Stanford



Fangfang Shen

Physical Science Research Scientist, Chemistry

Bio

BIO

Fangfang Shen is a postdoc scholar in Laura Dassama lab at the Department of Chemistry. Before joined Stanford University in Jan 2020, she obtained her Ph.D. at The University of Hong Kong, where her research focused on the development of small molecules to mimic protein functions and their applications as anti-cancer drugs. Currently, her research interest is the identification of novel protein inhibitors as new therapies for blood disorders, including sickle cell disease and beta-thalassemia.

ACADEMIC APPOINTMENTS

- Physical Science Research Scientist, Chemistry

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Identify protein inhibitors and develop novel specific protein delivery systems.

Publications

PUBLICATIONS

- **Light-Controlled Intracellular Synthesis of Poly(luciferin) Polymers Induces Cell Paraptosis.** *Journal of the American Chemical Society*
  Dai, S., Xiao, Z., Shen, F., Lim, I., Rao, J.
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- **PTER is a N-acetyltaurine hydrolase that regulates feeding and obesity.** *Nature*
  Wei, W., Lyu, X., Markhard, A. L., Fu, S., Mardjuki, R. E., Cavanagh, P. E., Zeng, X., Rajniak, J., Lu, N., Xiao, S., Zhao, M., Moya-Garzon, M. D., Truong, et al
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- **A PTER-dependent pathway of taurine metabolism linked to energy balance.** *bioRxiv : the preprint server for biology*
  Wei, W., Lyu, X., Markhard, A. L., Fu, S., Mardjuki, R. E., Cavanagh, P. E., Zeng, X., Rajniak, J., Lu, N., Xiao, S., Zhao, M., Moya-Garzon, M. D., Truong, et al
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- **Opportunities and challenges of protein-based targeted protein degradation.** *Chemical science*
  Shen, F., Dassama, L. M.
  2023; 14 (32): 8433-8447

- **A Cell-Permeant Nanobody-Based Degrader That Induces Fetal Hemoglobin.** *ACS central science*
  Shen, F., Zheng, G., Setegne, M., Tenglin, K., Izadi, M., Xie, H., Zhai, L., Orkin, S. H., Dassama, L. M.
  2022; 8 (12): 1695-1703

- **Mediating K+/H+ Transport on Organelle Membranes to Selectively Eradicate Cancer Stem Cells with a Small Molecule.** *Journal of the American Chemical Society*
  Shen, F. F., Dai, S. Y., Wong, N. K., Deng, S., Wong, A. S., Yang, D.
  2020; 142 (24): 10769-10779
- **A small synthetic molecule functions as a chloride-bicarbonate dual-transporter and induces chloride secretion in cells** *CHEMICAL COMMUNICATIONS*
  Liu, P., Li, S., Shen, F., Ko, W., Yao, X., Yang, D.
  2016; 52 (46): 7380–83
- **Catalytic Asymmetric 1,2-Addition of alpha-Isothiocyanato Phosphonates: Synthesis of Chiral beta-Hydroxy- or beta-Amino-Substituted alpha-Amino Phosphonic Acid Derivatives** *ANGEWANDTE CHEMIE-INTERNATIONAL EDITION*
  Cao, Y., Shen, F., Zhang, F., Zhang, J., Wang, R.
  2014; 53 (7): 1862–66
- **Catalytic Enantioselective Ring-Opening Reaction of meso-Aziridines with -Isothiocyanato Imides** *CHEMISTRY-A EUROPEAN JOURNAL*
  Cao, Y., Zhang, F., Shen, F., Wang, R.
  2013; 19 (29): 9476–80
- **Catalytic Asymmetric Michael Addition/Cyclization of Isothiocyanato Oxindoles: Highly Efficient and Versatile Approach for the Synthesis of 3,2'-Pyrrolidinyl Mono- and Bi-spirooxindole Frameworks** *CHEMISTRY-A EUROPEAN JOURNAL*
  Cao, Y., Shen, F., Zhang, F., Wang, R.
  2013; 19 (4): 1184–88
- **Enantioselective Michael/Cyclization Reaction Sequence: Scaffold-Inspired Synthesis of Spirooxindoles with Multiple Stereocenters** *ANGEWANDTE CHEMIE-INTERNATIONAL EDITION*
  Cao, Y., Jiang, X., Liu, L., Shen, F., Zhang, F., Wang, R.
  2011; 50 (39): 9124–27
- **A Unique Approach to the Concise Synthesis of Highly Optically Active Spirooxazolines and the Discovery of a More Potent Oxindole-Type Phytoalexin Analogue** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
  Jiang, X., Cao, Y., Wang, Y., Liu, L., Shen, F., Wang, R.
  2010; 132 (43): 15328–33
- **Direct Organocatalytic Asymmetric Aldol Reaction of alpha-Isothiocyanato Imides to alpha-Ketoesters under Low Ligand Loading: A Doubly Stereocontrolled Approach to Cyclic Thiocarbamates Bearing Chiral Quaternary Stereocenters** *ORGANIC LETTERS*
  Jiang, X., Zhang, G., Fu, D., Cao, Y., Shen, F., Wang, R.
  2010; 12 (7): 1544–47