NEW APPROACH TO THE SYNTHESES OF DERIVATIVES OF NATURAL COMPOUND DIHYDROACTINIDIOLIDE

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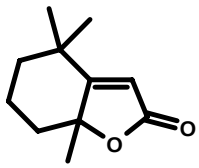
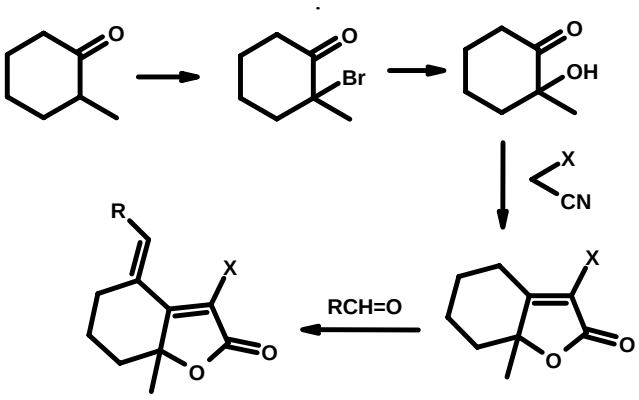
Dihydroactinidiolide has been isolated from number of plants, e.g. spikerush, tea leaves, tobacco and cassia. Its phytotoxic nature was observed in investigation[1].



Dihydroactinidiolide

A convenient approach has been developed for syntheses of some 3-substituted functionalized derivatives. The initial ketol **II** was synthesized by alkaline hydrolysis of corresponding α-bromo derivative **I,** obtained by brominating of 2-methylcyclohexanone and distillated under reduced pressure. Bromination took place for tertiary carbon with good yield. Lactones **III** were synthesized through the interaction of **II** with substituted ethylacetates in ethanol solution in the presence of sodium ethylate.



X = CN, $CO_2C_2H_5$, $C(O)CH_3$, Ar

R = Alk, Ar, Het

α-Methylene group of unsaturated bond of **III** reacts with various aldehydes with formation of targeted derivatives **IV**.

References

K.L. Stevens, G.B. Merrill, Growth Inhibitors from Spikerush, *J.Agric. Food Chem.,* 1980, 28, 644-646.