

重庆大学药学院

学术报告第一百五十七讲

报告题目: Total Synthesis for Better and New Function – From
Enabling Synthetic Methodology and Strategy to Novel
Disease Target

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时 间: 2019年5月22日(周三) 10:30

地 点: 重庆大学药学院学术报告厅

报告人简介:

Mingji Dai received his B.S. degree from Peking University in 2002. After two years' research with Professors Zhen Yang and Jiahua Chen in the same university, he went to New York in 2004 and pursued graduate study under the guidance of Professor Samuel J. Danishefsky at Columbia University. After earning his Ph.D. degree in 2009, he took a postdoctoral position in the laboratory of Professor Stuart L. Schreiber at Harvard University and the Broad Institute. In the August of 2012, he began his independent career as an assistant professor in the Chemistry Department and Center for Cancer Research of Purdue University and was promoted to associate professor with tenure in 2018. His lab currently focuses on developing new strategies and methodologies for the synthesis of complex natural products and other medicinally important molecules. His recent awards include the Amgen Young Investigators' Award, the Eli Lilly Grantee Award, the 2017 Chinese-American Chemistry & Chemical Biology Professors Association (CAPA) Distinguished Junior Faculty Award, the NSF CAREER Award, the 2015 Organic Letters Outstanding Author of the Year Lectureship Award, and the 2015 Thieme Chemistry Journal Award.



Abstract

This talk will focus on our recent efforts in function-driven divergent and efficient total synthesis of medicinally important natural products. The target molecules include macrolides, alkaloids and polycyclic terpenoids. Enabling synthetic strategies and catalytic methodologies toward these target molecules will be highlighted. Biological evaluations and target identification studies of certain selected natural products and their analogs will be discussed as well, which will demonstrate that total synthesis efforts can often lead to the identification of better and new biological function.