

Project Title: Mycosporine Like Compounds

Project Mentor: Professor Wallace Fu, Chemistry Department

Project Description: Mycosporines are natural products derived from dihydropyrogallols and amino acids. Marine organisms and plants are known to use these molecules for protection from harmful UV radiation. The UV activity of mycosporines could be further enhanced if an aromatic group can be incorporated into the structure. In this synthetic organic chemistry project the students will learn how to make complex molecules from simply building blocks, known chemical transformations and readily available recyclable reagents. In the summer of 2008 several aromatic mycosporine-like compounds were prepared. The UV absorbance of one of these was measured to be at least three times stronger than the commercial sunscreen avobenzone.