

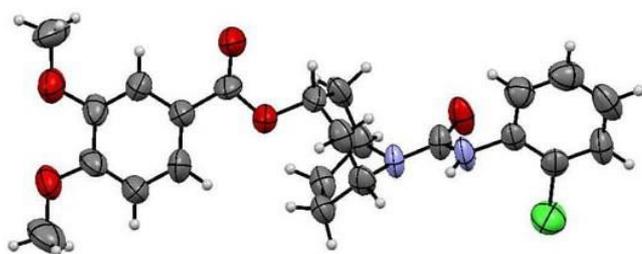
PP45. SYNTHETIC DERIVATIVES BASED ON TROPANE ALKALOIDS

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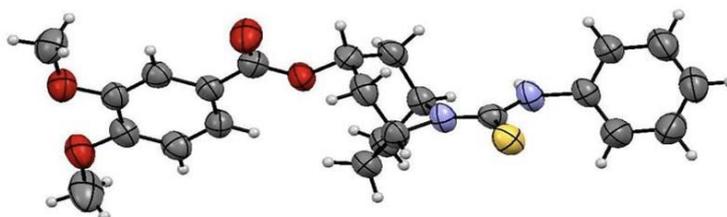
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Previously, it was found that the *Convolvulus subhirsutus* plant growing in various regions of Uzbekistan, Kazakhstan and Tajikistan contains significant amounts of tropane alkaloids, the main of which is the convolvin alkaloid (3,4- dimethoxybenzoyloxy-nortropine) - a derivative of nortropine. Due to the sufficient availability of convolvin, a number of its derivatives were obtained in order to search for substances with valuable pharmacological properties. In this regard, the synthesis of other convolvin derivatives was also of interest. We investigated the interaction of the convolvin (1) alkaloid with the homologous series of alkyl halides 2a-g. It is established that all reactions take place with heating at the boiling point of the solvent with yields of 60-85 %. The structures of the synthesized compounds 3a-g have been proved on the basis of IR and NMR spectroscopy data. For compounds 3c, 3e and 3f, the spatial structure was determined by X-ray diffraction analysis of their hydrochlorides. The structures of the synthesized compounds were proved on the basis of IR and NMR spectroscopy data. For the hydrochlorides of the compounds N-hexyl-, N-octyl- and N-nonyl derivatives of convolvin, the spatial structure was established by the RSA method. Next, we investigated the interaction of the convolvin alkaloid with a number of isocyanates. Synthesized: convolvin N-phenylisocyanate (**3a**), convolvin N-allylisocyanate (**3b**), convolvin N-thiophenylisocyanate (**3c**), convolvin N-o-chlorphenylisocyanate (**3d**), convolvin N-m-chlorphenylisocyanate (**3f**), convolvin N-ethylisocyanate (**3e**). The spatial structure of **3d** and **3c** is established by the X-ray method.



Convolvin N-o-chlorphenylisocyanate (**3d**)



Convolvin N-Thiophenylisocyanate (**3c**)