

Dr Nisha He (Post-doctoral Research Fellow)

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RESEARCH INTERESTS

- Chemical biology
- Microbiology
- Enzymology
- Structural biology
- Biochemical analysis: LC-MS/MS, NMR, EPR, Mössbauer

SUMMARY

I obtained my Ph.D from Chinese Academy of Science on December, 2017. My Ph.D research focused on elucidating the chemical mechanism by which enzymes containing iron-sulfur clusters catalyze chemical reaction. I am skilled in diverse biochemical technologies especially in HPLC, LCMS and NMR. My research use biochemical, analytical, structural, and spectroscopic techniques to characterize complex radical SAM enzyme reaction mechanism in the biosynthesis of bacterial natural products. At present, as a postdoc at College de France I am working on tRNA thiolation enzymes that catalyze the simple non-redox substitution of a uridine carbonyl oxygen by sulfur using a [4Fe-4S] cluster. These enzymes belong to a new enzymes superfamily.

PUBLICATIONS

2017

- “Construction of the octosyl acid backbone catalyzed by a radical S-adenosylmethionine enzyme and a phosphatase in the biosynthesis of high-carbon sugar nucleoside antibiotics.”, Nisha He#, Pan Wu#, Yongxing Lei, Baofu Xu, Xiaochen Zhu, Gudan Xu, Yaojie Gao, Jianzhao Qi, Zixin Deng, Gongli Tang, Wenqing Chen, Youli Xiao. **Chemical Science**, 2017. 8.444-451.

2016

- “Structural basis of rifampin inactivation by rifampin phosphotransferase.”, Xiaofeng Qi, Wei Lin, Miaolian Ma, Chengyuan Wang, Yuan He, Nisha He, Jing Gao, Hu Zhou, Youli Xiao, Yong Wang, and Peng Zhang, **PNAS**. 2016. 113(14):3803.