

# Synthesis of *nor*-Hydroperoxides from Natural Triterpenic Acids

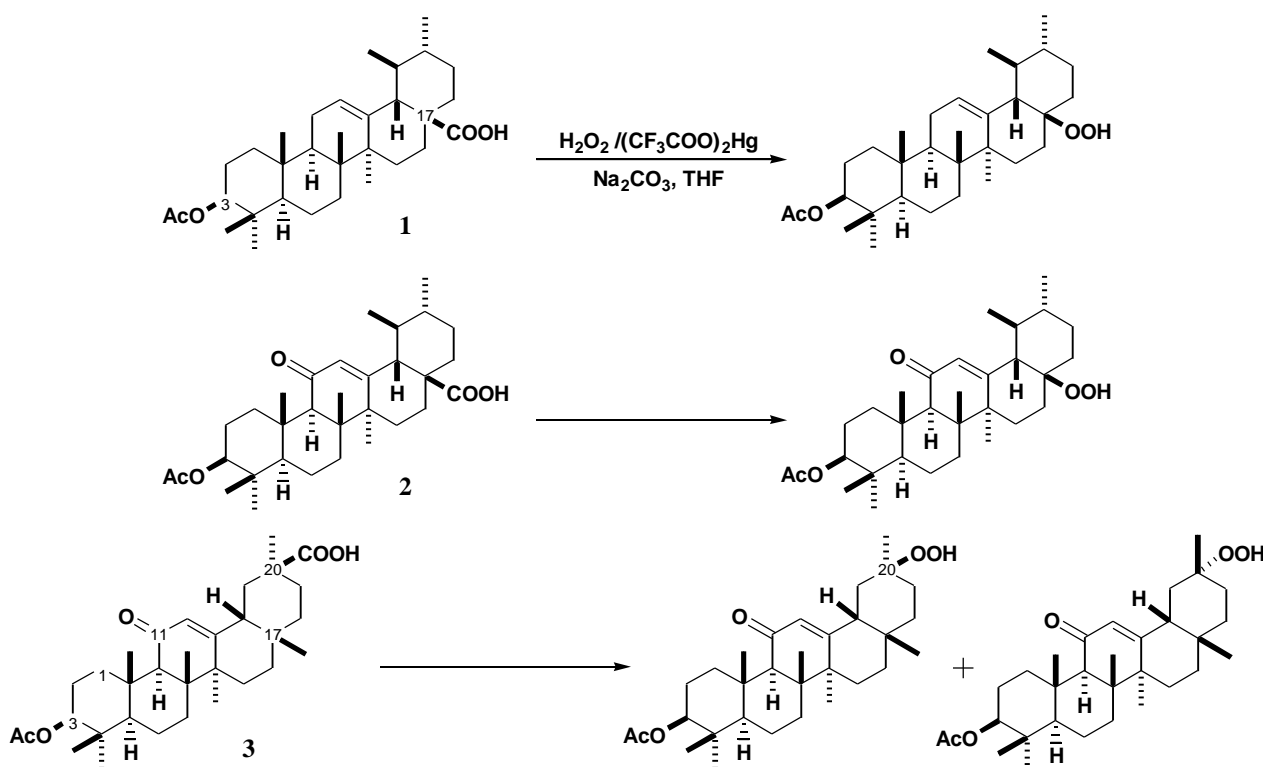
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Study of oxidative transformations of easily available natural pentacyclic triterpenoids is of great interest from the view point of development of new methods for oxidative modification of natural products and syntheses of new derivatives of natural biologically active compounds. Oxidative decarboxylation with hydrogen peroxide in the presence of a mercury (II) salts was used for preparation of *nor*-hydroxy derivatives of acetyloleanolic and acetylursolic acids, with the reaction proceeding *via* the formation of *nor*-hydroperoxides.<sup>1</sup> Hydroperoxides of natural molecules are interesting intermediates and prospective biologically active substances. We studied preparation of *nor*-hydroperoxides from 3-O-acetylursolic (**1**), 11-oxo-3-O-acetylursolic (**2**) and 3-O-acetylgyrrhetic (**3**) acids.

Oxidation of 3-O-acetylursolic (**1**) and 11-oxo-3-O-acetylursolic (**2**) acids results in each case in the sole stereoisomeric derivative having 17 $\beta$ -hydroperoxy group, while the reaction of 3-O-acetylgyrrhetic (**3**) leads to *ca.* 5:2 mixture of C-20 epimers.

Method of preparation of the above *nor*-hydroperoxides, their spectral properties and chemical transformations are discussed.



<sup>1</sup> Tkachev A.V., Denisov A.Yu. *Tetrahedron*. 1994, vol. 50, No. 8, p. 2591-2598.