

Synthesis of new derivatives of quinolines fused with thiazolidinones and thiazolidines

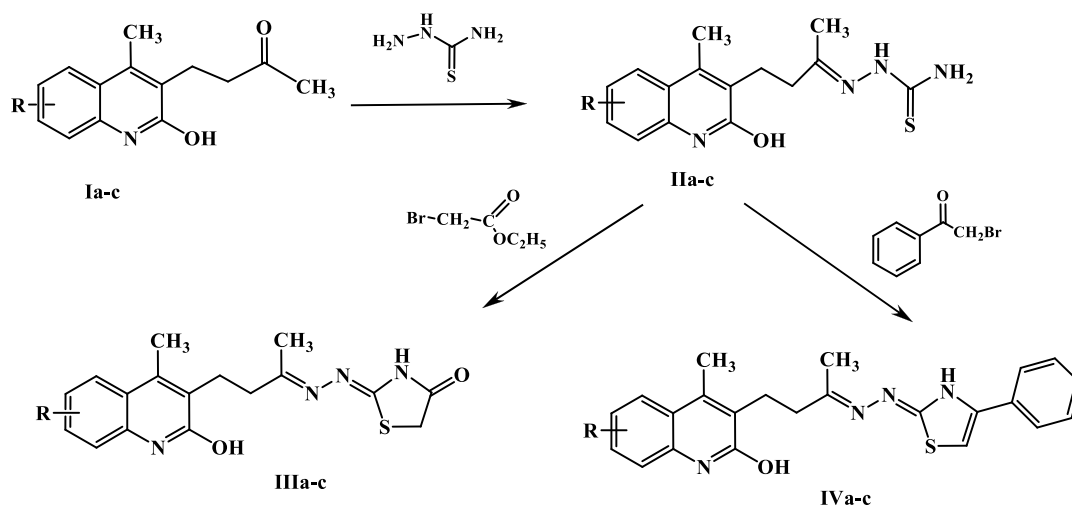
Aleksanyan I.L., Hambardzumyan L.P.

Yerevan State University

Armenia, Yerevan, st. Alek Manukyan 1, 0025.

lilit_hambardzumyan@ysu.am

Quinoline and its derivatives have always attracted both synthetic and biological chemist because of its diverse chemical and pharmacological properties [1]. Quinoline derivatives fused with various heterocycles have displayed potent anticancer activity targeting different sites like topoisomerase I, telomerase, farnesyl transferase, Src tyrosine kinase, protein kinase CK-II etc [2-6]. Accordingly, the present work is aimed at the design and synthesis of new thiazolidinone and thiazolidine quinoline compounds on base of those semicarbazones of benz-substituted 4-(2-hydroxy-4-methylquinolin-4-yl)butan-2-ones [7]. For synthesis of these target heterarylquinolines the initial quinolyl-substituted butan-2-ones (Ia-c) were refluxed with thiosemicarbazide in absolute ethanol in ratio 1:1 [8]. It was found out that thiosemicarbazones (IIa-c) are formed as a result of the reaction in the form of syn- and anti-isomers at the ratio 1:3. The condensation of the thiosemicarbazones (IIa-c) with ethyl bromoacetate and bromoacetophenone (phenacyl bromide) in the presence of sodium acetate was accompanied by closing of thiazolidinone and thiazolidine rings, resulting in the formation of substituted in the benzene rings 2-hydroxy-3-[3-(thiazol-4-on-2(3H)-ylidenehydrazino)butyl]- (IIIa-c) and 2-hydroxy-3-[3-(4-phenylthiazol-2(3H)-ylidenehydrazino)butyl]- (IVa-c) 4-methylquinolines.



R = H(a); 6-CH₃ (b); 8-CH₃ (c)

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