

ENHANCED SECONDARY METABOLITE PRODUCTION BY MICROBIAL CO-CULTURES. Chris Witowski, Bill J. Baker, Department of Chemistry, University of South Florida, 4202 E. Fowler Ave CHE205, Tampa, FL 33620.

Microorganisms are a rich source of bioactive natural products beneficial in drug discovery. Competitive interactions are a prominent factor in secondary metabolite production. However, typical isolated cultivation techniques do not harness the complete chemical diversity found in their natural environment. Recently, microbial mixed fermentations have been employed to increase yields of previously described metabolites and induce production of novel secondary metabolites. Isolation of a marine endophytic fungus from a *Xestospongia muta* sponge has been shown to inhibit the growth of *Aspergillus niger*, a common foodstuff and laboratory mold contaminant. A co-culture technique of both fungi was utilized and lead to increased metabolite production from pure cultures. The research herein describes the methods and preliminary results from the co-cultures.