

P-014: METABOLIC ENGINEERING OF *SACCHAROMYCES CEREVISIAE* TO PRODUCE GIBBERELLIN SKELETONS

Caroline V. Pardue, Quanbo Xiong and Seiichi P. T. Matsuda
Rice University, Houston, TX 77005

Diterpenoids are a large class of natural products derived from the C-20 precursor geranylgeranyl pyrophosphate. Among these compounds are gibberellins, plant hormones that regulate processes such as growth, seed germination and flowering. We report here a *Saccharomyces cerevisiae* strain that was genetically engineered to produce geranylgeranyl pyrophosphate. Extensive modification of this host resulted in derivatives that accumulate gibberellin precursors. The yeast strain demonstrates its potential for use in characterizing novel diterpene synthases and generating commercially useful compounds.