MICHAEL BATES#, JOSHUA BENFIELD, THEUNIS VAN AARDT, and JON SERRA, Department of Natural Sciences and Mathematics, West Liberty University, West Liberty, WV, 26074**. Synthesizing trans-pterocarpans.**

The goal of this research is to synthesize trans-pterocarpans, an unnatural isoflavonoid. Trans-pterocarpans are of interest because they may display increased steroidal activity when compared to the natural cis-pterocarpans. First, a Williamson ether synthesis is performed using benzylchloride on the hydroxyl functional group of 2-hydroxy-4-methoxy-acetophenone. This protected acetophenone has been collected in 85% yield and verified by 1H-NMR and 13C-NMR. The protected acetophenone is currently being reacted with thallium trinitrate in order to rearrange the molecule into a protected phenylacetic ester compound. The protected phenylacetic ester will then be combined with a protected benzaldehyde via an aldol condensation. These aldol products are then converted to trans-pterocarpans through cyclization of the 5-membered ring followed by the 6-membered ring using protection and deprotection methods.