

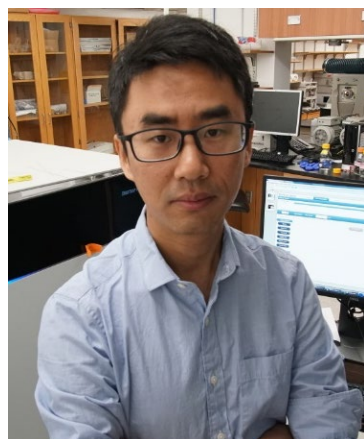


## VIRTUAL BIOLOGY COLLOQUIUM

Friday, 10 Mar 2023 | 10 am | Online Zoom Session

Hosted by Assistant Professor Lin Zhewang

# Expanding the Landscape of E3 Ligases for Targeted Protein Degradation



**By Xiaoyu Zhang**

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### **About the Speaker**

The field of small molecule-mediated protein degradation has grown tremendously over the past few years, providing a new pharmacological approach to eliminate proteins from cells, which has potential advantages over simply inhibiting their activities. Nonetheless, until recently, only a handful of E3 ligases had been identified to support this process, each with a limited range of substrate capacities. We have developed a generalizable chemical proteomic method to discover additional E3 ligases capable of supporting small molecule-mediated protein degradation. By leveraging this technology platform, we identified two novel E3 ligases, DCAF16 and DCAF11, as the targets of electrophilic bifunctional degraders that engage diverse protein substrates

Xiaoyu Zhang received his B.S. and M.S. in pharmaceutical sciences at Zhejiang University. In 2017, he completed his Ph.D. in chemistry and chemical biology at Cornell University, where he studied with Professor Hening Lin. As a Damon Runyon fellow at The Scripps Research Institute, he conducted his postdoctoral research with Professor Benjamin Cravatt. In 2022, Dr. Zhang started his independent career as an assistant professor at Northwestern University. His research group seeks to develop small molecule therapeutic approaches to modulate disease targets in unique ways. Dr. Zhang has received a number of awards and honors, including the NIH Pathway to Independence Award, Damon Runyon-Dale F. Frey Award for Breakthrough Scientists, Ono Pharma Breakthrough Science Initiative Award, Falk Medical Research Trust Catalyst Award, and Illumina Pilot Award.