

Yu Leo Lei, DDS, PhD
Assistant Professor
University of Michigan
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Education and Training

Education

09/1999-07/2006 DDS, Dentistry, Sichuan University, Chengdu, Sichuan China
08/2006-05/2011 PhD, Immunology, University of North Carolina at Chapel Hill, Chapel Hill, NC

PostDoctoral Training

05/2011-06/2011 Postdoctoral Fellow, Immunology, University of North Carolina at Chapel Hill, Chapel Hill, NC
07/2011-06/2014 Residency, Oral and Maxillofacial Pathology, University of Pittsburgh Medical Center, Pittsburgh, PA
07/2014-09/2014 Postdoctoral Fellow, Head and Neck Oncology Research, University of Pittsburgh, Pittsburgh, PA

Certification And Licensure

Certification

10/2014-09/2024 American Board of Oral and Maxillofacial Pathology - Oral and Maxillofacial Pathology

Licensure

08/2015-08/2021 State of Michigan, Clinical Academic Dental

Academic, Administrative, Clinical, Research and Military Appointments

Academic Appointments

10/2014-07/2015 Visiting Research Assistant Professor, University of Pittsburgh, Pittsburgh, PA
08/2015-08/2021 Assistant Professor in Periodontics and Oral Medicine, University of Michigan - Ann Arbor, Ann Arbor, Michigan
10/2015-present Core Member, University of Michigan Rogel Cancer Center, Ann Arbor, MI
07/2016-08/2021 Adjunct Assistant Professor, Department of Otolaryngology – Head and Neck Surgery, University of Michigan Medical School, Ann Arbor, MI

Clinical Appointments

08/2015-present Attending Oral Pathologist, University of Michigan Oral Pathology Biopsy Service, Ann Arbor, MI

Clinical Interests

- Oral and Maxillofacial Pathology: I am an attending oral pathologist at the University of Michigan Oral Pathology Biopsy Service. I provide histologic and molecular diagnoses for Oral, Head and Neck Cancer.
- Oral Medicine: I am specialized in the diagnosis and management of complex oral mucosal conditions, such as oral pre-malignant lesions, oral lichen planus, pemphigoid, pemphigus, and inflammatory diseases with oral manifestation.

Research Interests

- Mechanisms Regulating Cancer Immune Escape: Utilizing human Head and Neck Cancer specimens, we have found that the DNA-mediated Type I Interferon signaling is essential for host anti-tumor immunity. We employ biochemical, genomic, pre-clinical, and clinical models to characterize novel cancer inhibitors of the type I interferon signaling, which drive effector T-cell exclusion and cancer immune escape.
- Nano-vaccines to Sensitize Cold Cancer to Immune Checkpoint Receptor Blockade: In order to expand the tumor-specific CD8+ T-cell repertoire, our group utilizes advanced nanotechnologies to optimize and deliver different anti-tumor vaccine formulations. We are interested in vaccine design, manufacture, pre-clinical validation, mechanistic analysis and clinical translation.
- Core techniques: Head and Neck Cancer transgenic mouse models, implantable models, tumor-infiltrating lymphocytes profiling, effector T-cell function assays, clinical Head and Neck Cancer research, immunohistochemistry, protein biochemistry, molecular cloning, flow cytometry, lentiviral shRNA delivery, CRISPR-Cas9 genomic editing, retroviral gene expression, confocal imaging, transcriptome profiling (RNA-Seq), immune deconvolution, quantitative mass spectrometry, single-cell RNA-Seq, and nanotechnology.

Grants

Current Grants

5 R01 CA251198-05: Sensitizing High Grade Serous Cancers to Immunotherapy through the Induction of DNA Damage NIH-DHHS-US- 20-PAF00989

Co-I with Effort (Principal Investigator: Karen McLean)
07/2020-06/2025. \$1,784,250 (\$356,850)

5 F31 DE030000-03: Analysis of the E7-Mediated Mechanism of MHC Class I Repression in HNSCC NIH-DHHS-US- 20-PAF03457

Co-I without Effort (Principal Investigator: Chad Brenner)
07/2020-06/2023. \$112,591 (\$38,520)

Integrated Bioinformatics Analysis of Immune Biomarkers in Oral Cancer American Head and Neck Society- 20-PAF03990

Co-I without Effort (Principal Investigator: Steven Bennett Chinn)
07/2020-06/2021. \$10,000 (\$10,000)

F31 DE030000: Analysis of the E7-mediated mechanism of MHC Class I repression in HNSCC NIH/NIDCR

Co-I without Effort (Principal Investigator: Gensterblum-Miller, E)
07/2020-04/2023. \$112,591 (\$38,520)

1R21DE02900501A1: Quantitative Estimation of Periodontal Inflammation and Tissue Destruction with High-Resolution Ultrasound-Based Imaging NIH-DHHS-US- 20-PAF00025

Co-I with Effort (Principal Investigator: Hsun-Liang Chan)
04/2020-03/2022. \$429,000

R01 CA240515: Targeting the DNA damage response in combination with radiation to induce innate immunity and improve immunotherapy efficacy in pancreatic cancer NIH/NCI

Co-I with Effort (Principal Investigator: Morgan, Meredith)
03/2020-02/2025. \$2,261,385 (\$452,277)

U01 DE029255: Robust Immuno-prevention Strategies for High-Risk Oral Epithelial Dysplasia NCI/NIDCR

Lei, Yu Leo, PI
09/2019-08/2024. \$3,799,975

K01 EB028877: Chimeric Antigen Receptor T Cell Design Through Living Cell Systems Biology NIBIB

Decker, Joseph, Co-PI
09/2019-08/2023. \$506,902

F31 DE028740: NLR and Oral Cancer Immune Escape NIH/NIDCR

Heath, Blake R; Lei, Yu Leo, PI
03/2019-02/2022. \$93,287 (\$37,315)

5R01DE02672803: *Develop a Therapeutic Nano-vaccine against Head and Neck Cancer* NIH-DHHS-US- 17-PAF05907

Yu Leo Lei, PI

04/2018-03/2023. \$1,851,906

Submitted Grants

Targeting "stemness" for cancer prevention and therapy NIH-DHHS-US- 21-PAF00774

Co-I with Effort (Principal Investigator: Brenner, Dean E;Nor, Jacques Eduardo;Wicha, Max S)

07/2021-06/2026. \$11,856,000

Preclinical development of PDI inhibitors for glioblastoma NIH-DHHS-US- 20-PAF07656

Co-I with Effort (Principal Investigator: Neamati, Nouri)

04/2021-03/2026. \$3,552,133

New Engineering Strategy for Harnessing Immune System against Head and Neck Cancer NIH-DHHS-US- 21-PAF00729

Moon, James J;Lei, Yu Leo, PI

04/2021-03/2026. \$3,449,392

Advance Vaccine Adjuvant Combinations to Overcome Insensitivity to Sting Agonists NIH-DHHS-US- 20-PAF08374

Lei, Yu Leo;Moon, James J, PI

04/2021-03/2026. \$3,079,302

Obesity and prediabetes-mediated neuroinflammation and cognitive decline: Identifying mechanism-based therapeutic targets and therapeutic windows NIH-DHHS-US- 20-PAF07267

Co-I without Effort (Principal Investigator: Elzinga, Sarah Elizabeth)

04/2021-03/2026. \$967,847

Regulation of Antitumor Immunity in Bladder Cancer by TRIM29 Army-DoD-US- 20-PAF09061

Co-I with Effort (Principal Investigator: Palmbo, Phillip Lee)

04/2021-03/2024. \$757,164

Novel combination immunotherapy against head and neck cancer NIH-DHHS-US- 20-PAF06684

Moon, James J;Lei, Yu Leo, PI

09/2020-08/2025. \$3,477,124

Role of TRIM29 in Bladder Cancer Invasion and Progression NIH-DHHS-US- 20-PAF05056

Co-I with Effort (Principal Investigator: Palmbo, Phillip Lee)

09/2020-08/2025. \$2,890,719

Dissecting Mechanisms of Adaptive PI3K Inhibitor Resistance in HNSCC NIH- 20-PAF04658

Co-I with Effort (Principal Investigator: Brenner, J Chad)

09/2020-08/2025. \$3,724,870

Validation, inhibition, and degradation of GSTO1 in glioblastoma NIH- 20-PAF04494

Co-I with Effort (Principal Investigator: Neamati, Nouri)

09/2020-08/2025. \$3,545,794

Novel combination immunotherapy against head and neck cancer NIH-DHHS-US- 20-PAF03223

Moon, James J;Lei, Yu Leo, PI

07/2020-06/2025. \$3,743,939

Validating Machine Learning-Assisted Risk Classification of Peri-Implantitis NIH-DHHS-US- 20-PAF01601

Lei, Yu Leo;Giannobile, William V, PI

07/2020-06/2025. \$3,499,145

Construct an Immune Atlas for Pre-Malignancies at Single-Cell Resolution Chan Zuckerberg Initiative, LL- 20-PAF02984

Lei, Yu Leo;Chinn, Steven Bennett, PI

03/2020-02/2022. \$525,000

Past Grants

U063983: Drug-like small molecule modulators for interferons University of Michigan
Lei YL, Neamati N, Moon JJ, PI
12/2018-11/2019. \$60,000

R03 DE027399: Development of a Prognostic Compound Immunoscore for Head and Neck Cancer NIH
Lei, Yu Leo, PI
09/2018-08/2020. \$338,336

T32 AI007413: Postdoctoral T32 Trainee: Yee Sun Tan, Targeting SOX2-driven metabolic insufficiency of tumor microenvironment to enhance immunotherapy, Research Training in Experimental Immunology. Role: Mentor NIH/NIAID
Co-I without Effort (Principal Investigator: Kunkel, Steve L; Moore, Bethany)
08/2018-07/2019. \$70,139

Cancer Center Research Committee Grant University of Michigan Rogel Cancer Center
Lei, Yu Leo, PI
06/2018-05/2019. \$75,000

18-PAF03600: Periodontal inflammation quantification with point-of-care ultrasonography American Academy of Periodontology
Co-I without Effort (Principal Investigator: Hsun-Liang Chan)
02/2018-01/2019. \$30,000

Rackham Faculty Allies Diversity Grant Program University of Michigan Rackham Graduate School
Other (Principal Investigator: Blake R. Heath)
08/2017-07/2019. \$2,500

R00 DE024173S1: Research Supplements to Promote Diversity in Health-Related Research NIH/NIDCR
Lei, Yu Leo, PI
07/2017-03/2019. \$116,484

A prognostic immunoscore for regenerative therapy in patients with peri-implantitis Department of Periodontics and Oral Medicine, U-M School of Dentistry
Lei, Yu Leo, Co-PI
04/2017-04/2018. \$48,122

G019423: Fund for Discovery University of Michigan Comprehensive Cancer Center
Lei, Yu Leo, PI
02/2017-04/2018. \$75,000

5 T32 AI007413-25: Predoctoral T32 Trainee: Blake R. Heath, NLRC3 and Oral Cancer Immune Escape, Research Training in Experimental Immunology. Role: Mentor NIH/NIAID- 13-PAF00677
Co-I without Effort (Principal Investigator: Kunkel, Steve L; Moore, Bethany B)
08/2016-07/2017. \$50,000

5R00DE02417305S1: Autophagy-promoting NLRX1-TUFM complex and cancer cell resistance to cetuximab NIH-DHHS-US- 16-PAF08075; 16-PAF00346
Yu Leo Lei, PI
04/2016-03/2020. \$1,033,057

U049689: High throughput genetic screening system University of Michigan MCube
Lei, Yu Leo, Co-PI
01/2016-04/2018. \$60,000

K99 DE024173: Autophagy-Promoting NLRX1-TUFM Complex and Cancer Cell Resistance to Cetuximab NIH/NIDCR
Lei, Yu Leo, PI
09/2014-03/2016. \$253,584

Honors and Awards

International

- 2012 Paul E. Strandjord Young Investigator Award, Academy of Clinical Laboratory Physicians and Scientists.
- 2013 Leon Barnes Award, United States & Canadian Academy of Pathology.
- 2014 Top Reviewer, Oral Surgery, Oral Medicine, Oral Pathology, Oral Radiology
- 2017 First Place, Joseph Lister Award for New Investigators, International Association for Dental Research
- 2017 Star Peer Reviewer of Springer - Head and Neck Pathology

National

- 2014-2019 The NIH/NIDCR Dentist-Scientist Pathway to Independence Award (K99/R00).
- 2014 The Ruth L. Kirschstein National Research Service Award (NRSA) (T32) fellow of Head and Neck Oncology research.
- 2017 The American Academy of Oral and Maxillofacial Pathology Annual Conference Travel Award (Role: Mentor; Awardee: Christopher R Donnelly)
- 2017 The American Association of Oral and Maxillofacial Surgeons (AAOMS) Annual Conference Poster Winner (Role: Mentor; Awardee: Lorenza AJ Donnelly)
- 2018 The Autumn Immunology Conference John Wallace Scholarship (Role: Mentor; Awardee: Blake R. Heath)
- 2019 Rising Stars Award, the National Institutes of Health

Regional

- 2008 Derek T. Turner Award for excellence in dental research by North Carolina Local Section of the American Association for Dental Research.
- 2010 Derek T. Turner Award for excellence in dental research by North Carolina Local Section of the American Association for Dental Research.
- 2010 Freedland Advanced Dental Education Fellowships, North Carolina Dental Foundation.

Institutional

- 2001 Federal Award for Medical Education.
- 2002 Sichuan University Award for Creativity, First Place.
- 2004 Outstanding Student Award of Sichuan University.
- 2004 Sichuan University Award for Creativity, First Place.
- 2004 Sichuan University Excellent Academic Performance Fellowship, First Place.
- 2006 Outstanding Graduate Award, Sichuan University
- 2015 Benard Maas Fellowship (Role: Mentor; Awardee: Blake R. Heath)
- 2015 Rackham Merit Fellowship (Role: Mentor; Awardee: Blake R. Heath)
- 2017 Oral Health Sciences Block Grant (Role: mentor; Awardee: Erica Siismets)

Memberships in Professional Societies

- 2011-present Member, American Academy of Oral and Maxillofacial Pathology
- 2013-2014 Associate Member, Academy of Clinical Laboratory Physicians and Scientists
- 2013-2014 Member, United States and Canadian Academy of Pathology
- 2014-present Fellow, American Academy of Oral and Maxillofacial Pathology
- 2014-present Member, International Association for Dental Research/American Association for Dental Research (IADR/AADR)
- 2017-present Full Member, American Association for Cancer Research
- 2020-present Member, The International Cytokine & Interferon Society

Editorial Positions, Boards, and Peer-Review Service

Study Sections

International

- 2018 Infections and Immunity Board, Immune Disease, Medical Research Council, United Kingdom (Ad Hoc)
- 2020 Panel CE15 - Immunologie, Infectiologie et Inflammation, Agence Nationale de la Recherche, France. (Ad Hoc)
- 2020 United States - Israel Binational Science Foundation Review Panel (Ad Hoc)

National

- 2018 NIH/NIDCR Special Emphasis Panel ZRG1 MOSS K(57), Immune System Plasticity in the Pathogenesis and Treatment of Complex Dental, Oral, and Craniofacial diseases, June 22 (Ad Hoc)
- 2018 NIH/NIDCR Special Emphasis Panel ZRG1 MOSS K(57), Immune System Plasticity in the Pathogenesis and Treatment of Complex Dental, Oral, and Craniofacial diseases, March 28 (Ad Hoc)
- 2019 ZDE1 NB (03) M - National Institute of Dental and Craniofacial Research Special Emphasis Panel, June 17 (Ad Hoc)
- 2019 ZDE1 NB (14) M ZDE1 NB (14) October 24 (Ad Hoc)
- 2019 ZRG1 MOSS-C (12) B - Small Business: Dermatology, Rheumatology and Inflammation, July 10 (Ad Hoc)
- 2020 NCI PREVENT Cancer Preclinical Drug Development Program Scientific Review Panel
- 2020 NIDCR DSR 2021 01 Review Meeting (Ad Hoc)

Institutional

- 2018 U-M Office of Research (UMOR) Faculty Grants and Awards Reviewer (Ad Hoc)
- 2020 Michigan Drug Discovery Pilot Grant (Ad Hoc)

Editorial Boards

- 2011-present Editorial Board Member, Journal of International Dental and Medical Research
- 2014-present Editorial Board Member, Oral Surgery Oral Medicine Oral Pathology Oral Radiology
- 2017-2020 Editorial Board Member, Head and Neck Pathology
- 2018-present Editorial Board Member, Frontiers In Immunology
- 2020-present Editorial Board Member, Journal of Dental Research

Journal Reviewer

- 2010-present Cell Transplantation (Ad Hoc)
- 2010-present International Journal of Oral Science (Ad Hoc)
- 2010-present Journal of Biological Chemistry (Ad Hoc)
- 2011-present British Dental Journal (Ad Hoc)
- 2011-present Cancer (Ad Hoc)
- 2011-present PLOS one (Ad Hoc)
- 2013-present Head and Neck Pathology
- 2013-present Oral Surgery Oral Medicine Oral Pathology Oral Radiology
- 2014-present European Journal of Oral Sciences (Ad Hoc)
- 2014-present Head and Neck (Ad Hoc)
- 2014-present Oral Oncology (Ad Hoc)
- 2016-present Autophagy (Ad Hoc)
- 2016-present Journal of Dental Research (Ad Hoc)
- 2016-present Oncotarget (Ad Hoc)

2016-present	Pathology (Ad Hoc)
2017-present	Tissue Engineering (Ad Hoc)
2018-present	Frontiers in Immunology
2018-present	Journal of Molecular Histology (Ad Hoc)
2018-present	Oncoimmunology (Ad Hoc)
2018-present	Scientific Reports (Ad Hoc)
2019-present	Head and Neck (Ad Hoc)
2019-present	Journal of Clinical Investigation (Ad Hoc)
2020-present	JCI Insight (Ad Hoc)

Teaching

Dental Student

03/2016-06/2018	Denise Barrak, DDS, University of Michigan
10/2016-06/2018	Lorenza Donnelly, DDS, University of Michigan

Graduate Student

01/2016-08/2017	Kanokwan Sansanaphongpricha, PhD, University of Michigan
01/2016-present	Blake R. Heath, PhD, University of Michigan
02/2016-06/2018	Christopher Donnelly, DDS, PhD, University of Michigan
04/2016-05/2016	Mikel D. Haggadone, PhD, University of Michigan
11/2016-06/2019	Xiaobo Luo, PhD, University of Michigan; Sichuan University, China
07/2017-10/2017	Erica Siismets, DDS, PhD, University of Michigan School of Dentistry
11/2017-05/2018	Denise Guadiana, M.S., University of Michigan School of Dentistry
06/2018-09/2018	Marsha-Kay Hutchinson, DDS, PhD, University of Michigan School of Dentistry
08/2018-07/2019	Yao Yao, PhD, University of Michigan School of Dentistry
09/2018-12/2018	Daniel Salas-Escabillas, PhD, University of Michigan Medical School
11/2018-09/2020	Wang Gong, PhD, University of Michigan; Sichuan University, China
01/2019-05/2019	Michelle Velez, M.S., University of Michigan School of Dentistry
01/2020-04/2020	Alan Kelleher, PhD, University of Michigan
01/2020-04/2020	Erika Danella, DDS, PhD, University of Michigan School of Dentistry
07/2020-present	Hulya Taner, DDS, PhD, University of Michigan School of Dentistry
07/2020-present	Nita Singh, DDS, PhD, University of Michigan School of Dentistry
11/2020-present	Sean Hannifin, PhD, University of Michigan Graduate Program in Immunology

Postdoctoral Fellow

05/2016-05/2019	Yee Sun Tan, PhD, University of Michigan School of Dentistry
11/2017-06/2019	Shreya Raghavan, PhD, University of Michigan College of Engineering
01/2019-12/2019	Xin Lin, PhD, University of Michigan School of Dentistry
02/2019-present	Joseph Decker, PhD, University of Michigan College of Engineering
11/2019-present	Kamal Hossain, PhD, University of Michigan School of Dentistry

Resident/House Officer

07/2018-06/2019	Shayan Barootchi, DDS, University of Michigan
09/2018-06/2021	Riccardo Di Gianfilippo, M.S., University of Michigan School of Dentistry
12/2019-present	Janice L. Farlow, MD, PhD, University of Michigan

Undergraduate Student

02/2016-10/2016	Maria Regina Trinidad (Trini) C. Roxas, BSc, University of Michigan
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05/2016-08/2016 Min Goo Kang, BSc, College of Wooster
 07/2018 Tianqi "Jimmy" Wei, BSc, University of Florida
 05/2019-07/2019 Rachel O'Rourke, BSc, University of Michigan

Visiting Scholars

10/2014-07/2015 Yang Liu, M.D., University of Pittsburgh Cancer Institute
 07/2017-06/2018 Shuyun Ge, DDS, PhD, Ninth People's Hospital, College of Stomatology, Shanghai Jiao Tong University, China

Teaching Activity

International

04/2017 Clinicopathologic Correlations of Oral Diseases, the Chinese National Congress of Oral Medicine, Chengdu, China
 08/2019 Develop Strategies to Reverse Oncogenic Suppression of Innate Immune Sensors, Chulalongkorn University, Bangkok, Thailand
 08/2021-09/2021 Summer School on Immuno-Oncology, University of Piedmont Region-Novara, Verbania, Italy

National

04/2015 Panel Discussant for AAOMP/AAOM joint conference.

Institutional

07/2011-06/2014 Lecturer in Head & Neck Pathology and Inflammation for the General Pathology course for the second year dental student, University of Pittsburgh School of Dental Medicine (2.0 contact hours)
 07/2011-06/2014 Oral Pathology and Oral Medicine consultation at the University of Pittsburgh School of Dental Medicine.
 07/2011-06/2014 Clinical instructor of 3rd, and 4th year dental student in the Emergency Clinic for comprehensive care, University of Pittsburgh School of Dental Medicine.
 07/2012-06/2014 Lecturer in Inflammation for the Pathology course for the dental hygiene students, University of Pittsburgh School of Dental Medicine (1.0 contact hour)
 12/2014 Bone Pathology, Allegheny General Hospital Department of Oral and Maxillofacial Surgery, Pittsburgh, PA (3.0 contact hours)
 01/2015 Odontogenic Cysts, Allegheny General Hospital Department of Oral and Maxillofacial Surgery, Pittsburgh, PA (3.0 contact hours)
 02/2015 Odontogenic Tumors, Allegheny General Hospital Department of Oral and Maxillofacial Surgery, Pittsburgh, PA (3.0 contact hours)
 09/2016 Lecturer in Periodontics 782: Extracellular Matrix Regulation of Cell Survival /Tumorigenesis, University of Michigan School of Dentistry (3.0 contact hour)
 11/2016 Lecturer in DENT 644: (1) Endocrine Pathology and Clinical Correlations, and (2) Dental Management of Patients with Endocrine Disease, University of Michigan School of Dentistry (2.0 contact hours)
 06/2017 Lecturer in DENT 605 Neoplasia: Salivary Gland Tumors, University of Michigan School of Dentistry (1.0 contact hour)
 01/2018 Faculty Evaluator in Immunology 815 Immunology Program Research Seminar, Evaluation for Mark Painter, University of Michigan Medical School (1.0 contact hour)
 01/2018 Course Director in DH440 Internal Medicine: Physical Evaluation and Risk Assessment I, University of Michigan School of Dentistry (1.0 contact hour)
 01/2018 Course Director in DH440 Internal Medicine: Cardiovascular Diseases I, University of Michigan School of Dentistry (1.0 contact hour)
 01/2018 Course Director in DH440 Internal Medicine: Cardiovascular Diseases II, University of Michigan School of Dentistry (1.0 contact hour)
 01/2018 Course Director in DH440 Internal Medicine: Physical Evaluation and Risk Assessment II, University of Michigan School of Dentistry (1.0 contact hour)

02/2018 Course Director in DH440 Internal Medicine: Hepatic and Gastrointestinal Disease, University of Michigan School of Dentistry (1.0 contact hour)

02/2018 Course Director in DH440 Internal Medicine: Pulmonary Disease, University of Michigan School of Dentistry (1.0 contact hour)

02/2018 Course Director in DH440 Internal Medicine: Renal Disease, University of Michigan School of Dentistry (1.0 contact hour)

02/2018 Course Director in DH440 Internal Medicine: Hepatic and Gastrointestinal Disease, University of Michigan School of Dentistry (1.0 contact hour)

03/2018 Course Director in DH440 Internal Medicine: Endocrine Disease I Adrenal and Pituitary Disease, University of Michigan School of Dentistry (1.0 contact hour)

03/2018 Course Director in DH440 Internal Medicine: Blood Dyscrasia I, University of Michigan School of Dentistry (1.0 contact hour)

03/2018 Course Director in DH440 Internal Medicine: Endocrine Disease II Thyroid and Parathyroid Disease, University of Michigan School of Dentistry (1.0 contact hour)

03/2018 Course Director in DH440 Internal Medicine: Blood Dyscrasia I, University of Michigan School of Dentistry (1.0 contact hour)

03/2018 Course Director in DH440 Internal Medicine: Endocrine Disease III Diabetes, University of Michigan School of Dentistry (1.0 contact hour)

04/2018 Course Director in DH440 Internal Medicine: Blood Dyscrasia II, University of Michigan School of Dentistry (1.0 contact hour)

05/2018 Lecturer in DENT 605 Neoplasia: Host Defense in Tumors, University of Michigan School of Dentistry (1.0 contact hour)

10/2018 Lecturer, DENT 533 Infection and Immunity, Wound Healing and Repair, University of Michigan School of Dentistry (1.0 contact hour)

10/2018 Faculty Evaluator in CB800 Cancer Biology Research Seminar, Evaluation for Dr. Nina Steele, Hedgehog Signaling in Pancreatic Cancer, University of Michigan Medical School (1.0 contact hour)

10/2018 Lecturer, DENT 533 Infection and Immunity, Inflammation: Cells and Mediators, University of Michigan School of Dentistry (1.0 contact hour)

11/2018 Lecturer in Periodontics 782: Immunology: general principles, humoral/cell-mediated, inflammation, osteoimmunology and periodontal pathogenesis, University of Michigan School of Dentistry (3.0 contact hour)

12/2018 Lecturer, PIBS 503 Research Responsibility & Ethics: Research in the Global Workplace, University of Michigan Medical School (1.0 contact hour)

01/2019 Course Director in DH440 Internal Medicine: Physical Evaluation and Risk Assessment II, University of Michigan School of Dentistry (1.0 contact hour).

01/2019 Course Director in DH440 Internal Medicine: Physical Evaluation and Risk Assessment I, University of Michigan School of Dentistry (1.0 contact hour)

02/2019 Course Director in DH440 Internal Medicine: Cardiovascular Disease I, University of Michigan School of Dentistry (1.0 contact hour).

02/2019 Course Director in DH440 Internal Medicine: Hepatic and Gastrointestinal Disease, University of Michigan School of Dentistry (1.0 contact hour).

02/2019 Course Director in DH440 Internal Medicine: Cardiovascular Diseases II, University of Michigan School of Dentistry (1.0 contact hour)

03/2019 Course Director in DH440 Internal Medicine: Endocrine Disease I, University of Michigan School of Dentistry (1.0 contact hour).

03/2019 Faculty Evaluator in Immunology 815 Immunology Program Research Seminar, Evaluation for Stephanie Kim, University of Michigan Medical School (1.0 contact hour)

03/2019 Course Director in DH440 Internal Medicine: Endocrine Disease II, University of Michigan School of Dentistry (1.0 contact hour)

04/2019 Course Director in DH440 Internal Medicine: Blood Dyscrasia I, University of Michigan School of Dentistry (1.0 contact hour)

04/2019 Lecturer, CB554 Cancer Biology, Cancer Immunology and Immunotherapy Part I, University of Michigan Medical School (4.0 contact hours)

04/2019	Lecturer, CB554 Cancer Biology, Cancer Immunology and Immunotherapy Part II, University of Michigan Medical School (2.0 contact hours)
04/2019	Course Director in DH440 Internal Medicine: Blood Dyscrasia II, University of Michigan School of Dentistry (1.0 contact hour)
06/2019	Lecturer, DENT Cardiovascular Systems, Blood Dyscrasia, University of Michigan School of Dentistry (1.0 contact hour)
01/2020	Course Director in DH440 Internal Medicine: Cardiovascular Diseases I, University of Michigan School of Dentistry (1.0 contact hour)
01/2020	Course Director in DH440 Internal Medicine: Physical Evaluation and Risk Assessment I, University of Michigan School of Dentistry (1.0 contact hour)
01/2020	Course Director in DH440 Internal Medicine: Physical Evaluation and Risk Assessment II, University of Michigan School of Dentistry (1.0 contact hour)
02/2020	Course Director in DH440 Internal Medicine: Cardiovascular Diseases II, University of Michigan School of Dentistry (1.0 contact hour)
03/2020	Course Director in DH440 Internal Medicine: Endocrine Disease I, University of Michigan School of Dentistry (1.0 contact hour)
03/2020	Course Director in DH440 Internal Medicine: Endocrine Disease II, University of Michigan School of Dentistry (1.0 contact hour)
03/2020	Lecturer, CB554 Cancer Biology, Cancer Immunology and Immunotherapy Part I, University of Michigan Medical School (3.0 contact hours)
04/2020	Course Director in DH440 Internal Medicine: Oral Cancer Exams, University of Michigan School of Dentistry (1.0 contact hour)
04/2020	Course Director in DH440 Internal Medicine: Blood Dyscrasia, University of Michigan School of Dentistry (1.0 contact hour)
11/2020	Lecturer in DENT 644: (1) Endocrine Pathology and Clinical Correlations, and (2) Dental Management of Patients with Endocrine Disease, University of Michigan School of Dentistry (2.0 contact hours, recorded Zoom remote teaching)

Dissertation Committees

2017	Kanokwan Sansanaphongpricha, Production of Novel Nanosatellite Material, University of Michigan College of Pharmacy, Department of Pharmaceutical Sciences, Committee Member
2018	Xiaobo Luo, HPV16-mediated Suppression of Innate Immune Sensing of Cancer, Sichuan University, State Key Laboratory of Oral Diseases, Co-Chair
2019	Ryan M. Clauson, Production of Antigen-Specific Polyclonal Antibodies Utilizing a Viral-mimicking Inorganic Nanoparticle System, University of Michigan, Pharmaceutical Sciences, Committee Member
2020	Wang Gong, Regulation of Innate Lymphoid Cells in Head and Neck Cancer, Sichuan University, State Key Laboratory of Oral Diseases, Co-Chair
2021	Blake R. Heath, Role of Type I Interferon in Head and Neck Cancer Immunogenicity, University of Michigan Medical School, Graduate Program in Immunology, Chair
2021	Riccardo Di Gianfilippo, Development of immunoscore to predict patient response to regenerative periodontal therapy, University of Michigan School of Dentistry, Periodontics and Oral Medicine, Committee Member
2021	Xiaoqi Sun, Modulation of cGAS-STING-Type-I Interferon Axis for Cancer Immunotherapy, University of Michigan, Department of Pharmaceutical Sciences, Committee Member
2021	Yujie Zhou, The role of OASL in regulating anti-tumor immunity, Sichuan University, State Key Laboratory of Oral Diseases, Co-Chair
2024	Elizabeth Gensterblum-Miller, Analysis of the E7-Mediated Mechanism of MHC Class I Repression in HNSCC, University of Michigan, Department of Otolaryngology - Head and Neck Surgery, Committee Member

Committee and Administrative Services

Committee Services

International

- 2016-2018 IADR Clinical and Translational Science Network (CTS-Net), Councilor
2017 IADR/AADR Innate Immunity and Oral Cancer Session, Chair

National

- 2016-2018 Nomination Committee, American Academy of Oral and Maxillofacial Pathology, The role of this committee is to prepare a list of nominees for all elective offices for balloting by the fellowship, in accordance with the Constitution & Bylaws.
2018-2021 Nominating Committee, American Association for Dental Research, Member
2019-2024 Steering Committee of the NCI Cancer MoonshotSM Immuno-Oncology Translational Network, Member

Institutional

- 2015-present Distributed Health Technologies, Member
2015-present University of Michigan Cancer Biology Program, Member
2015-present University of Michigan Head and Neck Oncology Program, Member
2016-present Graduate Program in Immunology, Faculty Member
2016-present University of Michigan Immunotherapy Working Group, Member
2017-2020 Oral Health Sciences Seminar Committee, Member
2017-present Dental Research Day Judge, Member
2017-present Program in Biomedical Sciences (PIBS) Admission, Faculty Interviewer
2017 Inaugural Donald Kerr Symposium (Personalized Medicine in Oral Cancer) Organizing Committee, Committee Member
2017 Oral Health Science PhD Program Preliminary Exam Committee (Laura Zweifler), Committee Member
2018-present The Medical Scientist Training Program (MSTP) Admission, Faculty Interviewer
2018 Graduate Program in Immunology Preliminary Exam Committee (Austin Taylor), Member
2018 Graduate Program in Immunology Preliminary Exam Committee (Eli Olson), Member
2018 Graduate Program in Immunology Preliminary Exam Committee (Emily Yarosz), Member
2018 Graduate Program in Immunology Preliminary Exam Committee (Hanna Hong), Member
2018 Graduate Program in Immunology Preliminary Exam Committee (John Charpentier), Member
2018 Oral Health Science PhD Program Preliminary Exam Committee (Alexandra Oklejas), Member
2018 Oral Medicine Faculty Search Committee, Member
2018 Rogel Cancer Center spring symposium judge, Member
2018 University of Michigan Office of Research (UMOR) Faculty Grants and Awards Review Panel, Member
2019 Donald Kerr Symposium Planning Committee, Member
2019 Oral Health Science PhD Program Preliminary Exam Committee (Marsha-Kay Hutchinson), Committee Member

Administrative Services

Volunteer

- 2018 Participating Faculty, University of Michigan Office of Academic Multicultural Initiatives, Michigan Union, Participating faculty member of the first Asian/Pacific Islander Graduation Ceremony

Visiting Professorships and Extramural Invited Presentations

Extramural Invited Presentations

1. MAVS-mediated apoptosis and its inhibition by viral proteins, IADR General Session, April 2009, Miami, FL
2. Mammary Analogue Secretory Carcinoma, Gorlin Conference, October 2011, Minneapolis
3. Identification of NLRP Mutations in Head and Neck Squamous Cell Carcinoma, Academy of Clinical Laboratory Physicians and Scientists, June 2012, Milwaukee, WI
4. Metastatic Renal Cell Carcinoma to the Jaw, Gorlin Conference, October 2012, Minneapolis, MN
5. Identification of SOX2 as a Marker for Ameloblastic Carcinoma, United States & Canadian Academy of Pathology, March 2013, Baltimore, MD
6. Interpretation of SOX2 Immunohistochemical Stain in Ameloblastic Carcinoma: An Expanded Cohort, American Academy of Oral and Maxillofacial Pathology, June 2013, Portland, OR
7. Chronic Lymphocytic Leukemia/Small Lymphocytic Lymphoma, Gorlin Conference, October 2013, Minneapolis, MN
8. Characterization of EGFR Expression in Ameloblastic Neoplasms, American Academy of Oral and Maxillofacial Pathology, April 2014, St. Augustine, FL
9. EGFR Blockade-induced Autophagy Modulates Head & Neck Cancer Cells Sensitivity to Cetuximab, IADR /AADR General Session & Exhibition, March 2015, Boston, MA
10. Oral Cancer-Associated Immune Suppression, Lycera Corporation, August 2016, Lycera Corporation
11. Joseph Lister Award Competition, IADR, March 2017, San Francisco, CA
12. Keynote: Clinicopathologic Correlation of Oral Diseases, The Chinese National Congress of Oral Medicine, April 2017, Chengdu, China
13. Type I Interferon Signatures Promote the Immunogenicity of Head and Neck Cancer, Donald Kerr Symposium, June 2017, Ann Arbor, MI
14. Mitigating Head and Neck Cancer Immune Escape, AADR, March 2018, Fort Lauderdale, FL
15. Sensitizing Oral Cancer to Immune Checkpoint Blockade, Seidman Cancer Center, Case Western Reserve University, October 2018, Cleveland, OH
16. Oncogenic Regulation of Pattern Recognition Receptor-Mediated Immune Sensing, Translational Research Cancer Centers Consortium, February 2019, Seven Springs, Pennsylvania
17. How Do Oral Cancers Turn Cold?, IADR/AADR HNSCC Immunotherapy Symposium, June 2019, Vancouver, BC
18. The Co-Evolution of HPV and the Immune Sensors in the Oral Cavity, Donald Kerr Symposium, June 2019, Ann Arbor, MI
19. Develop Strategies to Reverse Oncogenic Suppression of Innate Immune Sensors, Chulalongkorn University, August 2019, Bangkok, Thailand
20. Oncogenic Suppression of Innate Immune Sensing of Cancer, NIH Rising Stars Award Seminar Series, August 2019, Bethesda, MD
21. Reverse Oncogenic Suppression of Innate Immunity, University of Louisville, November 2019, Louisville, Kentucky
22. Innate Immune Escape by HPV16+ Cancer, Cancer Moonshot Collaborative Meeting, November 2019, Bethesda, MD
23. Oncogenic Induction of Innate Immune Tolerance, NCI Cancer Moonshot Immunoprevention Workshop, July 2020, Zoom
24. Viral Induction of Innate Immune Tolerance of Cancer, Summer School on Immuno-Oncology, University of Piedmont Region-Novara, August 2021, Verbania, Italy

Other

1. Veterans (VA) with high and intermediate risk oropharyngeal cancer field-based roadmap working group., Bobby R. Alford Department of Otolaryngology – Head and Neck Surgery, Baylor College of Medicine, May 2019, Houston, TX
2. Innate Immune Escape by HPV16+ Cancer, University of Michigan Cancer Stenmness SPORE, April 2020, Zoom

Seminars

1. MAVS-mediated apoptosis, AADR-NC, Dental Research in Review Day, February 2008, Chapel Hill, NC
2. NLRX1 and TUFM form a protein complex., AADR-NC, Dental Research in Review Day., February 2010, Chapel Hill, NC
3. Potential Targets for Individualized Diagnosis & Treatment of Head and Neck Cancer, University of Michigan School of Dentistry, July 2014, Ann Arbor, MI
4. Autophagy and EGFR-targeted Treatment for Oral Cancer, Translational Oncology Program, University of Michigan, May 2015, Ann Arbor, MI
5. Danger-Associated Molecular Pattern and Anti-tumor Immunity, Cancer Cell Biology Program, U-M Comprehensive Cancer Center, March 2016, U-M Comprehensive Cancer Center
6. Type 1 Interferon Signatures and Oral Cancer Immunogenicity, The Graduate Program in Immunology, the University of Michigan School of Medicine, October 2016, Ann Arbor, MI
7. Mitigating Oral Cancer-Associated Immune Suppression, University of Michigan Oral Health Sciences Program, December 2016, University of Michigan School of Dentistry
8. Head and Neck Cancer Immunotherapy, University of Michigan Cancer Immunotherapy Working Group, May 2017, Ann Arbor, MI
9. The Immunogenomics of Oral Disease, University of Michigan School of Dentistry, February 2018, Ann Arbor, MI
10. Understanding the Mechanisms Promoting Oral Cancer Immune Escape, Department of Radiation Oncology, University of Michigan, May 2018, Ann Arbor, MI
11. Immunogenomics of Oral Cancer, Department of Otolaryngology - Head and Neck Surgery, University of Michigan, May 2018, Ann Arbor, MI
12. Oncogenic Suppression of Innate Immune Sensing of Cancer, NIH Rising Stars Award Seminar, August 2018, Bethesda, MD
13. Cancer Stem Cell and Pattern Recognition Receptor Signaling, Cancer Stem Cell SPORE planning meeting, University of Michigan, February 2019, Ann Arbor, MI
14. Obesity and Head & Neck Cancer Immune Escape, University of Michigan Head and Neck Oncology Annual Retreat, May 2020, Zoom
15. Viral Inhibition of Innate Immune Sensors, University of Michigan Biosciences Initiative Symposium on SARS-CoV-2, June 2020, Zoom
16. Oncogenic, Viral, and Metabolic Regulation of Innate Immune Sensing of Cancers, University of Michigan Center for Cell Plasticity and Organ Design (CPOD) Seminar Series, December 2020, Ann Arbor, MI

Patents

Application in Process

Complexes for Delivery of Type I Interferon Agonists and Antigenic Peptides, Inventor, Submitted on 06/2017

Disclosures

Machine Learning-Based Immunoscore for Risk Stratification, 2019-337, Inventor, Submitted on 03/2019

Bibliography

Peer-Reviewed Journals and Publications

1. Zhang WQ, Zhu ZM, Chao YL, **Lei Y**, Cui J.: [Effects of hypotonic solution on the proliferation, alkaline phosphatase activity and [Ca²⁺]_i concentration of osteoblast-like cells]. **Sichuan Da Xue Xue Bao Yi Xue Ban** 38(4): 649-52, 2007. PM17718432
2. Moore CB, Bergstralh DT, Duncan JA, **Lei Y**, Morrison TE, Zimmermann AG, Accavitti-Loper MA, Madden VJ, Sun L, Ye Z, Lich JD, Heise MT, Chen Z, Ting JP.: NLRX1 is a regulator of mitochondrial antiviral immunity. **Nature** 451(7178): 573-7, 2008. PM18200010
3. **Lei Y**, Moore CB, Liesman RM, O'Connor BP, Bergstralh DT, Chen ZJ, Pickles RJ, Ting JP.: MAVS-mediated apoptosis and its inhibition by viral proteins. **PLoS One** 4(5): e5466, 2009. PM19404494

4. Wen H, **Lei Y**, Eun SY, Ting JP.: Plexin-A4-semaphorin 3A signaling is required for Toll-like receptor- and sepsis-induced cytokine storm. **J Exp Med** 207(13): 2943-57, 2010. PM21098092/PMC3005237
5. Ting JP, Duncan JA, **Lei Y**.: How the noninflammasome NLRs function in the innate immune system. **Science** 327(5963): 286-90, 2010. PM20075243/PMC3943909
6. Allen IC, Moore CB, Schneider M, **Lei Y**, Davis BK, Scull MA, Gris D, Roney KE, Zimmermann AG, Bowzard JB, Ranjan P, Monroe KM, Pickles RJ, Sambhara S, Ting JP.: NLRX1 protein attenuates inflammatory responses to infection by interfering with the RIG-I-MAVS and TRAF6-NF- κ B signaling pathways. **Immunity** 34(6): 854-65, 2011. PM21703540/PMC3166771
7. Taxman DJ, Holley-Guthrie EA, Huang MT, Moore CB, Bergstralh DT, Allen IC, **Lei Y**, Gris D, Ting JP.: The NLR adaptor ASC/PYCARD regulates DUSP10, mitogen-activated protein kinase (MAPK), and chemokine induction independent of the inflammasome. **J Biol Chem** 286(22): 19605-16, 2011. PM21487011/PMC3103340
8. Wen H, Gris D, **Lei Y**, Jha S, Zhang L, Huang MT, Brickey WJ, Ting JP.: Fatty acid-induced NLRP3-ASC inflammasome activation interferes with insulin signaling. **Nat Immunol** 12(5): 408-15, 2011. PM21478880/PMC4090391
9. **Lei Y**, Wen H, Yu Y, Taxman DJ, Zhang L, Widman DG, Swanson KV, Wen KW, Damania B, Moore CB, Giguère PM, Siderovski DP, Hiscott J, Razani B, Semenkovich CF, Chen X, Ting JP.: The mitochondrial proteins NLRX1 and TUFM form a complex that regulates type I interferon and autophagy. **Immunity** 36(6): 933-46, 2012. PM22749352/PMC3397828
10. Taxman DJ, **Lei Y**, Zhang S, Holley-Guthrie E, Offenbacher S, Ting JP.: ASC-dependent RIP2 kinase regulates reduced PGE2 production in chronic periodontitis. **J Dent Res** 91(9): 877-82, 2012. PM22828789/PMC3420395
11. **Lei Y***, Chiosea SI.: Re-evaluating historic cohort of salivary acinic cell carcinoma with new diagnostic tools. **Head Neck Pathol** 6(2): 166-70, 2012. PM22127547/PMC3370021
12. **Lei Y**, Wen H, Ting JP.: The NLR protein, NLRX1, and its partner, TUFM, reduce type I interferon, and enhance autophagy. **Autophagy** 9(3): 432-3, 2013. PM23321557/PMC3590269
13. Lei Y: Generation and culture of mouse embryonic fibroblasts *Methods Mol. Biol.* 1031: 59-64, 2013. PM23824887
14. Schuler PJ, Harasymczuk M, Visus C, Deleo A, Trivedi S, **Lei Y**, Argiris A, Gooding W, Butterfield LH, Whiteside TL, Ferris RL.: Phase I dendritic cell p53 peptide vaccine for head and neck cancer. **Clin Cancer Res** 20(9): 2433-44, 2014. PM24583792/PMC4017234
15. **Lei Y***, Lui VW, Grandis JR, Egloff AM: Identification of mutations in the PYRIN-containing NLR genes (NLRP) in Head and Neck Squamous Cell Carcinoma. **PLoS One** 9(1): e85619, 2014. PM24465623/PMC3897487
16. **Lei Y***, Jaradat JM, Owosho A, Adebisi KE, Lybrand KS, Neville BW, Müller S, Bilodeau EA: Evaluation of SOX2 as a potential marker for ameloblastic carcinoma. **Oral Surg Oral Med Oral Pathol Oral Radiol** 117(5): 608-616.e1, 2014. PM24603057
17. Concha-Benavente F, Srivastava RM, Trivedi S, **Lei Y**, Chandran U, Seethala RR, Freeman GJ, Ferris RL.: Identification of the cell-intrinsic and extrinsic pathways downstream of EGFR and IFN γ that induce PD-L1 expression in head and neck cancer. **Cancer Res** 76(5): 1031-43, 2015. PM26676749
18. Li J, Jie HB, **Lei Y**, Gildener-Leapman N, Trivedi S, Green T, Kane LP, Ferris RL.: PD-1/SHP-2 inhibits Tc1/Th1 phenotypic responses and the activation of T cells in the tumor microenvironment. **Cancer Res** 75(3): 508-18, 2015. PM25480946/PMC4315704
19. **Lei Y**, Kansy BA, Li J, Cong L, Liu Y, Trivedi S, Wen H, Ting JP, Ouyang H, Ferris RL.: EGFR-targeted mAb therapy modulates autophagy in head and neck squamous cell carcinoma through NLRX1-TUFM protein complex. **Oncogene** 35(36): 4698-707, 2016. PM26876213
20. Lei Y, Xie Y, Tan YS, Prince ME, Moyer JS, Nör J, Wolf GT: Telltale tumor infiltrating lymphocytes (TIL) in oral, head & neck cancer *Oral Oncology* 61: 159-165, 2016. PM27553942
21. Kansy BA, Concha-Benavente F, Srivastava RM, Jie HB, Shayan G, Lei Y, Moskovitz J, Moy J, Li J, Brandau S, Lang S, Schmitt NC, Freeman GJ, Gooding WE, Clump DA, Ferris RL: PD-1 status in CD8⁺ T cells associates with survival and anti-PD-1 therapeutic outcomes in head and neck cancer *Cancer Research* 77(22): 6353-6364, 2017. PM28904066
22. Luo X, Qiu Y, Jiang Y, Chen F, Jiang L, Zhou Y, Dan H, Zeng X, **Lei YL***, Chen Q*: Long non-coding RNA implicated in the invasion and metastasis of head and neck cancer: possible function and

- mechanisms. **Mol Cancer** 17(1): 14, 2018. 29368602
23. Leach DG, Dharmaraj N, Piotrowski SL, Lopez-Silva TL, **Lei YL**, Sikora AG, Young S, Hartgerink JD.: STINGel: controlled release of a cyclic dinucleotide for enhanced cancer immunotherapy. **Biomaterials** 163: 67-75, 2018. 29454236
 24. Tan YS, Sansanaphongpricha K, Prince ME, Sun D, Wolf GT, **Lei YL***: Engineering Vaccines to Reprogram Immunity against Head and Neck Cancer. **J Dent Res** 97(6): 627-634, 2018. 29533731
 25. Polverini PJ, D'Silva NJ, **Lei YL**: Precision Therapy of Head and Neck Squamous Cell Carcinoma. **J Dent Res** 97(6): 614-621, 2018. 29649374
 26. Kansy BA, Shayan Gulidanna, Jie HB, Gibson SP, **Lei YL**, Brandau S, Lang S, Schmitt NC, Ding F, Lin Y, Ferris RL.: T cell receptor richness in peripheral blood increases after cetuximab therapy and correlates with therapeutic response. **Oncoimmunology** 7(11): e1494112, 2018. PMC6205044
 27. Tan YS, Sansanaphongpricha K, Xie Y, Donnelly CR, Luo X, Heath BR, Zhao X, Bellile E, Hu H, Chen H, Polverini PJ, Chen Q, Young S, Carey TE, Nor JE, Ferris RL, Wolf GT, Sun D, **Lei YL***: Mitigating SOX2-potentiated immune escape of Head and Neck Squamous Cell Carcinoma with a STING-inducing nanosatellite vaccine. **Clin Cancer Res** 24(17): 4242-4255, 2018. PMC6125216
 28. Wolf GT, Winter W, Bellile E, Nguyen A, Donnelly CR, McHugh JB, Thomas D, Amlani L, Rozek L, **Lei YL**, the Head and Neck SPORE Program: Histologic pattern of invasion and epithelial-mesenchymal phenotype predict prognosis in squamous carcinoma of the head and neck. **Oral Oncol** 87: 29-35, 2018. 30527240
 29. Li T, Li X, Attri KS, Liu C, Li L, Herring LE, Asara JM, **Lei YL**, Singh PK, Gao C, Wen H*: O-GlcNAc transferase links glucose metabolism to MAVS-mediated antiviral innate immunity. **Cell Host Microbe** 24 (6): 791-803, 2018. 30543776
 30. Dharmaraj N, Piotrowski SL, Huang C, Newton JM, Golfman LS, Hanoteau A, Koshy ST, Li WA, Pulikkathara MX, Zhang B, Burks JK, Mooney DJ, **Lei YL**, Sikora AG, Young S: Robust anti-tumor immunity induced by ectopic expression of viral antigens is transient and limited by immune escape. **Oncoimmunology** 8(4): e1568809, 2019. PMC6422387
 31. Hao Y, Yan M, Heath BR, **Lei YL***, Xie Y*: Fast and robust deconvolution of tumor infiltrating lymphocyte from expression profiles using least trimmed squares. **PLoS Comput Biol.** 15(5): e1006976, 2019. PMC6522071
 32. Zhang Q, Green MD, Lang X, Lazarus J, Parsels J, Wei S, Parsels LA, Shi J, Ramnath N, Wahl DR, Pasca di Magliano M, Frankel TL, Kryczek I, **Lei YL**, Lawrence TS, Zou W, Morgan MA.: Inhibition of ATM increases interferon signaling and sensitizes pancreatic cancer to immune checkpoint blockade therapy. **Cancer Res.** 79(15): 3940-51, 2019. PMC6684166
 33. Raghavan S, Mehta P, Xie Y, **Lei YL**, Mehta G: Ovarian cancer stem cells and macrophages reciprocally interact through the WNT pathway to promote pro-tumoral and malignant phenotypes in 3D engineered microenvironments. **J Immunother Cancer.** 7(1): 190, 2019. PMC6642605
 34. Heath BR, Michmerhuizen NL, Donnelly CR, Sansanaphongpricha K, Sun D, Brenner JC, **Lei YL***: Head and Neck Cancer Immunotherapy beyond the Checkpoint Blockade. **J Dent Res.** 98(10): 1073-80, 2019. PMC6704427
 35. Sandulache VC, **Lei YL**, Heasley LE, Chang M, Amos CI, Sturgis EM, Graboyes E, Chiao EY, Rogus-Pulia N, Lewis J, Madabhushi A, Frederick MJ, Sabichi A, Ittmann M, Yarbrough WG, Chung CH, Ferrarotto R, Mai W, Skinner HD, Duvvuri U, Gerngross P, Sikora AG.: Innovations in risk-stratification and treatment of Veterans with oropharynx cancer; roadmap of the 2019 Field Based Meeting. **Oral Oncol** Epub ahead of print: xx, 2019. 31648864
 36. Li X, Gong W, Wang H, Li T, Attri KS, Lewis RE, Kalil AC, Bhinderwala F, Powers R, Yin G, Herring LE, Asara JM, **Lei YL**, Yang X, MocarSKI ES, Rodriguez DA, Yang M, Green DR, Singh PK, Wen H.: O-GlcNAc transferase suppresses inflammation and necroptosis by targeting RIPK3. **Immunity** 50(3): 576-590, 2019. PMC6426684
 37. Luo X, Donnelly CR, Gong W, Heath BR, Hao Y, Donnelly LA, Moghbeli T, Tan YS, Lin X, Bellile E, Kansy BA, Carey TE, Brenner JC, Cheng L, Polverini PJ, Morgan MA, Wen H, Prince ME, Ferris RL, Xie Y, Young S, Wolf GT, Chen Q, **Lei YL***: HPV16 drives cancer immune escape via NLRX1-mediated degradation of STING. **J Clin Invest.** 130(4): 1635-1652, 2020. PMC7108911
 38. Sun L, Girnary M, Wang L, Jiao Y, Zeng E, Marchesan JT, Yu N, Moss K, **Lei YL**, Offenbacher S, Zhang S.: IL-10 dampens an IL-17-mediated inflammatory network associated with periodontitis. **J Immunol.** 204 (8): 2177-2191, 2020. 32169848
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40. Lu T, Tang J, Shrestha B, Heath BR, Hong L, **Lei YL**, Ljungman M, Neamati N.: Up-regulation of hypoxia-inducible factor antisense as a novel approach to treat ovarian cancer **Theranostics.** 10(15): 6959-76, 2020. PMC7295058
41. Kitamoto S, Nagao-Kitamoto H, Jiao Y, Gilliland III MG, Hayashi A, Imai J, Sugihara K, Miyoshi M, Brazil JC, Kuffa P, Hill BD, Rizvi SM, Wen F, Bishu S, Inohara N, Eaton KA, Nusrat A, **Lei YL**, Giannobile WV, Kamada N.: The intermucosal connection between the mouth and gut in commensal pathobiont-driven colitis **Cell.** 182(2): 447-462, 2020. PMC7414097

Non-Peer-Reviewed Journals and Publications

1. **Lei Y**, Tian W: Advances in cartilage tissue engineering. **Journal of International Stomatology** 30(6): 432-34, 2003.
2. Yang X, **Lei Y**, Zhang Z, Ding Y: Application of Er: YAG laser in periodontitis treatment. **Dental Equipment and Materials** 2004: 68-9, 2004.
3. **Lei Y**, Wang H, Zhu Z: Dental diagnostic utilities of storage phosphor imaging system. **Chinese Journal of Conservative Dentistry** 14(8): 468-71, 2004.
4. **Lei Y**, Zhu Z, Chao Y, Shi Z, Meng Y: Application of Evidence-based Prosthodontics in Practice. **Journal of International Stomatology** 33(5): 333-6, 2006.
5. **Lei Y**: Editorial: Recent Advances in the Ancillary Studies for Diagnosing Odontogenic Carcinomas. **Journal of Advanced Oral Research** 5(1): 1-2, 2014.

Book Chapters

1. **Yu Lei**, Jenny P.-Y. Ting: Mitochondrial immune signaling complex. **Nucleic Acid Sensors and Antiviral Immunity**, Prakash Sambhara, Takashi Fujita Landes Bioscience, 2012. 97-113
2. **Yu Lei**: Generation and Culture of Mouse Embryonic Fibroblasts. **Methods in Molecular Biology**, Clifton, N.J. Springer, 2013. 59-64
3. Yee Sun Tan, **Yu L Lei**: Isolation of Tumor-Infiltrating Lymphocytes by Ficoll-Paque Density Gradient Centrifugation. **Methods in Molecular Biology**, Irving C Allen Humana Press, New York, NY, 2019. 2nd, 93-99
4. Yee Sun Tan, **Yu L Lei**: Generation and Culture of Mouse Embryonic Fibroblasts.. **Methods in Molecular Biology**, Irving C Allen Humana Press, New York, NY, 2019. 2nd, 85-91

Abstracts

1. **Yu Lei**, Chris B. Moore, Rachael M. Liesman, Brian P. O'Connor, Daniel T. Bergstralh, Zhijian J. Chen, Raymond J. Pickles, Jenny P.-Y. Ting: MAVS-mediated apoptosis, IADR/AADR General Session, Miami, FL, 2009.
2. **Yu Lei**, Jennifer R. Grandis, Ann Marie Egloff: Identification of NLRP mutations in head and neck squamous cell carcinoma, 47th Annual Meeting of the Academy of Clinical Laboratory Physicians and Scientists, Milwaukee, WI, 2012.
3. **Yu Lei**, Jumana M. Jaradat, Adepitan Owosho, Kehinde E. Adebisi, Kelley S. Lybrand, Brad W. Neville, Susan Müller, Elizabeth A. Bilodeau: Interpretation of SOX2 Immunohistochemical Stain in Ameloblastic Carcinoma: An Expanded Cohort, American Academy of Oral and Maxillofacial Pathology Annual Meeting, Portland, OR, Oral Surgery Oral Medicine Oral Pathology Oral Radiology, 116, 6, e497, 2013.
4. **Yu Lei**, Jumana Jaradat, Adepitan Owosho, Elizabeth A. Bilodeau: Identification of Sox2 as a marker for ameloblastic carcinoma, United States & Canadian Academy of Pathology's 102nd Annual Meeting, Baltimore, MD, Modern Pathology, 26 (Supplement 2), 2013.
5. **Yu Lei**, Susan Muller, Elizabeth A. Bilodeau: Characterization of EGFR Expression in Ameloblastic Neoplasms, American Academy of Oral and Maxillofacial Pathology Annual Meeting, St. Augustine, FL, 2014.
6. **Yu Lei**, Linhai Cong, Benjamin A. Kansy, Robert L. Ferris: TLR8 agonist VTX-2337 sensitizes head and neck cancer cells to cetuximab, 1st International Symposium on Tumor-Host Interaction in Head and

Neck Cancer., Essen, Germany, Oral Oncology, 51, 5, e46, 2015.

7. Benjamin A. Kansy, **Yu Lei**, Jing Li, Raghvendra M. Srivastava, Ryan Stephenson, Sven Brandau, Stephen Lang, Robert L. Ferris: The role of toll-like receptor (TLR) agonists in combinational immunotherapy for head and neck cancer, 1st International Symposium on Tumor-Host Interaction in Head and Neck Cancer, Essen, Germany, 2015.
8. Benjamin A Kansy, Raghvendra M Srivastava, Hyun-Bae Jie, Gulidanna Shayan, **Yu Lei**, Jing Li, William Gooding, Sven Brandau, Stephan Lang, Nicole Schmitt, Gordon J Freeman, David A Clump and Robert L Ferris: Level of PD-1 expression on CD8+ T cells influence prognosis and respond to PD-1 therapy in a murine model, 30th Annual Meeting and Associated Programs of the Society for Immunotherapy of Cancer (SITC 2015), National Harbor, MD, J Immunother Cancer, 3, Suppl 2, 228, 2015.
9. **Yu Lei**, Benjamin A. Kansy, Jing Li, Linhai Cong, Sumita Trivedi, Hongjiao Ouyang, Robert L. Ferris: Epidermal growth factor receptor signaling blockade-induced autophagy modulates head & neck cancer cells sensitivity to cetuximab, IADR/AADR General Session & Exhibition, Boston, MA, 2015.
10. Yee Sun Tan, Yuying Xie, Blake R. Heath, Xinyi Zhao, Peter J. Polverini, Gregory T. Wolf, Robert L. Ferris, **Yu Lei**: Type I Interferon Signatures Promote the Immunogenicity of Head and Neck Cancer, 2017 IADR/AADR/CADR General Session & Exhibition, San Francisco, CA, 2017.
11. Christopher R. Donnelly, Lorenza An-Jia Donnelly, Yuying Xie, Emily L. Bellile, Gregory T. Wolf, **Yu Lei**: Prognostic Value of MX1 in Head and Neck Squamous Cell Carcinoma, American Academy of Oral and Maxillofacial Pathology Annual Meeting, Newport, RI, 2017.
12. Lorenza An-Jia Donnelly, Christopher R. Donnelly, Yuying Xie, Emily L. Bellile, Gregory T. Wolf, **Yu Lei**: An Expanded Cohort Analysis of the Prognostic Value of the Type I Interferon Signature Gene MX1 in Head and Neck Squamous Cell Carcinoma, American Academy of Oral and Maxillofacial Surgeons Annual Meeting, San Francisco, CA, 2017.
13. Yee Sun Tan, Kanokwan Sansanaphongpricha, Yuying Xie, Christopher R. Donnelly, Xiaobo Luo, Blake R. Heath, Xinyi Zhao, Qianming Chen, Peter J. Polverini, Thomas E Carey, Jacques Nor, Simon Young, Robert L. Ferris, Gregory T. Wolf, Duxin Sun, **Yu Lei**: Type I Interferon Signatures Promote the Immunogenicity of Head and Neck Cancer, Dental Research Day, Ann Arbor, MI, 2017.
14. Xiaobo Luo, Yee Sun Tan, Brett D. Hill, Hongxiang Hu, Syed M. Rizvi, Erica Siismets, Blake R. Heath, Toktam Moghbeli, Kanokwan Sansanaphongpricha, Yuying Xie, Qianming Chen, Duxin Sun, Fei Wen, **Yu Lei**: Mass Cytometry Characterization of STING Agonist-induced Anti-tumor Immunity, AADR Annual Conference, Fort Lauderdale, FL, 2018.
15. Blake R. Heath, Yee Sun Tan, Christopher R. Donnelly, Lorenza A. J. Donnelly, Toktam Moghbeli, Xiaobo Luo, Emily L. Bellile, Yuying Xie, Gregory T. Wolf, **Yu L. Lei**: NLRC3 Antagonizes STING-mediated Interferon Induction in Head and Neck Squamous Cell Carcinoma, Autumn Immunology Chicago, Chicago, IL, 2018.
16. Yee Sun Tan, Shuyun Ge, Toktam Moghbeli, Yuying Xie, Jianwen Que, Peter J. Polverini, **Yu L. Lei**: A New Genetically Engineered Mouse Model for Oral Dysplasia and Cancer, Dental Research Day, Ann Arbor, MI, 2018.
17. Blake R. Heath, Christopher R. Donnelly, Lorenza AJ Donnelly, Yee Sun Tan, Toktam Moghbeli, Xiaobo Luo, Emily Bellile, Yuying Xie, Gregory T. Wolf, **Yu L. Lei**: Inhibition of Type I Interferon Induction in Head and Neck Squamous Cell Carcinoma, Dental Research Day, Ann Arbor, MI, 2018.
18. Danielle E. Bolland, Yee Sun Tan, Yuning Hao, Kari E. Hacker, Lijun Tan, Yuying Xie, **Yu Lei**, Karen McLean: Induction of DNA Damage in Ovarian Cancer Induces Type I Interferon Signaling, Experimental Biology Annual Conference, San Diego, CA, 2018.
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