

Synthesis of A Non-Natural Substrate for PFTase

Protein Farnesyl Transferase (PFTase) has numerous natural and non-natural substrates. PFTase covalently links these substrates to proteins and peptides ending in the amino acid sequence CVIA by a prenylation reaction. Three steps of the synthesis of a non-natural substrate have successfully been completed. Tetrazine, which can undergo a click reaction with cyclooctene and norbornene strained rings, was also made but has not yet been purified. Through this research the identity of new substrates for PFTase that include analogs with strained rings are trying to be determined. Discovering new non-natural substrates for PFTase will create the ability for bioconjugation without using toxic copper catalysts.