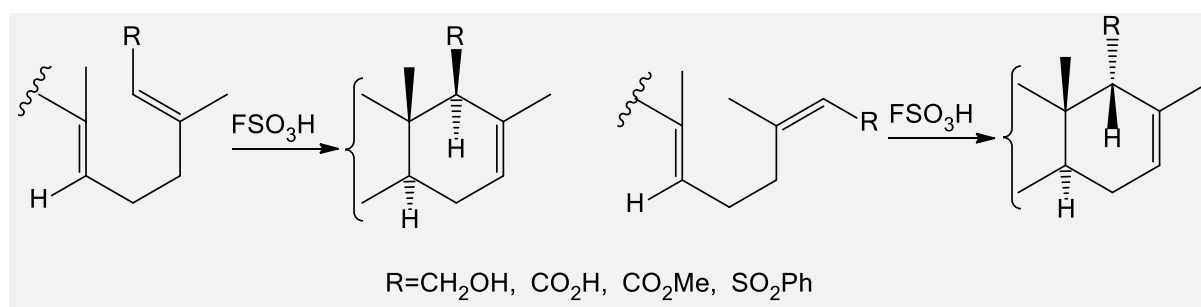


THE VLAD REACTION – A DISCOVERY IN THE CHEMISTRY OF NATURAL COMPOUNDS

The Wurtz reaction, Wittig reaction, Bayer-Williger reaction... This list of scientific discoveries, which perpetuate the names of the authors, may be continued. It is certain though that the name of the Moldavian **academician Pavel Vlad** will not be missing from the list.

The Vlad reaction - a term already used in the international scientific circles in the field of natural compound chemistry - represents the cyclization reaction of aliphatic terpenoids with superacids. The fundamental character of the *Vlad reaction* was proved by establishing the laws of the reaction for different classes of terpene compounds: alcohols, their acetates, acids, esters, etc.



This remarkable achievement of academician Vlad brings a considerable contribution in the development of the biogenetic rule of isoprene in the series of terpenoids, opens perspectives in the search of new compounds with specific properties, valuable for science and practice. The discovery ranks today at the world top of the study of the processes of superacid cyclization of terpenoids, being cited by well-known foreign scientists such as the Nobel Prize Laureates in Chemistry [Derek Harold Richard Barton](#) (UK), [George Andrew Olah](#) (USA), and renowned scientists Jean -Claude Jacquesy (France), [Peter Welzel](#) (Germany). The latter also named the superacid cyclization reaction of labdanoids - the [Vlad reaction](#).

Practical applications of the Vlad reaction are found in:

- ❖ elaboration of new methods for obtaining ambroxide and homofixer - extremely valuable compounds for the perfume and cosmetics industry;
- ❖ the unique realization of the synthesis of a series of natural compounds and their analogues that have increased biological activity (anti-cancer, anti-HIV-1, antifungal, antibacterial, anti-inflammatory), which are of interest to the pharmaceutical industry and environmental protection.

The valuable scientific results of academician Pavel Vlad, obtained in the field of the study of superacid cyclization of terpenoids, have been described in over 250 original publications in prestigious periodicals in the country and abroad.