NEW ADAMANTANE-CONTAINING WITHASOMNINE ANALOGUES

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The new adamantane-containing heterocyclic compounds derived from 5,6-dihydro-4\(H\)-pyrrolo[1,2-\(b\)]pyrazole (1) and 1,3,10-triazatricyclo[5.2.1.0\(4.10\)]dec-6-en-2-one (2) were prepared. For these syntheses lately developed method [1] based on the reaction of a suitable diethyl-alkylidenehydrazidophosphate (3) with 2,2-dimethyl-3-alkylpent-3,4-dienal (4) was used. Resulting nonsymmetrical azines (5) (see Scheme 1) cyclized in xylene under heating with or without presence of alkyl/aryl isocyanate to afford derivatives of 2 or 1, respectively. Although several methods for synthesis of withasomnine itself were developed [2], our procedure permits easy preparation of substituted analogues of withasomnine alkaloid family. These alkaloids have been isolated from several subtropical plants e.g. Whitania somnifera, Newbouldia leavis or Elytraria acaulis [3] and display various biological activity [3,4]. Therefore, a preliminary biological screening of our new compounds was performed.

\textbf{Scheme 1}