DISTINGUISHED AGRICULTURE ALUMNI 2025

FRIDAY, SEPTEMBER 19, 2025

10:30 A.M. LILY 2-425

Attend virtually via Zoom

Seminar links will be posted at: purdue.ag/agryseminars

DR. JIANHUA YU

PROFESSOR, SCHOOL OF MEDICINE
UNIVERSITY OF CALIFORNIA, IRVINE
PhD '03 /Department of Agronomy

Jianhua Yu (P.I.) obtained his Ph.D. degree from Purdue University in 2003 and completed his postdoctoral training at The Ohio State University. Currently, Dr. Yu is a Tenured Full Professor in the Division of Hematology & Oncology, Department of Medicine, School of Medicine and Chao Family Comprehensive Cancer Center at the University of California, Irvine (UCI). Prior to this, Dr. Yu was a Tenured Full Professor in the Division of Hematology, Department of Internal Medicine, College of Medicine and Comprehensive Cancer Center as well as The Arthur G. James Cancer Hospital at The Ohio State University (OSU), and then Professor and the Founding Director of the Natural Killer Research Program at the City of Hope (COH) National Medical Center and Beckman Research Institute.

From Maize and Yeast Genetics to Cancer Immunotherapy: A Journey Across Scientific Fields

My scientific journey began with studying the mobility of the Zea mays Ac/Ds transposon system in yeast at Purdue, where I learned how genetic elements can reshape cellular behavior across species. The mechanism we characterized evolutionarily resembles V(D)J recombination in T and B lymphocytes, which generate immune diversity through double-strand DNA breaks and repair. Building on this foundation, my career has evolved into investigating the immune system's ability to recognize and eliminate cancer, with a particular focus on innate immunity. In this work, we have engineered allogeneic (healthy donor–derived) immune cells as well as induced pluripotent stem cell (iPSC)–derived immune cells with chimeric antigen receptors (CARs), and we have also developed attenuated or oncolytic herpes viruses armed with therapeutic payloads. Both CAR-engineered immune cells and oncolytic viruses serve as powerful tools to advance cancer immunotherapy.

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