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(54) Title: MODIFIED TERPENE SYNTHASES AND THEIR USE FOR PRODUCTION OF PSEUDOPTEROSIN INTERMEDIATES AND/OR PSEUDOPTEROSINS

(57) Abstract: The present invention pertains to novel modified terpene synthases and their use for a preparation method for pseudopteriosin intermediates and/or pseudopteriosins. The method is based on the use of a modified terpene synthase comprising at least one modified amino acid residue, which enables a terpene synthase-catalyzed increased production of pseudopteriosin intermediates and/or pseudopteriosins from Geranylgeranyl pyrophosphate as starting material. The new modified terpene synthase of this invention allow the production of pseudopteriosin intermediates, such as Isoelisabethatriene A, Isoelisabethatriene B, Erogorgiaene, or Seco-Pseudopteriosin and/or the production of pseudopteriosins, such as Pseudopteriosin A, in a cost-efficient, economical, and sustainable manner. Also provided are nucleic acids, encoding for the modified terpene synthases of this invention, as well as expression vectors capable of expressing said nucleic acids and host cells comprising the same.



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