

**University of Puerto Rico
Mayagüez Campus
Chemistry Department
Departmental Seminar**

**Friday, March 18th, 2016
Q -123
Abbott Room
11:30 AM**

By

**Dr. Eliud Hernández, Ph.D.
Associate Professor
UPR School of Pharmacy
Medical Sciences Campus**

Discovery of EHop-016: A Small Molecule Inhibitor of Rac

Rac1, a Rho family member, plays a critical role in several aspects of tumorigenesis, cancer progression, and has been associated with the increased proliferation and invasion of several breast cancer cell lines. Since the activation of Rho GTPases is controlled by guanine nucleotide exchange factors (GEFs), inhibition of the interaction of Rac with its GEFs is a targeted strategy for blocking Rac activation. In our research, we used an existing Rac inhibitor NSC23766 to design and develop improved derivatives. We identified EHop-016 as a Rac inhibitor, with 100-fold more potency than NSC23766, which binds to Rac1 with tighter interaction. The compound EHop-016 is an effective tool for probing Rac function in different cell lines.