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(54) Title: NUCLEIC ACID MOLECULE ENCODING TRITERPENOID SYNTHASE

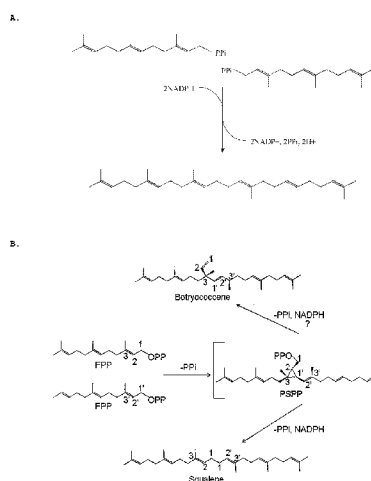


Figure 36. Conversion of two farnesyl pyrophosphate C₁₅ units to the squalene C₃₀ unit by the enzyme squalene synthase, or to the botryococcene C₃₀ unit by the enzyme botryococcene synthase, each with NADPH cofactor.

(57) Abstract: The invention relates to an isolated nucleic acid molecule encoding a polypeptide capable of producing a triterpenoid hydrocarbon. The invention also relates to the encoded polypeptide, a vector comprising the nucleic acid molecule, a recombinant non-human organism comprising the nucleic acid molecule, and to methods of producing a triterpenoid hydrocarbon or an intermediate of biofuel using the nucleic acid molecule, polypeptide or recombinant organism.