

# ANNE XIAO-ZHOU ZHOU

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Skaggs Graduate School at Scripps Research

## CONTACT INFORMATION

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## EDUCATION

- 2017 – present The Skaggs Graduate School at Scripps Research
- 2013 – 2017 Chemical biology major, College of Chemistry and Molecular Engineering, Peking University, China (bachelor's degree in summer, 2017)
- 2010 – 2013 Tianjin Nankai High School, China

## RESEARCH EXPERIENCE

- 2019 – present Research on elucidating HIV-1 Gag assembly steps in the presence of relevant lipids and RNAs in Prof. James Williamson's laboratory, Skaggs Graduate School at Scripps Research (CA), USA.
- 2017 – 2019 Research on eukaryotic semi-synthetic organisms and eukaryotic translation mechanisms in Prof. Floyd Romesberg's laboratory, Skaggs Graduate School at Scripps Research (CA), USA.
- Established an unnatural codon mammalian translation system, proved that codons with unnatural nucleotide can be translated in mammalian cells; Established unnatural *in vitro* transcription fidelity assay, measured transcription fidelity dependency on unnatural ribonucleotide triphosphate concentration.
- 2016 – 2017 Undergraduate research on induced pluripotent stem cells (iPSCs) and chemically induced neuron (CiN) in Prof. Hongkui Deng's laboratory, School of Life Science, Peking University, China.
- in vivo* tested (murine experiments) new CiN strategies and established sustainable drug delivery method for *in situ* CiN;
- 2015 – 2016 Undergraduate research on TQ ligation-based IKKB inhibitor target identification in Dr. Xiaoguang Lei's laboratory, College of Chemistry and Molecular Engineering, Peking University, China.
- Identified the target of BMS on IKKB using modified probes and proposed a new model based on LC-MS/MS and molecule simulation results;
- Summer, 2015 Internship research on unnatural base pairs in Prof. Floyd Romesberg's laboratory, Department of Chemistry, The Scripps Research Institute (CA), USA.

Participated in *in vivo* tests of stable storage of expanded information by incorporating unnatural base pair into *E. coli* cells;

2014 – 2015 Undergraduate research on DNA-templated crosslinking-based TF recognition in Prof. Xiaoyu Li laboratory, College of Chemistry and Molecular Engineering, Peking University, China.

Participated in method optimization, in charge of culturing various cells for supplementary data (cell culturing, cell line establishment, DNA synthesis, DNA modification, immunoprecipitation).

## PUBLICATIONS

1. Anne Xiao-Zhou Zhou, Kai Sheng, Aaron W. Feldman, Floyd E. Romesberg, Progress Toward Eukaryotic Semi-Synthetic Organisms: Translation of Unnatural Codons, *J. Am. Chem. Soc.* **2019**, 141, 20166-20170
2. Zongwei Yue, Xinhua Xiao, Jinbao Wu, Xiaozhou Zhou, Weilong Liu, Yaxi Liu, Houhua Li, Guoqiang Chen, Yingli Wu, and Xiaoguang Lei, *ent*-Jungermannenone C triggers reactive oxygen species-dependent cell differentiation in leukemia cells, *J. Nat. Prod.* **2018**, 81, 298-306
3. Yorke Zhang, Brian Lamb, Aaron W. Feldman, Anne X. Zhou, Thomas Lavergne, Lingjun Li and Floyd E. Romesberg, A semi-synthetic organism engineered for the stable storage of increased genetic information, *PNAS* **2017**, 114, 1317-1322
4. ZHOU Xiao-Zhou, Activation of C-H bonds Catalyzed by Fe(PDP) compound, *Univ. Chem.* **2016**, 9, 103-107
5. Ying Liu, Wenlu Zheng, Wan Zhang, Nan Chen, Yang Liu, Li Chen, Xiaozhou Zhou, Xingshuo Chen, Haifeng Zheng and Xiaoyu Li, Photoaffinity labeling of transcription factors by DNA-templated crosslinking, *Chem. Sci.* **2015**, 6, 745-751

## PROFESSIONAL ACTIVITIES

1. J. Pei, Q. Xing, W. Pei, R. Xu, *Organic Chemistry (4<sup>th</sup> ed)*, Higher Education Press: BEIJING, **2016** (reviewer of Biochemistry Chapter)

## HONORS AND AWARDS

June 2017 “Star of Chemistry” Award (Peking University)  
Oct 2015 Huabao Foundation funding for undergraduate research (Peking University)  
Aug 2014 Outstanding Student Leader Award (Peking University)  
Apr 2014 Social Activity Award (Peking University)  
Nov 2012 First prize in the 26<sup>th</sup> Chinese Chemistry Olympiad (National)

## **SEMINARS**

- Oct 2019 “Realization of unnatural codon translation in mammalian cells”, the Scripps Research Graduate Student Symposium, La Jolla, CA, USA
- April 2019 “Realization of unnatural codon translation in mammalian cells”, ACS National Meeting, Orlando, FL, USA

## **POSTERS**

- June 2019 “Realization of unnatural codon translation in mammalian cells”, Gordon Research Conference on Nucleic Acids, Newry, ME, USA
- Oct 2018 “Towards the realization of unnatural codon translation in mammalian cells”, the Scripps Research Graduate Student Symposium, La Jolla, CA, USA
- June 2016 “Target Identification of IKKB Kinase Inhibitor”, 1<sup>st</sup> National College Student Chemistry Forum, Beijing, China