

P-18

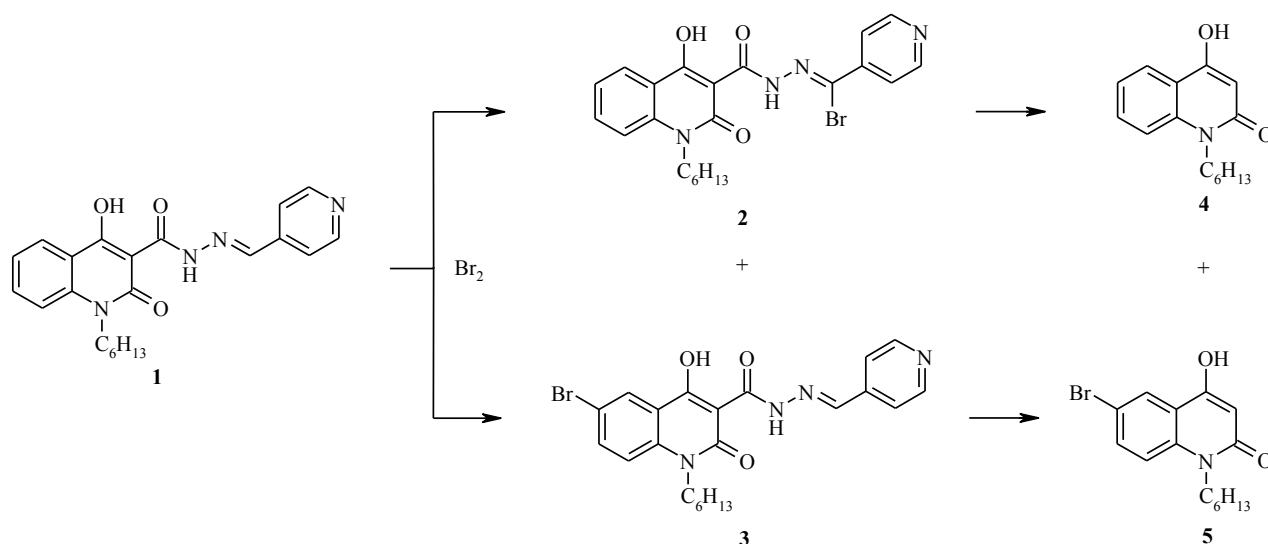
A Study of Reaction of Pyridine-4-ylmethylene Hydrazone 1-Hexyl-4-hydroxy-2-oxo-1,2-dihydroquinoline-3-carboxylic Acid and Molecular Bromine

Ye.V. Mospanova ^a, I.V. Ukrainets ^b

^a *Kyiv National University of Technologies and Design, Kyiv, Ukraine;*
e-mail: elena_mospanova@list.ru

^b *National University of Pharmacy, Kharkiv, Ukraine, e-mail: uiv@kharkov.ua*

Chemical reactions of various amide derivatives of 4-hydroxy-2-oxo-1,2-dihydroquinoline-3-carboxylic acids with molecular bromine do not always proceed in an unambiguous manner, often leading to the formation of quite unexpected final products and therefore attracting special attention from organic chemists. Thus, using pyridine-4-ylmethylene hydrazone 1-hexyl-4-hydroxy-2-oxo-1,2-dihydroquinoline-3-carboxylic acid (**1**) as an example, we have shown that, regardless of external conditions, its bromination in glacial acetic acid leads to the formation of two different types of products. Under ordinary conditions, it is the less reactive center - the azomethine carbon atom that mostly undergoes bromination to yield (bromopyridine-4-ylmethylene) –hydrazone (**2**).



As it turned out, in the hydrazone molecule (**1**), another real target for an electrophilic attack is the 6 position of the quinolone nucleus, and the result of its involvement in the reaction under study is a minor 6-bromo hydrazone (**3**). If the reaction is carried out in a sealed tube, more profound chemical transformations occur leading to the destruction of both hydrazones and the formation of 1-hexyl-4-hydroxy-1H-quinolin-2-one (**4**) and of its 6-bromo analogue (**5**).