## ENGINEERED POLYKETIDE SYNTHASES: MOLECULAR FOUNDRIES FOR COMMODITY CHEMICALS, SPECIALTY CHEMICALS, AND BIOFUELS

Jay Keasling, Departments of Chemical Engineering and Bioengineering, University of California, Berkeley, CA 94720 Biological Systems and Engineering Division, Lawrence Berkeley National Laboratory, Berkeley, CA 94720 Joint BioEnergy Institute, Emeryville, CA 94608 jdkeasling@lbl.gov

Engineered modular polyketide synthases (PKSs) have the potential to be an extraordinarily effective platform for synthesis of commodity and specialty chemicals as well as biofuels. We have engineered PKSs to produce a variety of molecules, including diacids, hydroxyacids, biofuels and fragrances. In my talk, I will highlight our work on engineering hybrid PKSs to produce these products. In addition, I will discuss our work to develop tools to engineer Streptomyces venezuelae and other Streptomycetes to better control expression of these hybrid PKSs to maximize production of the desired final product