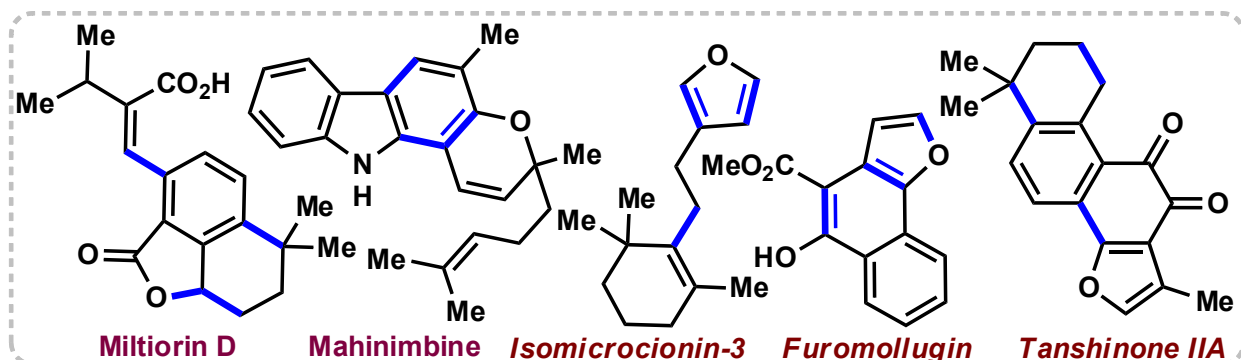


Dr. Huck Grover, Associate Professor, Organic Chemistry, Memorial University

## Exploring Selective C–H Functionalization Strategies in Target Oriented Synthesis



### Abstract:

The emergence of transition metal-catalyzed C–H bond activation/functionalization strategies has changed the landscape of synthetic design by providing chemists with new avenues to rapidly generate molecular complexity from simple structural building blocks. Among the many flourishing areas of research in this growing field are cascade reactions involving a C(sp<sup>2</sup>)–H functionalization step. A cascade reaction, also known as a tandem or domino reaction, is a chemical process wherein a minimum of two sequential chemical transformations occur in a single reaction apparatus. Through the judicious choice of substrates and catalysts, the value of this class of cascade reactions lies in delivering efficient access to various useful target molecules in short order.

This talk will focus on our continued efforts to improve chemical efficiency through the development of metal catalyzed C–H functionalization and cascade reactions. Highlights will include our recent exploration of  $\alpha$ -diazocarbonyl compounds, as a one carbon ambiphilic synthon, in metal-catalyzed cascade processes. As well as the development of transition metal-catalyzed (Pd, Ir, Rh) aryl–H functionalization strategies in the construction of new C–C bonds. Our current efforts in these areas, along with the development of other cascade reactions, will be presented with an emphasis on utilization of these methodologies in the synthesis of heterocycles and natural products.

### Speaker Biography:

Huck completed his BSc in chemistry at Wilfrid Laurier University in the MacNeil lab where he got his first experience with organic synthesis and methodology. Following completion of his undergraduate degree, he joined the Kerr lab (2010) at Western University where he learned about heterocycles, cycloaddition chemistry and natural product synthesis as a PhD candidate. Huck then moved to Berkeley, California to work in the Maimone lab (2015) as a postdoc with a focus on complex asymmetric synthesis, terpenes, natural products, and medicinal chemistry. In 2017, Huck brought each of these diverse learning experiences to Memorial University of Newfoundland and Labrador, where he established a synthetic organic chemistry research group as an assistant professor. In September 2025, Huck was promoted to associate professor.