



WESTERN MICHIGAN UNIVERSITY  
College of Arts and Sciences  
Department of Chemistry

## **The Department of Chemistry**

*Presents*

### **Dr. Kelly Teske, PhD**

#### **SEMINAR: Design of Small Molecule Modulators of Aberrant MicroRNA Function for the Treatment of Cancer**

Cancer affects nearly every person worldwide- whether it be themselves, a family member, or a friend afflicted with the disease. According to the NIH National Cancer Institute, an estimated 1,735,350 new cases of cancer will be diagnosed in the United States this year with an estimated 609,640 deaths associated with it. This presents a need for new and novel cancer therapies. One approach is the development of targeted therapies, such as small molecule drugs, that directly interfere with the source to stop cancer growth. Traditional drugs are designed to target proteins as RNA has previously been seen as “undruggable”. However, recent advances have indicated that RNA is susceptible to drug intervention. MicroRNAs are short, single stranded noncoding RNAs that negatively regulate messenger RNA and play a pivotal role in cell cycle progression, proliferation, and differentiation. When dysregulated, microRNAs have been shown to cause many different forms of cancer. Herein, I will discuss three proposed projects that aim to develop potent and selective small molecule modulators of aberrant microRNA function to serve as both novel anti-cancer therapies as well as tools to learn more about the biological role of micro RNA's.

**Monday, September 24, 2018**  
**4:00 pm**  
**Chemistry Building, Room 1220**