SYNTHESIS OF FUSED ISOQUINOLINES BASED ON ANTHRANILIC ACID

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The small number of recorded synthetic routes to derivatives of the partially reduced isoquino[2,3-a]quinazoline (3) and the isoquino[3,2-b]quinazoline (4), together with the recent interest in the potential medicinal use of derivatives of (4), prompts us to record useful routes to these heterocycles.

It was found that anthranilic acids (1) react with the 2-[2-(bromomethyl)phenyl]acetonitrile (2) to derivatives of 7,12-dihydro-5H-isoquino[2,3-a]quinazolin-5-ones (3a-b), 6,11-dihydro-13H-isoquino[3,2-b]quinazolin-13-ones (4a,b), 6H,12H,17H-dibenzo[3,4;6,7]naphthyridino[1,8-ab]quinazoline-6,17-diones (5a,c,d), which are b-annelated isoquinoline derivatives. The result of reaction depends on both the position and the effects of radicals in the anthranilic acids and the reaction conditions. It was found that naphthyridines 5 are not the products of conversion of isoquino[2,3-a]quinazolines 3, while compounds 4 are the result of such thermal rearrangement of 3. Melting together of substances 1, 2 and p-toluidine yields 6-(4-methylphenyl)-6,12-dihydro-5H-isoquino[2,3-a]quinazolin-5-one (6).

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