

# Jinyue Pu

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## Research Interests

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I obtained my Ph.D. in bioorganic chemistry and am currently pursuing postdoctoral work with Professor Bryan Dickinson at the University of Chicago in synthetic biology and protein engineering. Currently, my research efforts include leading projects aimed at developing generalizable systems to optimize protein-protein interactions, and model systems to study evolutionary events at the molecular level. My long-term goal is to develop an independent research program aimed at developing protein-based tools as solutions to problems in biomedicine. This research will attract chemists, biologists, and bio-engineers who will develop molecular tools to improve our understanding of living systems.

## Education and Professional Experience

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<b>Postdoctoral Scholar, The University of Chicago</b> Department of Chemistry, with Professor Bryan C. Dickinson	2014-present
<b>Research Scholar, Shanghai Institute of Organic Chemistry,</b> Chinese Academy of Sciences, Shanghai, China, with Professor Gongli Tang	2012-2014
<b>Ph.D. in Organic Chemistry, Shanghai Institute of Organic Chemistry,</b> Chinese Academy of Sciences, Shanghai, China, with Professor Gongli Tang	2007-2012
<b>B.S. in Applied Chemistry, Central South University</b> Changsha, China, with Professor Kelong Huang	2002-2006

## Peer-Reviewed Publications

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9. Pu, J., Kentala, K., & Dickinson, B. C. (2017). Multidimensional Control of Cas9 by Evolved RNA Polymerase-Based Biosensors. *ACS Chemical Biology*, 13(2), 431-437 (2018). [link](#)
8. Pu, J., Dewey, J. A., Hadji, A., LaBelle, J. L., & Dickinson, B. C. (2017). RNA Polymerase Tags To Monitor Multidimensional Protein-Protein Interactions Reveal Pharmacological Engagement of Bcl-2 Proteins. *Journal of the American Chemical Society*, 139(34), 11964-11972. [link](#)
7. \*Song, L.-Q., \*Zhang, Y.-Y., \*Pu, J.-Y., Tang, M.-C., Peng, C., & Tang, G.-L. (2017). Catalysis of Extracellular Deamination by a FAD-Linked Oxidoreductase after Prodrug Maturation in the Biosynthesis of Saframycin A. *Angewandte Chemie International Edition*, 56(31), 9116-9120. (\*denotes equal contribution) [link](#)
6. Pu, J., Zinkus-Boltz, J., & Dickinson, B. C. (2017). Evolution of a split RNA polymerase as a versatile biosensor platform. *Nature Chemical Biology*, 13(4), 432-438. [link](#)
  - Highlighted in "Evolved RNAP 'Plug-and-Play' Biosensors." *Cell Chem. Biol.* 24, 428 (2017). [link](#)

5. **Pu, J.**, Chronis, I., Ahn, D., & Dickinson, B. C. (2015). A Panel of Protease-Responsive RNA Polymerases Respond to Biochemical Signals by Production of Defined RNA Outputs in Live Cells. *Journal of the American Chemical Society*, 137(51), 15996–15999. [link](#)
  - JACS “Spotlight.” *J. Am. Chem. Soc.* 138, 1 (2016) [link](#)
4. **Pu, J.-Y.**, Peng, C., Tang, M.-C., Zhang, Y., Guo, J.-P., Song, L.-Q., Tang, G.-L. (2013). Naphthyridinomycin biosynthesis revealing the use of leader peptide to guide nonribosomal peptide assembly. *Organic Letters*, 15(14), 3674–3677. [link](#)
3. Wang, J.-B., Zhang, F., **Pu, J.-Y.**, Zhao, J., Zhao, Q.-F., & Tang, G.-L. (2014). Characterization of AvaR1, an autoregulator receptor that negatively controls avermectins production in a high avermectin-producing strain. *Biotechnology Letters*, 36(4), 813–819. [link](#)
2. \*Peng, C., \***Pu, J.-Y.**, \*Song, L.-Q., \*Jian, X.-H., Tang, M.-C., & Tang, G.-L. (2012). Hijacking a hydroxyethyl unit from a central metabolic ketose into a nonribosomal peptide assembly line. *Proceedings of the National Academy of Sciences of the United States of America*, 109(22), 8540–8545. (\*denotes equal contribution) [link](#)
1. Peng, C., Tang, Y.-M., Li, L., Ding, W., Deng, W., **Pu, J.-Y.**, Tang, G.-L. (2012). In vivo investigation of the role of SfmO2 in saframycin A biosynthesis by structural characterization of the analogue saframycin O. *Science China Chemistry*, 55(1), 90–97. [link](#)

## Awards

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- 2016**     **Kharasch Travel Award for Postdoctoral Scholars**  
**2018**     **Kharasch Travel Award for Postdoctoral Scholars**  
**2018**     **Outstanding poster award, 5<sup>th</sup> Postdoctoral Research and Career Development Symposium, University of Chicago**

## Presentations

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- 2018/05    5<sup>th</sup> Postdoctoral Research and Career Development Symposium, University of Chicago, poster presentation  
2017/10    6<sup>th</sup> Sino-USA Chinese Collaborative Workshop, oral presentation  
2016/06    2016 Gordon Research Conference Bioorganic Chemistry, poster presentation  
2016/04    Chemistry-Biology Interface Talk, University of Chicago, oral presentation

## Mentored trainees

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Simone Rauch	University of Chicago, graduate student
Victoria Cochran	University of Chicago, graduate student
Yang Cao	University of Chicago, graduate student
Ian Chronis	University of Chicago, former undergraduate
Daniel Ahn	University of Chicago, former undergraduate
Shangping Ma	University of Chicago, former master student
Michael Disare	University of Chicago, former rotation student
Young Hoon Koh	University of Chicago, former rotation student
Jiacheng Zhang	University of Chicago, former rotation student