

Curriculum Vitae



Name: Stephen HSU Chin-Ying

Present Appointment: Associate Professor (Department of Dentistry, National University Health System (NUHS), Faculty of Dentistry (FOD), National University of Singapore (NUS), 9 Lower Kent Ridge Road, Singapore 119085)
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Research Interests (as clinician-scientist @ NUHS and NUS-NGS):

physicochemical characterization of dental biomarkers pertinent to Oral-systemic link; Bio-photonic/laser application on caries diagnosis, prevention and treatment; caries risk assessment/prediction

Teaching Areas: Cariology, Biostatistics, Community Health Study

Academic/Professional Qualifications:

- **1987: DDS**, School of Dental Medicine, National Yang-Ming Medical College (NYMMC), Taipei, Taiwan
- **1989-91: AEGD-GPR** training, Advanced Education in General Dentistry (AGED) and General Practice Residency (GPR) training in NYMMC and Veterans General Hospital, Taipei, Taiwan
- **1991-94: MSc/Cert-Pedo**, in Pediatric Dentistry, University of Iowa (UI), USA
- **1996: Cert DPH**, in Preventive Dentistry & Dental Public Health, UI, USA
- **1997: Ph.D.** Oral Science (Cariology), Dows Institute for Dental Research, UI, USA
- **1998: Fellow**, American Association of Pediatric Dentistry (AAPD), USA

Awards:

- **1992** National Dean's List (USA)
- **1998** IADR/Colgate Research Award in Prevention, International Association for Dental Research (IADR), USA
- **1998** NUS Staff Achievement Award (Singapore)
- **1999** IADR/Colgate Research Award in Prevention (USA)
- **2001** "Foundation Research Award" (American Academy of Pediatric Dentistry, USA)
- **2010** "Education research Award" (IADR-SEAADE)
- **2011** "Williams J. Gies Award" for clinical research (IADR, USA)

Team/Student Awards:

- **2001** David Scott Student Research Fellowship/Award, IADR, USA (US\$2,500)
- **2005 & 2010** Singapore Science Engineering Fair (SSEF), Gold Award
- **2006** Hatton / Unilever Travel Award, IADR, Brisbane, Australia (US\$1000)
- **2007** Lion Dental Research Award, IADR, New Orleans, USA (US\$2000)
- **2008 & 2010** NUS Outstanding Undergraduate Research Award, Singapore (S\$5000)

Career History & Service:

- **2001-2023:** Member, Faculty Research Committee
- **2017-2024:** Member, Faculty Promotion & Tenure Committee, FOD, NUS
- **2009 July-Dec:** Acting Vice Dean for research, FOD, NUHS, NUS
- **2006-2010:** Director, Dental Biophotonic and Biomaterials program
- **2001-2010:** Member, the University Research Committee
- **2001-present:** Associate Professor, FOD, NUS;
- **1998-2001:** Assistant Professor, Department of Preventive Dentistry, NUS
- **1997-1998:** Lecturer, Department of Preventive Dentistry, NUS
- **1995-1997:** Adjunct Assistant Professor, Department of Pediatric Dentistry, UI, USA

Major Research Grants: (PI: 20 grants totaling \$5,588,099; Collaborator: 6 grants totaling \$1,947,783)

- PI of NMRC (National Medical Research Council) grant: WBS: A-8002654-00-00, with **S\$ 1,949,025**, Sep 2024~ Oct 2027
- PI of NMRC Grant: CIRG12may049 (**S\$1,115,959**), 2012-2017
- PI of BMRC (Biomedical Research Council) Grant: R-222-000-015-305 (**S\$799,450**): 2003-2007

Selected Publications (66 international peer-reviewed journal articles, 2 book chapters): [ORCID](#)

Journal of Dental Research (IF=5.6, Top 2% in DENTISTRY, ORAL SURGERY & MEDICINE, JCR 2023)

- Samuel SR, ..., **Hsu C-Y.S.*** 2023. Gestational Serum Retinol Deficiency Is Associated with Enamel Hypoplasia. *J. Dent. Res.* 102(13):1417-1424.
- Kalhan, T. A., ..., **Hsu, C.-Y. S.*** Caries Risk Prediction Models in a Medical Health Care Setting. *J. Dent. Res.* 99, 787– 796 (2020).
- Liu Y, **Hsu CYS***, Teo CMJ, Teoh SH. Potential Mechanism for the Laser-Fluoride Effect on Enamel Demineralization. *J. Dent. Res.* 2013, 92 (1), 71-75.
- Hu XL, ..., **Hsu CS***. Thermal Treatments Modulate Bacterial Adhesion to Dental Enamel. *J. Dent. Res.* 2011, 90 (12), 1451-1456.
- Gao X L, **Hsu CYS*** et al. Behavioral Pathways Explaining Oral Health Disparity in Children. *J. Dent. Res.* 2010, 89 (9), 985-990.
- Gao X L, **Hsu CYS***, et al. Building Caries Risk Assessment Models for Children. *J. Dent. Res.* 2010, 89 (6), 637-643.
- Gao X L, ..., **Hsu CY***. Laser-Fluoride Effect on Root Demineralization. *J. Dent. Res.* 2006, 85 (10), 919-923.
- **Hsu CYS** et al. Laser-matrix-fluoride effects on Enamel Demineralization. *J. Dent. Res.* 2001, 80 (9), 1797-1801.
- **Hsu CYS**, Jordan TH, Dederich DN, Wefel JS. Effects of Low-energy CO₂ Laser Irradiation and the Organic Matrix on Inhibition of Enamel Demineralization. *J. Dent. Res.* 2000, 79 (9), 1725-1730.
- **Hsu, C.-Y. S.**, Donly, K. J., Drake, D. R. & Wefel, J. S. Effects of Aged Fluoride-containing Restorative Materials on Recurrent Root Caries. *J. Dent. Res.* 1998 **77**, 418–425.

Others

- Kalhan TA, ..., **Hsu CY***. Atopic Dermatitis and Early Childhood Caries: Results of the GUSTO study. *Journal of Allergy and Clinical Immunology* 2017, 139 (6), 2000-2003. (IF 14.29) (Top 2.5% in ALLERGY, JCR 2023)
- Tan, G.-R., Wang, M., **Hsu, C.-Y.***, Chen, N. & Zhang, Y. Small Upconverting Fluorescent Nanoparticles for Biosensing and Bioimaging. *Advanced Optical Materials* 4, 984–997 (2016). (IF 8, Top 10% in OPTICS, JCR 2023) Tan, G.-R., **Hsu, C.-Y. S.*** et al. pH-Responsive Hybrid Nanoparticles for Imaging Spatiotemporal pH Changes in Biofilm-Dentin Microenvironments. *ACS Appl Mater Interfaces.* 13, 46247–46259 (2021). (IF 8.5, Top 14% in MATERIALS SCIENCE, MULTIDISCIPLINARY, JCR 2023)