Synthesis of isomeric farnesols by soluble enzymes from Pinus radiata seedlings

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Water soluble enzymes obtained from Pinus radiata seedlings form two sesquiterpene alcohols from 2-14C mevalonic acid. They have been identified as 2,6-trans,trans-farnesol and 2-cis,6-trans-farnesol. The pyrophosphate of the former prenol could be isolated, but there was no evidence of the presence of phosphorylated derivatives of the cis isomer. The same pair of sesquiterpene alcohols and trans-farnesyl pyrophosphate are formed from isopentenyl pyrophosphate plus geranyl pyrophosphate (2-trans). Neryl pyrophosphate (2-cis) is completely inactive as a precursor of farnesols. Isomerization of trans- to cis-farnesyl pyrophosphate did not occur in this system. © 1972.