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2021- Present Professor, The University of Hong Kong
2015-2021 – Associate Professor, The University of Hong Kong
2009-2015 – Principal Investigator, Peking University
2007-2009 – Research Scientist, The Broad Institute
2004-2007 – Senior/Principle Scientist, Ensemble Discovery Corp.
2002-2004 – Postdoctoral Researcher, Harvard University
2002 Ph.D. University of Chicago
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Research Interests:
DNA-encoded library; drug discovery; target identification

Selected Publications:

1. Yiran Huang, Rui Hou, Fong Sang Lam, Yunxuan Jia, Yu Zhou, Xun He, Gang Li, Feng Xiong, Yan Cao,* Dongyao Wang,* and Xiaoyu Li* "Agonist Discovery for Membrane Proteins on Live Cells by Using DNA-encoded Libraries" *J. Am. Chem. Soc.* **2024**, *146*, 35, 24638–24653.
2. Yu Zhou, Wenyin Shen, Ying Gao, Jianzhao Peng, Qingrong Li, Xueying Wei, Shihao Liu, Fong Sang Lam, Joan Mayol-Llinas, Guixian Zhao, Gang Li, Yizhou Li, Hongzhe Sun,* Yan Cao,* and **Xiaoyu Li*** "Protein-templated Ligand Discovery via the Selection of DNA-encoded Dynamic Libraries" *Nat. Chem.* **2024**, *16,* 543–555.
3. Yiran Huang, Yizhou Li* and **Xiaoyu Li*** "Beyond a binding assay: an overview of DNA-encoded chemical library" *Nat. Chem.* **2022**, *14*, 129-140.
4. Yiran Huang, Ling Meng, Qigui Nie, Yu Zhou, Langdong Chen, Shilian Yang, Yi Man Eva Fung, Xiaomeng Li, Cen Huang, Yan Cao,* Yizhou Li,* and **Xiaoyu Li*** "Selection of DNA-encoded chemical libraries against endogenous membrane proteins on live cells" *Nat. Chem.* **2021,** *13,* 77-88.
5. Jianfu Zhang, Jianzhao Peng, Yiran Huang, Ling Meng, Qingrong Li, Feng Xiong, and **Xiaoyu Li*** "Identification of Histone-deacetylase (HDAC)-associated Proteins with DNA-Programmed Affinity Labeling" *Angew. Chem. Int. Ed.* **2020**, *59,* 17525-17532.

New modalities in DEL selections

Many strategies have been developed for the synthesis and selection methods of DNA-encoded libraries (DEL). However, the target scope of DEL has been mostly limited to purified proteins, which remains a significant obstacle for the future development and applications of DELs. Here, we describe our recent efforts on developing new methods to enable DEL selections in complex biological targets and functional assays. Representative selection examples will be discussed.

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