



## **Dr. Nadja B. Cech**

is Patricia A. Sullivan Professor of Chemistry at the *University of North Carolina Greensboro*. There, she supervises a dynamic research group engaged in developing novel approaches to solve challenging problems in natural products and plant medicine research. A major focus of this work is studying how combinations of molecules may interact to achieve biological effects (additivity, synergy, or antagonism). Dr. Cech received the recipient of the 2011 Jack L. Beal Award from the *Journal of Natural Products*, the 2017 Thomas Norwood Award for Undergraduate Research Mentorship, and the 2022 Board of Governors Teaching Excellence Award for the University of North Carolina System. She is a Principal Investigator for the National Institutes of Health funded [Center for High Content Functional Annotation of Natural Products](#) and [Center of Excellence for Natural Product Drug Interaction](#).

# **Seeking Synergy: Mass Spectrometry Tools to Unlock Nature's Treasure Chest**

The discovery of penicillin from a *Penicillium* fungus in the 1920s ushered in a new era of scientific studies. In the decades that followed, scientists have probed the natural world, looking for "magic bullets" to cure deadly infections. This approach yielded some tremendously important results, but also many failures. One reason that the search for single active molecules can fail is that the interplay between living organisms is complicated and nuanced, and often involves many molecules operating by diverse mechanisms. Our research group is working to develop approaches to unravel these complex situations, using mass spectrometry as a central tool. This talk will highlight some of our results, with a particular focus on "interaction metabolomics", a novel mass spectrometry approach to pinpoint combinations of molecules that work together to exert effects on biological systems.

**Meet the Speaker**    **2:00pm, PCB 3144**  
**Seminar**                    **3:30pm, King 159**