

## CURRICULUM VITAE

Date 11/1/2019

### PERSONAL INFORMATION

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Mark Weidenbecher, MD FACS  
MetroHealth Medical Center  
Department of Otolaryngology  
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### MEDICAL SCHOOL

1995 – 2002

Medical School, Friedrich Alexander University, Germany  
Erlangen, Germany

### FOREIGN MEDICAL RESIDENCY

2002 – 2006

Otolaryngology-Head and Neck Surgery and Electrophysiology  
Friedrich Alexander University, Erlangen, Germany

### RESEARCH FELLOWSHIP

2006 - 2008

Case Western Reserve University  
Department of Orthopedics, Cleveland, OH

### INTERNSHIP

2008 – 2009

General Surgery  
Case Western Reserve University, Cleveland, OH

### RESIDENCY

2009 – 2013

Otolaryngology-Head and Neck Surgery  
Case Western Reserve University, Cleveland, OH

### FELLOWSHIP

2013 - 2014

Laryngology –Steven Zeitels, MD  
Massachusetts General Hospital - Harvard University, Boston, MA

### HOSPITAL APPOINTMENTS

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2018 – present

Attending Otolaryngology Surgeon, MetroHealth Medical Center, Department  
of Otolaryngology

2014 - present	Attending Otolaryngology Surgeon, Louis Stokes Cleveland VA Medical Center, Department of Otolaryngology
2014 – 2017	Attending Otolaryngology Surgeon, University Hospitals-Case Medical Center, Department of Otolaryngology

### **ACADEMIC APPOINTMENTS**

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2014 - present	Assistant Professor, Case Western Reserve University, School of Medicine, Department of Otolaryngology
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### **CERTIFICATION AND LICENSURE**

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Board Certification:	American Board of Otolaryngology, 2014-present
State Licensure:	Ohio License, 2014-present Massachusetts License, 2013-2014

### **ACADEMIC HONORS AND RESEARCH AWARDS**

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1. Graduated *“With Excellence” (top 3rd percentile)*, 2001, University of Erlangen-Nuremberg, Germany 2001
2. Awarded *“summa cum laude”* for medical thesis, entitled “Laryngotracheal growth following cricotracheal resection combined with laminotomy. An experimental study on rabbits”, 2003
3. Weidenbecher M, Dennis JE, Fabrication of a composite neotrachea in a rabbit model, *Awarded 1st research prize*, 2007, Midwest Tissue Engineering Consortium, Cincinnati, OH
4. Weidenbecher M, Henderson JH, Tucker HM, Baskin JZ, Dennis JE, Tissue engineered implants for laryngotracheal reconstruction using Hyalograft C: An animal study, *Awarded 1st research prize*, 2007, Combined Otolaryngology Spring Meeting, San Diego, CA
5. Weidenbecher M, Tucker HM, Dennis JE, Fabrication of a neotrachea, *Awarded 1st research prize* at the Midwest Tissue Engineering Consortium, 2008, Ann Arbor, MI
6. Weidenbecher M, Tucker HM, Dennis JE, Fabrication of a tissue engineered neotrachea in a rabbit model, *Awarded 1st research prize* at the Resident Research Competition, 2008, Pittsburgh, PA
7. Weidenbecher M, Tucker HM, Dennis JE, Fabrication of a tissue engineered neotrachea, *Awarded 1st research prize*, 2008, Resident Research Competition, Cleveland, OH

### **ORGANIZATIONS AND PROFESSIONAL SOCIETY MEMBERSHIPS**

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2001 - present	German Society of Otolaryngology-Head & Neck Surgery
2002 - present	American Academy of Otolaryngology-Head and Neck Surgery
2018 – present	Society of University Otolaryngologist
2018 – present	American College of Surgeons
2018 - present	Advanced Platform Technology Center, Cleveland, Investigator and Member

## **PROFESSIONAL SERVICES**

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### **JOURNAL CONTRIBUTIONS**

1. 2018-present: *The Annals of Otolaryngology, Rhinology and Laryngology*, Editorial Board Member
2. 2018-present: *Otolaryngology – Head and Neck Surgery*, Ad hoc Reviewer
3. 2014-Present: *Laryngoscope*, Ad hoc Reviewer
4. 2014-Present: *American Journal of Otolaryngology*, Ad hoc Reviewer

### **LOCAL AND NATIONAL COMMITTEE SERVICES**

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|----------------|---|
| 2019 – present | Otolaryngology Veterans Affairs Committee                                   |
| 2017 - present | Laryngology & Bronchoesophageal education committee                         |
| 2014 - present | Board member, North East Ohio Society of Otolaryngology-Head & Neck Surgery |

### **HOSPITAL AFFILIATE**

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|----------------|---|
| 2018 – present | Director of Voice & Swallow, MetroHealth, Cleveland, OH                                 |
| 2018 – present | Director of Sleep Surgery, MetroHealth, Cleveland, OH                                   |
| 2014 – present | Head and Neck Cancer Tumor Board Director, Louis Stokes Cleveland VA Medical Center, OH |

### **EDUCATIONAL COMMITTEES**

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|----------------|---|
| 2014 - present | Clinical Competency Committee member, Department of Otolaryngology, Cleveland, OH |
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### **ADVISORY GROUP**

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| 2014-2016 | Member of Olympus advisory board for product development |
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## **TEACHING ACTIVITIES**

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### **COURSE DEVELOPMENT**

1. Laryngeal cadaver micro-dissection lab – Case Western Reserve University.  
Initiated and developed course schedule and simulators for cadaver lab for 25 residents.  
Dedicated 2 days in 2015 and 2016.
2. Mock oral board Simulation - Case Western Reserve University.  
Developed scenarios and cases to prepare 20 chief residents for oral boards, 2016- present.

## **TEACHING ACTIVITIES**

1. Multilevel Sleep Surgery, Department of Otolaryngology, University Hospitals Cleveland Medical Center, Cleveland, OH, 1/2019 and 6/2018, audience of 25 students.
2. Tracheal Stenosis Management, Department of Otolaryngology, University Hospitals Cleveland Medical Center, 2018, audience of 20 students.
3. Sleep Surgery, Department of Otolaryngology, University Hospitals Cleveland Medical Center, 2017, audience of 25 students.
4. Repair of Laryngeal Stenosis, Department of Otolaryngology, University Hospitals Cleveland Medical Center, 2017, audience of 25 students.
5. Adult Airway Management, Department of Otolaryngology, University Hospitals Cleveland Medical Center, 2016, audience of 20 students.
6. Spasmodic Dysphonia - Diagnosis and Treatment, Department of Otolaryngology, University Hospitals Cleveland Medical Center, 2016, audience of 25 students.

## **INTERNATIONAL INVITED LECTURES/ COURSES/ PROFESSORSHIP**

1. Visiting Professor, lecture on sleep surgery to improve outcome of OSA. 2019, University of Freiburg, Germany
2. "Upper airway stimulation for obstructive sleep apnea: a single center clinical outcome using modified surgical technique", invited presentation. 2018, German Sleep Society, Nuremberg, Germany
3. Visiting professor with lecture on "Advances in laser treatment of laryngeal cancer". 2018, Friedrich-Alexander University, Erlangen, Germany
4. Invited to teach, lecture and perform live surgery for international audience at the "2017 International Laryngology Course". 2017, Friedrich Alexander University, Erlangen, Germany

## **NATIONAL INVITED LECTURES/ COURSES/ PANELIST**

1. "Contemporary surgical management of laryngeal cancer", invited keynote speaker. 2019, University of Indianapolis, IN
2. "Repair techniques of posterior glottic stenosis", Fall Voice conference, invited panelist. 2018, Seattle, WA
3. "Managing challenging laryngology cases", North East Ohio Society of Otolaryngology-Head & Neck Surgery, invited panel member, 2016, University of Cincinnati, OH

## **INTERNATIONAL RESEARCH PRESENTATION**

1. Weidenbecher M, Tucker HM, Dennis JE. Fabrication of a tissue engineered neotrachea. 79th annual meeting of the German Association of Otorhinolaryngology, 2008, Bonn, Germany
2. Weidenbecher M, Henderson JH, Tucker HM, Dennis JE. Tissue engineered implants for laryngotracheal reconstruction using Hyalograft C: An animal stud. 78th annual meeting of the German Association of Otorhinolaryngology, 2007 Munich, Germany
3. Weidenbecher M, Zenk J, Zimmermann Th, Iro H. Acute stridor in newborns following long-term intubation: treatment options to avoid tracheotomy, 77th annual meeting of the German Association of Otorhinolaryngology, 2006, Mannheim, Germany
4. Iro H, Weidenbecher M, Waldfahrer, Interdisciplinary approach to tracheal stenoses, 1st symposium of laryngotracheal stenoses, Heidelberg, 2005 Germany
5. Weidenbecher M. Surgical therapy of subglottic stenoses, 76th annual meeting of the German Association of Otorhinolaryngology, 2005, Erfurt, Germany
6. Weidenbecher M, Iro H. Segmental tracheal resection for the treatment of tracheal stenoses. 76th annual meeting of the German Association of Otorhinolaryngology, 2005, Erfurt, Germany
7. Weidenbecher M, Huk WJ, Iro H. Styloid syndrome – possible complications after surgical management. 75th annual meeting of the German Association of Otorhinolaryngology, 2004, Bad Reichenhall, Germany

## **NATIONAL RESEARCH PRESENTATION**

1. Parker P; Weidenbecher M; Friedman A; Walker W; Lott D; KTP Laser Treatment of T1-2 Glottic Cancer: Fall Voice 2019, Dallas, Texas
2. Kominsky R, Strauss, M; Weidenbecher M; The role of gastrograffin and barium swallow studies in developing an oral feeding timeline after laryngectomy; Fall Voice 2019, Dallas, Texas
3. Parker P; Weidenbecher M; Friedman A; Walker W; Lott D; Potassium-Titanyl-Phosphate Laser Treatment of Early Glottic Cancer: A Multi-Institutional Retrospective Study; Combined Otolaryngology Spring Meetings 2019; Austin, Texas
4. White EK, Carter JC, Weidenbecher M. A multidisciplinary approach to treating insomnia and anxiety due to hypoglossal nerve stimulation treatment of obstructive sleep apnea: a case study. National Conference of the Association of Psychologists in Academic Health Centers, 2019, New Orleans, LA

5. Sozansky J., Weidenbecher, M. Repair of glottic avulsion injury from intubation. Fall Voice Conference, 2018, Seattle, WA
6. Tamaki A, Weidenbecher, M. Superior laryngeal nerve neuralgia. Fall Voice Conference, 2018, Seattle, WA
7. Weidenbecher, M, Tamaki A. Repair of high grade glottic stenosis, Fall Voice Conference, 2017, Washington DC
8. Erol L, Younesi M, Akkus O, Weidenbecher M. Computerized Rotational Jet Spraying of Polymers for Biofabrication of Composite Tubular Scaffolds. Society for biomaterials, 2017
9. Adessa M. Weidenbecher M, Muscle Tension Dysphagia: A novel diagnosis. American-Speech-Hearing Association, 2017, Los Angeles, CA
10. Weidenbecher M, Tucker HM, Gilpin AD, Dennis JE. Tissue-Engineered trachea for airway reconstruction. Combined Otolaryngology Spring Meeting (COSM), 2019, Phoenix, AZ
11. Weidenbecher M, Jarchow A, Dennis JE. Tissue engineering of cartilage implants for laryngotracheal reconstruction. Research Day Meeting, Department of Otolaryngology - Head & Neck Surgery. 2007, Cleveland, OH
12. Weidenbecher M, Awadallah A, Dennis JE. Fabrication of a vascularised composite neotrachea in a rabbit model. Midwest Tissue Engineering Consortium. 2007, Ann Arbor, MI

#### **LOCAL INVITED LECTURES**

1. Contemporary Sleep Surgical Management in OSA, Southwest General Hospital, Cleveland, OH, 2018
2. Transoral laser treatment of early glottis cancer, Inter-institutional tumor board, Cleveland, Ohio, 2016
3. Professional Voice – Singers and Actors, Conservatory of Music, Baldwin Wallace University, Berea, 2015
4. Ultrasound in otolaryngology, Department of Otolaryngology, University Hospitals Cleveland Medical Center, 2007

#### **ACADEMIC MENTORING**

1. Mark Frilling, MD; 2018 – present, Otolaryngology Resident, Description of mentoring: career development
2. Akina Tamaki, MD; 2016-present, Otolaryngology Resident, Description of mentoring: career development
3. Frank McMaster, MD, 2015-2018, Tacoma Medical Center, Description of mentoring: career development

4. Claudia Carbera, MS, 2017-2018, Case Western Reserve University, Description of mentoring: career development and research
5. Alexandra McMillon, MD PhD; 2014-2017, Case Western Reserve University, Description of mentoring: Member of thesis committee. I helped with career development and research project management
6. Andrew Stein, MD, 2016-present, Case Western Reserve University, Description of mentoring: career development, research projects.

## **RESEACRH SUPPORT AND PATENTS**

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1. Title: Treatment of tracheal stenosis with a drug eluting stent  
Purpose: To study tracheal stents to help manage upper airway strictures  
Agency: NIH (R21)  
Role: Co-Investigator  
Funding Dates: prepared for re-submission
2. Title: Treatment of tracheal stenosis by drug eluting, bioabsorbable stent,  
Purpose: To study tracheal stents to help manage upper airway strictures  
Agency: US Department of veterans Affairs (SPiRE)  
Role: Principal Investigator  
Funding Dates: 2018-2020  
Total Funding: \$200,000
3. Title: Engineering a self-assembled, multi-tissue tracheal replacement  
Purpose: To study stem cells to make cartilage and vascular constructs for tracheal replacements  
Agency: NIH (RO1-EB023907)  
Role: Co-Principal Investigator  
Funding Dates: 2017- 2021  
Total Funding: \$2,656,659
4. Title: A new spraying device to produce multilayered tracheal stents  
Purpose: Our research group designed a spray machine to make bioabsorbable stents consisting of collagen and other materials.  
Agency: ENT Innovation Award, University Hospitals Medical Center, Cleveland, OH  
Role: Co-Investigator  
Funding Dates: 2016-2018  
Total Funding: \$5,000
5. Title: Fabrication of a neotrachea  
Purpose: Development of tissue engineering methodologies to produce functional tissue for segmental replacement of damaged trachea.  
Agency: NIH (RO1De015322)  
Role: Collaborator  
Funding Dates: 2008-13  
Total Funding: \$1,250,000
6. Title: Tissue engineered constructs for laryngotracheal reconstruction  
Agency: Deutsche Forschungsgemeinschaft (DFG)

Role: Young investigator award  
Funding Dates: 2006-08  
Total Funding: \$50,000

## PATENTS

1. Bioreactor and method for generating cartilage tissue constructs (US provisional patent application #20100041149)
2. A device for the construction and coating of tubular structures by spraying on a rotating mandrel (#62/423,408)

## BIBLIOGRAPHY

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### BOOK CHAPTERS

1. Weidenbecher, M, Parker N., Neurological Diseases of the Larynx; Crush Otolaryngology Boards. Volume 1, ISBN: 978-1-53614-781-0; Novapublishers

### PEER-REVIEWED PUBLICATIONS

\*Trainee, mentee or student

1. \*Tamaki A, Thuener J, Weidenbecher M. Superior Laryngeal Nerve Neuralgia: Case Series and Review of Anterior Neck Pain Syndromes. Ear Nose Throat J. 2019 Apr;17:145561318823373. doi: 10.1177/0145561318823373. [Epub ahead of print] PubMed, PMID: 30995862.
2. \*Stein AP, Weidenbecher M. Extracardiac Rhabdomyoma of the Larynx. Ear Nose Throat J. 2019 Mar 28;145561319837471. doi: 10.1177/0145561319837471. [Epub ahead of print] PubMed PMID: 30922112.
3. Weidenbecher M, \*Tamaki A, \*Cabrera C, Strohl K. Improved exposure of the hypoglossal branches during hypoglossal nerve stimulator implantation: Clinical outcomes of twenty patients at a single institution. Clin Otolaryngol. 2019 Jan;44(1):72-76. doi: 10.1111/coa.13221. Epub 2018 Oct 21. PubMed PMID: 30207417.
4. Boon M, Huntley C, Steffen A, Maurer JT, Sommer JU, Schwab R, Thaler E, Soose R, Chou C, Strollo P, Kezirian EJ, Chia S, Withrow K, Weidenbecher M, Strohl K, Doghramji K, Hofauer B, Heiser C; ADHERE Registry Investigators. Upper Airway Stimulation for Obstructive Sleep Apnea: Results from the ADHERE Registry. Otolaryngol Head Neck Surg. 2018 Aug;159(2):379-385. doi: 10.1177/0194599818764896. Epub 2018 Mar 20. PubMed PMID: 29557280.
5. Weidenbecher M. Repair of high-grade posterior glottic stenosis: A novel criocarytenoid joint release technique. Laryngoscope. 2018 Jul;128(7):1639-1642. doi: 10.1002/lary.27092. Epub 2018 Jan 13. PubMed PMID: 29330872.

6. \*Tamaki A, Wasman J, Weidenbecher M. Laryngeal alveolar soft part sarcoma: A case report of a rare malignancy in an atypical location. *Am J Otolaryngol*. 2017 Mar - Apr;38(2):260-262. doi: 10.1016/j.amjoto.2017.01.017. Epub 2017 Jan 18. PubMed PMID: 28131550.
7. Strohl M D KP, Baskin M D J, Lance M D C, Ponsky M D D, Weidenbecher M D M, Strohl B A M, Yamauchi M D M. Origins of and implementation concepts for upper airway stimulation therapy for obstructive sleep apnea. *Respir Investig*. 2016 Jul;54(4):241-9. doi: 10.1016/j.resinv.2016.01.006. Epub 2016 Mar 18. Review. PubMed PMID: 27424823; PubMed Central PMCID: PMC4955664.
8. Li S, Weidenbecher M. Adult onset xanthogranuloma presenting as laryngeal mass. *Am J Otolaryngol*. 2016 Mar-Apr;37(2):112-5. doi: 10.1016/j.amjoto.2015.10.003. Epub 2015 Oct 23. PubMed PMID: 26954863.
9. Whitney GA, Mera H, Weidenbecher M, Awadallah A, Mansour JM, Dennis JE. Methods for producing scaffold-free engineered cartilage sheets from auricular and articular chondrocyte cell sources and attachment to porous tantalum. *Biores Open Access*. 2012 Aug;1(4):157-65. doi: 10.1089/biores.2012.0231. PubMed PMID: 23514898; PubMed Central PMCID: PMC3559237.
10. Manjila S, Weidenbecher M, Semaan MT, Megerian CA, Bambakidis NC. Prevention of postoperative cerebrospinal fluid leaks with multilayered reconstruction using titanium mesh-hydroxyapatite cement cranioplasty after translabyrinthine resection of acoustic neuroma. *J Neurosurg*. 2013 Jul;119(1):113-20. doi: 10.3171/2012.11.JNS121365. Epub 2013 Jan 25. PubMed PMID: 23350781.
11. Gilpin DA, Weidenbecher MS, Dennis JE. Scaffold-free tissue-engineered cartilage implants for laryngotracheal reconstruction. *Laryngoscope*. 2010 Mar;120(3):612-7. doi: 10.1002/lary.20750. PubMed PMID: 20058322; PubMed Central PMCID: PMC4824538.
12. Weidenbecher M, Tucker HM, Gilpin DA, Dennis JE. Tissue-engineered trachea for airway reconstruction. *Laryngoscope*. 2009 Nov;119(11):2118-23. doi: 10.1002/lary.20700. PubMed PMID: 19806650; PubMed Central PMCID: PMC4811374.
13. Hummel T, Rissom K, Reden J, Hähner A, Weidenbecher M, Hüttenbrink KB. Effects of olfactory training in patients with olfactory loss. *Laryngoscope*. 2009 Mar;119(3):496-9. doi: 10.1002/lary.20101. PubMed PMID: 19235739.
14. Weidenbecher M, Tucker HM, Awadallah A, Dennis JE. Fabrication of a neotrachea using engineered cartilage. *Laryngoscope*. 2008 Apr;118(4):593-8. doi: 10.1097/MLG.0b013e318161f9f8. PubMed PMID: 18197138; PubMed Central PMCID: PMC2504720.
15. Weidenbecher M, Henderson JH, Tucker HM, Baskin JZ, Awadallah A, Dennis JE. Hyaluronan-based scaffolds to tissue-engineer cartilage implants for laryngotracheal reconstruction. *Laryngoscope*. 2007 Oct;117(10):1745-9. PubMed PMID: 17690606; PubMed Central PMCID: PMC2504717.
16. Schick B, Weidenbecher M, Miller R, Iro H. [Experience with laryngotracheal reconstruction in subglottic stenosis in a 30 years time period]. *Laryngorhinootologie*. 2007 May;86(5):358-64. Epub 2007 Jan 16. German. PubMed PMID: 17226434.

17. Weidenbecher M, Weidenbecher M, Iro H. [Segmental tracheal resection for the treatment of tracheal stenoses]. HNO. 2007 Jan;55(1):21-8. German. PubMed PMID: 16601994.
18. Weidenbecher M, Schick B, Iro H. [Styloid syndrome and its treatment]. Laryngorhinootologie. 2006 Mar;85(3):184-90. German. PubMed PMID: 16547894.
19. Weidenbecher M, Huk WJ, Iro H. Internal carotid artery injury during functional endoscopic sinus surgery and its management. Eur Arch Otorhinolaryngol. 2005 Aug;262(8):640-5. Epub 2005 Jan 19. PubMed PMID: 15657746.
20. Constantinidis J, Steinhart H, Koch M, Buchfelder M, Schaenzer A, Weidenbecher M, Iro H. Olfactory neuroblastoma: the University of Erlangen-Nuremberg experience 1975-2000. Otolaryngol Head Neck Surg. 2004 May;130(5):567-74. PubMed PMID: 15138422.
21. Weidenbecher M, Amann K, Iro H. Laryngotracheal growth following cricotracheal resection combined with laminotomy. An experimental study on rabbits. Ann Otol Rhinol Laryngol. 2003 Aug;112(8):697-703. PubMed PMID: 12940668.
22. Sobiegalla M, von Hintzenstern U, Weidenbecher M, Rupprecht H. [Tracheal rupture--a rare and dramatic emergency]. Anaesthesiol Reanim. 2003;28(3):79-81. German. PubMed PMID: 12872541.