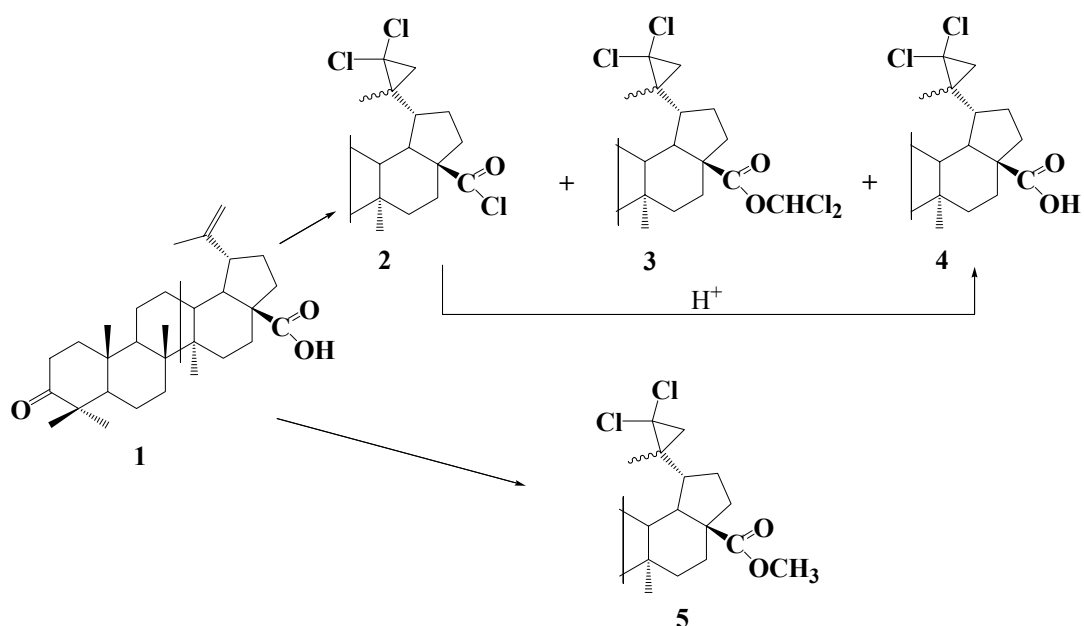


## Reaction of Betulonic Acid with Dichlorocarbene

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The purpose of our investigation is a search of effective synthetic pathway for lupane triterpenoid transformations to the compounds with some new farmacological properties. In this connection the reaction of betulonic acid **1** with dichlorocarbene generated in phase transfer catalysis conditions ( $\text{CHCl}_3$ , 50% NaOH, TEBA) has been studied. High stereoselective cycloaddition of dichlorocarbene to double bond of acid **1** was found to be accompaniend by dichlorocarbene attack on carboxyl group leading to *gem*-dichlorocyclopropane chloroanhydride **2**, dichloromethyl ester **3** and acid **4** only in some cases. The ratio of the compounds **2-4** depends on the dichlorocarbene concentration. Acidic hydrolysis of chloroanhydride **2** results in acid **4**. The reaction of dichlorocarbene with acid **1** methyl ester leads to corresponding adduct **5** in a high yield. An antiviral activity of compounds **2-5** synthesized is being studied.



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