

P68 - BIOSYNTHESIS OF UNUSUAL SYNTHONS IN NATURAL PRODUCTS



Monday, January 9, 2023



6:00 PM - 8:00 PM



CORONADO DE2 (Manchester Grand Hyatt Hotel)

Abstract

Natural products, often referred to as specialized metabolites, are small molecules known for their potent bioactivities relevant to treating human health conditions. Unique functional groups like the isonitrile and *N*-hydroxytriazene often drive bioactivity and may serve as indicators of novel chemical logic and enzymatic machinery. Yet, the biosynthetic underpinnings of these groups remain only partially understood, constraining the opportunity to rationally engineer biomolecules with these functionalities for applications in pharmaceuticals, bioorthogonal chemistry, and other value-added chemical processes. By exploiting biosynthetic machinery associated with unique synthons, it is possible to enhance, vary or diminish the biological activities of parent compounds and apply the biosynthetic machinery to new systems for functional group installation. Here, we focus on our recent efforts in functional characterization and mechanistic interrogation of enzymes responsible for generating isonitrile and *N*-hydroxytriazene pharmacophores.

Presenting Author



Antonio Del Rio Flores

University of California Berkeley

Author



Wenjun Zhang

University of California Berkeley

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