

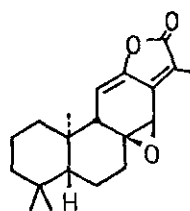
TOTAL SYNTHESIS OF JOLKINOLIDE A,B AND E

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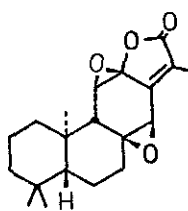
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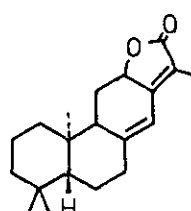
Jolkinolide B has a novel epoxybutenolide function and its cytotoxicity has been reported. The first efficient synthesis of jolkinolide A,B, and E is reported. Jolkinolide A was synthesized starting from 9-carbomethoxy- $\Delta^{6(7)}$ -4,4,10-trimethyl decalone via enone 1 and diosphenol 2. The key step is the esterification of diosphenol 2 by means of mixed anhydride of trichloroacetic acid and α -phosphonopropionic acid in the aid of 4-dimethylaminopyridine followed by intramolecular Wittig-Emmons reaction. The above method promises to be useful in the synthesis of cyclic γ -alkylidene- α,β -substituted butenolides. Jolkinolide E was also synthesized from 1 via α -hydroxy compound of 1 by the same reaction sequences.



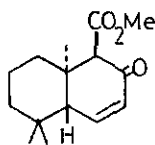
Jolkinolide A



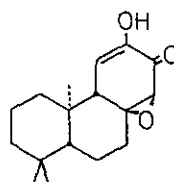
J. B



J. E



1



2