Ke Cheng

PhD · Chemical Biology

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Professional Experience

University of California, San Francisco – Department of Pharmaceutical Chemistry *San Francisco, CA*
Postdoctoral Scholar *Jan 2024 – Present*
- Advisor: Prof. Adam Renslo

Sun Yat-sen University – School of Pharmaceutical Sciences *Guangzhou, CN*
Postdoctoral Researcher *Nov 2022 – Nov 2023*
- Advisor: Prof. Wenbin Deng

WuXi AppTec *Wuhan, CN*
Intern *Oct 2013 – Jun 2014*

Education

City University of Hong Kong – Department of Chemistry *Hong Kong*
PhD, Chemical Biology *Sep 2018 – Oct 2022*
- Advisor: Prof. Hongyan Sun

Jinan University – School of Pharmacy *Guangzhou, CN*
MSc, Medicinal Chemistry *Sep 2015 – Jun 2018*
- Advisors: Prof. Ke Ding & Prof. Zhengqiu Li

Wuhan Institute of Technology *Wuhan, CN*
BS, Pharmaceutical Engineering *Sep 2010 – Jun 2014*

Research Interests

Small-Molecule Drugs & Probes Development, Chemoproteomics, Targeted Theraputics, Translational Oncology

Research Experience

University of California, San Francisco - Department of Pharmaceutical Chemistry *San Francisco, CA*
Advisors: Prof. Adam Renslo & Prof. Michael Evans *Jan 2024- Present*
- Developing novel small-molecule therapeutics and chemical probes for infectious disease treatment, new druggable target identification, and targeted radioligand therapies/chemotherapies for cancer treatment.
- Relevant publications: ***PNAS*** 2024, 121(28), e2401579121; ***ACS Med. Chem. Lett.*** 15(10), 1764–1770.

Sun Yat-sen University - School of Pharmaceutical Sciences *Guangzhou, China*
Advisors: Prof. Wenbin Deng & Prof. Lin Mei *Nov 2022 - Nov 2023*
- Postdoctoral researcher specializing in the development of activatable small-molecule probes and nanomedicines aimed at targeted protein degradation and cancer treatment.
- Representative publications: ***Biomaterials*** 2022, 291, 121916; ***Chem. Eng. J.*** 2023, 472, 144977.

City University of Hong Kong - Department of Chemistry *Hong Kong*

Advisor: Prof. Hongyan Sun *Sep 2018 - Sep 2022*

- PhD student focused on the development of small-molecule fluorescent probes for cancer theranostics, and the creation of novel photochemical tools to facilitate drug discovery and identification of druggable targets. Conducted interdisciplinary research at the interface of chemical biology and medicinal chemistry to support advances in targeted cancer therapies
- Representative publications: ***Angew. Chem. Int. Ed.*** 2022, 61(47), e202209947; ***Biomaterials*** 2022, 291, 121916.

Jinan University - School of Pharmacy *Guangzhou, China*

Advisors: Prof. Ke Ding & Prof. Zhengqiu Li *Sep 2015- Jun 2018*

- MSc student focused on the design and synthesis of a small-molecule library for screening new anticancer drugs, druggable cellular protein targets, and powerful cancer imaging and detection assays.
- Representative publications: ***Angew. Chem. Int. Ed.*** 2017, 56(47), 15044-15048; ***ACS Chem. Biol.*** 2019, 14 (12), 2546-2552.

WuXi AppTec (Wuhan) – Department of Chemistry *Wuhan, China*

Intern *Oct 2013- Jun 2014*

- Small Molecules Development

Skills & Expertise

Organic Chemistry: Organic Synthesis; Analytical Chemistry; Peptide Synthesis; Molecular Docking

Chemical Biology: Small-Molecule Drug Discovery; Chemical Probe Development; Chemoproteomics; Prodrug Design

Molecular Biology: Cell Culture; SDS-PAGE; Western Blot; Cell Imaging; Proteomics Analysis; Bioinformatics

Awards & Fellowships

2018-2021	**Postgraduate Studentship**, City University of Hong Kong	
2018	**Creative Research Award**, Jinan University	*Top 1%*
2017	**National Postgraduate Scholarship**, China Ministry of Education	*Top 1–3%*
2015-2018	**Postgraduate Fellowship**, Jinan University	

Teaching Experience

2020	**Principles of Organic Chemistry**, Teaching Assistant	*CityU, HK*
2018	**Chemistry**, Teaching Assistant	*CityU, HK*

Selected Publications

1. **Cheng, K.**; Lee, J. S.; Hao, P.; Yao, S. Q.; Ding, K.; Li, Z., Tetrazole-Based Probes for Integrated Phenotypic Screening, Affinity-Based Proteome Profiling, and Sensitive Detection of a Cancer Biomarker. ***Angew. Chem. Int. Ed.*** 2017, 56 (47), 15044-15048.
2. **Cheng, K.**; Qi, J.; Ren, X.; Zhang, J.; Li, H.; Xiao, H.; Wang, R.; Liu, Z.; Meng, L; Ma, N.; Sun, H., Developing Isoxazole as a Native Photo-Cross-Linker for Photoaffinity Labeling and Chemoproteomics. ***Angew. Chem. Int. Ed.*** 2022, 61 (47), e202209947.
3. **Cheng, K.**; Qi, J.; Zhang J.; Li H.; Ren X.; Wei W.; Meng L.; Jing L.; Li. Q.; Zhang H.; Deng W.; Sun H.; Mei L., Self-Assembled Nano-Photosensitizer for Targeted, Activatable, and Biosafe Cancer Phototheranostics. ***Biomaterials*** 2022, 291, 121916.
4. Pezacki, A. T.; Gonciarz, R. L.; Okamura, T.; Matier, C. D.; Torrente, L.; **Cheng, K.**; Miller, S. G.; Ralle, M.; Ward, N. P.; DeNicola, G. M.; Renslo, A. R.; Chang, C. J., A Tandem Activity-Based Sensing and Labeling Strategy Reveals Antioxidant Response Element Regulation of Labile Iron Pools. ***PNAS*** 2024, 121 (28), e2401579121.
5. He, F.; **Cheng, K.**; Qi J.; He F.; Chu C.; Xiong, Y.; Zhao, j.; Ding, J.; Kong, F.; Cao, Z.; Liu G.; Deng, W., Black Phosphorus Nanosheets Enhance Differentiation of Neural Progenitor Cells for Improved Treatment in Spinal Cord Injury. ***Chem. Eng. J.*** 2023, 472, 144977.

Full list of publications and patents available on https://scholar.google.com/citations?user=HfBo1jcAAAAJ&hl=en