

Lauren Joelle Luk, MD, FARS

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Education/Training

- 2002 – 2006 **BA, Human Biology.**
Stanford University, Palo Alto, CA
Area of Concentration: Neurobiology and Neural Disease
- 2006 – 2011 **MD with thesis.**
Univ. of California San Francisco (UCSF), San Francisco, CA
Pathways to Discovery –Molecular Medicine, 1 year research fellowship
- 2011 – 2016 **Internship and Residency in Otolaryngology.**
Oregon Health and Science Univ. (OHSU), Portland, OR
- 2016 - 2017 **Fellowship in Rhinology/Skull Base Surgery.**
Emory University, Atlanta, GA.

Grants/Awards

- 2016 **Oregon Academy of Otolaryngology - Second Place Award in Basic Science -**
Aminoglycoside Ototoxicity and Therapeutic Intervention. Resident Research Day Award. June 17th, 2016.
- 2015 **Oregon Academy of Otolaryngology – First Place Award in Clinical Science - Health Utility Outcomes in Patients Undergoing Medical Management for Chronic Rhinosinusitis.**
Resident Research Day Award, June 19, 2015.
- 2015 **ARS Clinical Science Research Award - First Runner Up - Health Utility Outcomes in Patients Undergoing Medical Management for Chronic Rhinosinusitis.**
Awarded at COSM, April 21-24, 2015.
- 2014 **Oregon Academy of Otolaryngology - Chamberlain Resident Research Award –**
Comparison of electrosurgical plasma coagulation and potassium-titanyl-phosphate laser photocoagulation for treatment of hereditary hemorrhagic telangiectasia-related epistaxis.
Awarded at the Oregon Academy of Otolaryngology Fall Meeting.
- 2013 **AAO-HNSF Centralized Otolaryngology Research Effort (CORE) Grant (\$10,000).**
Awarded to support research examining the mechanisms of aminoglycoside trafficking in the inner ear and subsequent ototoxicity. Specifically investigating the permeability of hair cell cation channels (eg. P2X2, TRPV1, TRPA1, nAChR) to gentamicin and their role in hair cell death. Dissected and cultured mouse cochlea in vitro using sterile technique. Designed and tested protocols for administration of channel agonists with Gentamicin tagged Texas Red to cochlear explants. Collected, analyzed, and interpreted imaging data for publication and presentation. Supervising PI: Peter Steyger, PhD
- 2011 **Stanford University Annual Research Retreat Poster Contest – First Prize (April 2011)**
Aminoglycosides Rapidly and Selectively Enter Hair Cells, Largely Via Mechanotransducer Channels. Lauren Luk; Abedelrahman Alharazneh; Peter Steyger; Alan Cheng; Anthony Ricci
- 2010 **American Society of Pediatric Otolaryngology Scientific Meeting – William P. Potts Basic Science Award (May 2010)**
Gentamicin Entry Into Sensory Hair Cells Is Dependent On Mechanotransduction Channels and Tip Link Integrity Garani Nadaraja; Lauren Luk; Alan Cheng; Anthony Ricci

- 2010 **Association for Research in Otolaryngology (ARO) Travel Award**
- 2009 **UCSF Pathways to Discovery Fellowship (\$23,000).** Awarded to support a 1 year research fellowship in Molecular Biology. Investigated the role of mechanoelectrotransduction (MET) channels in the uptake of gentamicin in rat and mouse hair cells. Dissected and cultured rat and mouse cochlea using sterile technique. Designed and tested protocols for administration of Gentamicin tagged Texas Red (GTTR) to cochlear cultures and imaging using two photon microscopy. Collected, analyzed, and interpreted imaging data for publication and presentation.

Peer Reviewed Publications

- "Repeat Balloon Dilation of the Eustachian Tube in Adults with Chronic Eustachian Tube Dysfunction."** Keschner, D., Garg, R. Luk, LJ. *Otolaryngol Head Neck Surg.* 2021 Aug 17. Epub ahead of print. PMID: 34399641.
- "Evaluation of in-office cryoablation of posterior nasal nerves for the treatment of rhinitis."** Gerka, J., Luk, L, Keschner, D, Garg, R. *Allergy & Rhinology.* Volume 0: 1-7. 2021 Jan 29. PMID: 33598336.
- "Follow up Management of Patients After Transsphenoidal Approach for Pituitary Adenoma Resection."** Ikeda, A, Luk, LJ, Patel, ZM., Oyesiku, NM, Solares CA, DelGaudio JM, Levy, JM, Wise SK. [Am J Rhinol Allergy.](#) 2020 Mar;34(2):150-155. doi: 10.1177/1945892419879806. Epub 2019 Oct 1. PMID: 31573321
- "Middle Turbinate Friendly Technique for Cribriform Cerebrospinal Fluid Leak Repair."** Luk, L. Ikeda, A. Wise, S. DelGaudio, J. *Otolaryngol Head Neck Surg.* 2019 April 30. PMID: 31039072
- "Unilateral versus Bilateral Sinonasal Disease: Considerations in Differential Diagnosis and Diagnostic Workup."** Eckhoff, A., Cox, D. Luk, L., Maidman, S., Wise, S. DelGaudio, J. *Laryngoscope* Published June 20, 2019. <https://doi.org/10.1002/lary.28108>
- "Ch. 36 - Endoscopic and Open Approaches to Skull Base Pathologies" Crush Otolaryngology Boards.** Lauren J. Luk, Camilo A. Reyes, C. Arturo Solares. Pages 395-411. Editor: Mohamad R. Chaaban. Nova Science. Published March 2019. ISBN: 9781536147810.
- "Laryngopharyngeal Reflux." Evidence-Based Clinical Practice in Otolaryngology.** Lauren J. Luk, MD; John DelGaudio, MD; Editor: Luke Rudmik, MD. Elsevier. Published January 19th 2018. ISBN: 9780323544603.
- Book Review: Handbook of Skull Base Surgery.** Lauren J. Luk, MD C. Arturo Solares, MD. *Neurosurgery,* Volume 81, Issue 2, 1 August 2017, Pages 377–379, Published: 19 July 2017
- "Assessing Asthma in the Otolaryngologist's Office."** Lauren J. Luk, MD; Melissa Rotella, NP; Leisa Stillman, PA-C; Sarah Wise, MD. *Current Opinion in Otolaryngology and Head and Neck Surgery.* 2017.
- "Advancements in Skull Base Reconstruction."** Lauren J. Luk, MD; John DelGaudio, MD; Sarah Wise, MD. *Springer's Current Otorhinolaryngology Reports.* Dec 2016, 4::286-94.
- "Topical Therapies for Chronic Rhinosinusitis."** Lauren J. Luk, MD; John DelGaudio, MD. *Otolaryngologic Clinics of North America.* 2017.
- "Implementation of a Pediatric Post-Tonsillectomy Pain Protocol."** Lauren J. Luk, MD; Carol MacArthur, MD; Anna Grosz, MD. *Otolaryngol Head Neck Surg.* 2016 Apr;154(4):720-4. Epub 2016 Feb 16. PMID: 26884362
- "Selective Neck Dissection: Key Landmark Exposure and Surgical Strategy."** Lauren J. Luk, MD; Mira Milas, MD; Maisie Shindo MD. *VideoEndocrinology.* August 2015, 2. doi: 10.1089/ve.2015.0052

“Health Utility Outcomes in Patients Undergoing Medical Management for Chronic Rhinosinusitis.”

Lauren J. Luk, MD; Toby O. Steele, MD; Jess C. Mace, MPH; Zachary M. Soler, MD; Luke Rudmik, MD, MSc, Timothy L. Smith, MD, MPH. *Int Forum Allergy Rhinol.* 2015 Nov;5(11):1018-27. Epub 2015 Jul 3. PMID: 26140502

“Comparison of electrosurgical plasma coagulation and potassium-titanyl-phosphate laser photocoagulation for treatment of hereditary hemorrhagic telangiectasia-related epistaxis.”

Lauren Luk, Jess Mace, Naveen Bhandarkar, Nathan Sautter. *Int Forum Allergy Rhinol.* 4(8):640-5, 2014 Aug. PMID: 24719397

“Integrity and regeneration of mechanotransduction machinery regulate aminoglycoside entry and sensory cell death.”

Andrew A. Vu; Garani S. Nadaraja; Markus E. Huth; Lauren Luk; John Kim; Renjie Chai; Anthony J. Ricci; Alan Gi-Lun Cheng. *PLoS One.* 8(1): e54794. Epub 2013, Jan 1. PMID:23359017

“Functional hair cell mechanotransducer channels are required for aminoglycoside ototoxicity.”

Abdelrahman Alharazneh; Lauren Luk (equal first authorship), Peter Steyger; Alan Cheng; Anthony Ricci. *PLoS One.* 2011; 6(7):e22347. Epub 2011 Jul 26. PMID:21818312

“Tracheostomy-related pressure sores in critically ill patients.”

Harry Hwang, Lauren Luk, Eric Kezirian, Hildegard Schell-Chaple, Susan Barbour, Wendy Ma and Ivan El-Sayed. *The Laryngoscope.* 2011; 121:S249. Epub 2011 Aug 15.

Presentations

“Evaluation of in-office cryoablation of posterior nasal nerves for the treatment of rhinitis.” Gerka, J. Luk, L. Keschner, D. Garg, R. Poster presentation at 2020 ARS spring meeting at COSM, Atlanta, GA April 22-24, 2020.

“Abducens nerve palsy in the setting of sphenoid sinusitis and clival metastasis.” Luk, L., Garg, R., Keschner, D. Poster presentation at 2019 American Rhinologic Society Fall Meeting, September 13-14, New Orleans, LA.

“Cost Reductions Associated with Clinic Based Sinonasal Surgeries Performed in an Integrated Health Care Delivery System.” Luk, L., Garg, R., Keschner, D., Loch, R., Irwin, S. Poster presentation at 2019 Rhinoworld Meeting, June 6-9, Chicago, IL.

“Middle Turbinate Friendly Technique for Cribriform Cerebrospinal Fluid Leak Repair.” Luk, L. Ikeda, A. Wise, S. Delgaudio, J. Oral Presentation at 2018 AAO-HNSF Annual Meeting, October 7, Atlanta, GA.

“Surgical Learning Collaborative: Continuous Surgical Learning in Endoscopic Sinus Surgery.” Garg, R. Keschner, D. Luk, L., Loch, R., O’Neal, C. and Klau, M. Presented at 2018 American Rhinologic Society meeting, October 5-6, Atlanta, GA.

“I don’t have migraines, Doc, I have sinus headaches” Panelist. 7th Annual Summer Sinus Symposium, Seattle, WA, July 12-14, 2018.

“Middle Turbinate Resection versus Preservation in Cribriform Cerebrospinal Fluid Leak Repair.”

Allison Ikeda, MD; Lauren J. Luk, MD; Sarah Wise, MD; John DelGaudio, MD. Poster presentation at 2017 American Rhinologic Society Fall Meeting, Chicago, IL, September 8-9, 2017.

“Silent Sinus Syndrome: A Progressive Preventable Acquired Condition.” Daniel Nieto, MD; Lauren J. Luk, MD; John DelGaudio, MD. Poster presentation at the 2016 American Rhinologic Society Fall Meeting, September 16-17, 2016.

“Key Tactics in Operative Exposure of Cervical Nerves during Modified Neck Dissection”. Lauren J. Luk, MD; Mira Milas, MD; Maisie Shindo MD. *Oral presentation at the American College of Surgeons Clinical Congress 2015. Chicago, Illinois. October 4-8, 2015.*

“Implementation of a Pediatric Post-Tonsillectomy Pain Protocol.”

Lauren J. Luk, MD; Carol MacArthur, MD; Anna Grosz, MD.

Oral presentation at 2015 American Academy of Otolaryngology – Head and Neck Foundation in Dallas, Texas. September 2015.

“Health Utility Outcomes in Patients Undergoing Medical Management for Chronic Rhinosinusitis.”

Lauren J. Luk, MD; Toby O. Steele, MD; Jess C. Mace, MPH; Luke Rudmik, MD, MSc, Timothy L. Smith, MD, MPH.

Oral presentation at 2015 American Rhinologic Society at COSM in Boston, Massachusetts.

“Perilymphatic Gentamicin Trafficking Through Basolateral Channels May Underlie Enhanced Ototoxicity by Noise Induced Threshold Shifts.”

Lauren Luk; Shiv Bhanu; Hongzhe Li; Peter Steyger. *Poster presented at 2014 American Academy of Otolaryngology –Head and Neck Foundation in Orlando, Florida.*

“Death from Physician-prescribed Lethal Medication in Head and Neck Cancer Patients: The Oregon Experience.”

Lauren Moneta, Lauren Luk, Neil Gross. *Presented at the 5th IFHNOS World Congress, July 26th-30th, 2014, New York, New York.*

“Comparison of electrosurgical plasma coagulation and potassium-titanyl-phosphate laser photocoagulation for treatment of hereditary hemorrhagic telangiectasia-related epistaxis.”

Lauren Luk, Jess Mace, Naveen Bhandarkar, Nathan Sautter. *Presented at American Rhinologic Society meeting at COSM May 16-17th, Las Vegas, Nevada. Also presented at Oregon Academy of Otolaryngology Fall Meeting, Nov 7th 2014, Portland, Oregon.*

“Acetylcholine enhances aminoglycoside uptake in neonatal hair cells via putative activation of nicotinic acetylcholine receptors.”

Lauren Luk, Peter Steyger, Douglas Vetter, Hongzhe Li. *Poster presented at the Association for Research in Otolaryngology (ARO) 37th Midwinter meeting, February 2014, San Diego, California.*

“Aminoglycosides Rapidly and Selectively Enter Hair Cells, Largely Via Mechanotransducer Channels.”

Lauren Luk; Abdelrahman Alharazneh, Taiyabah Naeem; Ashkan Monafarad; Peter Steyger; Alan Cheng; Anthony Ricci *Poster presented at the Association for Research in Otolaryngology (ARO) Midwinter Meeting, February 2010, Anaheim, California.*

“Aminoglycoside Ototoxicity Ameliorated with Mechanotransducer Channel Blockers.”

Abdelrahman Alharazneh; Lauren Luk; Alan Cheng; Anthony Ricci. *Poster presented at Association for Research in Otolaryngology (ARO) Midwinter Meeting, February 2010, Anaheim, California.*

Professional Positions

San Francisco Otolaryngology Medical Group

San Francisco, CA
October 2021 - present

**Department of Otolaryngology - Head and Neck Surgery /
Kaiser Permanente Orange County, Rhinology and Skull Base Surgeon**

Orange County, CA
August 2017 - May 2021

**Orange County Kaiser Permanente Rhinology Fellowship/
Rhinology and Skull Base surgery Co-director**

Orange County, CA
August 2017 - May 2021

**Department of Otolaryngology - Head and Neck Surgery/
University of California, Irvine**
Assistant Clinical Professor, Head and Neck Surgery

Irvine, CA
March 2018 - May 2021

Department of Surgery/ Western University of Health Sciences
CA
Clinical Assistant Professor of Surgery

Orange County,
August 2017 - May 2021

Licensure/Board Certification

Medical Board of California - Physician and Surgeon's License

American Board of Otolaryngology - Diplomate - June 2017 – present

Fellow of American Rhinologic Society (FARS) – July 2019 – present

Professional Society Memberships

(2018 – 2021)	Women in Rhinology – Executive Board - Member at Large
(2017 – present)	American Journal of Rhinology and Allergy – Reviewer
(2017 – present)	International Forum for Allergy and rhinology – Reviewer
(2016 – present)	American Academy of Otolaryngology White Journal - Reviewer
(2013 – present)	American Rhinologic Society – Committee of Residents and Fellows
(2012 – present)	American Academy of Otolaryngology – Head and Neck Surgery, Member
(2009 – 2015)	Association for Research in Otolaryngology