



WESTERN MICHIGAN UNIVERSITY
College of Arts and Sciences
Department of Chemistry

The Department of Chemistry

Presents

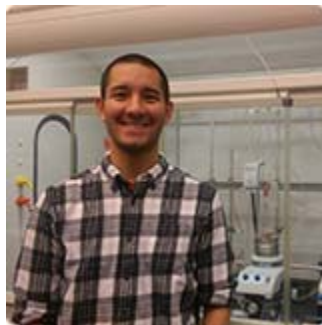
Michael Poe

Postdoctoral Fellow, University of Connecticut

Title: Evaluation of BTN3A1 with phosphoantigens for the stimulation of gamma-delta T cells

Abstract

Interest in $V\gamma 9V\delta 2$ T cells is growing and there is an increasing amount of data that suggests these gamma delta ($\gamma\delta$) T cells could be used as an immunotherapeutic agent against various forms of cancer including melanoma, lung, ovarian, and prostate cancer. These specialized T cells are activated following the binding of non-peptidic diphosphate antigens, commonly known as phosphoantigens, to the butyrophilin protein BTN3A1. Natural diphosphate butyrophilin ligands are limited, as isopentenyl diphosphate (IPP) stimulates little effect and the potent *E*-4-hydroxy-3-methyl-but-2-enyl diphosphate (HMBPP) is produced only in organisms that utilize the MEP pathway. Previously, our group developed a phosphonate prodrug related to HMBPP that has overcome the instability and low penetration that has plagued synthetic diphosphate analogs. Herein, we report ongoing work to improve ligand efficacy and increase data output as we investigate their effectiveness as a potential cancer immunotherapeutic.



Monday, October 15th, 2018
4:00 pm
Chemistry Building, Room 1220