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## Unique drug discoveries based on marinopyrrole and novel derivatives

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Natural products and their derivatives account for about half of the New Chemical Entities (NCEs) for drug discovery to treat human diseases. For example, 78 of the 118 small-molecule NCEs identified for antibacterial agents were from either natural products or their derivatives during 30 years between 1981 and 2010. For anticancer drug discoveries, 85 of the 175 small molecules, for 70-year span from 1940 to 2010, were from natural products, their derivatives, metabolites and mimics. To date, natural products have provided the most successful supply of drug leads. In this talk, a case study of marinopyrrole and its novel derivatives as potential antibiotic and anticancer agents will be presented. The design, synthesis and optimization of these novel derivatives to achieve improved physicochemical and drug-like properties and potent biological activities and high selectivity with low toxicity will be discussed.

### Biography

Rongshi Li is a Professor of Chemistry and Medicinal Chemistry in the Department of Pharmaceutical Sciences, College of Pharmacy, of University of Nebraska Medical Center, USA. He spent 14 years in industry and advanced from Scientist to Senior Vice President after his Postdoctoral training at University of California, San Francisco. He began his academic career in 2008 at Moffitt Cancer Center, Tampa, Florida. In 2013, he was recruited at University of Nebraska Medical Center. Since 2008, he has published over 20 peer-reviewed articles, filed and published 30 US and PCT patents, edited one book and delivered over 30 invited talks.

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