

Taiwan NSTC – Stanford SOM Visiting Student Program

1. Cardiovascular Diseases & Drug Discovery – Joseph C. Wu, MD, PhD

(PhD - UCLA, Molecular & Medical Pharmacology (2004), MD - Yale University School of Medicine, Medicine (1997))

Director, Stanford Cardiovascular Institute

Simon Stertzer Professor of Medicine & Radiology

<https://profiles.stanford.edu/joseph-wu>

Lab: <https://med.stanford.edu/wulab.html>

- (1) Gastruloids enable modeling of the earliest stages of human cardiac and hepatic vascularization. *Science* 2025;388(6751):eadu9375. PMID: 40472086. PMCID: 12815606. doi: 10.1126/science.adu9375.
- (2) Selective inhibition of stromal mechanosensing suppresses cardiac fibrosis. *Nature* 2025;642(8068):766-775. PMID: 40307543. PMCID: 12176515. doi: 10.1038/s41586-025-08945-9.

2. Genetics & Microbiota – Michael Snyder, PhD

(California Institute of Technology (1982))

Director, Center for Genomics and Personalized Medicine

<https://med.stanford.edu/profiles/michael-snyder>

Lab: <https://med.stanford.edu/snyderlab/about.html>

- (1) Short-chain fatty acid metabolites propionate and butyrate are unique epigenetic regulatory elements linking diet, metabolism and gene expression. *Nature Metabolism* 2025 Jan;7(1):196-211. doi: 10.1038/s42255-024-01191-9.
- (2) Global loss of promoter-enhancer connectivity and rebalancing of gene expression during early colorectal cancer carcinogenesis. *Nature Cancer* 2024 Nov;5(11):1697-1712. doi: 10.1038/s43018-024-00823-z.

3. Gene Editing - Matt Porteus, MD, PhD

(Stanford University School of Medicine (1994))

Director, Center for Definitive and Curative Medicine

<https://med.stanford.edu/profiles/matthew-porteus>

Lab: <https://med.stanford.edu/porteuslab.html>

- (1) Multilayered HIV-1 resistance in HSPCs through CCR5 Knockout and B cell secretion of HIV-inhibiting antibodies. *Nature Communications* 2025 Apr 1;16(1):3103. doi: 10.1038/s41467-025-58371-8.
- (2) Human striatal progenitor cells that contain inducible safeguards and overexpress BDNF rescue Huntington's disease phenotypes. *Molecular Therapy Methods & Clinical Development* 2025 Jan 22;33(1):101415. doi: 10.1016/j.omtm.2025.101415.

4. GI / Organoids – Calvin Kuo, MD, PhD

(M.D./Ph.D., Stanford University, Cancer Biology (1994))

Vice Chair, Dept of Medicine

<https://med.stanford.edu/profiles/calvin-kuo>

Lab: <https://www.kuolab.stanford.edu/>

- (1) Large-scale CRISPR screening in primary human 3D gastric organoids enables comprehensive dissection of gene-drug interactions. *Nature Communications* 2025 Aug 14;16(1):7566. doi: 10.1038/s41467-025-62818-3.
- (2) A human autoimmune organoid model reveals IL-7 function in coeliac disease. *Nature* 2024 Aug;632(8024):401-410. doi: 10.1038/s41586-024-07716-2.

5. Neuroscience / Organoids – Sergiu Pasca, MD

(Medical Doctor, Hatieganu School of Medicine, Romania, (2007))

Director, Stanford Brain Organogenesis Program

<https://profiles.stanford.edu/sergiu-pasca>

Lab: <https://med.stanford.edu/pascalab.html>

- (1) Human assembloid model of the ascending neural sensory pathway. *Nature* 2025 Jun;642(8066):143-153. doi: 10.1038/s41586-025-08808-3.
- (2) Midline assembloids reveal regulators of human axon guidance. *Science* 2025 Jul 17;389(6757):282-289. doi: 10.1126/science.adq7934.

6. Stem Cells – Ravi Majeti, MD, PhD

(MD - University of California, San Francisco (UCSF), 2002, PhD in Biomedical Sciences - UCSF, 2000)

Director, Stem Cell Institute

<https://profiles.stanford.edu/ravindra-majeti>

Lab: <https://med.stanford.edu/majetilab.html>

- (1) Convergent epigenetic evolution drives relapse in acute myeloid leukemia. *eLife* 2024 Apr 22;13:e93019. doi: 10.7554/eLife.93019.
- (2) Genome engineering with Cas9 and AAV repair templates generates frequent concatemeric insertions of viral vectors. *Nature Biotechnology* 2025 Feb;43(2):204-213. doi: 10.1038/s41587-024-02171-w.

7. Cancer – Steven Artandi, MD, PhD

(M.D., Columbia University (1995), Ph.D., Columbia University, Microbiology (1995))

Director, Cancer Institute

<https://profiles.stanford.edu/steven-artandi>

Lab: <https://med.stanford.edu/artandilab.html>

- (1) Clonal inactivation of TERT impairs stem cell competition. *Nature* 2024 Aug;632(8023):201-208. doi: 10.1038/s41586-024-07700-w.

- (2) Acinar cell clonal expansion in pancreas homeostasis and carcinogenesis, *Nature* 2021 Sep;597(7878):715-719. doi: 10.1038/s41586-021-03916-2

8. Immunology & Aging – Mark Davis, PhD

(Caltech, Molecular Biology (1981))

HHMI Investigator Emeriti

Past Director, Institute for Immunity, Transplantation, and Infection

<https://profiles.stanford.edu/mark-davis>

Lab: <https://med.stanford.edu/davislab.html>

- (1) Oxidative stress is a shared characteristic of ME/CFS and Long COVID. *Proc Natl Acad Sci U S A*. 2025 Jul 15;122(28):e2426564122. doi: 10.1073/pnas.2426564122.
- (2) KIR+CD8+ T cells suppress pathogenic T cells and are active in autoimmune diseases and COVID-19. *Science* 2022 Apr 15;376(6590):eabi9591. doi: 10.1126/science.abi9591.

9. Vaccinology – Bali Pulendran, PhD

(1995 — PhD, Immunology, The Walter & Eliza Hall Institute, University of Melbourne)

Director, Institute for Immunity, Transplantation, and Infection

<https://profiles.stanford.edu/bali-pulendran>

Lab: <https://med.stanford.edu/pulendranlab/research.html>

- (1) System vaccinology analysis of predictors and mechanisms of antibody response durability to multiple vaccines in humans. *Nature Immunology* 2025 Jan;26(1):116-130. doi: 10.1038/s41590-024-02036-z.
- (2) Transforming vaccinology. *Cell* 2024 Sep 19;187(19):5171-5194. doi: 10.1016/j.cell.2024.07.021.