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MATERIALS RESEARCH AND DEVELOPMENT

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Exploring novel functional molecules in symbionts

The impact of natural products on drug discovery pipelines keeps kindling our interest in structurally unpredictable low-molecular-weight biomolecules as a promising source of pharmaceutical leads. Meanwhile, scientists are frequently frustrated by re-isolations of known compounds from new organism collections since countless natural products have been identified since Serturmer's characterization of morphine in 1806. To address this frustration, the affordability and chemical space expansion of minor new natural products become a great concern, and chemical synthesis has been performed to produce organism-originated complex molecules and natural product-like compounds with privileged

scaffolds. To add more skills to the existing arsenal of searching for highly-valued new chemicals like drug leads, this talk will present the discovery and biosynthesis of bioactive secondary metabolites from symbionts, some of which are evidenced to be evolutionally advanced owing to their non-stop interaction with multicellular hosts such as plants, insects and fishes. This presentation will be focused on the structure characterization and biosynthetic mechanism of bioactive secondary metabolites with unprecedented carbon skeletons from the cultures of symbiotic microorganisms such the marine-derived *Curvularia sp.*,

Biography

Ren Xiang Tan obtained his PhD from Lanzhou University with his dissertation completed at Technical University of Berlin, Germany. He worked as a visiting professor at University Lausanne, Switzerland, and University of California (San Diego), USA. He has been serving as a full Professor at Nanjing University since 1994. He appointed as the vice-presidency at Nanjing University of Chinese Medicine, one of the leading institutions specialized in Chinese medicine in 2016. He has published more than 300 papers in reputed journals and 4 monographs and served/is serving as editorial (advisory) board members of 16 scientific journals including *Natural Product Reports* (IF > 11).

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