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The Katharine Hsu Lab

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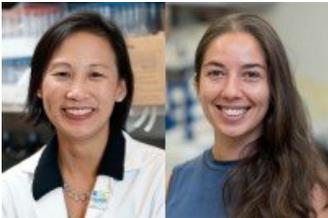
Katharine C. Hsu, MD, PhD
Professor of Medicine

My laboratory studies the natural killer (NK) cell and the molecules that control its ability to recognize and kill cancer and virally infected cells. Improved understanding of how NK cells behave is critical to advancing our ability to harness their innate capacity for tumor recognition and eradication. Therefore, an important component of my research focuses on the basic biology of the NK cell, identifying the molecules involved in controlling NK reactivity, and determining the laboratory and clinical conditions under which NK activity can be modified.

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Featured News



[Unusual Immune Cell Type Could Be Good Target for Immunotherapy](#)

Part natural killer, part T cell, this hybrid immune cell has a “double sword” for fighting cancer.



[Dr. Katharine Hsu Named Director of Tri-Institutional M.D.-Ph.D. Program](#)

In her new role, Dr. Hsu will work to diversify matriculating classes and train students to become skilled leaders as both clinicians and biomedical researchers.



[Study Suggests Refined Donor Selection Could Improve Outcomes of Bone Marrow Transplantation in Leukemia](#)

In the future, more-advanced genetic testing might offer better ways to match up patients who need a bone marrow transplant with potential donors.

Publications Highlights

[Hasan AN, Doubrovina E, Sottile R, Prockop S, Klatt MG, Heller G, Selvakumar A, Barnett L, Hsu KC, O'Reilly RJ. Dominant epitopes presented by prevalent HLA alleles permit wide use of banked CMVpp65 T-cells in adoptive therapy. Blood Adv. 2022 May 23;bloodadvances.2022007005. doi: 10.1182/bloodadvances.2022007005. Epub ahead of print.](#)

[Petersdorf EW, McKallor C, Malkki M, He M, Spellman S, Hsu KC, Strong R, Gooley TA, Stevenson PA. Role of NKG2D Ligands and Receptor in Haploidentical Related Donor Hematopoietic Cell Transplantation. Blood Adv. 2023 Feb 10;bloodadvances.2022008922. doi: 10.1182/bloodadvances.2022008922. Epub ahead of print.](#)

[van der Ploeg K, Sottile R, Kontopoulos T, Shaffer BC, Papanicolaou GA, Maloy MA, Cho C, Robinson KS, Perales MA, Le Luque JB, Hsu KC. Emergence of human CMV-induced NKG2C+ NK cells is associated with CD8+ T-cell recovery after allogeneic HCT. Blood Adv. 2023 Oct 10;7\(19\):5784-5798. doi: 10.1182/bloodadvances.2022008952. PMID: PMC10561005.](#)

[Shahid S, Ceglia N, Le Luque JB, McPherson A, Spitzer B, Kontopoulos T, Bojilova V, Panjwani MK, Roshal M, Shah SP, Abdel-Wahab O, Greenbaum B, Hsu KC. Immune profiling after allogeneic hematopoietic cell transplantation in pediatric acute myeloid leukemia. Blood Adv. 2023 Sep 12;7\(17\):5069-5081. doi: 10.1182/bloodadvances.2022009468. PMID: PMC10471937.](#)

[Santosa EK, Kim H, Rückert T, Le Luque JB, Abbasi AJ, Wingert CK, Peters L, Frost JN, Hsu KC, Romagnani C, Sun JC. Control of nutrient uptake by IRF4 orchestrates innate immune memory. Nat Immunol. 2023 Oct;24\(10\):1685-1697. doi: 10.1038/s41590-023-01620-z. Epub 2023 Sep 11.](#)

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People

Katharine C. Hsu, MD, PhD

Professor of Medicine

Physician-scientist Katharine Hsu studies the biology of human natural killer cells and how they contribute to disease processes.

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Scientific Research Lead

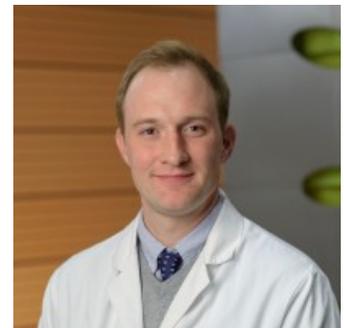
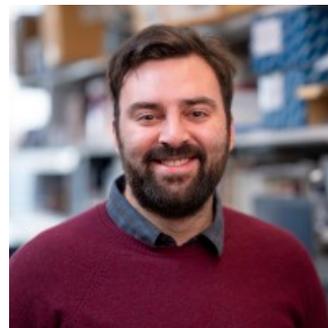
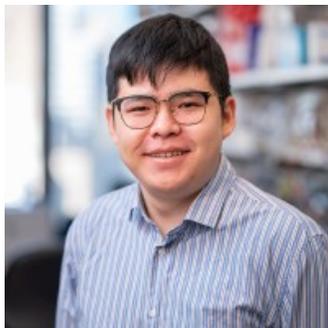
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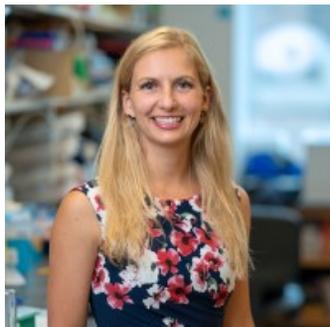
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Disclosures

Doctors and faculty members often work with pharmaceutical, device, biotechnology, and life sciences companies, and other organizations outside of MSK, to find safe and effective cancer treatments, to improve patient care, and to educate the health care community.

MSK requires doctors and faculty members to report (“disclose”) the relationships and financial interests they have with external entities. As a commitment to transparency with our community, we make that information available to the public.

Katharine C. Hsu discloses the following relationships and financial interests:

Wugen, Inc.

Professional Services and Activities (Uncompensated)

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