

CURRICULUM VITAE

Henry Alexander Arts, M.D., F.A.C.S.

PERSONAL DATA

Born: February 19, 1956 Address (home):
Buffalo, New York

Phone: (734) 936-9816 (business): Dept. of Otolaryngology -
(734) 936-9625 fax Head and Neck Surgery
Univ. of Michigan
Email: aarts@umich.edu Medical Center
1540 E. Hospital Dr
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Ann Arbor, MI 48109-4241

EDUCATION

1970-1974 Westchester High School, Houston, Texas
(Magna cum laude)

1974-1978 Rice University, Houston, Texas,
Degree awarded:
Bachelor of Science in Mechanical Engineering

1979-1983 Baylor College of Medicine, Houston, Texas,
Degree awarded: Doctor of Medicine (With Honors)

1985-1986 University of Washington, Seattle, Washington,
Degree awarded: Master of Science in Engineering,
(Bioengineering) (degree awarded 1990)

POSTDOCTORAL TRAINING

July, 1983-June,1985 University of Washington, Seattle, Washington
Residency, General Surgery

July, 1985-June,1990 University of Washington, Seattle, Washington
Residency, Otolaryngology - Head & Neck Surgery

Jan, 1990-May,1990 St. Vincent's Medical Center, Sydney, NSW, Australia
Fellowship, Neurotology and Skull Base Surgery
(Optional rotation during residency training)

July, 1990-June, 1991 University of Virginia, Charlottesville, Virginia
Fellowship, Neurotology and Skull Base Surgery

LICENSURE/CERTIFICATION

Board Certification

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| 1992 | Diplomate, American Board of Otolaryngology |
| 2003 | Neurotology Subspecialty Certification, American Board of Otolaryngology |

Medical Licensure

- | | |
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| 1983 | Washington Medical Licensure (expired) |
| 1983 | Drug Enforcement Administration, Controlled Substance Registration (active) |
| 1990 | Virginia Medical Licensure (expired) |
| 1991 | Missouri Medical Licensure (expired) |
| 1991 | New Mexico Medical Licensure (inactive) |
| 1992 | Michigan Medical Licensure (active) |
| 1992 | Michigan Controlled Substance License (active) |
| 2020 | Alabama Medical Licensure (active) |
| 2020 | Alabama Controlled Substance License (active) |
| 2020 | Iowa Medical Licensure (active) |

Other Licensure

FAA Certificates held: Airline Transport Pilot, Airplane Multi-Engine
Commercial Pilot, Airplane Single-Engine
Instrument Rating, Airplane
Certified Flight Instructor, Airplane, Single-Engine
Certified Flight Instructor, Instrument, Airplane
Ground Instructor, Advanced and Instrument
Mechanic, Airframe and Powerplant

MILITARY SERVICE

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| 1977 | Non Petty Officer, US Naval Reserve |
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ACADEMIC APPOINTMENTS

- July, 1990 - June, 1991 Instructor, Department of Otolaryngology - Head & Neck Surgery, University of Virginia, Charlottesville, Virginia
- July, 1991 - July, 1993 Assistant Professor, Department of Otolaryngology - Head & Neck Surgery, University of Virginia, Charlottesville, Virginia
- Aug. 1993 - Oct. 1997 Assistant Professor, Department of Otolaryngology - Head & Neck Surgery, University of Michigan, Ann Arbor, Michigan
- Nov. 1997 - Aug. 1998 Clinical Assistant Professor, Department of Otolaryngology - Head & Neck Surgery, University of Michigan, Ann Arbor, Michigan
- Sept. 1998 - Aug. 2004 Clinical Associate Professor, Department of Otolaryngology - Head & Neck Surgery, University of Michigan, Ann Arbor, Michigan
- Mar. 2001 - Aug. 2004 Clinical Associate Professor, Department of Neurological Surgery, University of Michigan, Ann Arbor, Michigan
- Aug. 2004 – Apr, 2018 Clinical Professor, Dept. of Otolaryngology – Head & Neck Surgery
and
Clinical Professor, Dept. of Neurological Surgery, University of Michigan, Ann Arbor, Michigan
- Apr. 2018 – present Clinical Professor Emeritus of Otolaryngology and Neurosurgery, University of Michigan
- Mar. 202 – present Professor of Otolaryngology – Head & Neck Surgery, University of Alabama at Birmingham

ACADEMIC ADMINISTRATIVE APPOINTMENTS

- Sept. 1994-2014 Co-Director, Cranial Base Program, Univ. of Michigan Health System
- Sept. 2003-Apr. 2018 Program Director, Neurotology and Cranial Base Surgery Fellowship Program (ACGME accredited program), Univ. of Michigan Health System
- Jan. 2014-Apr. 2018 Medical Director, Cochlear Implant Program, Univ. of Michigan Health System

CLINICAL/HOSPITAL APPOINTMENTS

- Aug. 1993-Apr. 2018 Staff Surgeon, Otology & Neurotology Service, Dept. of Otolaryngology – Head & Neck Surgery, Univ. of Michigan Health System
- Sept. 1993 - 2013 Consultant in Otolaryngology - Head & Neck Surgery, Ann Arbor Veterans Administration Hospital, Ann Arbor, Michigan

CLINICAL/HOSPITAL APPOINTMENTS (cont.)

- Jan 2014 – Apr. 2018 Medical Director, Cochlear Implant Program, Dept. of Otolaryngology – Head & Neck Surgery, Univ. of Michigan Health System
- Jan 2014 – Apr. 2018 Medical Director, Hearing Rehabilitation Center Ambulatory Care Unit, Univ. of Michigan Health System
- Jan 2014 – Apr. 2018 Medical Director, Pediatric Hearing Loss Program, Univ. of Michigan Health System

CONSULTING APPOINTMENTS

- 1993- Occasional medical-legal consultation
- 1998-2003 Advisory Board, Symphonix Devices, Inc., San Jose, CA.
- 2002-2005 Advisory Board, Otologics, LLC, Boulder, CO.

PATENTS

Tegmen Plate Prosthesis And Methods For Manufacturing The Same
Patent application filed December 2, 2016

HONORS AND AWARDS

- 1978 Tau Beta Pi (National Engineering Honor Society)
1977-1978 President, Lovett College, Rice University
1980 Basic Science Honors, Baylor College of Medicine
1983 Alpha Omega Alpha, Baylor College of Medicine
1988 Annual Resident Presentation Award, Univ. of Washington, Dept.
 of Otolaryngology-Head & Neck Surgery.
1989 Vice President's Award, American Laryngological, Rhinological,
 and Otological Society, Western Section
1990 Annual Resident Presentation Award, Univ. of Washington, Dept.
 of Otolaryngology-Head & Neck Surgery.
1996 Best Doctors in America, Midwest Edition
1998 Best Doctors in America, 4th Edition
2001 Honor Award, American Academy of Otolaryngology – Head &
 Neck Surgery
2001 Best Doctors in America, 2001-2002
2002 Best Doctors in America, 2002-2003
2003 Top Doctors in America, 2003-2005
2003 Best Doctors in America, 2003-2004
2004 Best Doctors in America, 2004-2005
2005 Best Doctors in America, 2005-2006
2006 America's Top Doctors, 2005
2006 Best Doctors in America, 2006-2007
2007 America's Top Doctors, 7th Edition
2007 Best Doctors in America, 2007-2008
2008 America's Top Doctors, 8th Edition
2008 Best Doctors in America, 2008-2009
2009 America's Top Doctors, 9th Edition
2009 Best Doctors in America, 2009-2011
2010 Best Doctors in America, 2011-2012
2011 America's Top Doctors, 10th Edition
2012 Best Doctors in America, 2012-2013
2012 America's Top Doctors, 11th Edition
2013 America's Top Doctors, 12th Edition
2013 Best Doctors in America, 2013-2014
2014 Best Doctors in America, 2014-2015
2014 America's Top Doctors, 13th Edition
2015 Best Doctors in America, 2015-2016
2015 America's Top Doctors, 14th Edition
2016 Best Doctors in America, 2016-2017
2016 America's Top Doctors, 15th Edition
2017 Best Doctors in America, 2017-2018
2017 America's Top Doctors, 16th Edition
2018 Best Doctors in America, 2018-2019

HONORS AND AWARDS (cont.)

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| 2018 | America's Top Doctors, 17 th Edition |
| 2018 | Otology/Neurotology Teaching Award
Univ. of Michigan Dept. of Otolaryngology |

SCIENTIFIC ACTIVITIES

Research Efforts

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|-----------|--|
| 1978-1970 | Studied the effect of fluid shear rate on the adsorption of serum proteins onto synthetic surfaces. Univ. of Texas, Austin, TX. Robert Eberhart, Ph.D., project director. |
| 1985-1988 | Developed a mathematical model of the geometry of the guinea pig cochlea for use in mechanical and electrodynamic modeling of the cochlea. Univ. of Washington, Center for Bioengineering and Dept. of Otolaryngology. Francis Spelman, Ph.D., project director. |
| 1989-1990 | Studied the effects of efferent manipulation on distortion product oto-acoustic emissions in the gerbil. Univ. of Washington, Dept. of Otolaryngology. Edwin Rubel, Ph.D. and Susan Norton, Ph.D., project directors. |
| 1989-1990 | Examined the effects of alterations in perilymphatic calcium concentration on hair cell function as measured by distortion product emissions. Univ. of Washington, Dept. of Otolaryngology. Edwin Rubel, Ph.D. and Susan Norton, Ph.D., project directors. |
| 1993- | Development of an implantable auditory neural prosthesis. Kresge Hearing Research Institute, Univ. of Michigan. Principal investigator. |
| 1994- | Autoimmune sensorineural hearing loss. Kresge Hearing Research Institute, Univ. of Michigan. Thomas Carey, PhD, co-investigator. |
| 1996-2000 | Positron emission tomographic studies of cortical activation in cochlear implant patients and normals. With Bryan Pfingst, PhD, Teresa Zwolan, PhD, and Satoshi Minoshima, MD, collaborators, Univ. of Michigan. |
| 1998-2000 | Clinical trial of implantable hearing aid. Sponsored by Symphonix Devices, Inc., Principal Investigator |
| 2002-2003 | Clinical trial of implantable hearing aid. Sponsored by Otologics, LLC, Inc., Principal Investigator |

SCIENTIFIC ACTIVITIES (cont.)

Research Efforts (cont.)

- 2002-2003 Clinical trial of Meniett device for Meniere's disease. Sponsored by Medtronic, Inc., Co-investigator.
- 2004- Clinical trial of Envoy implantable hearing aid. Sponsored by St. Croix Medical, Inc., Principal Investigator
- 2005-2007 Clinical trial of Nucleus hybrid cochlear implant/hearing aid. Sponsored by Cochlear Corp., Principal Investigator
- 2007- Longitudinal analysis of vestibular schwannoma
- 2008- Electrocochleography in superior canal dehiscence syndrome.
- 2009-2011 Multicenter, Phase 1b Study of OTO-104 Versus Placebo given as a Single Intratympanic Injection in Subjects with Meniere's Disease, Sponsored by Otonomy, LLC, Principal Investigator
- 2015- Design and development of a 3-D printed reconstruction plate for middle cranial fossa floor defects.
- 2016- Across site patterns of cochlear implant function: Importance of cochlear health. NIH R01 DC015809
- 2016 Measures to improve auditory prosthesis function, M-Cubed project

Editorial Boards

- 2008- Editorial Board Member, *Otology and Neurotology*
- 2009- Editorial Board Member, *J. of International Advanced Otology*
- 1993- Ad hoc reviewer, *Archives of Otolaryngology*
- 1994- Ad hoc reviewer, *Ear and Hearing*
- 1995- Ad hoc reviewer, *Skull Base Surgery*
- 1997- Ad hoc reviewer, *American Journal of Otology (Otology and Neurotology)*
- 1998- Ad hoc reviewer, *Otolaryngology – Head & Neck Surgery*
- 2001- Ad hoc reviewer, *Audiology & Neuro-Otology*

Editorial Boards (cont.)

- 2001- Ad hoc reviewer, *Neuropsychopharmacology*
- 2002- Ad hoc reviewer, *International Journal of Audiology*
- 2004- Ad hoc reviewer, *Annals of Otolaryngology, Rhinology, and Laryngology*
- 2005- Ad hoc reviewer, *Laryngoscope*
- 2006- Ad hoc reviewer, *Hearing Research*
- 2007- Ad hoc reviewer, *Brain*
- 2008- Ad hoc reviewer, *American Journal of Otolaryngology*

GRANT SUPPORT

- 1995-1996 Mentor, American Academy of Otolaryngology - Head & Neck Surgery Resident Research Award, Development of an Implantable Cochlear Nerve Micro-electrode for Prosthetic Stimulation of the Auditory System (\$10,000)
- 1996-1997 Deafness Research Foundation Research Grant, principal investigator, Defining Antigenic Targets of Autoimmune Sensorineural Hearing Loss in Humans (\$15,000)
- 1996-1997 Univ. of Michigan, General Clinical Research Center, Pilot Project Grant, co-investigator, Cortical Representation of Acoustic and Electrical Stimulation by PET in Normal and Deaf Subjects
- 1998-2000 Symphonix Devices, Inc., Clinical trial of surgically implantable hearing aid, Local Principal Investigator (approx. \$10,000)
- 2001-2003 Otologics, LLC, Clinical trial of surgically implantable Middle Ear Transducer, Local Principal Investigator (approx. \$10,000)
- 2001-2003 Medtronic, Inc., Meniett device clinical trial, Co-Investigator (approx. \$20,000)
- 2004-2006 St. Croix Medical, Envoy implantable hearing aid clinical trial, Local Principal Investigator (approx \$10,000)
- 2004-2008 Cochlear Corp., Hybrid implant clinical trial, Local Principal Investigator (approx \$10,000)
- 2009-2011 Otonomy, Inc., Clinical trial of OTO-104, Intratympanic injection for unilateral Meniere's Disease Principal Investigator (\$20,000)
- 2013-2015 Cochlear Corporation, Safety and Efficacy of the Cochlear Nucleus CI422 in Adults, Principal Investigator, (approx. \$47,000)
- 2015-2021 Cochlear Corporation, Nucleus Hybrid L24 Implant System New Enrollment Study, Principal Investigator, (approx. \$64,000)
- 2009-2016 R01 DC010789: Across-Site Patterns of Perception with Cochlear Implants and Across-Site Patterns of Modulation Detection: Relation to Speech Recognition. Consultant, Bryan Pfungst, PhD, PI \$1,658,650
- 2016-2021 R01 DC015809: Functionally Important Features of the Electrically Stimulated Cochlea, Co-Investigator, Bryan Pfungst, PhD, PI \$3,625,428

GRANT SUPPORT (cont.)

- 2015-2017 MCubed Grant: Measures to Improve Auditory Prosthesis Function, Co-Investigator with Bryan Pfingst, PhD and Karl Grosh, Phd, \$60,000
- 2017-2022 Cochlear Corporation, Clinical Performance of a New Implant System for Bone Conduction Hearing, Principal Investigator, \$218,332.00

MEMBERSHIP AND OFFICES IN PROFESSIONAL SOCIETIES

- 1977 Tau Beta Pi, National Engineering Honor Society
- 1982 Alpha Omega Alpha, National Medical Honor Society
- 1985 Association for Research in Otolaryngology, Member
- 1990 American Auditory Society, Member
- 1991 William F. House Society, Member
- 1991 American Academy of Otolaryngology- Head & Neck Surgery, Fellow
- 1993 Michigan Oto-Laryngological Society, Member
- 1994 American Neurotology Society, Fellow
- 1994 North American Skull Base Society, Member
- 1997 American College of Surgeons, Fellow
- 2001 American Otological Society, Active Member
- 2001 Otosclerosis Study Group, Member

COMMITTEE AND ADMINISTRATIVE SERVICE

National

- 1994-1997 Facial Nerve Disorders Committee, American Academy of Otolaryngology - Head & Neck Surgery
- 1994-1997 Task Force on New Materials, American Academy of Otolaryngology - Head & Neck Surgery and American Board of Otolaryngology
- 1997- Home Study Course Faculty, American Academy of Otolaryngology - Head and Neck Surgery
- 1997 Guest Examiner, Oral Certifying Examination, American Board of Otolaryngology
- 1998 Guest Examiner, Oral Certifying Examination, American Board of Otolaryngology
- 1998- Membership Committee, Assoc. for Research in Otolaryngology
- 1998-2001 Subcommittee on Hearing Aids, American Academy of Otolaryngology - Head & Neck Surgery
- 1999- Subcommittee on Medical Aspects of Noise, American Academy of Otolaryngology - Head & Neck Surgery
- 1999 Guest Examiner, Oral Certifying Examination, American Board of Otolaryngology
- 2001-2003 Chairman, Otology & Neurotology Section, Home Study Course Faculty, American Academy of Otolaryngology – Head & Neck Surgery.
- 2001-2004 Socioeconomic Affairs Committee, American Neurotology Society
- 2003 Program Advisory Committee, American Otological Society Annual Scientific Meeting, 2004.
- 2004 Program Advisory Committee, American Otological Society Annual Scientific Meeting, 2005.
- 2004 Examiner, Neurotology Subspecialty Examination, American Board of Otolaryngology
- 2004-2009 Research Committee, American Neurotology Society
- 2005 Examiner, Neurotology Subspecialty Examination, American Board of Otolaryngology

COMMITTEE AND ADMINISTRATIVE SERVICE (cont.)

National (cont.)

- 2006-2007 Scientific Program Committee, American Neurotology Society, Annual Meeting, 2007
- 2007-2010 Audit Committee, American Otological Society
- 2007-2008 Program Committee, American Otological Society Annual Meeting, 2008
- 2008 Examiner, American Board of Otolaryngology, Oral Certifying Examination
- 2008 - 2010 Examiner, American Board of Otolaryngology, Neurotology Subspecialty Examination
- 2008-2010 Governmental Affairs Committee, Assoc. for Research in Otolaryngology
- 2008-2011 Nominating Committee, American Otological Society
- 2009-2010 CME Committee, American Neurotology Society
- 2009-2010 Chairman, Audit Committee, American Otological Society
- 2010-2014 Education Committee, American Neurotology Society
- 2011-present Fellowship Committee, American Neurotology Society
- 2013-present *Senior Examiner*, American Board of Otolaryngology
- 2015-present Committee on Implantable Hearing Devices, American Academy of Otolaryngology – Head & Neck Surgery
- 2016 Nominating Committee, American Otological Society

University of Virginia

- 1991-1993 Quality Assurance Committee, Univ. of Virginia Medical Center

University of Michigan

- 1993-1995 Operating Room Network Committee, Univ. of Michigan Medical Center
- 1993-2002 Committee on Research Standards and Ethics, Kresge Hearing Research Institute, Univ. of Michigan
- 1993-1998 Research Committee, Dept. of Otolaryngology
- 1993-1997 Resident Selection Committee, Dept. of Otolaryngology
- 1993-1996 Information Systems Committee, Dept. of Otolaryngology
- 1994-2000 Medical Director, Outpatient Clinics, Dept. of Otolaryngology
- 1994-2000 Chairman, Outpatient Clinic Committee, Dept. of Otolaryngology

COMMITTEE AND ADMINISTRATIVE SERVICE (cont.)

University of Michigan (cont.)

- 1995-1996 Taubman Improvement Task Force, Univ. of Michigan Medical Center
- 1997-2000 Ambulatory Care Operations and Planning Council, Univ. of Michigan Health System
- 1999-2000 Chairman, Incentive Redesign Committee, Dept. of Otolaryngology
- 1999-2000 Steering Committee, Ambulatory Care Operations Redesign Task Force
- 1999-2000 Steering Committee, Ambulatory Care Human Resources
- 1999-2006 Finance Committee, Faculty Group Practice
- 1999-2002 Steering Committee, East Ann Arbor Surgery Center and Clinics Project, Otolaryngology Clinic Facility
- 1999-2000 Steering Committee, Main Operating Rooms Redesign
- 2003-present Program Director, Neurotology Fellowship Program
- 2006-2009 Operations Committee, East Ann Arbor Ambulatory Surgical Facility
- 2006-2007 Finance and Budget Committee, Faculty Group Practice
- 2007-2011 Business and Finance Committee, Dept. of Otolaryngology
- 2007-2008 Search Committee for the Chair of the Dept. of Otolaryngology
- 2008-2010 Chair, Marketing Workgroup, Dept. of Otolaryngology
- 2009-2010 Incentive Redesign Workgroup, Dept. of Otolaryngology
- 2009-present Search Committee for the Director, Kresge Hearing Research Institute
- 2010 Planning Committee, Kresge Hearing Research Institute, 50th Anniversary Symposium and Lecture Series
- 2011-present Clinical Research Committee, Dept. of Otolaryngology
- 2012-present Executive Committee, Dept. of Otolaryngology
- 2014-present Ambulatory Care Unit Medical Director, Hearing Rehabilitation Center
- 2014-present Medical Director, Pediatric Hearing Loss and Pediatric Otology-Neurotology Programs
- 2014-present Medical Director, Cochlear Implant Program and Implantable Hearing Devices Program

TEACHING ACTIVITIES

National

Examination/Certification Boards

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| 1997 | American Board of Otolaryngology, Guest Examiner, Oral certifying examination, |
| 1998 | American Board of Otolaryngology, Guest Examiner, Oral certifying examination, |
| 1999 | American Board of Otolaryngology, Guest Examiner, Oral certifying examination, |
| 2004 | American Board of Otolaryngology, Examiner, Neurotology Subspecialty Examination |
| 2005 | American Board of Otolaryngology, Examiner, Neurotology Subspecialty Examination |
| 2008 | American Board of Otolaryngology, Examiner, Oral Certifying Examination |
| 2008 | American Board of Otolaryngology, Examiner, Neurotology Subspecialty Examination |
| 2009 | American Board of Otolaryngology, Examiner, Neurotology Subspecialty Examination |
| 2010 | American Board of Otolaryngology, Examiner, Neurotology Subspecialty Examination |
| 2013-2018 | American Board of Otolaryngology, Senior Examiner |

Continuing Medical Education Courses

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| 1992-1993 | Course director, Temporal Bone Dissection Workshop, Univ. of Virginia, Charlottesville, Virginia (June and October 1992, May 1993) |
| 1993-pres. | Course co-director, Temporal Bone Surgical Dissection Course, Univ. of Michigan, Ann Arbor, Michigan (<i>four times yearly</i>) |
| 1998 | Course director, Otologic Medicine, CME course presented at annual meeting of Michigan State Medical Society. Presented lecture on <u>Diseases of the Auditory System and their Management</u> |

TEACHING ACTIVITIES

National (cont.)

American Academy of Otolaryngology – Head & Neck Surgery Teaching Activities

- 1994-1997 American Board of Otolaryngology, Task Force for New Materials (develops test questions for the American Board Examination and the AAO-HNS Annual In-service Examination)
- 1996 Instruction course faculty, American Academy of Otolaryngology - Head & Neck Surgery, The Acute Facial Palsies
- 1996 Instruction course faculty, American Academy of Otolaryngology - Head & Neck Surgery, Education of the Hearing Impaired Child
- 1997 Instruction course faculty, American Academy of Otolaryngology - Head & Neck Surgery, Education of the Hearing Impaired Child
- 1997-2002 Faculty, Home Study Course, Otology Section, American Academy of Otolaryngology - Head & Neck Surgery
- 1998 Instruction course faculty, American Academy of Otolaryngology - Head & Neck Surgery, Education of the Hearing Impaired Child
- 1999 Instruction course faculty, American Academy of Otolaryngology - Head & Neck Surgery, Education of the Hearing Impaired Child
- 2000 Instruction course faculty, American Academy of Otolaryngology - Head & Neck Surgery, Education of the Hearing Impaired Child
- 2001 Instruction course faculty, American Academy of Otolaryngology - Head & Neck Surgery, Education of the Hearing Impaired Child.
- 2002 Instruction course faculty, American Academy of Otolaryngology - Head & Neck Surgery, Education of the Hearing Impaired Child.
- 2002 Instruction course faculty, American Academy of Otolaryngology - Head & Neck Surgery, Basic Audiologic Testing: A Review and Update.
- 2002-2003 Section Chairman, Otology & Neurotology Section, Home Study Course, American Academy of Otolaryngology – Head & Neck Surgery

TEACHING ACTIVITIES (cont.)

National (cont.)

Continuing Medical Education Presentations

- 1991 Symposium on Comprehensive Management of Cranial Base Lesions, Univ. of Virginia, Charlottesville, Virginia, Glomus Jugulare Tumors
- 1991 Fitz-Hugh Symposium on Otology, University of Virginia, Charlottesville, Virginia, Current Management of Tinnitus
- 1992 Grand Rounds, Dept. of Otolaryngology, Univ. of Michigan, Ann Arbor, Michigan, Otoacoustic Emissions: Clinical and Basic Science Applications
- 1993 Fitz-Hugh Symposium on Pediatric Otolaryngology, University of Virginia, Charlottesville, Virginia, Otitis Media in Children - Update 1993
- 1993 Faculty, Cochlear Implant Update, Univ. of Michigan, Ann Arbor, Michigan
- 1999 Otolaryngology for the Non-Otolaryngologist: A Practical Update, UM Sponsored CME course, Ann Arbor, MI, Hearing Loss: Spotting the Red Flags on the Audiogram and When to Refer for Evaluation.
- 1999 Otolaryngology for the Non-Otolaryngologist: A Practical Update, UM Sponsored CME course, Ann Arbor, MI, Facial Paralysis: Update on Diagnosis and Management
- 1999 29th Annual Spring Update in Internal Medicine, Univ. of Michigan Continuing Medical Education Course, May 3-5, 2001, Ann Arbor, MI, Hearing Loss: Evaluation and Treatment.
- 2001 Otolaryngology for the Non-Otolaryngologist: A Practical Update, UM Sponsored CME course, Ann Arbor, MI, Facial Paralysis: Update on Diagnosis and Management.

TEACHING ACTIVITIES (cont.)

University of Virginia

- 1990-1993 Lecture series on Otology, Neurotology, Audiology, monthly or more frequent lectures to Otolaryngology residents
- 1993 Introduction to Hearing and Balance Disorders, Lecture to 1st year medical students, Neuroscience Course, April 8, 1993
- 1993 Introduction to Otology, Lecture to 2nd year medical students, Introduction to Clinical Medicine Course, April 14, 1993.

University of Michigan

Mentorships/Dissertation Committees

- 1995 Mentor for mechanical engineering design course, Development of a Modiolar Electrode Insertion Device
- 1996-1997 Mentor for resident research project, Derek A. Jones, MD, Development of an implantable auditory nerve prosthesis.
- 1998-2000 Dissertation Committee, Amy L. Miller, MD, PhD, Effects of ototoxic deafening and chronic stimulation on auditory-nerve survival and electrical hearing in guinea pigs.
- 2001-2003 Mentor for Neurotology fellow research project, Wayne Berryhill, MD: Simultaneous intraneural cochlear nerve stimulation with multi-unit recording from inferior colliculus in the guinea pig.
- 2003 Mentor for a visiting faculty research project: Mustafa Kazkayzi, MD: Infralabyrinthine approach to the internal auditory canal for electrode implantation: A temporal bone study.
- 2007-2011 Dissertation Committee, Alana Kirby, MD/PhD candidate: Transmission of temporal information through the auditory pathway measured with cochlear-implant stimulation

Lectures and Courses

- 1993- Lecture series on Otology, Neurotology, and Cranial Base Surgery, twice monthly or more frequent lectures to Otolaryngology residents
- 1993- Temporal Bone Dissection Workshops, monthly or more frequent laboratory sessions with Otolaryngology residents

TEACHING ACTIVITIES (cont.)

University of Michigan (cont.)

Lectures and Courses (cont.)

- 1994- Coordinator, Auditory and Vestibular Section, Neuroscience Sequence. Coordinate lectures to 2nd year medical students on the auditory and vestibular systems during their Neuroscience sequence (annually)
- 1994- Anatomy and Physiology of the Auditory System, Lecture to 2nd year medical students, Neuroscience Sequence, annually beginning 1994
- 1994- Diagnosis and Management of Auditory System Disorders, Lecture to 2nd year medical students, Neuroscience Sequence, annually beginning 1994
- 1995 Neurosurgery Grand Rounds, Diagnosis and Management of Vestibular Schwannoma, Nov. 11, 1995
- 1995-2001 Fundamentals of Signal Processing and Otoacoustic Emissions, Lecture to residents and neuroscience graduate students as part of the Otolaryngology Research Didactic Lecture Series. Annually beginning 1995 through 2001.
- 1996- Cochlear Implant Surgery, Lecture given to parents of hearing impaired children at recurring Cochlear Implant Parent Training Workshops, semiannually or more often beginning 1996
- 1996- Otitis Media, Lecture to 3rd year medical students, quarterly.
- 1997 Diseases of the Vestibular System, Lecture to 2nd year medical students, Neuroscience Sequence.
- 1998- Otologic Surgery, Lecture to 3rd year medical students on Surgery rotation, quarterly beginning 1998
- 1998- Faculty, Comprehensive Clinical Assessment, Formal assessment of medical student history & physical examination skills, yearly.
- 1998- Instructor, Physical Diagnosis course, 1st year medical students, yearly.
- 2016-2018 Director, Temporal Bone Dissection Courses, Univ. of Michigan.

TEACHING ACTIVITIES (cont.)

Clinical Teaching

- 1993- Clinical teaching of residents, medical students, and audiology fellows in the outpatient clinic and in the operating room, daily.
- 1993- Clinical teaching of residents, medical students, and audiology fellows in Otology/Neurotology Case Conference, weekly.
- 1993- Clinical teaching of residents and medical students via inpatient consultations, quarterly.

Program Directorship

- 2003 – 2018 Program Director, Neurotology & Cranial Base Surgery Fellowship (ACGME accredited fellowship training program)

Otology-Neurotology Fellows Trained

Thomas Kryzer, MD, Private practice, Wichita, KS
Jeffrey Vrabec, MD, Academic practice, Baylor College of Medicine
Michael J. Disher, MD, Private practice, Fort Wayne, IN
Hussam K. El-Kashlan, MD, Academic practice, Univ. of Michigan
David Eisenman, MD, Academic practice, Univ. of Maryland
Wayne E. Berryhill, MD, Academic practice, Univ. of Oklahoma
Ana Kim, MD, Academic practice, New York Eye & Ear Institute
R. Mark Wiet, MD, Academic practice, Chicago, IL
Meredith Adams, MD, Academic practice, Univ. of Minnesota
Gregory Basura, MD, 2010-2012, Academic practice, Univ. of Michigan
Cameron Budenz, MD, 2012-2014, Private Practice, New York
Sameer Ahmed, MD 2014-2016, Academic Practice, Univ. of Michigan
Kristin Angster, MD 2016-2018 Academic Practice, Henry Ford Health

EXTRAMURAL INVITED PRESENTATIONS

- 1993 Invited lecture, 17th Annual Maj.Gen. Paul H. Streit Memorial Otolaryngology Seminar, Uniformed Services University of the Health Sciences, Bethesda, Maryland, Medical Management of Meniere's Disease
- 1993 Invited lecture, 17th Annual Maj.Gen. Paul H. Streit Memorial Otolaryngology Seminar, Uniformed Services University of the Health Sciences, Bethesda, Maryland, Facial Nerve Paralysis

EXTRAMURAL INVITED PRESENTATIONS (cont.)

- 1996 Invited faculty, National Bioengineering Career Symposium, Univ. of Washington, Seattle, Washington, Engineers as Physicians and Vice Versa and Prosthetic Electrical Stimulation of the Auditory System.
- 1996 Invited lecture, Hearing and Chemical Sciences Seminar Series, Kresge Hearing Research Institute, Univ. of Michigan, Ann Arbor, Dec. 18, 1996, Diagnostic Testing for Endolymphatic Hydrops.
- 1999 Invited lecture, Cochlear Implant Workshop, Michigan Speech and Hearing Assoc. Annual Meeting, Troy, MI, Surgery and Special Medical Considerations
- 1999 Invited lecture, 12th Annual Cherry Blossom Conference on *Facial Nerve Disorders: Update 1999* sponsored by the American Academy of Otolaryngology – Head & Neck Surgery, Washington, DC, March 24, 1999, Lyme Disease and Facial Palsy
- 1999 Invited lecture, Wichita Neuroscience Society, Nov. 15, 1999, Wichita, KS, Practical Evaluation of the Dizzy Patient
- 2004 Invited lecture, Bloedel Hearing Research Symposium, Univ. of Washington, May 20, 2002, Seattle, WA, Intraneural electrodes for stimulation of the auditory system.
- 2006 Invited lecture, Michigan Cleft Palate Association, 24th Annual Conference, June 9, 2006, Detroit, MI, Hearing Loss in Children with Craniofacial Anomalies: Current Status of Cochlear Implants and Bone Anchored Hearing Aids.
- 2007 Invited lecture, Children’s Tumor Foundation, Neurofibromatosis Symposium, Nov. 12, 2007, Ann Arbor, MI, Acoustic Neuroma in Neurofibromatosis Type II
- 2009 Guest Professor & Invited lecture, Temporal Bone Dissection Course, Henry Ford Health System, Oct. 9, 2009
- 2011 Moderator, Panel discussion: “Semicircular Canal Dehiscence: Difficult Diagnostic and Management Issues”, American Neurotology Society Fall Meeting, San Francisco, CA, Sept. 10, 2011
- 2012 Panel discussant: “Management of Petrous Apex Lesion,” American Neurotology Society Spring Meeting, San Diego, CA, April 21, 2012

EXTRAMURAL INVITED PRESENTATIONS (cont.)

- 2012 Moderator, Miniseminar & panel discussion: “Superior Canal Dehiscence and other Third Window Syndromes. American Academy of Otolaryngology – Head & Neck Surgery Annual Meeting, Washington, DC, September 12, 2012.
- 2013 Guest Professor & Invited Lecture: Electrocochleography and Superior Canal Dehiscence: A New Role for an Old Test. Grand Rounds, Dept. of Otolaryngology, Oregon Health & Sciences University, Portland, OR, May 6, 2013.
- 2013 Invited Panelist: Cochlear implants in very young children. American Cochlear Implant Alliance CI2013 Symposium, Washington, DC, October 25, 2013.
- 2014 Invited Panelist: Management of Single Sided Deafness. American Neurotology Society Fall Meeting, Orlando, FL, Sept. 20, 2014.
- 2014 Guest Professor & Invited Lecture: Rehabilitation of Single Sided Deafness, Dept. of Otolaryngology, Univ. of Cincinnati, Oct. 22, 2014.
- 2016 Invited Speaker: Modern Management of Acoustic Neuroma: Flying Physicians Association Annual Meeting, Indianapolis, IN, April 29, 2016
- 2016 Invited Speaker: Pediatric Hearing Loss, American Academy of Otolaryngology – Head & Neck Surgery Mid-Winter Meeting, Oct. 9, 2016, Detroit, MI.
- 2016 Invited Speaker and Panel Chair: Panel on Surgical Techniques in Bone Anchored Hearing Aids. Cochlear Global Research Symposium, Sydney, NSW, Australia, November 3, 2016.
- 2017 Invited Panelist: Panel on Challenges with Large Cholesteatomas, Endoscopic Ear Surgery and Current Advances in Otology International Symposium, University of Minnesota, Minneapolis, MN, Sept. 13-14, 2017
- 2018 Guest Professor & Invited Lectures: Ohio State Univ. Lateral Skull Base Dissection Course, Columbus, OH. Jan 26-27, 2018.
- 2019 Invited Speaker: Electrocochleography and the diagnosis of Superior Semicircular Canal Dehiscence Syndrome. Otolaryngology Grand Rounds, Univ of Alabama – Birmingham Medical School. Nov. 12, 2019.

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1. **Arts HA**, Soma M, Sutton D: "A Mathematical Model of the Curve of the Basilar Membrane," Association for Research in Otolaryngology, Ninth Midwinter Research Meeting, Clearwater Beach, Florida, February 5, 1986.
2. Santos P, **Arts HA**, Spelman FA, Sutton D: "Geometrical Presentation of the Curve of the Basilar Membrane of the Guinea Pig Cochlea Using Three-Dimensional Graphics," House Ear Institute, West Coast Cochlear Prosthesis Workshop, Los Angeles, California, March, 1986.
3. Santos PM, **Arts HA**, Spelman FA, Sutton D: "A Computer-assisted Morphometric Method for Describing the Differential Geometry of the Cochlear Spiral in Three-dimensional Space," Scientific Session, American Academy of Otolaryngology - Head & Neck Surgery, Annual Meeting, 1987.
4. **Arts HA**, Soma M, Spelman FA: "A Mathematical Model of the Cochlear Spiral in Three Dimensions," Association for Research in Otolaryngology, Eleventh Midwinter Research Meeting, Clearwater Beach, Florida, February 4, 1988.
5. **Arts HA**, Eisele DW, Duckert LG: "Intraocular Hypertension as an Index of Ocular Injury Following Orbital Trauma: A Retrospective and Prospective Analysis," American Academy of Facial Plastic and Reconstructive Surgery, Spring Scientific Program, Palm Beach, Florida, April 28, 1988.
6. **Arts HA**, Eisele DW, Duckert LG: "Intraocular Hypertension as an Index of Ocular Injury Following Orbital Trauma," American Trauma Society, 1988 Annual Meeting, Washington, D.C., May 20, 1988.
7. **Arts HA**: "A Mathematical Model of the Guinea Pig Cochlear Spiral in Three Dimensions," American Academy of Otolaryngology - Head & Neck Surgery, 93rd Annual Meeting, New Orleans, Louisiana, September 25, 1989.
8. **Arts HA**, Cummings CW: "The Carotid Balloon Occlusion Test as a Predictor of Outcome Following Carotid Artery Ligation," Western Section, The Triological Society, Pebble Beach, California, January 7, 1990. (Presentation won the annual Vice-President's award).
9. **Arts HA**, Norton SJ, Rubel EW: "The Influence of Perilymphatic Tetrodotoxin and Calcium Concentration on Hair Cell Function," Assoc. for Research in Otolaryngology, Thirteenth Midwinter Research Meeting, Clearwater Beach, Florida, February 6, 1990.
10. **Arts HA**: "Otoacoustic emissions: Potential clinical and research applications," Grand Rounds, Dept. of Otolaryngology - Head & Neck Surgery, Univ. of Texas Health Science Center, San Antonio, Texas, February 18, 1991.

OTHER PRESENTATIONS (cont.)

11. **Arts HA:** "Glomus Jugulare Tumors," Symposium on Comprehensive Management of Cranial Base Lesions, Univ. of Virginia, Charlottesville, Virginia, May 2, 1991.
12. **Arts HA, Lambert PR:** "Pitfalls in the Diagnosis and Treatment of Glomus Tympanicum Tumors," Virginia Society of Otolaryngology Annual Meeting, Norfolk, Virginia, May 18, 1991.
13. **Arts HA:** "Current Management of Tinnitus," Fitz-Hugh Symposium on Otolology, Univ. of Virginia, Charlottesville, Virginia, June 21, 1991.
14. **Arts HA:** "Recurrent Meningitis Secondary to Labyrinthine Abnormalities," Virginia Society of Otolaryngology Annual Meeting, Charlottesville, Virginia, May 1, 1992.
15. **Arts HA:** "Otoacoustic Emissions: Clinical and Basic Science Applications," Grand Rounds, Dept. of Otolaryngology, Univ. of Michigan Medical Center, Ann Arbor, MI, Nov. 9, 1992.
16. **Arts HA:** "Introduction to Hearing and Balance Disorders," Lecture to 1st year medical students, Neuroscience course, Univ. of Virginia School of Medicine, Charlottesville, Virginia, April 8, 1993.
17. **Arts HA:** "Introduction to Otolology," Lecture to 2nd year medical students, Introduction to Clinical Medicine course, Univ. of Virginia School of Medicine, Charlottesville, Virginia, April 14, 1993.
18. Dodson EE, Younger RM, **Arts HA**, Lambert PR, & Steiner L: "The University of Virginia Experience with Stereotactic Radiosurgery for the Treatment of Acoustic Neuromas," Virginia Society of Otolaryngology Annual Meeting, Norfolk, Virginia, May 7, 1993
19. **Arts HA:** "Otitis Media in Children - Update 1993," Seventeenth Annual Fitz-Hugh Symposium, Univ. of Virginia, Charlottesville, Virginia, June 18, 1993
20. Vrabc J, **Arts HA**, Ruth RA, Lambert PR: "Promontory Electrical Stimulation Following Translabyrinthine Excision of Acoustic Neuroma with Preservation of the Cochlear Nerve," Annual Scientific Meeting, American Neurotology Society, Palm Beach, Florida, May 8, 1994.
21. Noordzij JP, **Arts HA**, Dodson E, Lambert PR: "Chronic Otitis Media and Sensorineural Hearing Loss," Annual Meeting, American Otological Society, Palm Beach, Florida, May 7, 1994.

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22. Ramakrishnan A, Nair TS, Altschuler RA, Disher MJ, **Arts HA**, Telian SA, Raphael Y, Miller JM, Carey TE: "Defining targets of autoimmune sensorineural hearing loss: Case report and results of initial analysis," Association for Research in Otolaryngology, Eighteenth Midwinter Research Meeting, St. Petersburg Beach, Florida, February 4-8, 1995.
23. Griffith AJ, **Arts HA**, Downs C, Innis JW, Sheldon S: "Familial inheritance of the large vestibular aqueduct syndrome", Middle Section Meeting, Triological Society, Dearborn, MI, Jan. 13, 1996.
24. Jones DA, **Arts HA**, Bierer SM, Anderson DJ: "Stimulation of the auditory nerve using a penetrating, thin film microelectrode array in cats", Association for Research in Otolaryngology, Nineteenth Midwinter Research Meeting, St. Petersburg Beach, Florida, February 4-8, 1996.
25. Ramakrishnan A, Nair TS, Disher MJ, Telian ST, **Arts HA**, Miller JM, Carey TE: "Antibodies from "autoimmune" hearing loss patients bind to guinea pig inner ear antigens on western blots and surface preparations: Similarities to monoclonal antibody KHRI-3," Association for Research in Otolaryngology, Nineteenth Midwinter Research Meeting, St. Petersburg Beach, Florida, February 4-8, 1996.
26. Carey TE, Nair TS, Ramakrishnan A, Disher MJ, Telian SA, **Arts HA**, Miller JM: "Murine and human antibodies to supporting cells," 1st International Conference on Immunological Diseases of the Ear, Positano, Italy, Oct. 24-26, 1996
27. Connor CM, Zwolan T, Heiber S, **Arts HA**: "The education of children using cochlear implants: Oral or total communication?" Vth International Cochlear Implant Conf., New York, NY, May 1-3, 1997.
28. Telian SA, El-Kashlan HK, **Arts HA**: "Minimizing wound complications in cochlear implant surgery", Vth International Cochlear Implant Conf., New York, NY, May 1-3, 1997.
29. El-Kashlan HK, Shepard NT, **Arts HA**, Telian SA: "Disability from vestibular symptoms after acoustic neuroma resection", American Neurotology Society Annual Meeting, Scottsdale, AZ, May 10-11, 1997.
30. **Arts, HA**: "The Bone Anchored Hearing Aid: Indications, Device Details, and Implantation Procedure," Michigan Oto-Laryngological Society, Crystal Mountain, MI, June 27, 1997.
31. Jones DA, **Arts HA**, Hetke JF, Anderson DJ: "Feasibility of Chronic Auditory Nerve Implantation Using a Thin-Film Microelectrode Array," Annual meeting, American Academy of Otolaryngology - Head & Neck Surgery, San Francisco, CA, Sept. 8, 1997.

OTHER PRESENTATIONS (cont.)

32. Ramakrishnan A, Disher MJ, Nair TS, Miller JM, **Arts HA**, Telian SA, Sataloff RT, Carey TE: Antibodies from patients with autoimmune hearing loss bind to a 68kD protein and to supporting cells in guinea pig inner ear, Twenty-first Midwinter Research Meeting, Association for Research in Otolaryngology, St. Petersburg Beach, FL, Feb., 1998.
33. El-Kashlan H, **Arts HA**, Gebarski S: Jugular bulb diverticulum associated with extension into the labyrinth, Annual meeting, American Academy of Otolaryngology - Head & Neck Surgery, San Antonio, TX, Sept 13, 1998.
34. Nair TS, Gray JP, Ramakrishnan A, **Arts HA**, Telian SA, Carey TE: Assessing human sera for antibodies to the KHRI-3 inner ear antigen and HSP70 protein, Twenty-second Midwinter Research Meeting, Association for Research in Otolaryngology, St. Petersburg Beach, FL, Feb., 1999.
35. Gray JP, Zeitouin H, **Arts HA**, et al: Immunofluorescence to inner ear supporting cell antigens predicts response to corticosteroid therapy in sudden and rapidly progressive hearing loss, Twenty-second Midwinter Research Meeting, Association for Research in Otolaryngology, St. Petersburg Beach, FL, Feb., 1999.
36. El-Kashlan H., Zeitoun H, **Arts HA**, Telian SA: Recurrence of acoustic neuroma after incomplete resection, American Neurotology Society Annual Meeting, Palm Desert, CA, April 25, 1999.
37. **Arts HA**, Telian SA, El-Kashlan HK, Jones C: A conservative approach to intratympanic gentamicin therapy: Preliminary results, Fourth International Symposium on Meniere's Disease, April 11, 1999, Paris, France.
38. Carey TE, Gray J, **Arts HA**, Lansford CD, Lee D, El-Kashlan HK, Telian SA, Denny ED, Ramakrishnan A, Nair TS, Zeitoun H, Disher MJ, Sataloff RT, Fisher SG: Antibody to inner ear supporting cells correlates with response to steroids in suspected autoimmune hearing loss, Inner Ear Biology Workshop, June 26-29, Helsinki, Finland.
39. El-Kashlan H, **Arts HA**, Telian SA: External auditory canal closure in cochlear implant surgery, American Neurotology Society Annual Meeting, Boca Raton, FL, May 12, 2003.
40. Telian SA, **Arts HA**, El-Kashlan H, Thompson BG: Hearing preservation results in middle cranial fossa acoustic neuroma resection, Michigan Otolaryngological Society Annual Meeting, Bay Harbor, MI, August 1, 2003.
41. **Arts HA**, Jones DA, Anderson DJ: Auditory Stimulation with Intranearal Electrodes, Wireless Integrated Microsensor Systems Engineering Research Center Seminar Series, Univ. of Michigan, Ann Arbor, MI, November 18, 2003.

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42. Isaacson B, Telian SA, McKeever PE, **Arts HA**: Hemangiomas of the geniculate ganglion: Evaluation and management, American Otological Society Annual Meeting, Scottsdale, AZ, May 1, 2004.
43. **Arts HA**, Telian SA, El-Kashlan H, Thompson BG: Outcomes in vestibular schwannoma surgery using the middle cranial fossa approach, American Neurotology Society Annual Meeting, Boca Raton, FL, May 15, 2005.
44. Kim AH, Edwards BM, Telian SA, Kileny PR, **Arts HA**: Transient evoked otoacoustic emissions as a prognostic indicator for hearing preservation in acoustic neuroma surgery, American Neurotology Society Annual Meeting, Boca Raton, FL, May 15, 2005.
45. Kim AH, El-Kashlan H, **Arts HA**: Bone Anchored Hearing Aid (BAHA): Complications and Pitfalls, Annual Meeting, American Academy of Otolaryngology – Head & Neck Surgery, Los Angeles, CA, Sept. 28, 2005.
46. Kommareddi PK, Nair TS, Vallurupalli, M, Remington M, Telian SA, **Arts HA**, El-Kashlan H, Fisher SG, Kumar V, Carey TE: Production and Purification of Recombinant Human CTL2 as a Target Protein for Autoantibodies in Autoimmune Hearing Loss, , Twenty-ninth Midwinter Research Meeting, Association for Research in Otolaryngology, New Orleans, LA, Feb., 2006.
47. Adams ME, Kim AH, **Arts HA**, Telian SA: Contralateral hearing loss after acoustic neuroma surgery, Poster presented at the Annual Meeting of the American Academy of Otolaryngology - Head & Neck Surgery, Toronto, Ontario, CA, Sept. 20, 2006.
48. **Arts HA**, Telian SA, El-Kashlan H, Thompson BG: Hearing preservation and facial nerve outcomes in vestibular schwannoma surgery: Results using the middle cranial fossa approach, Michigan Walter Work Society Scientific Seminar, Ann Arbor, MI, Oct. 20, 2006.
49. **Arts HA**, Adams ME, Telian SA, El-Kashlan, HE, Kileny PR: Abnormal electrocochleography in superior semicircular canal dehiscence syndrome, American Neurotology Society, San Diego, CA, May 2, 2008.
50. Wiet RM, **Arts HA**, El-Kashlan HE, Telian SA, Kileny PR: Electromyography in the Prediction of Outcome of Acute Unilateral Complete Facial Paralysis, American Neurotology Society, San Diego, CA, May 2, 2008.
51. **Arts HA**: Surgical issues in cochlear implantation, Univ. of Michigan Sound Support Lecture Series, Washtenaw Intermediate School District, May 21, 2008

OTHER PRESENTATIONS (cont.)

52. **Arts HA:** Large cerebellopontine angle neoplasm presenting in a cochlear implant candidate: Many lessons for the unwary, Michigan Oto-Laryngological Society Annual Meeting, Crystal Mountain Resort, MI, July 24, 2010.
53. Adams ME, Kileny PR, Telian SA, El-Kashlan HK, Heidenreich KD, **Arts HA:** Electrocochleography: A sensitive diagnostic and surgical adjunct in semicircular canal dehiscence syndrome. American Neurotology Society, 46th Annual Meeting, Chicago, IL, April 30, 2011.
54. Budenz C, Arnedt C, Starr K, **Arts HA**, El-Kashlan HK, Telian SA, Zwolan TA: Outcomes of cochlear implantation in children with auditory neuropathy. 13th Symposium on Cochlear Implants in Children, Chicago, IL, July 15, 2011.
55. **Arts, HA:** Diagnosis of superior semicircular canal dehiscence and other third window syndromes. *Miniseminar* Annual Meeting of the American Academy of Otolaryngology – Head & Neck Surgery, Washington, DC, September 12, 2012.
56. Budenz C, Arnedt C, Starr K, **Arts HA**, El-Kashlan HK, Telian SA, Zwolan TA: Speech and language outcomes of cochlear implantation in children with auditory neuropathy. American Neurotology Society, 47th Annual Meeting, Orlando, FL, April 13, 2013.
57. Stach C, **Arts HA**, El-Kashlan H, Telian SA, Zwolan TA: Cochlear implant device failures: A retrospective review 1985-2013. CI2013: American Cochlear Implant Alliance Symposium, Washington DC, Oct. 24, 2013.
58. **Arts HA:** Rehabilitation of Single Sided Deafness: Options, Outcomes, and Controversies. 2014 Michigan Work Society Academic Meeting, Ann Arbor, MI, October 9, 2014.
59. Paoletti A, Still J, **Arts HA**, Zwolan TA: Auditory perception and language acquisition of a patient with X-Linked Deafness: Pre and Post Cochlear Implant Outcomes, CI2014: American Cochlear Implant Alliance Symposium, Nashville, TN Dec. 11, 2014
60. Slager H, **Arts HA**, Zwolan TA: Clinical trial speech perception outcomes with the Cochlear Nucleus CI422 cochlear implant in adults, CI2015: American Cochlear Implant Alliance Symposium, Washington, DC Oct. 15, 2015.
61. Sim MW, Manarelli G, El-Kashlan HK, Telian SA, **ArtsHA:** High frequency hearing loss after stapedectomy. Podium presentation at the 148th Annual meeting of the American Otological Society, Boston, MA, April 25, 2015.

OTHER PRESENTATIONS (cont.)

62. VanKouvering KK, Ahmed S, Kline S, Hollister SJ, Green GE, **Arts HA**: Customized lateral skull base repair in temporal bones with 3-D printed models. Poster presentation at 149th Annual meeting of the American Otological Society, Chicago, IL, May 20, 2016.
63. Hussain S, Ahmed S, **Arts HA**: Systematic review of the effectiveness of medical and surgical treatments for MRSA otorrhea in pediatric patients. Annual meeting of the American Society of Pediatric Otolaryngology, Austin, TX, May 21, 2017.
64. Schwartz-Leyzac KC, Buswinka CJ, **Arts HA**, Zwolan TA, Pfingst BE: Factors that contribute to electrophysiological and psychological measures of cochlear health in cochlear-implanted humans. Poster presentation at Conference on Implantable Auditory Prosthesis, Lake Tahoe, CA, July 16, 2017.
65. Schwartz-Leyzac KC, **Arts HA**, Holden TA, Buswinka CJ, Firszt JB, Zwolan TA, Hughes AP, Colesa DJ, Pfingst BE: Effects of electrode position on functional measures of cochlear health in cochlear implant listeners. 41st Annual meeting of the Association for Research in Otolaryngology, San Diego, CA, Feb. 10, 2018.
66. Schwartz-Leyzac KC, Buswinka CJ, Holden TA, Hughes AP, Colesa DJ, **Arts HA**, Zwolan TA, Firszt JB, Raphael Y, Pfingst BE: Clinical applications of neural-health measures. Symposium presentation on Auditory Nerve Impairment, Preservation, and Repair: Implications for Cochlear Implants. Annual meeting of the Association for Research in Otolaryngology, San Diego, CA, Feb. 10, 2018.
67. Griffin B, Still J, **Arts HA**, El-Kashlan HE, Zwolan TA, Changing with the times: Cochlear implant candidacy considerations. Poster presentation at the American Cochlear Implant Alliance Annual Meeting, Washington, DC, March 8, 2018
68. Schwartz-Leyzac KC, Colesa DJ, **Arts HA**, Swiderski D, Zwolan TA, Raphael Y, Pfingst BE: Using a combined animal and human approach to better understand how neural function affects cochlear implant performance. 2019 Conference on Implantable Auditory Prostheses, Lake Tahoe, CA, July 15, 2019

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1. Eberhart RC, Lynch ME, Bilge F, **Arts HA**: Effects of fluid shear and temperature on protein adsorption onto Teflon surfaces, *Trans Am Soc Artif Int Organs* 26:185-193, 1980.
2. **Arts HA**, Eisele DW, Duckert LG: Intraocular pressure as an index of ocular injury in orbital fractures, *Arch Otolaryngol Head Neck Surgery* 115(2):213-216, 1989.
3. **Arts HA**, Fagan PA: Vagal body tumors, *Otolaryngol Head Neck Surgery* 105:77-85, 1991.
4. Vrabec J, Lambert PR, **Arts HA**, Ruth RA: Promontory stimulation following translabyrinthine excision of acoustic neuroma with preservation of the cochlear nerve, *Am J Otol* 16(5):643-647, 1995.
5. Noordzig P, Dodson E, Ruth RA, **Arts HA**, Lambert PR: Chronic otitis media and sensorineural hearing loss: Is there a clinically significant relation?, *Am J Otol* 16(4):420-423, 1995.
6. Griffith AJ, **Arts HA**, Downs C, Innis JW, Sheldon S: Familial large vestibular aqueduct syndrome, *Laryngoscope* 106(8):960-965, 1996.
7. Levy RA, **Arts HA**: Predicting neuroradiologic outcome in patients referred for audiovestibular dysfunction, *Am J Neuroradiol* 17:1717-1724, 1996.
8. **Arts HA**, Telian SA, Kileny PR: Diagnostic testing for endolymphatic hydrops, *Otolaryngologic Clinics of North America*, 30(6):987-1005, 1997.
9. Disher MJ, Ramakrishnan A, Nair TS, Miller JM, Telian SA, **Arts HA**, Sataloff RT, Altschuler RA, Raphael Y, Carey T: Human autoantibodies and monoclonal antibody KHRI-3 bind to a phylogenetically conserved inner ear supporting cell antigen, *Annals New York Academy of Sciences*, 830:253-265, 1997.
10. El-Kashlan HK, Shepard NT, **Arts HA**, Telian SA: Disability from vestibular symptoms after acoustic neuroma resection, *Am J Otol*, 19(1):104-111, 1998.
11. **Arts HA**, Rubel EW, Norton SJ: Tetrodotoxin effects on the peripheral auditory system, *Seminars in Hearing*, 20(1):3-12 1999.
12. Telian SA, El-Kashlan HK, **Arts HA**: Minimizing wound complications in cochlear implant surgery, *Am J Otol*, 20(3):331-334, 1999.
13. El-Kashlan H, **Arts HA**, Gebarski S: Jugular bulb diverticulum: Clinical significance, *Otolaryngol Head Neck Surg*, 122(4):575-576, 2000.

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14. **Arts HA**, Telian SA, El-Kashlan HE, Jones CA: A conservative approach to intratympanic gentamicin therapy: Preliminary results, *Meniere's disease: Proceedings of the 4th international symposium on Meniere's disease*, Paris, France, April 11-14, 1999, pp 619-625, Kugler Publications, The Hague, Netherlands.
15. El-Kashlan H, Zeitoun H, **Arts HA**, Telian SA: Recurrence of acoustic neuroma after incomplete resection, *Am J Otol*, 21(3):389-392, 2000.
16. Eisenman DE, **Arts HA**: Clinical Challenges: Effectiveness of treatment for sudden-onset unilateral profound sensorineural hearing loss, *Arch Oto Head Neck Surg* 126(9):1161-1164, 2000.
17. Connor CM, Heiber S, **Arts HA**, Zwolan T: Speech, vocabulary, and the education of children using cochlear implants: Oral or total communication?, *J Speech Lang Hear Res* 43:1185-1204, 2000.
18. Marentette LJ, Switz KL, **Arts HA**, Doerr TD, Ross DA, Thompson BG: The Role Of Cost-effectiveness Analyses In Cranial Base Care, *Skull Base Surgery* 10:19-20, 2000.
19. Eisenman DE, Ashbaugh C, Zwolan TA, **Arts HA**, Telian SA: Implantation of the malformed cochlea. *Otology & Neurotology*, 22:834-841, 2001.
20. Lustig LR, **Arts HA**, Brackmann DE, Francis HF, Molony T, Megerian CA, Moore GF, Moore KM, Morrow T, Potsic W, Rubenstein JT, Srireddy S, Syms CA 3rd, Takahashi G, Vernick D, Wackym PA, Niparko JK: Hearing rehabilitation using the BAHA bone-anchored hearing aid: results in 40 patients. *Otology & Neurotology* 22(3):328-34, 2001.
21. El-Kashlan HK, **Arts HA**, Telian SA: Cochlear implantation in chronic suppurative otitis media. *Otology & Neurotology*, 23:53-55, 2002.
22. Luetje CM, Brackman DE, Balkany TJ, Maw J, Baker RS, Kelsall D, Backous D, Miyamoto R, Parisier S, **Arts HA**: Phase III clinical trial results with the Vibrant Soundbridge implantable middle ear hearing device: A prospective controlled multicenter study. *Otolaryngol Head Neck Surg*, 126(2):97-107, 2002.
23. **Arts HA**, Garber A, Zwolan TA: Pediatric cochlear implantation, *Otolaryngologic Clin NA*, 35:925-943, 2002.
24. **Arts HA**, Jones DA, Anderson DJ: Intraneural electrode arrays for prosthetic auditory stimulation, *Ann Otol Rhinol Laryngol*, 112:9 Pt 2, Suppl 191, 2003.

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25. Yeom K, Gray J, Nair TS, **Arts HA**, Telian SA, Disher MJ, El-Kashlan H, Sataloff RT, Fisher SG, Carey TE. Antibodies to HSP-70 in normal donors and autoimmune hearing loss patients, *Laryngoscope* 113(10):1770-6, 2003.
26. El-Kashlan HK, **Arts HA**, Telian SA. External auditory canal closure in cochlear implant surgery. *Otology & Neurotology*, 24(3):404-8, 2003.
27. Nair TS, Kozma KE, Hoefling NL, Kommareddi PK, Ueda Y, Gong TW, Lomax MI, Lansford CD, Telian SA, Satar B, **Arts HA**, El-Kashlan HK, Berryhill WE, Raphael Y, Carey TE: Identification and characterization of choline transporter-like protein 2, an inner ear glycoprotein of 68 and 72 kDa that is the target of antibody-induced hearing loss, *J Neuroscience* 24(7):1772-1779, 2004.
28. Zwolan TA, Ashbaugh CM, Alarfaj A, Kileny PR, **Arts HA**, El-Kashlan H, Telian SA: Pediatric Cochlear Implant Patient Performance as a Function of Age at Implantation, *Otology & Neurotology*, 25:112-120, 2004.
29. Isaacson B, Telian SA, McKeever PE, **Arts HA**: Hemangiomas of the geniculate ganglion, *Otology & Neurotology*, 26:796-802, 2005
30. Zeitoun H, Beckman JG, **Arts HA**, Lansford CD, Lee DS, El-Kashlan H, Telian SA, Denny DE, Ramakrishnan A, Nair TS, Disher MJ, Sataloff RT, Fisher SG, Carey TE: Steroid response and supporting cell antibody in autoimmune hearing loss, *Arch. Otolaryngol Head Neck Surg*, 131:665-72, 2005.
31. **Arts HA**, Telian SA, El-Kashlan H, Thompson BG: Hearing preservation and facial nerve outcomes in vestibular schwannoma surgery: Results using the middle cranial fossa approach, *Otology & Neurotology*, 27:234-241, 2006.
32. Kim, HO, El-Kashlan H, Telian SA, **Arts HA**: Transient evoked otoacoustic emissions pattern as a prognostic indicator for hearing preservation in acoustic neuroma surgery, *Otology & Neurotology*, 27:372-379, 2006.
33. DeGregoris G, Brumblay H, **Arts HA**, Thompson BG: Lipochoristoma of the cerebellopontine angle, *Otology & Neurotology*, 28:867-868, 2007.
34. Kommareddi PK, Nair TS, Raphael Y, Telian SA, Kim AH, **Arts HA**, El-Kashlan HK, Carey TK: Cochlin isoforms and their interaction with CTL2 (SLC44A2) in the inner ear, *J Assoc Res Otolaryngol*, 8:435-446, 2007.
35. Kim AH, Kileny PR, **Arts HA**, El-Kashlan HK, Telian SA, Zwolan TA: Role of electrically evoked auditory brainstem response in cochlear implantation of children with inner ear malformations, *Otology & Neurotology*, 29(5):626-634, 2008.

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36. Kommareddi PK, Nair TS, Vallurupalli M, Telian SA, **Arts HA**, El-Kashlan HK, Sataloff RT, Carey TE: Autoantibodies to Recombinant Human CTL2 in Autoimmune Hearing Loss, *Laryngoscope*, 119(5):924-932, 2009.
37. **Arts HA**, Adams ME, Telian SA, El-Kashlan HK, Kileny PR: Reversible Electrocochleographic Abnormalities in Superior Semicircular Canal Dehiscence, *Otology & Neurotology*, 30(1):79-86, 2009.
38. Isaacson B, Berryhill W, **Arts HA**: Giant-cell tumors of the temporal bone: Management strategies, *Skull Base*, 19(4):291-301, 2009
39. Kommareddi PK, Nair TS, Vallurupalli M, Telian SA, **Arts HA**, El-Kashlan HK, Sataloff RT, Carey TE: Autoantibodies to recombinant CTL2 in autoimmune hearing loss, *Laryngoscope* 119(5):924-32, 2009.
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41. Kileny PR, Kim AH, Wiet RM, Telian SA, **Arts HA**, El-Kashlan H, Zwolan TA: The predictive value of transtympanic promontory EABR in congenital temporal bone malformations, *Cochlear Implants Intl.*, 11(Suppl. 1):181-86, 2010.
42. Pepper JP, McKeever P, Gebarski S, Spector ME, Thompson BG, **Arts HA**: Angioleiomyoma of the internal auditory canal: Clinical and radiographic features, *Otology & Neurotology* 31(9):1451-4, 2010.
43. Spector ME, Adams ME, **Arts HA**: Capillary hemangioma of the tympanic membrane, *Am J Otolaryngol*, 32(6):615-6, 2011.
44. Adams ME, Kileny PR, Telian SA, El-Kashlan HK, Heidenreich KD, Mannarelli GR, **Arts HA**: Evaluation of electrocochleography as a diagnostic and surgical adjunct in superior semicircular canal dehiscence syndrome, *Otology & Neurotology*, 32(9):1506-12, 2011.
45. Adams ME, Kileny PR, Telian SA, El-Kashlan HK, Heidenreich KD, Mannarelli GR, **Arts HA**. Electrocochleography as a diagnostic and intraoperative adjunct in superior semicircular canal dehiscence syndrome. *Otol Neurotol*. 2011 Dec;32(9):1506-12. PubMed PMID: 22072263.
46. Clark JH, Wang NY, Riley AW, Carson CM, Meserole RL, Lin FR, Eisenberg LS, Tobey EA, Quittner AL, Francis HW; CDaCI Investigative Team (**Arts HA**), Niparko JK: Timing of cochlear implantation and parents' global ratings of children's health and development, *Otology & Neurotology* 33(4):545-552, 2012.

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