

Room 143, Washington Convention Center

**Seventh Annual AACR Gertrude B. Elion Cancer Research Award Lecture**

**Roles of Transmembrane Domain Association in the Constitutive Activation of the Epstein-Barr Virus Oncoprotein LMP-1**



**Hang (Hubert) Yin, Ph.D.**

Assistant Professor of  
Chemistry and Biochemistry  
University of Colorado at Boulder  
Boulder, CO

The AACR Gertrude B. Elion Cancer Research Award provides a one-year grant to foster meritorious basic, translational, or clinical cancer research by a tenure-track scientist at the level of Assistant Professor. This award honors the late Dr. Gertrude B. Elion, Scientist Emeritus at Glaxo Wellcome Co. (now GlaxoSmithKline). Her seminal research at the company revolutionized cancer therapeutics and her prolific contributions to biomedical science earned her the Nobel Prize in Physiology or Medicine in 1988. The AACR is extremely pleased to sponsor this award in the name of Dr. Elion, a distinguished Past President and Honorary Member of the AACR.

Dr. Hang (Hubert) Yin's research interests lie at the interface of chemistry, protein engineering, and cancer biology with particular focuses on biotechnology development to design agents that target protein transmembrane domains. Transmembrane domains regulate many pivotal biological processes, including cell signal transduction, cancer development, ion transmission, and membrane protein folding. However, the molecular recognition in membranes is little understood due to the lack of available probes with high affinity and specificity. Conventional tools such as antibodies are unable to bind to the transmembrane regions of membrane proteins. Dr. Yin's goal is to develop exogenous peptide and small-molecule agents that target transmembrane helices with high selectivity and specificity.

Using these agents, he can study these important membrane protein-protein interactions and thereby further the understanding of molecular recognition in membranes. As a proof-of-principle, he plans to develop novel peptide/peptidomimetic reagents to target the transmembrane domains of oncogenic latent membrane proteins 1 (LMP-1) found on the human herpesvirus. These designed peptides will be used to study TMD-mediated LMP-1 activation and dissect its roles in the development of various lymphomas. The findings from his studies will lay the groundwork for the discovery of new pharmaceutical agents with which he hopes to prevent, diagnose, and treat herpesvirus-dependent cancers.

Dr. Yin graduated from Peking University in Beijing in 1999. He received his doctorate in chemical biology from Yale University in 2004, and carried out his postdoctoral work at the University of Pennsylvania School of Medicine. Since 2007, Dr. Yin has been an assistant professor of chemistry and biochemistry at the University of Colorado at Boulder and a member of the University of Colorado Cancer Center. He is named a Kimmel Scholar of cancer research, a recipient of an HHMI CIA award, NSF CAREER award, NIDA EChem and CEBRA awards, and an SU2C Innovative Research Grant award.