

Syntheses of New β -Bifunctionalized Derivatives and Annelated Pyrimidines Based on Natural Monoterpenes (+)-3-Carene and Limonene

Sergey A. Popov, Alexey V. Tkachev

Novosibirsk Institute of Organic Chemistry, Acad Lavrentjev Ave. 9, Novosibirsk 630090, Russia.
e-mail: spopov@nioch.nsc.ru

β -Enaminones are established as versatile synthetic intermediates presumably in heterocyclic chemistry. We have investigated the synthetic routes from readily accessible enaminones **3** derived from seco-derivatives of (+)-carene (**1**) and limonene (**2**) to β -chlorovinylketones **5**, enaminones **8** and **9**, and 2-substituted pyrimidines **4** and **7**. Containing physiologically active amine moiety, enaminones **8** and **9** may be considered as prodrugs. Pharmacokinetic advantages of such compounds are supposed as follows: better stability, improved transport *via* membranes, lower toxicity. On the other hand, due to their moderate lability to hydrolysis N-acylated derivatives **10** are also of interest in case of presence of a physiologically active acid moiety. Some pyrimidine derivatives **4** and **7** are prospective as synthones for chemotherapeutical's preparations. Synthetic procedures, structure elucidation and mechanistic consideration will be presented in details.

