JAMES HORNER#, MCKENSIE MASON, THEUNIS VAN AARDT, and JON SERRA, Department of Natural Sciences and Mathematics, West Liberty University, West Liberty, WV, 26074. **Synthesis of trans-Pterocarpans.**

The objective of the research project is to synthetically produce trans-pterocarpans, a new but non-naturally occurring flavonoid. In order to achieve this, a synthetic method must be developed to produce the desired stereo outcome of the pterocarpan product. First, a Williamson ether synthesis is performed to protect the hydroxyl functional group of a benzaldehyde molecule, to be later combined via an aldol condensation with a protected acetophenone. The aldol products can then be converted to trans-pterocarpans by sequential cyclization of the 5-membered ring and the 6-membered ring using protection and deprotection procedures. At this point, the aldol condensation has been completed; however, the reaction procedure needs to be optimized in order to achieve better yields. The presence of the aldol product was verified via NMR, including H1, C13, DEPT, HETCOR, and COSY spectrums.