; Pittsburgh PA, November 21, 1987

Southwestern Pennsylvania Speech and Hearing Association, Case Presentation, Pittsburgh PA, December 9, 1987

American College of Surgeons, Southwestern Chapter, "Paraganglioma of the Temporal Bone"; Pittsburgh PA, April 27, 1988

Alumni Association of Eye and Ear Hospital, Pittsburgh Otologic Society and the University of Pittsburgh School of Medicine Department of Otolaryngology and Division of Continuing Education, Member, Panel Discussion, "Problems in Middle Ear Reconstruction"; Pittsburgh PA, May 13, 1988

Center for Cranial Base Surgery, Presbyterian-University Hospital of Pittsburgh, Eye and Ear Hospital of Pittsburgh, and the University of Pittsburgh Center for Continuing Education Health Sciences: International Symposium on Cranial Base Surgery, Faculty Member, "Glomus Tumors: Diagnosis and Classification"; "Temporal Bone Carcinoma: Review of 26 Patients"; Pittsburgh PA, September 15, 1988

American Academy of Otolaryngology - Head and Neck Surgery 92nd Annual Meeting, Poster Presentation: "Sphenoid Abscess: An Unusual Complication of Trans-sphenoidal Hypophysectomy"; Washington DC, September 25-29, 1988

University of Pittsburgh School of Medicine Department of Neurobiology, Anatomy and Cell Science, "Cancer of Head and Neck"; November 8, 1988

Twenty-fourth Annual Scientific Meeting of The American Neurotology Society, "Metastatic Atrial Myxoma to the Temporal Bone"; San Francisco CA, April 1, 1989

Southwestern Pennsylvania American College of Surgeons Meeting, "Unusual Skull Base Tumors"; Pittsburgh PA, April 26, 1989

Otolaryngology Alumni Association of the University of Pittsburgh and Eye and Ear Hospital, Panel Participant: Common Problems in Otolaryngology, Pittsburgh PA, May 19, 1989

American Academy of Otolaryngology - Head and Neck Surgery 93rd Annual Meeting, Scientific Exhibit: Model Computer-Based Instructional Program for Surgical Training, New Orleans LA, September 1989

House Ear Institute: First Annual Meeting of the North American Skull Base Society: Approaches to the Skull Base, "Acoustic neurilemmoma excision by the retrosigmoid approach facial nerve preservation and neurophysiological monitoring"; Los Angeles CA, February 18, 1990

House Ear Institute: First Annual Meeting of the North American Skull Base Society: Approaches to the Skull Base. Poster Presentation: "Operative management of large glomus jugulare tumors requiring combined resection"; Los Angeles CA, February 1990

The American Neurotology Society Scientific Meeting, "Acoustic neuroma surgery: Predictive criteria for hearing preservation"; Palm Beach FL, April 27, 1990

University of Pittsburgh School of Medicine Department of Otolaryngology, and Division of Continuing Education, Mini-Seminar: Otolaryngology Update, Faculty Member, Panel Member - Meniere's Disease and Middle Ear Reconstruction Techniques, Pittsburgh PA, May 18, 1990

Allegheny General Hospital, Division of Otolaryngology/Neurotology, Department of Surgery sponsored, Middle Ear/Mastoid Surgical Techniques for the 90's, Presented "Hydroxyapatite"; Panel Moderator: Stapedectomy Problems/Complications, Pittsburgh PA, June 16, 1990

University of Pittsburgh School of Medicine, Otolaryngology and Neurological Surgery, Center for Continuing Education, sponsored Cranial Base Surgery: Practical Applications Workshop, presented, "Surgical Anatomy of the Infratemporal Fossa"; Panel Member: Infratemporal Fossa: Surgical Approaches, Tumor Excision, Reconstructive Options, and Facial Nerve Surgery, Pittsburgh PA, June 29-30, 1990

Meniere's Support Group, "Testing Performed to Evaluate Patients with Meniere's Disease"; Pittsburgh PA, October 16, 1990

The Society of Otorhinolaryngology and Head-Neck Nurses, "Otologic Tumors"; Pittsburgh PA, October 26-27, 1990

University of Pittsburgh School of Medicine and The Pittsburgh Otologic Society, Mini-Seminars in Otolaryngology, "Tympanoplasty in Cholesteatoma Surgery"; Pittsburgh PA, February 13, 1991

Temple University School of Medicine, Family Practice Review, Presented "Fluctuant Hearing Loss"; Philadelphia PA, March 21, 1991

The Otolaryngology Alumni Association of the University of Pittsburgh and Montefiore University Hospital, Otolaryngology Teaching Day, Faculty Member and Panel Member, "Hearing Loss in Children"; Pittsburgh, PA April 19, 1991

University of Pittsburgh Medical Center, Computational Diagnostics, Instrumentation Associates, Xomed-Treace, Otoneurology Update, Presented: "Prognostic indicators for hearing preservation in acoustic tumor removal"; Pittsburgh PA, June 13, 1991

American Academy of Otolaryngology - Head and Neck Surgery, 95th Annual Meeting, "Single-Stage Management of Cholesteatoma", Kansas City Missouri, September 22-26, 1991

Audiotape in the series Passages #2, "Chronic Otitis Media", Published by H & R Communication, Belmar NJ, 1991

Audiotape in the series Passages #2, "Acoustic Neuroma"; Published by H & R Communication, Belmar NJ, 1991

Self Help for the Hard of Hearing Meeting, "Nerve Deafness"; Pittsburgh PA, February 12, 1992

University of Pittsburgh School of Medicine Department of Otolaryngology, Masters in Otolaryngology Meeting, "Cerebrospinal Fluid Otorrhea"; Panel Member: "How I Do It"; Snowmass CO, March 21-28, 1992

Allegheny General Hospital, Allegheny Campus of the Medical College of Pennsylvania, Otology Update Diseases of the Oval and Round Window"; "Diagnosis of Perilymph Fistula"; and panel member, "Complicated Stapedectomy"; Pittsburgh PA, May 9, 1992

University of Pittsburgh Medical Center, Center for Cranial Base Surgery, School of Medicine, Departments of Neurological Surgery and Otolaryngology, and the Center for Continuing Education in the Health Sciences, Cranial Base Microsurgery and Radiosurgery: A Practical Applications Workshop, "Transcochlear Approach"; Pittsburgh PA, May 11-14, 1992

Pennsylvania Academy of Otolaryngology Annual Meeting, "DNA Flow Cytometry in Acoustic Neuromas"; Hershey PA, June 20, 1992

University of Pittsburgh Medical Center, Center for Cranial Base Surgery, School of Medicine, Departments of Neurological Surgery and Otolaryngology, and the Center for Continuing Education in the Health Sciences, Cranial Base Microsurgery and Radiosurgery: A Practical Applications Workshop, "Transcochlear Approach"; Pittsburgh PA, September 22-25, 1992

The University of Pittsburgh Medical Center for Continuing Education and the Department of Otolaryngology, Masters in Otolaryngology, "Partial Labyrinthectomy"; Moderator: Common Dilemmas in Otology Panel, Steamboat Springs CO, March 15-19, 1993

American Otological Society Meeting, "Translabyrinthine Approach to Skull Base Tumor with Hearing Presentation"; "Excision of Petroclival Tumors by a Total Petrosectomy Approach"; Panel Member: "Intraoperative Neural Monitoring: When is it Helpful, When is it Required?"; Combined Otolaryngology Spring Meeting, Los Angeles CA, April 16-20, 1993

University of Pittsburgh Medical Center, The Eye & Ear Institute of Pittsburgh, Cochlear Corporation, Recent Advances in Cochlear Implants and Other Technology for the Deaf, "Problems of Hearing Management of the Neurofibromatosis Patient"; Pittsburgh PA, June 30, 1993

The Medical Center Beaver: "Hearing Loss Management"; Beaver PA, July 16, 1993

American Academy of Otolaryngology – HNS, 97th Annual Meeting, "Revision Course Instructor, "Diagnosis of Cerebrospinal and Perilymph Fluid Leaks"; Poster Presentations: "Localizing Retrocochlear Hearing Loss" and "Imaging of Ossicular Prosthesis"; Minneapolis MN, October 2-6, 1993

The Department of Otolaryngology University of Pittsburgh School of Medicine, The University of Pittsburgh for Continuing Education in the Health Sciences: Otolaryngology for the Family Practitioner, "Facial Paralysis: Diagnosis and Management"; Pittsburgh PA, January 14, 1994

The University of Pittsburgh Medical Center for Continuing Education and the Department of Otolaryngology, Masters in Otolaryngology, "Single Stage Management of Cholesteatoma"; Breckenridge CO, March 21-24, 1994

Tri-State Chapter Regional Meeting of the Acoustic Neuroma Association, "Acoustic Neuroma: Diagnosis and Treatment"; Beaver Falls PA, April 9, 1994

University of Pittsburgh Medical Center, Center for Continuing Education in the Health Sciences, South Side Hospital Medical Staff, "Hearing Loss"; Pittsburgh PA, April 11, 1994

The Center for Continuing Education in the Health Sciences, Department of Otolaryngology, University of Pittsburgh School of Medicine, Alumni Teaching Day, Panel Member: Otology Grand Rounds, Pittsburgh PA, April 29, 1994

Pennsylvania Academy of Otolaryngology - Head and Neck Surgery, "Efficacy of Tympanic Electrocochleography (ECOG) in the Diagnosis of Endolymphatic Hydrops," June 17, 1994

The Washington Hospital Continuing Medical Education Program, "Evaluation and Treatment of Hearing Loss in the Elderly"; Washington PA, August 10, 1994

University of Pittsburgh Medical Center, Center for Continuing Education in the Health Sciences, School of Medicine, Department of Otolaryngology and the School of Health and Rehabilitative Sciences, Department of Physical Therapy, Assessment and Rehabilitation of Vestibular and Balance Disorders, "Surgical Management"; Pittsburgh PA, September 30, 1994

University of Pittsburgh Medical Center and the Department of Otolaryngology, The Pittsburgh Temporal Bone Anatomy and Surgical Dissection, Course Director, Presented: "Overview Mastoid"; "Skull Base Approaches", "Lateral Facial Nerve Decompression", Pittsburgh PA, October 27-29, 1994

Triologic Society Eastern Section Meeting, "Treatment of Autoimmune Ear Disease with FK506"; Pittsburgh PA, January 27, 1995

The North American Skull Base Meeting Sixth Annual Meeting, sponsored with the University of Pittsburgh Center for Continuing Education in the Health Sciences, Panel Member, "Transtemporal Approaches"; Naples FL, February 21, 1995

University of Pittsburgh Medical Center, Center for Continuing Education in the Health Sciences and the Lawrence County Medical Society Meeting, "Facial Paralysis"; New Castle PA, March 7, 1995

The University of Pittsburgh School of Medicine, Department of Otolaryngology and Center for Continuing Education in the Health Sciences, Masters in Otolaryngology, "Intratympanic Gentamicin for Treatment of Vertigo"; Breckenridge CO, March 14, 1995

The Pennsylvania Academy of Otolaryngology - Head & Neck Surgery, "Issues in Acoustic Neuroma Surgery"; Hershey PA, June 17, 1995

American Academy of Otolaryngology - Head and Neck Surgery, Annual Meeting, Co-Course Instructor, "Single Stage Management of Cholesteatoma" and "Practical Imaging of Temporal Bone"; New Orleans LA, September 16-19, 1995

Department of Otolaryngology University of Pittsburgh and the University of Pittsburgh Center for Continuing Education in the Health Sciences, Mini-Seminar Series: Update in Techniques for Hearing Restoration, "Cholesteatoma Surgery: Canal Wall Up and Down Techniques and Hearing Results"; Pittsburgh PA, October 11, 1995

Department of Otolaryngology University of Pittsburgh and the University of Pittsburgh Center for Continuing Education in the Health Sciences, Co-Director, The Pittsburgh Temporal Bone Anatomy and Surgical Dissection Course, Pittsburgh PA, October 12-14, 1995

University of Pittsburgh Student Health Service, "Evaluation and Treatment of Dizziness and Vertigo"; Pittsburgh PA, February 14, 1996

The University of Pittsburgh School of Medicine Department of Otolaryngology and Center for Continuing Education in the Health Sciences, Masters in Otolaryngology, "Otologic Diagnosis and Temporal Bone Imaging"; Crested Butte CO March 12, 1996

Temple University, Annual Family Practice Review Course, "ENT Problems in the Elderly"; Lancaster PA, March 23, 1996

University of Pittsburgh Medical Center, "Hearing Problems Relating to Facial Paralysis"; Pittsburgh PA, April 13, 1996

Allegheny General Hospital, Temporal Bone Dissection Course, "Stapedectomy", and "Lateral Graft Tympanoplasty"; Pittsburgh PA, April 26-28, 1996

American Otologic Society Meeting, "Gentamicin Therapy for Meniere's Disease"; Combined Otolaryngology Spring Meeting, Orlando FL, May 4, 1996

University of Pittsburgh School of Medicine, Ambulatory Sub-Specialties Lecture Series, "Evaluation and Treatment of Hearing Loss"; Pittsburgh PA, May 30, 1996

Allegheny General Hospital Division of Otolaryngology, Allegheny Neuroscience Institute, Medical College of Pennsylvania and Hahnemann University, Temporal Bone Microanatomy & Hands-On Dissection Workshop, "Stapedectomy"; "Tympanoplasty"; Pittsburgh PA, April 26-28, 1996

University of Pittsburgh Medical Center, Center for Continuing Education in the Health Sciences, North Hills Passavant Hospital, "Diagnosis and Treatment of Vertigo"; Pittsburgh PA, June 18, 1996

Boston University School of Medicine, Department of Continuing Medical Education, Guest Faculty, "Ossicular Reconstruction: A Temporal Bone Workshop"; Boston MA, June 23, 1996

Second International Skull Base Congress Meeting, San Diego CA, June 29 - July 4, 1996

University of Pittsburgh Center for Continuing Education in the Health Sciences, Department of Otolaryngology, "Single Stage Management of Cholesteatoma"; Mini-Seminar Series - Update in the Treatment of Chronic Ear Disease, Pittsburgh PA, September 18, 1996

University of Pittsburgh Medical Center Department of Otolaryngology, The Pittsburgh Temporal Bone Anatomy and Surgical Dissection Course, Course Director; Presented: "Tympanoplasty"; "Facial Nerve Decompression"; Pittsburgh, PA September 19-21, 1996

Temple University, Second Annual Primary Care Review Program, "Inflammatory Diseases of the External Canal and Middle Ear - Practical Clinical Considerations"; Lancaster PA, October 3, 1996

American Academy of Otolaryngology - Head and Neck Surgery 99th Annual Meeting, Course Co-Director, "Practical Imaging of the Temporal Bone" and "Single Stage Management of Cholesteatoma"; Washington DC, September 29 - October 2, 1996

Self Help for the Hard of Hearing (SHHH), "Management of Severe Hearing Loss"; Pittsburgh PA, October 16, 1996

University of Pittsburgh, School of Medicine, Center for Continuing Education in the Health Sciences, Department of Otolaryngology, Department of Ophthalmology, Emergency! Focus on Otolaryngology & Ophthalmology, "Otologic Emergencies"; Pittsburgh PA, November 20, 1997

The University of Pittsburgh School of Medicine, Department of Otolaryngology and Center for Continuing Education in the Health Sciences, Masters in Otolaryngology, "Beta-2 Transferrin: An Update"; Park City UT, March 4, 1997

The University of Pittsburgh Medical Center, Center for Continuing Education in the Health Sciences, "Common ENT Problems"; Washington Hospital, Washington PA, June 11, 1997

American Academy of Otolaryngology - Head and Neck Surgery, Annual Meeting, Course Co-Director, "Practical Imaging of the Temporal Bone" and "Single Stage Management of Cholesteatoma"; San Francisco CA, September 6-10, 1997

The University of Pittsburgh Medical Center, Center for Continuing Education in the Health Sciences, "Vertigo"; UPMC - Beaver Valley, Beaver PA, October 15, 1997

University of Pittsburgh School of Medicine Department of Otolaryngology and Center for Continuing Education in the Health Sciences, Otolaryngology Mini-Seminar Series: Otology, "Beta-2 Transferrin: An Update"; October 29, 1997

University of Pittsburgh Medical Center Department of Otolaryngology, The Pittsburgh Temporal Bone Anatomy and Surgical Dissection Course, Co-Course Director; Presented: "Tympanoplasty"; "Facial Recess Lateral Facial Nerve Decompression"; Pittsburgh PA, October 30-November 1, 1997

Self Help for the Hard of Hearing (SHHH), Communication Access Festival, "An Update on Cochlear

Implants”; Pittsburgh PA, December 2, 1997

University of Pittsburgh School of Medicine, Ambulatory Sub-Specialties Lecture Series, Pittsburgh PA, “A Deafness@”; March 5, 1998 and “Dizziness” March 18, 1998

The University of Pittsburgh School of Medicine, Department of Otolaryngology and Center for Continuing Education in the Health Sciences, Masters in Otolaryngology, "Problems in Otology - What would you do?"; Snowmass CO, March 10, 1998

University of Pittsburgh Medical Center Inservice, “Tympanoplasty”; Pittsburgh PA, March 17, 1998

University of Pittsburgh Center for Continuing Education in the Health Sciences and the University of Pittsburgh School of Medicine Department of Otolaryngology, George C & Robert A Schein Memorial Otolaryngology Alumni Day, Moderator of Panel, “Dilemmas in Otology”; Pittsburgh PA, May 1, 1998

Thirteenth International SHHH (Self-Help for the Hard of Hearing) Convention, Cochlear Implants in 1998"; Panel participation, “Ask the Doctor”; Boston MA, June 13, 1998

Confluence 98, Pittsburgh’s Annual Science Fiction Convention, panel discussion, “The Bionic Man Revisited: Prospects for Merging Human and Machine in a New Millennium”; presented, “Update on Cochlear Implants”; Pittsburgh PA, September 5, 1998

American Academy of Otolaryngology - Head and Neck Surgery Annual Meeting, Course Co-Director, “Practical Imaging of the Temporal Bone” and “Single Stage Management of Cholesteatoma”; San Antonio TX, September 12-16, 1998

University of Pittsburgh Medical Center Department of Otolaryngology, The Pittsburgh Temporal Bone Anatomy and Surgical Dissection Course, Co-Course Director; "Acoustic Neuroma Surgery"; “Tympanoplasty” and “Facial Recess & Facial Nerve Decompression”; Pittsburgh PA, October 12-16, 1998

The University of Pittsburgh Medical Center, Center for Continuing Education in the Health Sciences, “Update on Cochlear Implants”; Citizens General Hospital, New Kensington PA, October 13, 1997

University of Pittsburgh School of Medicine Department of Otolaryngology and Center for Continuing Education in the Health Sciences, Otolaryngology Mini-Seminar Series: Otology, “Update on Cochlear Implants”; October 14, 1998

University of Pittsburgh School of Medicine Center for Continuing Education in the Health Sciences, Emergency: Focus on Otolaryngology & Ophthalmology, “Otologic Emergencies”; Pittsburgh PA, February 26, 1999

Conference of Educational Administrators of Schools and Programs for the Deaf, Sponsored by Western Pennsylvania School for the Deaf, Invited Lecturer, “Cochlear Implants”; Pittsburgh PA, May 2, 1999

Northwest Medical Center, “Evaluation and Treatment of Vertigo”; Franklin PA, May 21, 1999

Pennsylvania Academy of Otolaryngology - Head and Neck Surgery, Member, Acute Sensorineural Hearing Loss Panel, Hershey PA, June 18-19, 1999

American Academy of Otolaryngology - Head and Neck Surgery Annual Meeting, Course Co-Director, “Practical Imaging of the Temporal Bone” and “Single Stage Management of Cholesteatoma”; New Orleans LA, September 25-29, 1999

University of Pittsburgh Medical Center Health System Center for Continuing Education in the Health Sciences, Outreach Program, Armstrong County Memorial Hospital, “Hearing Loss & Hearing Aids”; Kittanning PA, September 29, 1999

University of Pittsburgh Center for Continuing Education in the Health Sciences, Fall Specialty Conference: Otolaryngology, “Hearing Loss and Hearing Aids”; October 16, 1999

University of Pittsburgh, School of Medicine, Department of Otolaryngology and Center for Continuing

Education in the Health Sciences, “Beta-2 Transferrin: An Update”; Pittsburgh PA, October 27, 1999

University of Pittsburgh Medical Center Department of Otolaryngology, The Pittsburgh Temporal Bone Anatomy and Surgical Dissection Course, Co-Course Director; Presented, "Facial Recess & Facial Nerve Decompression"; “Cochlear Implant”; “Tympanoplasty/Ossicular Chain Reconstruction” and “Acoustic Neuroma Surgery”; Pittsburgh PA, October 25-29, 1999

II International Course of Otologic Surgery and Temporal Bone Dissection, Visiting Professor, “Tympanoplasty”; “Stapedectomy”; “Mastoidectomy - Canal Wall Up”; “Mastoidectomy - Canal Wall Down”; “Vestibular Neurectomy”; “Facial Nerve Surgery and Repair”; “Cerebellopontine Angle Tumors” and “Glomus Tumors”; Panel Discussion: “Otologic Management”; Monterrey Mexico, November 17-21, 1999

Children’s Hospital of Pittsburgh Pediatric Otolaryngology Department, “Cochlear Implantation”; Pittsburgh PA, January 7, 2000

The University of Pittsburgh School of Medicine Department of Otolaryngology and Center for Continuing Education in the Health Sciences, High Altitude/Masters in Otolaryngology, Moderator, Otology, presented “Beta-2 Transferrin: An Update”; Vail CO, February 19-26, 2000

University of Puerto Rico, Annual Department Graduation Conference, Visiting Professor, “Surgical Management of Vertigo”; “Tympanoplasty and Ossicular Chain Reconstruction” and “Surgical Management of Cholesteatoma”; Participant in three panel discussions, Puerto Rico, June 16-19, 2000

The Venezuelan Society of Otorhinolaryngology, Invited Faculty, “Medical and Surgical Treatment of Vertigo” and “Ossicular Chain Reconstruction”; Caracas, Venezuela, October 19-21, 2000

University of Pittsburgh Medical Center Department of Otolaryngology, The Pittsburgh Temporal Bone Anatomy and Surgical Dissection Course, Co-Course Director; Presented: “Mastoidectomy”; "Facial Recess & Facial Nerve Decompression"; “Cochlear Implant”; “Tympanoplasty/Ossicular Chain Reconstruction” and “Acoustic Neuroma Surgery”; Pittsburgh PA, October 23-27, 2000

The University of Pittsburgh School of Medicine Department of Otolaryngology and Center for Continuing Education in the Health Sciences, High Altitude/Masters in Otolaryngology, Moderator, Otology; Presented “Implantable Hearing Aids”; Park City UT, March 11-14, 2001

The University of Pittsburgh School of Medicine Department of Otolaryngology and Center for Continuing Education in the Health Sciences, Advances in Cranial Base Surgery, Moderator – Panel: Lateral Skull Base, Pittsburgh PA, May 4-5, 2001

SUNY Downstate Medical Center, Department of Otolaryngology Grand Round Lecture Series, “Intratympanic Treatment of Meniere’s Disease” and “Implantable Hearing Devices”; May 24, 2001

Panhellenic Congress of Otorhinolaryngology Head and Neck Surgery, Scientific Advisor, Panel Moderator – Pathophysiology and Management, and Cochlear Implants, Presented: “Surgery of the Facial Nerve” and “Tinnitus Retraining Therapy”; Athens Greece, June 20-23, 2001

Pittsburgh and Southeastern Pennsylvania Chapters, Society of Head and Neck Nurses in conjunction with The Pennsylvania Academy of Otolaryngology Annual Scientific Meeting, “Advancements in Auditory Rehabilitation”; Philadelphia PA, June 29-30, 2001

University of Pittsburgh School of Medicine Department of Otolaryngology, Otology Mini-Seminar, “Update in Implantable Aids”; Pittsburgh PA, October 31, 2001

University of Pittsburgh Medical Center Department of Otolaryngology, Temporal Bone Anatomy and Surgical Dissection Course, Course Director, “Mastoidectomy”; “Facial Recess, Facial Nerve Decompression” and “Tympanoplasty/Ossicular Chain Reconstruction”; Pittsburgh PA, October 2001

The University of Pittsburgh School of Medicine Department of Otolaryngology and Center for Continuing

Education in the Health Sciences, High Altitude/Masters in Otolaryngology, Moderator, Otology; Presenter, “Implantable Hearing Aids”; Park City UT, March 10-16, 2002

American Academy of Otolaryngology – Head and Neck Surgery 15th Annual Cherry Blossom Conference, “Implantable Hearing Devices: Needs Analysis”; Washington DC, March 22-24, 2002

University of Pittsburgh School of Medicine Center for Continuing Education in the Health Sciences and the Department of Otolaryngology, Otolaryngology Update: Coding for New Practice Procedures, “Update in Otology and Audiology”; Pittsburgh PA, April 20-21, 2002

American Academy of Otolaryngology - Head and Neck Surgery Annual Meeting, Course Co-Director, “Practical Imaging in Otology”; San Diego CA, September 21-23, 2002

Allegheny County Medical Society, School Health Update 2002, “Hearing Disorders of Childhood”; Pittsburgh PA, October 12, 2002

University of Pittsburgh Medical Center Department of Otolaryngology, The Pittsburgh Temporal Bone Anatomy and Surgical Dissection Course, Course Director; “Mastoidectomy”; “Facial Recess, Facial Nerve Decompression”; “Acoustic Neuroma Surgery” and “Tympanoplasty/Ossicular Chain Reconstruction”; October 21-25, 2002

University of Pittsburgh, School of Medicine and Department of Otolaryngology, Mini Seminar in Otology: Update in Medical and Surgical Otology, “Intratympanic Treatment of Dizziness and Sudden Hearing Loss”; October 24, 2002

Journal of Deaf Studies and Deaf Education, University of Pittsburgh Medical Center Health System, Western Pennsylvania School for the Deaf, Cochlear Implants: A Comprehensive Overview, Pittsburgh PA, October 25, 2002

The American Laryngological, Rhinological and Otological Society, aka The Triologic Society, Panelist, Otology Panel: Advances in Diagnosis and Treatment of Sensorineural Hearing Loss, January 25, 2003

The Western Pennsylvania Hospital and Department of Medicine, ENT for the Primary Care Provider, “Dizziness and Benign Positional Vertigo”; Pittsburgh PA, March 7, 2003

Children’s Hospital of Pittsburgh Division of Child Neurology and the University of Pittsburgh School of Medicine, Department of Pediatrics and Center for Continuing Education in the Health Sciences, “Screening for and Treating Hearing Loss in Patients with Neurofibromatosis”; September 10, 2003

American Academy of Otolaryngology – Head and Neck Surgery Annual Meeting, Haginomore S, Sando I, Miura M, Orita Y, Hirsch BE, Takenaka H: Medial high jugular bulb: Contribution to etiology of endolymphatic hydrops, Orlando FL, September 22-24, 2003.

American Academy of Otolaryngology - Head and Neck Surgery Annual Meeting, Course Co-Director, “Practical Imaging in Otology” and “Surgical Decision Making in Cholesteatoma”; Orlando FL, September 19-24, 2003

University of Pittsburgh Mini Medical School, “What Did You Say? Understanding Hearing and Vestibular Function”; Pittsburgh PA, September 30, 2003

Department of Veterans Affairs, GRECC Education Conference, “Evaluation and Treatment of Hearing Loss”; October 3, 2003

University of Pittsburgh Medical Center Department of Otolaryngology, Temporal Bone Anatomy and Surgical Dissection Course, Course Director; Presented: “Mastoidectomy”, “Tympanoplasty/Ossicular Chain Reconstruction” and “Acoustic Neuroma Surgery”; October 20-24, 2003

University of Pittsburgh School of Medicine Department of Otolaryngology, “Update on Gentamicin Perfusion Therapy”; Mini Seminar Otology, October 22, 2003

Self-Help for the Hearing Impaired Meeting, “Evaluation and Treatment of Vertigo”; Pittsburgh PA, November 8, 2003

United Community Hospital, “Dizziness and Hearing Loss”; Grove City PA, February 26, 2004

High Altitude/Masters in Otolaryngology Meeting, “Implantable Devices in Otology”; Whistler British Columbia, April 2, 2004

The Virginia Society of Otolaryngology – Head and Neck Surgery Annual Meeting, Invited Keynote Speaker, Elbyrne G Gill Lecture, “Implantable Devices in Otology” and “Intratympanic Gentamicin Therapy”; April 16-17, 2004

Combined Otolaryngology Spring Meeting, The Triological Society, “Ossiculoplasty Using Incus Interposition: Hearing Results and Analysis of the Middle Ear Risk Index”; Phoenix AZ, May 3, 2004

Auditory Intervention and Management of Hearing Impaired Infants in the Tri-State Area, Sponsored by Cochlear Americas, University of Pittsburgh School of Medicine, an Children’s Hospital of Pittsburgh, “Medical Diagnosis of Referred Infants”; Pittsburgh PA, May 7, 2004

UPMC Horizon-Greenville Continuing Education, “Common Otologic Problems”; May 21, 2004

American Academy of Otolaryngology HNS Annual Meeting, Course Co-Director; “Practical Imaging in Otology, and Surgical Decision Making in Cholesteatoma”; New York, September 18-22, 2004

University of Pittsburgh Medical Center Department of Otolaryngology, Temporal Bone Anatomy and Surgical Dissection Course, Course Director; Presented, “Mastoidectomy”; “Facial Recess/Facial Nerve Decompression”; “Tympanoplasty/Ossicular Chain Reconstruction” and “Acoustic Neuroma Surgery”; October 11-15, 2004

Mini Seminar in Otology - Noise-Induced Hearing Loss, sponsored by University of Pittsburgh School of Medicine Department of Otolaryngology, “Hearing Impairment and Handicap”; Pittsburgh PA, October 14, 2004

Triological Society Meeting Eastern Section Meeting, Moderator for Otology Session, Washington DC, January 29-30, 2005

University of Pennsylvania Health System Department of Otolaryngology, Visiting Professor, “Noise Induced Hearing Loss” and “Intratympanic Gentamicin”; Philadelphia PA, February 10-11, 2005

Society of Head and Neck Nurses, “Cochlear Implant Update”; Pittsburgh PA, March 9, 2005

10th International Symposium on Cochlear Implants in Children, representing the AAO-HNS, Panel Member, “Soft Failures in Cochlear Implant Consensus Conference”; Dallas TX, March 19-20, 2005

Air Force Audiology Association Meeting on Cochlear Implants, Washington DC, April 1-2, 2005

DePaul School for Hearing and Speech Talk Your Physician to School Program, Course Director and Presenter, “Cochlear Implantation”; Pittsburgh PA, April 7, 2005

Pennsylvania Academy of Otolaryngology – Head and Neck Surgery Scientific Meeting, Panel Member, “Evaluation of Dizziness”; Pittsburgh PA, June 11, 2005

Evaluation and Treatment of Single Sided Deafness, sponsored by BAHA, “Evaluation of Hearing Loss” and “BAHA System”; Pittsburgh PA, July 28, 2005

American Academy of Otolaryngology – Head and Neck Surgery Annual Meeting, Course Co-Director, “Practical Imaging in Otology” and “Surgical Decision Making in Cholesteatoma”; Los Angeles CA, September 25, 2005

Pennsylvania Office of Vocational Rehabilitation, “BAHA and Other Hearing Devices”; Penn State PA, October 14, 2005

University of Pittsburgh Medical Center Department of Otolaryngology, Temporal Bone Anatomy and Surgical Dissection Course, Course Director; Presenter, “Mastoidectomy”; “Facial Recess/Facial Nerve Decompression”; “Tympanoplasty/Ossicular Chain Reconstruction”; “Acoustic Neuroma Surgery” and “Stapedectomy”; Pittsburgh PA, October 29-November 1, 2005

Middle East Update in Head and Neck Surgery Otolaryngology Conference, “Ossicular Chain Reconstruction”; “Implantable Hearing Devices”; “Antibiotics and Cochlear Implants” “Intratympanic Gentamicin Therapy”; “Superior Canal Dehiscence” and “Facial Nerve Recovery after Grafting”; Facilitator, Round Table Discussion on Chronic Ear Disease; Panelist, Round Table Discussion on Implants, Dubai, January 18-20, 2006

University of Pittsburgh, Department of Communication Science and Disorders Audiology Conference, “Otologic Middle Ear Implants, BAHA and Cochlear Implants”; Pittsburgh PA, February 3, 2006

Self Help for the Hard of Hearing (SHHH), “Cochlear Implants”; Pittsburgh PA, February 18, 2006

High Altitude/Masters in Otolaryngology Meeting, “Update on Implantable Middle Ear Devices” and “Understanding Imaging in Otology”; Snowmass Village CO, March 19, 2006

American Academy of Otolaryngology – Head and Neck Surgery Annual Meeting, Course Co-Director, “Practical Imaging in Otology” and “Surgical Decision Making in Cholesteatoma”; Toronto Canada, September 15-19, 2006

University of Pittsburgh Medical Center Department of Otolaryngology, Temporal Bone Anatomy and Surgical Dissection Course, Course Director; Presenter, “Mastoidectomy”; “Facial Recess/Facial Nerve Decompression”; “Tympanoplasty” and “Acoustic Neuroma Surgery”; October 11-14, 2006

ANSPACH - Approaches to the Skull Base for Senior Neurotology Residents, Invited Lecturer, “BAHA”; “Tympanoplasty”; “Ossicular Chain Reconstruction” and “Superior Canal Dehiscence”; November 6-7, 2006

High Altitude/Masters in Otolaryngology Meeting, Course Director; Presenter, “Conductive Hearing Loss – Variations on a Theme” and “Superior Canal Dehiscence”; Aspen CO, January 20-23, 2007

University of Pittsburgh School of Medicine, Center for Continuing Education in the Health Sciences and the Department of Otolaryngology, Alumni Day/Update in Otology ENT Refresher Course, Program Co-Director and Panel Moderator, March 16-17, 2007

Pennsylvania Academy of Otolaryngology – Head and Neck Surgery Annual Scientific Meeting, Panel Moderator: Decision Making in Otology, Philadelphia PA, June 8-9, 2007

Children’s Hospital of Pittsburgh Hearing Center, “Bilateral Cochlear Implantation”; Pittsburgh PA, September 7, 2007

American Academy of Otolaryngology – Head and Neck Surgery Annual Meeting, Course Co-Director, “Practical Imaging in Otology” and “Surgical Decision Making in Cholesteatoma”; Washington DC, September 15-19, 2007

University of Pittsburgh Medical Center Department of Otolaryngology, Temporal Bone Anatomy and Surgical Dissection Course, Course Director; Presenter, “Mastoidectomy”; “Facial Recess/Facial Nerve Decompression”; “Tympanoplasty” and “Acoustic Neuroma Surgery”; Pittsburgh PA, October 3-6, 2007

University of Pittsburgh School of Health & Rehabilitation Sciences, Department of Physical Therapy, School of Medicine, Department of Otolaryngology and the Claude Pepper Center for Older Americans, the Center for Continuing Education in the Health Sciences, “Superior Canal Dehiscence”; Pittsburgh PA, March 7-9, 2008

10th International Conference on Cochlear Implants and Other Implantable Auditory Technologies, Panel Moderator: Coding Strategies/Electrode Design/Mapping Strategies, San Diego CA, April 10-12, 2008

American Otological Society, Panel Member, “Controversies in Pediatric Cochlear Implantation: Meningitis,

MR Imaging and Bilateral Implantation”; Orlando FL, May 2-3, 2008

Poster Presentation: Elizabeth Toh, Barry Hirsch, Conductive hearing loss from self-induced digital manipulation of the external auditory canal, Annual Triological Society Meeting, Orlando FL, May 2008

University of Pittsburgh Medical Center Department of Otolaryngology, Temporal Bone Anatomy and Surgical Dissection Course, Course Director; Presenter, “Mastoidectomy”; “Facial Recess/Facial Nerve Decompression”; “Tympanoplasty” and “Acoustic Neuroma Surgery”; Pittsburgh PA, October 22-25, 2008

American Academy of Otolaryngology – Head and Neck Surgery Annual Meeting, Course Co-Director, “Practical Imaging in Otology” and “Surgical Decision Making in Cholesteatoma”; Chicago IL, September, 20-24, 2008

AAO-NHS Hearing Committee for American Academy of Otolaryngology – Head and Neck Surgery, Noise Induced Hearing Loss Q & A, AAO-NHS Member Expert and Chair, April 2009

Combined Otolaryngology Spring Meetings, Chief of Task Force for Vaccination Awareness Campaign and Implantable Device Committee representing the American Academy of Otolaryngology – Head and Neck Surgery, presentation to the Task Force and Industry Representative, Phoenix AZ, May 30, 2009

Synergy, Cochlear Implants in Children, Panel Member on Meningitis in Children with Cochlear Implants, Seattle WA, June 18, 2009

Poster Presentation: Cochlear Implant Fixation, Cochlear Implants in Children, Synergy, Seattle WA, June 2009

University of Pittsburgh Medical Center Department of Otolaryngology, Temporal Bone Anatomy and Surgical Dissection Course, Course Director; Presenter: “TB Anatomy”; “Tympanoplasty”; “Cochlear Implants”; “Ossicular Chain Reconstruction” and “Petrous Apex Disease and Approaches”; Pittsburgh PA, October 11-October 14, 2009

Hearing for Children 101, Technology Presentation and Panel: Bilateral Cochlear Implantation, Conference sponsored by the Hearing Center at Children’s Hospital of Pittsburgh, DePaul School for Hearing and Speech and Western Pennsylvania School for the Deaf, Pittsburgh PA, November 14, 2009

University of Pittsburgh School of Health and Rehabilitation Sciences, “What Audiologists Should Know About Imaging”; Part I, December 11, 2009 and Part II, January 22, 2010

The Beethoven Project, presentation and panel discussion on the impact of hearing loss and the ailments of Beethoven, Heinz Hall, Pittsburgh PA, January 22-23, 2010

University of Pittsburgh School of Medicine, Grand Rounds presentation to OR personnel, “Cochlear Implants”; Pittsburgh PA, April 7, 2010

University of Pittsburgh, School of Medicine, School of Pharmacy, Center for Continuing Education in Health Sciences, Vestibular Rehabilitation: An Advanced Course and Update, presented, “The Medically Refractory Dizzy Patient”; Pittsburgh PA, May 15, 2010

Pennsylvania Association of Otolaryngology-Head Neck Surgery, 2010 Annual Scientific Meeting, “Stereotactic Radiosurgery in Otology” Panel Discussion Member, Hershey PA, June 25, 2010

University of Pittsburgh Medical Center Department of Otolaryngology, Temporal Bone Anatomy and Surgical Dissection Course, Course Director; Presenter: “TB Anatomy”; “Facial recess/FN decompression”; “Tympanoplasty”; “Middle Fossa Approach” and “Petrous Apex Disease and Approaches”; Pittsburgh PA, July 25-28, 2010

University of Pittsburgh, School of Medicine, School of Pharmacy, Center for Continuing Education in Health Sciences, Vestibular Rehabilitation: An Advanced Course and Update, presented, “The Medically Refractory Dizzy Patient”; Pittsburgh PA, May 14, 2011

University of Pittsburgh Medical Center Department of Otolaryngology, Temporal Bone Anatomy and Surgical Dissection Course, Course Director; Presenter: “TB Anatomy”; “Facial recess/FN decompression”; “Tympanoplasty”; “Middle Fossa Approach” and “Petrous Apex Disease and Approaches”; Pittsburgh PA, July 25-28, 2011

AAO-HNS Annual Meeting, “Surgical Decision-Making in Cholesteatoma” and “Problem Solving in Otologic Surgery: When to Image, When to Operate, A Guide to Making the Right Intraoperative Decisions”, San Francisco CA, September 11-14, 2011

Louisiana State University, Department of Otolaryngology Temporal Bone Course, Visiting Professor, New Orleans, LA, December 9-11, 2011.

Tidewater Otolaryngology Society, Guest Speaker, Department of Otolaryngology-HNS, Eastern Virginia Medical School, Norfolk, VA, December 15-16, 2011.

22nd Annual North American Skull Base Society Meeting, presentation: “Tumors of the Jugular Fossa“, Panel Moderator; Otology, Proffered Papers Moderator, Las Vegas NV, February 18, 2012.

Kaiser Permanente, Guest at clinical rounds, guest speaker, “Otosclerosis” and “Implantable Middle Ear Devices”, Oakland, CA, May 4, 2012.

University of Pittsburgh, School of Medicine, Department of Otolaryngology Grand Rounds, ‘Update on Implantable Hearing Devices”, June 13, 2012.

Community Ears Nose and Throat Specialists (CENTS), “Update on Implantable Hearing Devices”, Pittsburgh PA, June 18, 2012.

University of Pittsburgh, Department of Otolaryngology Staff Members, “Coding in Otology”, Pittsburgh PA, June 19, 2012.

University of Pittsburgh Medical Center Department of Otolaryngology, Temporal Bone Anatomy and Surgical Dissection Course, Course Director; Presenter: “TB Anatomy”; “Facial recess/FN decompression”; “Tympanoplasty”; “Middle Fossa Approach” and “Petrous Apex Disease and Approaches”; Pittsburgh PA, July 22-25, 2012.

Poster Presentation: AAO-HNS 2012 Annual Meeting; Knisely A, Becker BC, Yank S, Hirsch BE, Riviere CN, “Robotic Tremor Suppression, A Tool for Stapes Surgery?”, Washington DC, September 9-12, 2012.

25th Anniversary of the UPMC Center for Cranial Base Surgery, “Dehiscence of the Semicircular Canals”, Pittsburgh PA, November 17, 2012

Vivas EX, Wegner R, Conley G, Torok J, Heron DE, Kabolizadeh P, Burton S, Ozhasoglu C, Quinn A, Hirsch BE. “Treatment outcomes in patients treated with CyberKnife radiosurgery for vestibular schwannoma.” Podium presentation at COSM, April 12, 2013

Vivas EX, Raz Y, McCall AA, Gardner PA, Hirsch BE, “ICP, BMI, and VP Shunt use in patient treated for spontaneous CSF otorrhea.” Podium presentation at COSM, April 13, 2013

University of Pittsburgh, School of Health and Rehabilitation Sciences, Department of Physical Therapy, Vestibular Rehabilitation: An Advanced Course and Update, presented, “The Medically Refractory Dizzy Patient”; Pittsburgh PA, May 18, 2013.

University of Pittsburgh Medical Center Department of Otolaryngology, Temporal Bone Anatomy and Surgical Dissection Course, Course Director; Presenter: “TB Anatomy”; “Facial recess/FN decompression”; “Tympanoplasty”; “Middle Fossa Approach” and “Petrous Apex Disease and Approaches”; Pittsburgh PA, August 18-21, 2013.

Abstract Presentation: The American Academy of Neurological Surgery 75th Annual Meeting, “Utility of High-Definition Fiber Tractography for the Resection of Pontomesencephalic Cavernous Malformations: Farajii AH, Jarbo K, Shin SS, Pathak S, Hirsch BE, Schneider W, Fernandez-Miranda JC, Friedlander RM,

Newport Beach, CA, September 25-28, 2013.

Poster Presentation: Hobson CE, Moy J, Byers K, Raz Y, Hirsch, BE, McCall AA, Malignant Otitis Externa: An Evolving Disease; American Academy of Otolaryngology-Head Neck Surgery, Annual Meeting, Vancouver Canada, September 29-October 2, 2013.

Panel Discussion: Smouha EE, Bojrab DI, Parisier SC, Hirsch BE, Surgical Decision-Making in Cholesteatoma, American Academy of Otolaryngology-Head Neck Surgery, Annual Meeting, Vancouver Canada, September 29-October 2, 2013.

Hearing Loss Association of Pittsburgh, “Implantable Hearing Devices”, Pittsburgh, PA, November 16, 2013.

Society of Physician Assistants in Otorhinolaryngology – Head and Neck Surgery, ENT for the PA-C Annual Conference, “Otologic Emergencies the General Otolaryngologist Needs to Know”, Westin Convention Center, Pittsburgh, April 24-27, 2014.

2014 PAO-HNS Annual Scientific Meeting, Panel Discussion Member, “Balance and Fall Prevention”, Hersey PA, June 13, 2014.

University of Pittsburgh Medical Center Department of Otolaryngology, Temporal Bone Anatomy and Surgical Dissection Course, Course Director; Presenter: “TB Anatomy”; “Facial recess/FN decompression”; “Tympanoplasty”; “Middle Fossa Approach” and “Petrous Apex Disease and Approaches”; Pittsburgh PA, August 17-20, 2014.

American Academy of Otolaryngology – Head and Neck Surgery Foundation 2014 Annual Meeting, Co-Instructor, “Surgical Decision-Making in Cholesteatoma”, Orlando, Florida, September 23, 2014.

University of Pittsburgh, Communication Science and Disorders, “Hybrid Cochlear Implants”, December 5, 2014

Rutgers New Jersey Medical School, The 25th Annual Department of Otolaryngology Alumni Day Symposium, Update in Otology and Neurotology, Featured Guest Faculty, “Update in Cochlear Implants” and “Stereotactic Radiosurgery for Acoustic Neuroma”, West Orange, New Jersey, June 17, 2015.

University of Pittsburgh Medical Center Department of Otolaryngology, Temporal Bone Anatomy and Surgical Dissection Course, Course Director; Presenter: “TB Anatomy”; “BAHA”; “Tympanoplasty”; and “Ossicular chain reconstruction”; Pittsburgh PA, August 23-26, 2015.

American Academy of Otolaryngology – Head and Neck Surgery Foundation 2015 Annual Meeting, Co-Instructor, “Surgical Decision-Making in Cholesteatoma”, Dallas, Texas, September 27, 2015.

University of Louisville, Temporal Bone Course, Special Guest Faculty, Louisville, KY, January 8-9, 2016

Penn State Hershey, Temporal Bone Course, Special Guest Faculty, “Stapes Surgery” and “Cochlear Implantation”, Hershey PA, April 22-23, 2016

Huyett P, Raz Y, Hirsch BE, McCall AA, “Radiographic Mastoid and Middle Ear Effusions in the Intensive Care Unit Patient.” Oral presentation at Triological Society, 119th Annual Meeting, COSM, Chicago IL, May 21, 2016

University of Pittsburgh Medical Center Department of Otolaryngology, Temporal Bone Anatomy and Surgical Dissection Course, Course Director; Presenter: “TB Anatomy”; “BAHA”; and “Ossicular chain reconstruction”; Pittsburgh PA, August 21-24, 2016.

Govil N, DeMayo WM, Hirsch BE, McCall AA, “Optimizing Positioning for In-Office Otology.” Oral presentation at the AAO-HNSF Annual Meeting & Oto Expo, San Diego, CA, September 18-21, 2016

Mady LJ, Sukato D, Fruit J, Palmer C, Raz Y, Hirsch BE, McCall AA, “Hearing Preservation: Does Cochlear Electrode Choice Matter?” Oral presentation at the AAO-HNSF Annual Meeting & Oto Expo, San

Diego, CA, September 18-21, 2016

University of Pittsburgh Medical Center Department of Otolaryngology, Temporal Bone Anatomy and Surgical Dissection Course, Course Director; Presenter: “TB Anatomy”; “BAHA”; and “Ossicular chain reconstruction”; Pittsburgh PA, August 20-23, 2017

King Saud University, Otorhinolaryngology Department College of Medicine 28th ENT Updates Symposium, International Speaker, Riyadh, Saudi Arabia Oct. 11-12, 2017

King Saud University, Otorhinolaryngology Department College of Medicine, International Examiner for Resident and Fellow Exams, Riyadh, Saudi Arabia Oct. 9-11, 2017

University of Tennessee Health Science Center, Department of Otolaryngology – Head and Neck Surgery, Fourth Annual John Shea Memorial Otology Workshop & Temporal Bone Dissection Course, Guest Lecturer, Memphis Tennessee Nov. 10-11, 2017

University of Pittsburgh School of Medicine, Center for Continuing Education in the Health Sciences and the Department of Otolaryngology, Alumni Day/Update in Otology ENT Refresher Course, Program Co-Director and Panel Moderator, March 16-17, 2018

Cooper T, Hildrew DM, McAfee JS, McCall AA, Branstetter BF, **Hirsch BE**, “Imaging in the Diagnosis and Management of Necrotizing Otitis Externa: A Survey of Practice Patterns.” Poster presentation at the American Neurotology Society meeting, COSM, National Harbor, MD, April 18-22, 2018

Freiser ME, Ghodadra A, **Hirsch BE**, McCall AA, “Evaluation of 3D Printed Temporal Bone Models in Preparation for Middle Cranial Fossa Surgery.” Poster presentation at the American Neurotology Society meeting, COSM, National Harbor, MD, April 18-22, 2018

University of Pittsburgh Medical Center Department of Otolaryngology, Temporal Bone Anatomy and Surgical Dissection Course, Course Director; Presenter: “TB Anatomy” and “Ossicular chain reconstruction”; Pittsburgh PA, July 22-25, 2018

RESEARCH

- 1987 University of Pittsburgh, Office of Research and Digital Equipment Corporation. Grant Proposal entitled, "Model Program for Self-paced Learning of Surgical Techniques via the Interactive Video Information System" (Co-Director)
- 1989 Hyperbaric Oxygen Therapy: Its' Effect on Middle Ear Eustachian Tube Function
- 1992 Research Fund of the American Otological Society, Inc, funded grant proposal entitled, "Evaluation of Beta-2 Transferrin Analysis for Identification of Perilymphatic Fistula"
- 3/2005- United States Air Force Medical Service (AFMS)
- 12/2006 "Feasibility study to evaluate remote access, monitor and adjust cochlear implants"
Co-Principal Investigator (Catherine Palmer, PhD, and Ben Sierra, PhD, Ret Col USAF)
- 2011-2013 "Evaluation of a Revised Indication for Determining Adult Cochlear Implant Candidacy", PI
- 2015 "Nucleus Hybrid L24 Implant System new Enrollment Study" Sponsored by Cochlear Americas
- 2016 "Hearing Outcomes for Cyberknife Stereotactic Radiation Therapy of Vestibular Schwannomas"

SERVICE

University of Pittsburgh School of Medicine

- University Senate Election Committee, Representative 1991
- Non-Tenured Faculty Promotions and Appointments Committee 1997-2000
- Non-Tenured Faculty Promotions and Appointments Committee 2005-2008
- University of Pittsburgh School of Medicine, Interviewing Committee Member 2010-2011

Department of Otolaryngology

- Coordinator, Otology Grand Rounds 1991-Present
- Coordinator, Resident Otology/Audiology Educational Curriculum lecture series 1991-Present
- Resident Applicant Review Committee 1988-Present
- UPP Clinical Operations Committee 1999-Present
- Isamu Sando Lectureship in Otology, Committee Chair 2015

Eye & Ear Hospital of Pittsburgh:

- Utilization Review Committee, Member 1984-1991
- Paging Advisory Committee, Member 1985-1986
- Operating Room Committee, Member 1985-1991
- Pharmacy Committee, Member 1985-1991
- Quality Assessment Committee, Member 1985-1991

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|---------------------------------------------------|-----------|
| Nursing Committee, Member | 1988-1991 |
| Transfusion Committee, Member | 1988-1990 |
| Executive Committee, Department of Otolaryngology | 1989-1991 |

University of Pittsburgh Medical Center

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|--------------------------------------------------------------------|--------------|
| Operating Room Committee, Member | 1991-1993 |
| Pharmacy Committee, Member | 1991-2000 |
| Executive Committee, Department of Otolaryngology, Member | 1991-1995 |
| Doctor-Patient Relationship Committee, Member | 1992 |
| Credentials Committee, Member | 1997-Present |
| UPMC Presbyterian Medical Staff, VP Otolaryngology & Ophthalmology | 1998-1999 |
| Noise Reduction Task Force | 1999 |
| Practitioner Health Committee, Member | 2003-2004 |
| Practitioner Health Committee, Chair | 2004-2010 |
| Patient Cost Transparency Committee, Member | 2012-Present |

Children’s Hospital of Pittsburgh

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|----------------------------------------------------|------|
| Professional Advisory Board for the Hearing Center | 2005 |
|----------------------------------------------------|------|

Community:

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|--------------|-----------------------------------------------------------------------|
| 1984 | KDKA Television News, "Hearing Loss and Cordless Telephones" |
| 1984 | WTKN Radio Talk Show Host, "Hearing Loss |
| 1985 | WTKN Radio Talk Show Host, "Better Hearing and Speech" |
| 1986 | WTKN Radio Talk Show Host, "Better Hearing and Speech" |
| 1987 | WTKN Radio Talk Show Host, "Better Hearing and Speech" |
| 2006-Present | DePaul School for Hearing & Speech, Semi-annual Otologic Examinations |

National

Accreditation Council for Graduate Medical Examination (ACGME)

| | |
|----------------------------------------------|------|
| Neurotology Milestones Working Group, Member | 2014 |
|----------------------------------------------|------|

American Academy of Otolaryngology - Head and Neck Surgery (AAO-HNS)

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|---------------------------------------------------------------|-----------|
| Continuing Education Task Force on New Materials | 1985-1992 |
| Home Study Course | 1987-1992 |
| Facial Paralysis Study Group, Member | 1987-2007 |
| Medical Aspects of Noise Subcommittee, Member | 1988-1993 |
| Implantable Hearing Devices Committee, Member | 1999-2002 |
| Implantable Hearing Devices Committee, Chair | 2002-2008 |
| Hearing Committee, Member | 2002-2003 |
| National Resident On-line Study Group (NROSG) Authors, Member | 2003-2006 |

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|-------------------------------------------------------------------------|------------------|
| Hearing Committee, Chair | 2003-2009 |
| Hearing and Equilibrium Steering Committee, Member | 2003-2009 |
| Certificate Program for Otolaryngology Personnel Committee, Member | 2003-2009 |
| Cerumen Impaction Clinical Practice Guideline Panel, Member | 2007-2008 |
| Implantable Hearing Devices Committee, Consultant | 2008-2010 |
| Hearing Committee, Consultant | 2009-2013 |
| <i>Federal Highway Administration</i> | |
| Hearing Disorders and Commercial Motor Vehicle Drivers Panel, Member | 1992 |
| <i>American Board of Otolaryngology</i> | |
| Guest Examiner for Oral Certifying Examination and Neurotology Examiner | 2006, 2010, 2012 |
| <i>American Academy of Otolaryngology – Head and Neck Surgery</i> | |
| <i>American Otological Society</i> | |
| Program Advisory Committee | 2004 |
| Member, Certificate Program for Otolaryngology Personnel | 2004–2007 |
| <i>American Neurotology Society</i> | |
| Continuing Education Committee, Member | 2005-2010 |
| Constitution and Bylaws Committee, Chair | 2014-2019 |
| President | 2018-2019 |
| <i>Otology and Neurotology</i> | |
| Education Committee, Ex-officio Member | 2007-2008 |
| Board of Directors, Member | 2014-2018 |
| <i>FDA Ear, Nose & Throat Devices Advisory Panel</i> , Member | 2007-2014 |
| <i>FDA Ear, Nose & Throat Devices Committee</i> , Board Member | 2015-present |
| <i>Centurions of the Deafness Research Foundation</i> , Member | 2010 |
| State Chair, Pennsylvania | 2010 |

Regional

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|-----------------------------------------------------------------------|-----------|
| <i>Pennsylvania Academy of Otolaryngology - Head and Neck Surgery</i> | |
| Chair, Committee for Young Otolaryngologists | 1989-2001 |
| President-Elect | 1995-1996 |
| President | 1996-1997 |
| Program Chair | 2003 |
| Chair, Otology Committee | 2005 |
| PAO-HNS Scientific Program Planning Committee | 2006-2007 |
| Member, Scientific Program Planning Committee | 2007 |

Western Pennsylvania Lions Hearing and Research Foundation

Executive Director 1989-2003
Medical Director 2003-Present

The DePaul School for Hearing and Speech
Trustee, Board of Trustees 2001-Present

Western Pennsylvania School for the Deaf
Member, Board of Trustees 2001-Present

Community Ear, Nose, and Throat Specialists (CENTS)
Treasurer 2003-2004

Other Committees

Furman JM, Baloh RW, Hain TC, **Hirsch BE**: Electronystagmography Position Statement.
Therapeutics and Technology Assessment Subcommittee of the Practice Committee for the
American Academy of Neurology 1994

Lundsford LD, Niranjana A, Noren G, Loeffler J, deLotginiere A, Grabel J, Regis J, Roche P-H, Smee R,
Speiser B, Alden M, Vermeulen S, Regine WF, **Hirsch BE**, Ledbetter TK, Emerick RL. International
RadioSurgery Association (IRSA) Medical Advisory Board. Stereotactic Radiosurgery for Patients with
Vestibular Schwannomas (Radiosurgery Practice Guideline Initiative /Report #4-06) 2006

Journal Reviewer

Otolaryngology - Head and Neck Surgery 1991-Present
Skull Base Surgery 1991-Present
American Journal of Otolaryngology 1992-Present
The American Journal of Otolaryngology 1992-2000
Family Practice Recertification 1997
Archives of Otolaryngology 2002-Present
Journal of Vestibular Research 2004-Present
Otology & Neurotology 2001-Present
Laryngoscope 2008-Present
Neurosurgery 2011-Present

Editorial Board

The American Journal of Otolaryngology 1997-2000
Otology & Neurotology 2001-Present
Laryngoscope 2005-Present
Head and Neck Surgery-Otolaryngology 5th Edition Section Editor 2009-2013
Otology & Neurotology, Editorial Board, Director 2017

Grant Reviewer

2000 - Present Pennsylvania Lions Hearing Research Foundation