



Jon-Paul Pepper, MD

Associate Professor of Otolaryngology - Head & Neck Surgery (OHNS)
Otolaryngology (Head and Neck Surgery)

CLINICAL OFFICE (PRIMARY)

- **Facial Plastic and Reconstructive Surgery and Otolaryngology**

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ACADEMIC CONTACT INFORMATION

- **Administrative Contact**

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Bio

BIO

Dr. Pepper is a double-board certified surgeon who specializes in aesthetic and reconstructive surgery of the face, in particular surgery for the treatment of facial paralysis. He is the Director of the Stanford Facial Nerve Center since 2017. He has broad expertise in facial plastic and reconstructive surgery, including facial reanimation surgery, facelift surgery, rhinoplasty, and the reconstruction of the face after skin cancer resection. Dr. Pepper performed his undergraduate studies at Brown University, majoring in Neuroscience. He completed a one-year research fellowship at the National Institutes of Health in preparation for a career in academic medicine. He was awarded his M.D. at the University of California, Irvine, graduating with highest honors and Alpha Omega Alpha designation in 2007. He went to the University of Michigan for residency training in Otolaryngology – Head & Neck Surgery in 2012. He then completed fellowship training in Facial Plastic & Reconstructive Surgery in 2013, also at the University of Michigan. Dr. Pepper was honored to receive the highest board score in the nation on the American Board of Facial Plastic & Reconstructive Surgery examination in 2013. For this accomplishment, he was given the Jack R. Anderson Award for Scholastic Achievement. He also directs the scientific work of the Stanford Facial Nerve Center and his NIH-funded research explores regenerative strategies to improve nerve regeneration after injury.

CLINICAL FOCUS

- Facial Paralysis Surgery
- Facial Plastic Surgery
- Rhinoplasty
- Skin cancer reconstruction
- Facelift Surgery
- Facial Reconstructive Surgery
- Aesthetic Surgery
- Filler and Botox(tm)
- Bell's Palsy
- Ramsay Hunt Syndrome

- Cranial Nerve Injuries
- Facial Nerve Injuries
- Facial Nerve
- Nerve Regeneration

ACADEMIC APPOINTMENTS

- Associate Professor - University Medical Line, Otolaryngology (Head and Neck Surgery)
- Member, Bio-X
- Member, Maternal & Child Health Research Institute (MCHR)
- Member, Wu Tsai Neurosciences Institute

ADMINISTRATIVE APPOINTMENTS

- Director, Stanford Facial Nerve Center, (2017- present)

HONORS AND AWARDS

- Faculty Scholar Award, Donald E. and Delia B. Baxter Foundation (2015)
- Research Scholar Award, American Association of Facial Plastic & Reconstructive Surgeons (2015)
- Research Scholar Award, American Association of Facial Plastic & Reconstructive Surgeons (2014)
- Jack Anderson Award (Given for highest national board score), American Board of Facial Plastic & Reconstructive Surgery (2013)
- Dr. Paul Holinger Resident Research Award, Triological Society (2010)
- Zeta Chapter, Alpha Omega Alpha Honor Medical Society (2007)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Chair elect, Plastic and Reconstructive Surgery Committee, American Academy of Otolaryngology - Head and Neck Surgery (2020 - present)
- Member, Education Committee, American Academy of Otolaryngology - Head and Neck Surgery (2020 - present)
- Exam writer, American Board of Otolaryngology (2018 - present)

PROFESSIONAL EDUCATION

- Board Certification: Facial Plastic Surgery, American Board of Facial Plastic and Reconstructive Surgery (2016)
- Board Certification: Otolaryngology, American Board of Otolaryngology (2013)
- Fellowship: University of Michigan Health System Internal Medicine Residency (2013) MI
- Residency: University of Michigan Health System (2012) MI
- Medical Education: University of California, Irvine (2007) CA

LINKS

- Stanford Facial Nerve Center: <http://med.stanford.edu/ohns/healthcare/facialnervecenter.html>
- Dr. Pepper's Clinical Site: <http://med.stanford.edu/drpepper.html>
- Dr. Pepper's Lab Site: <https://med.stanford.edu/ohns/research/labs/jon-paul-pepper-lab.html>
- Get a Second Opinion: <https://stanfordhealthcare.org/second-opinion/overview.html>

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Facial paralysis is a debilitating condition that affects thousands of people. Despite excellent surgical technique, we are currently limited by the regenerative capacity of the body. The mission of our research is to identify new treatments that improve current facial paralysis treatments. We do this by exploring the regenerative cues that the body uses to restore tissue after nerve injury, in particular through pathways of neurogenesis and nerve repair in small mammals.

Please visit our website at the URL below to see ongoing projects, open positions, publications, and more information about our research.

<https://med.stanford.edu/ohns/research/labs/jon-paul-pepper-lab.html>

Teaching

COURSES

2022-23

- Facial Plastic and Reconstructive Surgery: OTOHNS 209 (Aut, Win, Spr, Sum)

2021-22

- Facial Plastic and Reconstructive Surgery: OTOHNS 209 (Spr, Sum)

Publications

PUBLICATIONS

- **Increasing Incidence of Facial Nerve Disorders in the United States from 2007 to 2022.** *The Laryngoscope*
Wei, E. X., Green, A., Pepper, J., Akkina, S. R.
2025
- **Artificial Intelligence in Facial Plastics and Reconstructive Surgery.** *Otolaryngologic clinics of North America*
Park, K. W., Diop, M., Willens, S. H., Pepper, J. P.
2024
- **Localized application of SAG21k-loaded fibrin hydrogels for targeted modulation of the hedgehog pathway in facial nerve injury.** *International journal of biological macromolecules*
He, L., Sato, J. E., Sundar, P., Azimi, T., Beachy, P. A., Bekale, L. A., Pepper, J. P.
2024: 131747
- **Evidence Based Medicine for Facial Reanimation.** *Facial plastic surgery : FPS*
Kimura, K. S., Kfoury, P., Pepper, J. P.
2023
- **Synkinesis and Communicative Participation.** *Facial plastic surgery & aesthetic medicine*
Okland, T. S., Willens, S. H., Pepper, J.
2022
- **Facial Paralysis and Communicative Participation: The Importance of Facial Symmetry at Rest.** *The Annals of otology, rhinology, and laryngology*
Ayoub, N. F., Abdelwahab, M. n., Zhang, M. n., Ma, Y. n., Stranberg, S. n., Okland, T. S., Pepper, J. P.
2020: 3489420912446
- **Dual Nerve Transfer for Facial Reanimation** *JAMA FACIAL PLASTIC SURGERY*
Pepper, J.

2019; 21 (3): 260–61

- **Speech and Communicative Participation in Patients With Facial Paralysis.** *JAMA otolaryngology-- head & neck surgery*
Kim, J. H., Fisher, L. M., Reder, L., Hapner, E. R., Pepper, J.
2018; 144 (8): 686–93
- **The role of Hedgehog-responsive fibroblasts in facial nerve regeneration** *EXPERIMENTAL NEUROLOGY*
Dogaru, G., Juneja, S. C., Shokrani, A., Hui, R. Y., Chai, Y., Pepper, J.
2018; 303: 72–79
- **Human Induced Pluripotent Stem Cell-Derived Motor Neuron Transplant for Neuromuscular Atrophy in a Mouse Model of Sciatic Nerve Injury.** *JAMA facial plastic surgery*
Pepper, J., Wang, T. V., Hennes, V., Sun, S. Y., Ichida, J. K.
2017; 19 (3): 197-205
- **Current state of stem cell-mediated therapies for facial nerve injury** *CURRENT OPINION IN OTOLARYNGOLOGY & HEAD AND NECK SURGERY*
Wang, T. V., Delaney, S., Pepper, J.
2016; 24 (4): 285-293
- **Transcutaneous Lower Blepharoplasty with Fat Transposition** *CLINICS IN PLASTIC SURGERY*
Pepper, J., Baker, S. R.
2015; 42 (1): 57-?
- **Local Flaps: Cheek and Lip Reconstruction** *JAMA FACIAL PLASTIC SURGERY*
Pepper, J., Baker, S. R.
2013; 15 (5): 374-382
- **Upper Blepharoplasty The Aesthetic Ideal** *CLINICS IN PLASTIC SURGERY*
Pepper, J., Moyer, J. S.
2013; 40 (1): 133-?
- **Patient Assessment of Psychosocial Dysfunction following Nasal Reconstruction** *PLASTIC AND RECONSTRUCTIVE SURGERY*
Pepper, J., Asaria, J., Kim, J. C., Baker, S. R., Moyer, J. S.
2012; 129 (2): 430-437
- **Recovery of Frontalis Muscle Function in Patient with Iatrogenic Injury of the Frontal Branch of the Facial Nerve after Delayed Grafting Using Human Processed Nerve Allograft.** *Facial plastic surgery & aesthetic medicine*
Soo, J., Longino, E. S., Pepper, J. P.
2025
- **Functional outcomes of dual nerve transfer in patients with facial paralysis.** *Journal of plastic, reconstructive & aesthetic surgery : JPRAS*
Ezzibdeh, R., Meyer, M. R., Stranberg, S., Pepper, J. P.
2025; 103: 89-94
- **Facial Nerve Disorders: Sociodemographic Predictors and Temporal Trends in Dynamic Facial Reanimation in a National Administrative Claims Database.** *Facial plastic surgery & aesthetic medicine*
Wei, E. X., Green, A., Akkina, S. R., Pepper, J. P.
2024
- **Evaluation of Rhinoplasty Information from ChatGPT, Gemini, and Claude for Readability and Accuracy.** *Aesthetic plastic surgery*
Meyer, M. K., Kandathil, C. K., Davis, S. J., Durairaj, K. K., Patel, P. N., Pepper, J. P., Spataro, E. A., Most, S. P.
2024
- **HEDGEHOG PATHWAY INDUCTION FOLLOWING FACIAL NERVE INJURY IN MICE**
Azimi, T., Faniku, C., Ghorbani, S., Kong, W., Rosiles, G., Beachy, P., Pepper, J.
WILEY.2024: S136
- **FIBRIN-BASED DELIVERY OF HEDGEHOG PATHWAY MODULATORS DURING NERVE REPAIR IN MOUSE MODELS OF NERVE INJURY**
He, L., Cai, B., Ghorbani, S., Kilian, D., Bekale, L., Heilshorn, S., Pepper, J.
WILEY.2024: S144

- **Deep Learning for the Assessment of Facial Nerve Palsy: Opportunities and Challenges.** *Facial plastic surgery : FPS*
Boochoon, K., Mottaghi, A., Aziz, A., Pepper, J. P.
2023
- **Dual Nerve Transfer for Facial Reanimation.** *Facial plastic surgery clinics of North America*
Okland, T. S., Pepper, J.
2021; 29 (3): 397-403
- **Steps Forward: Contemporary Treatment of Facial Paralysis.** *Facial plastic surgery clinics of North America*
Pepper, J., Tollefson, T. T.
2021; 29 (3): xv-xvi
- **Facial Nerve Paralysis Following Endovascular Embolization: A Case Report and Review of the Literature.** *The Annals of otology, rhinology, and laryngology*
Feng, A. Y., Jin, M. C., Wong, S., Pepper, J., Jackler, R., Vaisbuch, Y.
2020: 3489420966611
- **How do we teach surgical residents in the COVID-19 era?** *Journal of surgical education*
Okland, T. S., Pepper, J., Valdez, T. A.
2020
- **Commentary on "Deep Dive into Denervation: Institutional Experience with Selective Denervation in Nonflaccid Facial Palsy" by Miller and Hadlock.** *Facial plastic surgery & aesthetic medicine*
Pepper, J. P.
2020
- **Contrast-Enhanced Ultrasound With Perflubutane for Sentinel Lymph Node Mapping in Cutaneous Melanoma: A Pilot Study** *LARYNGOSCOPE*
Bertelsen, C., King, K. G., Swanson, M., Duddalwar, V., Pepper, J.
2019; 129 (5): 1117-22
- **Health Outcome Studies in Skin Cancer Surgery.** *Facial plastic surgery clinics of North America*
Olds, C. E., Pepper, J.
2019; 27 (1): 163-70
- **Contrast-Enhanced Ultrasound With Perflubutane for Sentinel Lymph Node Mapping in Cutaneous Melanoma: A Pilot Study.** *The Laryngoscope*
Bertelsen, C., King, K. G., Swanson, M., Duddalwar, V., Pepper, J.
2018
- **Cisplatin and Cetuximab Treatment for Metastatic Cutaneous Squamous Cell Carcinoma: A Systematic Review** *DERMATOLOGIC SURGERY*
Trodello, C., Pepper, J., Wong, M., Wysong, A.
2017; 43 (1): 40-49
- **Nasopharyngeal airway to prevent tension pneumocephalus after open resection of anterior skull base tumors.** *Ear, nose, & throat journal*
Spector, M. E., Pepper, J., Sullivan, S., Marentette, L., McKean, E.
2016; 95 (12): E32-E35
- **Esthesioneuroblastoma: Updating Histologic Grading as It Relates to Prognosis** *ANNALS OF OTOLARYNGOLOGY AND LARYNGOLOGY*
Gallagher, K. K., Spector, M. E., Pepper, J., McKean, E. L., Marentette, L. J., McHugh, J. B.
2014; 123 (5): 353-358
- **Synchronous ipsilateral sebaceous lymphadenoma and membranous basal cell adenoma of the parotid** *ORAL SURGERY ORAL MEDICINE ORAL PATHOLOGY ORAL RADIOLOGY*
Scheller, E. L., Pritchett, C. V., Shukla, A., Pepper, J. P., Marentette, L. J., McHugh, J. B.
2013; 115 (4): E41-E46
- **The Persian Woman's Face: A Photogrammetric Analysis** *AESTHETIC PLASTIC SURGERY*
Sepehr, A., Mathew, P. J., Pepper, J., Karimi, K., Devcic, Z., Karam, A. M.

2012; 36 (3): 687-691

- **Olfactory Groove Meningioma: Discussion of Clinical Presentation and Surgical Outcomes Following Excision Via the Subcranial Approach** *LARYNGOSCOPE*
Pepper, J., Hecht, S. L., Gebarski, S. S., Lin, E. M., Sullivan, S. E., Marentette, L. J.
2011; 121 (11): 2282-2289
- **Histopathologic Findings and Clinical Manifestations in a Patient With Dysphonia and Vocal Fold Involvement by Systemic Sclerosis** *ARCHIVES OF OTOLARYNGOLOGY-HEAD & NECK SURGERY*
Pepper, J., Kupfer, R. A., McHugh, J. B., Hogikyan, N. D.
2011; 137 (8): 816-819
- **Perioperative Outcomes in Patients Undergoing the Transglabellar/Subcranial Approach to the Anterior Skull Base** *SKULL BASE-AN INTERDISCIPLINARY APPROACH*
Pepper, J., Ward, P. D., Lin, E. M., Sullivan, S. E., Hecht, S. L., Marentette, L. J.
2011; 21 (4): 215-222
- **The autospreader flap in reduction rhinoplasty.** *Archives of facial plastic surgery*
Pepper, J., Baker, S. R.
2011; 13 (3): 172-?
- **The cephalic tuck procedure.** *Archives of facial plastic surgery*
Pepper, J., Baker, S. R.
2011; 13 (3): 213-?
- **Perioperative Lumbar Drain Placement: An Independent Predictor of Tension Pneumocephalus and Intracranial Complications Following Anterior Skull Base Surgery** *LARYNGOSCOPE*
Pepper, J., Lin, E. M., Sullivan, S. E., Marentette, L. J.
2011; 121 (3): 468-473
- **SMAS flap rhytidectomy.** *Archives of facial plastic surgery*
Pepper, J., Baker, S. R.
2011; 13 (2): 108-?
- **Osteomyelitis of the hard palate secondary to actinomycosis: a case report.** *Ear, nose, & throat journal*
Garg, R., Schalch, P., Pepper, J., Nguyen, Q. A.
2011; 90 (3): E11-2
- **Angioleiomyoma of the Internal Auditory Canal: Clinical and Radiographic Features** *OTOLOGY & NEUROTOLOGY*
Pepper, J., McKeever, P., Gebarski, S., Spector, M., Thompson, B. G., Arts, H. A.
2010; 31 (9): 1451-1454
- **Key issues in nasal reconstruction** *CURRENT OPINION IN OTOLARYNGOLOGY & HEAD AND NECK SURGERY*
Asaria, J., Pepper, J. P., Baker, S. R.
2010; 18 (4): 278-282
- **Cavernous carotid injury during functional endoscopic sinus surgery: Case presentations and guidelines for optimal management** *AMERICAN JOURNAL OF RHINOLOGY*
Pepper, J., Wadhwa, A. K., Tsai, F., Shibuya, T., Wong, B. J.
2007; 21 (1): 105-109
- **Design of a low-cost, USB-compatible, otoscope image-capture system** *LARYNGOSCOPE*
Pepper, J., Jackson, R. P., Crumley, R. L., Wong, B. J.
2006; 116 (12): 2224-2226
- **Molecular and functional dissection of TGF-beta 1-induced cerebrovascular abnormalities in transgenic mice** *3rd World Congress on Vascular Factors in Alzheimers Disease*
Buckwalter, M., Pepper, J. P., Gaertner, R. F., Von Euw, D., Lacombe, P., Wyss-Coray, T.
NEW YORK ACAD SCIENCES.2002: 87-95
- **Inhibition of MAO-A fails to alter cocaine-induced increases in extracellular dopamine and norepinephrine in rat nucleus accumbens** *MOLECULAR BRAIN RESEARCH*

Pepper, J. P., Baumann, M. H., Ayestas, M., Rothman, R. B.
2001; 87 (2): 184-189

PRESENTATIONS

- The Role of Hedgehog-responsive Cells in Facial Nerve Regeneration - Combined Otologic Spring Meeting (4/28/2016)
- Age-Related Histologic and Biochemical Changes in Auricular and Septal Cartilage - Triological Society Combined Sections Meeting (1/20/2017)
- Co-Culture in Microfluidic Device of Human Induced Pluripotent Stem-Cell Derived Motor Neurons With Muscle - Combined Otologic Spring Meeting (5/19/2016)
- Local Flaps in Facial Reconstruction and Research Update - USC Caruso Department of Otolaryngology Grand Rounds (4/22/2016)
- Matching Patient Goals to Choice of Nasal Reconstruction - The Stanford Nasal Plastic Surgery Course (10/16/2015)
- Diced cartilage onlay grafts - The Stanford Nasal Plastic Surgery Course (10/15/2015)
- Local Flaps in Facial Reconstruction - Keck USC Department of Dermatology Grand Rounds (10/6/2015)
- What's new in Stem Cells - American Association of Facial Plastic Surgery 2015 Fall Meeting (10/2/2015)
- Prevention of neuromuscular atrophy via transplantation of human stem cell-derived motor neurons - American Association of Facial Plastic Surgery 2015 Fall Meeting (10/1/2015)
- Anatomic Considerations for Nerve Transfers in Facial Nerve Reanimation Surgery - American Association of Facial Plastic Surgery 2014 Fall Meeting (9/14/2014)
- Facial Nerve Paralysis: from Bell's Palsy to Reinnervation - Pacific Coast Oto-Ophthalmologic Society (6/29/2014)
- Revision Rhinoplasty - The Third UC Irvine Rhinoplasty Course (5/3/2014)
- Facial nerve paralysis: Guidelines for Workup & Treatment - Verdugo Hills Hospital Medical Staff Grand Rounds (4/3/2014)
- Facial Nerve Paralysis: from Bell's Palsy to Reinnervation - UC Irvine Department of Otolaryngology Grand Rounds (2/19/2014)
- Facial Nerve Paralysis: from Bell's Palsy to Reinnervation - Keck USC Dept. of Neurology Grand Rounds (2/4/2014)
- Scar outcomes after nasal reconstruction - American Association of Facial Plastic Surgery 2012 Spring Meeting at COSM (2012)
- Subcutaneous emphysema following endoscopic Zenker's diverticulum repair and postoperative CPAP use - Combined Otolaryngologic Spring Meeting 2012 (2012)
- Esthesioneuroblastoma: updating histologic grading as it relates to prognosis - North American Skull Base Society 22nd Annual Meeting 2012 (2012)
- Type and Frequency of Revision Surgeries following Open Surgery of the Anterior Cranial Base - The Triological Society 2012 Combined Sections Meeting (2012)
- Quality of life and scar assessment following nasal reconstruction - American Academy of Facial Plastic and Reconstructive Surgery 2010 Fall Meeting (2010)
- Approach to the midface in patients with facial nerve paralysis - International Symposium of Facial Plastic and Reconstructive Surgery (2010) (2010)
- Baseline Severity of Obstructive Sleep Apnea Syndrome (sOSAHS) vs. Body Mass Index (BMI): Their Role as Predictors for Surgical Treatment Success - The Triological Society 2007 Annual Meeting at COSM (2007)
- The Persian American woman's face: an anthropometric analysis - American Academy of Facial Plastic and Reconstructive Surgery Fall Meeting (2007) (2007)
- Prototype of an otoscope webcam – potential applications for primary care - American Academy of Family Physicians Scientific Assembly (2006) (2006)
- Cerebrovascular effects of possible alzheimer's disease cofactors - Gladstone Institutes Retreat (2001) (2001)
- Ethnicity and the tendency for rhinoplasty surgery - Department of Otolaryngology 7th annual Research Symposium, U.C. Irvine (2006) (2006)
- Abnormal ERP response in former drug abusers - Evoked Potentials International Conference (1998) (1998)