CURRICULUM VITAE

Jae-Yol Lim, MD, PhD

Dept. of Otorhinolaryngology

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Professorship:

2008 ~ 2009 Clinical Fellow in Department of Otorhinolaryngology, Yonsei University College of Medicine, Seoul, Korea

2009 ~ 2013: Assistant Professor in Department of Otorhinolaryngology, Inha University School of Medicine,

2013 ~ 2017: Associate Professor in Department of Otorhinolaryngology, Inha University School of Medicine,

2017 ~ present: Associate Professor in Department of Otorhinolaryngology, Yonsei University College of Medicine, Seoul, Korea

EDUCATION:

March 1993 – February 1999: College of Medicine, Yonsei University, Seoul, Korea

September 2003 – July 2007: Master's degree course in the department of Otorhinolaryngology, The Graduate School, Yonsei University, Seoul, Korea

September 2007– 2013: Ph.D in the department of Otorhinolaryngology, The Graduate School, Yonsei University, Seoul, Korea

MAJOR FIELDS OF INTEREST

Head and Neck Surgical Oncology

Head and Neck Radiation Biology

Laryngology and Phoniatrics

Tracheoesophageal diseases

MAJOR RESEARCH INTEREST

Prevention and treatment of radiation-induced salivary hypofunction

Promotion of wound healing of vocal folds

Tissue engineering and Regenerative medicine in head and neck fields

Stem cell biology

Drug delivery

HONORS AND AWARDS

Apr, 2019 Received Best Oral Presentation Award from the Korean Society of Otorhinolaryngology-Head and Neck

Jan, 2019 Received Best Research Award from the Gangnam Severance Cancer Center

Mar, 2018 Received Best Research Prize from the Korean Society of Laryngology, Phoniatrics, and Logopedics

Aug, 2016 Received Best Poster Award from Korean Society for Stem Cell Research

Aug, 2016 Received Best Paper Prize from the Korean Thyroid Association

June, 2016 Received Best Poster Award from Korean Tissue Engineering and Regenerative Medicine Society

March, 2015: Received Yesong Best Research Prize from the Korean Society of Laryngology, Phoniatrics, and Logopedics

March, 2014: Received Best Research Prize from the Korean Society of Otorhinolaryngology-Head and Neck

July, 2013: Received YuYu Academy Prize from the Korean Thyroid Association

March, 2011: Received Best Research Prize from the Korean Society of Otorhinolaryngology-Head and Neck

September, 2010: Received Dong-A Academy Prize from the Korean Society for Head & Neck Oncology

MEMBERSHIP

Korean Medical Association

Korean Society of Otolaryngology

The Korean Head and Neck Study Group

The Society of Korean Logopedics & Phoniatrics

The Korean Society for Head & Neck Oncology

The Korean Bronchoesophagological Society

Korean Thyroid Association

Korean Society of Tissue Engineering and Regenerative Medicine

International Society for Stem Cell Research

PATENT

1. Method for generation of salivary organoids using three-dimensional co-culture of stem cells. KP-10-1953977
2. Method for generation of salivary organoids from human salivary glandular stem cells through three-dimensional sequential culture. KP-10-1953978
3. Method for isolating enhanced glandular stem cells from gland tissue through three dimensional spheroid culture. KP-10-1883775 / KP-10-1907534
4. Method for formation of acinar-like organoids through three dimensional spheroid culture and use of salivary gland dysfunction disease model. KR-10-1837293
5. Device for sampling biopsy KR-10-1733322
6. COMPOSITE DRUG DELIVERY VEHICLE AND PHARMACEUTICAL COMPOSITION CONTAINING THE CARRIER FOR TREATING XEROSTOMIA. KR-10-1610732
7. Electrically conducting nerve regeneration-inducing tube coated with natural conductive material. KR-10-

1671399

8. Portable Device for Self-diagnosing Laryngeal Diseases: PCT/KR1-1-2012-0023263-81

GRANTS

2018~2023 National Research Foundation of Korea(NRF) grant funded by the Korea government(MSIT) (NRF-2018R1A2B3004269): Establishment of personalized therapeutic strategies for salivary diseases based on biotechnology of adult stem cells-derived salivary organoids

2017~2019 Biomedical Technology & Development Research (NRF-2017M3A9B4032053): Development of stem cell engineering technology for promotion of stem cell function based on generation of 3D spheroids and Wnt activation of LGR5 adult salivary stem cells

2016~2019 Korean Health Technology R&D Project, Ministry of Health & Welfare, Republic of Korea (HI16C1894): Regulation of glandular microenvironment by enhancement of the function of epitheliomesenchymal glandular stem cells

2015~2017 Korea Health Technology R&D Project through the Korea Health Industry Development Institute (KHIDI), funded by the Ministry of Health & Welfare, Republic of Korea (HI15C2807): Development of Cell Therapeuticics Based on Bioproengineering Process of Human Glandular Stem Cells

2013 ~ 2016 Korean Health Technology R&D Project, Ministry of Health & Welfare, Republic of Korea (HI13C1625): Investigation on cellular mechanisms in vocal fold injury and development of regulatory factors by transcriptome analyses of vocal fold-derived cells

2013 ~ 2016 The Basic Science Research Program of the National Research Foundation (NRF-2013R1A2A2A04014200) funded by the Korean Ministry of Education, Science and Technology: Therapeutic fusion technology of active carriers for bioactive factors to restore salivary gland function of intractable xerostomia

2013 ~ 2016 Basic Science Research Program through the National Research Foundation of Korea (NRF-2013R1A1A2010844) funded by the Ministry of Education, Science and Technology: Development of therapeutic biohealth technology based on tissue-specific clonal stem cell engineering and investigation on restoration of intractable xerostomia

2012 ~ 2013 Research Grant for Young Scientists by Inha University Hospital: Protection of salivary function based on bioactive factor-scaffold composites for restoration of intractable xerostomia

2012 ~ 2013 Bumsuk Academic Scholarship Foundation: Human salivary gland-specific stem cells for treatment of disease-specific xerostomia

2011 ~ 2012 The National Research Foundation of Korea (NRF) grant funded by the Korea government (MEST) (No. 2011-001847): Development of radioprotective candidate substances for protection against external radiation-induced xerostomia

2010 ~ 2013 Korean Ministry of Education, Science and Technology (Grant 2010-0004064): Development of definitive treatment modalities and delivery system in vocal cord scarring-induced dysphonia

2010 ~ 2011 The Korean Society of Otorhinolaryngology-Head and Neck: Isolation and culture of the salivary gland-specific stem cells for the treatment of radiation-induced salivary hypofunction

PUBLICATIONS

1. Yoon YJ1, Shin HS1, Lim JY. A hepatocyte growth factor/MET-induced antiapoptotic pathway protects against radiation-induced salivary gland dysfunction. Radiother Oncol. 2019 May 25;138:9-16
2. Choi JS, Kim YM, Lim JY. Parotid ductal stenosis after facial cosmetic surgery (2 case reports). Medicine (Baltimore). 2019 Apr;98(15):e15015
3. Joo YH, Cho JK, Koo BS, et al. Guidelines for the Surgical Management of Oral Cancer: Korean Society of Thyroid-Head and Neck Surgery. Clin Exp Otorhinolaryngol. 2019 May;12(2):107-144
4. Park YM, Lim JY, Kang MS, Choi HS. Treatment Outcomes of Angiolytic Laser-Assisted Glottoplasty in Patients With Sulcus Vocalis. Ann Otol Rhinol Laryngol. 2019 May;128(5):377-383.
5. Lim JY, Park YM, Kang M, Lee SJ, Baek K, Na J, Choi HS. Angiolytic laser stripping versus CO2 laser microflap excision for vocal fold leukoplakia: Long-term disease control and voice outcomes. PLoS One. 2018 Dec 31;13(12):e0209691
6. Shin HS, Hong HJ, Koh WG, Lim JY. Organotypic 3D Culture in Nanoscaffold Microwells Supports Salivary Gland Stem-Cell-Based Organization. ACS Biomater Sci Eng. 2018 Dec 10;4(12):4311-4320.
7. Lee SJ, Yi T, Ahn SH, Lim DK, Kim SN, Lee HJ, Cho YK, Lim JY, Sung JH, Yun JH, Lim J, Song SU, Kwon SW. Comparative study on metabolite level in tissue-specific human mesenchymal stem cells by an ultra-performance liquid chromatography quadrupole time of flight mass spectrometry. Anal Chim Acta. 2018 Sep 18;1024:112-122.
8. Shin HS, Lee S, Kim YM, Lim JY. Hypoxia-Activated Adipose Mesenchymal Stem Cells Prevents Irradiation-Induced Salivary Hypofunction by Enhanced Paracrine Effect Through Fibroblast Growth Factor 10. Stem Cells. 2018 Jul;36(7):1020-1032.
9. Shin HS, Lee S, Hong HJ, Lim YC, Koh WG, Lim JY. Stem cell properties of human clonal salivary gland stem cells are enhanced by three-dimensional priming culture in nanofibrous microwells. Stem Cell Res Ther. 2018 Mar 22;9(1):74
10. Kim D, Lee S, Lim JY, Kwon S. Characteristics and Responses of Human Vocal Fold Cells in a Vibrational Culture Model. Laryngoscope. 2018 Jul;128(7):E258-E264.
11. Bae WJ, Koo BS, Lee SH, Kim JM, Rho YS, Lim JY, Moon JH, Cho JH, Lim YC. Inhibitor of DNA binding 2 is a novel therapeutic target for stemness of head and neck squamous cell carcinoma. Br J Cancer. 2017 Dec 5;117(12):1810-1818.
12. Choi JS, Choi YG, Kim YM, Lim JY. Clinical outcomes and prognostic factors of sialendoscopy in salivary duct stenosis. Laryngoscope 2018 Apr;128(4):878-884.
13. Lee S, Kim Y, Shin HS, Lim JY. Comparative characteristics of laryngeal-resident mesenchymal stromal cell populations isolated from distinct sites in the rat larynx. Stem Cell Res Ther. 2017 Sep 29;8(1):200
14. Shin HS, An HY, Choi JS, Kim HJ, Lim JY. Organotypic Spheroid Culture to Mimic Radiation-Induced Salivary Hypofunction. J Dent Res. 2017 Apr;96(4):396-405
15. Choi JS, Shin HS, An HY, Kim YM, Lim JY. Radioprotective effects of Keratinocyte Growth Factor-1 against

irradiation-induced salivary gland hypofunction. Oncotarget. 2017 Feb 21;8(8):13496-13508

16. Choi JS, An HY, Shin HS, Kim YM, Lim JY. Enhanced tissue remodeling efficacy of adipose-derived mesenchymal stem cells using injectable matrices in radiation damaged salivary gland model. J Tissue Eng Regen Med.2018 Feb;12(2):e695-e706.
17. Yi T, Lee S, Choi N, Shin HS, Kim J, Lim JY. Single Cell Clones Purified from Human Parotid Glands Display Features of Multipotent Epitheliomesenchymal Stem Cells. Sci Rep. 2016 Nov 8;6:36303
18. Shin HS, Kook YM, Hong HJ, Kim YM, Koh WG, Lim JY. Functional spheroid organization of human salivary gland cells cultured on hydrogel-micropatterned nanofibrous microwells. Acta Biomater. 2016 Nov;45:121-132
19. Choi JS, An HY, Park IS, Kim SK, Kim YM, Lim JY. Radioprotective Effect of Epigallocatechin-3-Gallate on Salivary Gland Dysfunction After Radioiodine Ablation in a Murine Model. Clin Exp Otorhinolaryngol. 2016 Sep;9(3):244-51
20. Kim D, Lim JY, Kwon S. Development of Vibrational Culture Model Mimicking Vocal Fold Tissues. Ann Biomed Eng. 2016 Mar 7. [Epub ahead of print]
21. An HY, Shin HS, Choi JS, Kim HJ, Lim JY, Kim YM. Adipose Mesenchymal Stem Cell Secretome Modulated in Hypoxia for Remodeling of Radiation-Induced Salivary Gland Damage. PLoS One. 2015 Nov 3;10(11):e0141862.
22. Choi JS, Lim HG, Kim YM, Lim MK, Lee HY, Lim JY. Usefulness of Magnetic Resonance Sialography for the Evaluation of Radioactive Iodine-Induced Sialadenitis. Ann Surg Oncol. 2015 Dec;22 Suppl 3:1007-13
23. Lee S, Choi JS, Kim HJ, Kim YM, Lim JY. Impact of Irradiation on laryngeal hydration and lubrication in rat larynx. Laryngoscope. 2015 Aug;125(8):1900-7.
24. Choi JS, Hong SB, Hyun IY, Lim JY, Kim YM. Effects of Salivary Secretion Stimulation on the Treatment of Chronic Radioactive Iodine-Induced Sialadenitis. Thyroid. 2015 Jul;25(7):839-45.
25. Choi JS, Lee S, Kim da Y, Kim YM, Kim MS, Lim JY. Functional remodeling after vocal fold injury by small intestinal submucosa gel containing hepatocyte growth factor. Biomaterials. 2015 Feb;40:98-106.
26. Choi JS, Lim JY, Park IS, Seo SY, Joung YK, Han DK, Kim YM. Surface-modified silicone T-tubes for prevention of tracheal stenosis in a rabbit model. Laryngoscope. 2015 Jun;125(6):1465-71
27. Lim JY, Yi T, Lee S, Kim J, Kim SN, Song SU, Kim YM. Establishment and Characterization of Mesenchymal Stem Cell-Like Clonal Stem Cells from Mouse Salivary Glands. Tissue Eng Part C Methods. 2015 May;21(5):447-57
28. Kim YM, Choi JS, Hong SB, Hyun IY, Lim JY. Salivary gland function after sialendoscopy for treatment of chronic radioiodine-induced sialadenitis. Head Neck. 2016 Jan;38(1):51-8.
29. Kim YM, Oh SH, Choi JS, Lee S, Ra JC, Lee JH, Lim JY. Adipose-derived stem cell-containing hyaluronic acid/alginate hydrogel improves vocal fold wound healing. Laryngoscope. 2014 Mar;124(3):E64-72
30. Choi JS, Oh SH, An HY, Kim YM, Lee JH, Lim JY. Functional regeneration of recurrent laryngeal nerve injury during thyroid surgery using an asymmetrically porous nerve guide conduit in an animal model. Thyroid. 2014 Jan;24(1):52-9.
31. Choi JS, Park IS, Kim SK, Lim JY, Kim YM. Analysis of age-related changes in the functional morphologies

of salivary glands in mice. Arch Oral Biol. 2013 Nov;58(11):1635-42.

32. Lim JY, Ra JC, Shin IS, Jang YH, An HY, Choi JS, Kim WC, Kim YM. Systemic transplantation of human adipose tissue-derived mesenchymal stem cells for the regeneration of irradiation-induced salivary gland damage. PLoS One. 2013 Aug 9;8(8):e71167
33. Choi JS, Park IS, Kim SK, Lim JY, Kim YM. Morphometric and Functional Changes of Salivary Gland Dysfunction after Radioiodine Ablation in a Murine Model. Thyroid. 2013 Nov;23(11):1445-51.
34. Lim JY, Choi BH, Lee S, Jang YH, Choi JS, Kim YM. Regulation of Wound Healing by Granulocyte-Macrophage Colony-Stimulating Factor after Vocal Fold Injury. PLoS ONE. 2013;8:e54256
35. Lim JY, Yi T, Choi JS, Jang YH, Lee S, Kim HJ, Song SU, Kim YM. Intraglandular Transplantation of Bone Marrow-derived Clonal Mesenchymal Stem Cells for Amelioration of Post-irradiation Salivary Gland Damage. Oral Oncol. 2013,49:136-143
36. Kim YM, Yi T, Choi JS, Lee S, Jang YH, Kim CH, Song SU, Lim JY. Bone Marrow-Derived Clonal Mesenchymal Stem Cells as a Source of Cell Therapy for Promoting Vocal Fold Wound Healing. Ann Otol Rhinol Laryngol. 2013,122:121-130
37. Shin YS, Lee JS, Choi JW, Min BH, Jang JW, Lim JW, Kim CH. Transplantation of Autologous Chondrocytes Seeded on a Fibrin/Hyaluronic Acid Composite Gel into Vocal Fold in Rabbits: Preliminary Results. Tissue Eng Regen Med. 2012:9(4);203-208
38. Choi JS, Kim NJ, Klemuk S, Jang YH, Park IS, Ahn KH, Kim YM, Lim JY. Preservation of Viscoelastic Properties of Rabbit Vocal Folds after Implantation of Hyaluronic Acid-Based Biomaterials. Otolaryngol Head Neck Surg. 2012;147(3):515-521.
39. Kim HS, Suh H, Lee JH, Kim JH, Song DE, Jo I, Chung SM, Lim JY, Park HS, Kim HJ. Development of an Artificial Tracheal Prosthesis: a Semicircular Shape Polyurethane Scaffold. Tissue Eng Regen Med, 2011;8(5):439-45.
40. Lim JY, Park IS, Park SW, Kim JW, Kim YM. Potential pitfalls and therapeutic implications of pretherapeutic radiologic staging in glottic cancers. Acta Otolaryngol. 2011;131(8):869-75.
41. Lim JY, Lim YC, Kim SH, Byeon HK, Choi EC. Factors predictive of successful outcome following salvage treatment of isolated neck recurrences. Otolaryngol Head Neck Surg. 2010;412:832-837.
42. Lim JY, Kim J, Kim SH, Lee S, Lim YC, Kim JW, Choi EC. Surgical treatment of carotid body paragangliomas: outcomes and complications according to the shamblin classification. Clin Exp Otorhinolaryngol. 2010;3(2):91-5.
43. Lim JY, Lim YC, Kim SH, Kim JW, Jeong HM, Choi EC. Predictive factors of isolated distant metastasis after primary definitive surgery without systemic treatment for head and neck squamous cell carcinoma. Oral Oncol. 2010;46(7):504-8.
44. Lim JY, Kim J, Choi SH, Kim KM, Kim YH, Kim HS, Choi HS. Sulcus configurations of vocal folds during phonation. Acta Otolaryngol. 2009;129(10):1127-35.
45. Choi HS, Suh H, Lee JH, Park SN, Shin SH, Kim YH, Chung SM, Kim HK, Lim JY, Kim HS. A polyethylene glycol grafted bi-layered polyurethane scaffold: preliminary study of a new candidate prosthesis for repair of a partial tracheal defect. Eur Arch Otorhinolaryngol. 2008;265(7):809-16.

46. Lim JY, Kim HS, Kim YH, Kim KM, Choi HS. PMMA (polymethylmetacrylate) microspheres and stabilized hyaluronic acid as an injection laryngoplasty material for the treatment of glottal insufficiency: in vivo canine study. Eur Arch Otorhinolaryngol. 2008;265(3):321-6.
47. Choi HS, Chung SM, Lim JY, Kim HS. Increasing the closed quotient improves voice quality after type I thyroplasty in patients with unilateral vocal cord paralysis: analysis using SPEAD program. J Voice. 2008;22(6):751-5.
48. Lim JY, Lim SE, Choi SH, Kim JH, Kim KM, Choi HS. Clinical characteristics and voice analysis of patients with mutational dysphonia: clinical significance of diplophonia and closed quotients. J Voice. 2007 Jan;21(1):12-9. Epub 2006 Jan 19.
49. Lim JY, Kim KM, Choi EC, Kim YH, Kim HS, Choi HS. Current clinical propensity of laryngeal tuberculosis: review of 60 cases. Eur Arch Otorhinolaryngol. 2006 Sep;263(9):838-42. Epub 2006 Jul 12.
50. Lim YC, Koo BS, Lee JS, Lim JY, Choi EC. Distributions of cervical lymph node metastases in oropharyngeal carcinoma: therapeutic implications for the N0 neck. Laryngoscope. 2006 Jul;116(7):1148-52.
51. Lim JY, Choi JN, Kim KM, Choi HS. Voice analysis of patients with diverse types of Reinke's edema and clinical use of electroglottographic measurements. Acta Otolaryngol. 2006 Jan;126(1):62-9.
52. Lim YC, Lee SY, Lim JY, Shin HA, Lee JS, Koo BS, Kim SH, Choi EC. Management of contralateral N0 neck in tonsillar squamous cell carcinoma. Laryngoscope. 2005 Sep;115(9):1672-5.
53. Choi EC, Lim YC, Lee SY, Lim JY, Kim SH. Titanium hemostatic clip tailoring method to overcome vessel caliber discrepancy in interposition saphenous vein graft for carotid artery resection. Acta Otolaryngol. 2005 Jun;125(6):638-41.
54. Nam DH, Lim JY, Ahn CM, Choi HS. Specially programmed respiratory muscle training for singers by using respiratory muscle training device (Ultrabreathe).Yonsei Med J. 2004 Oct 31;45(5):810-7.