THE SYNTHESIS OF NEW HYBRID MOLECULES CONTAINING 1,4-DIHYDROPYRIDINE (OR PYRIDINE) AND 1,2,3-TRIAZOLE FRAGMENTS AS POTENTIAL ANTIHYPERTENSIVE DRUGS

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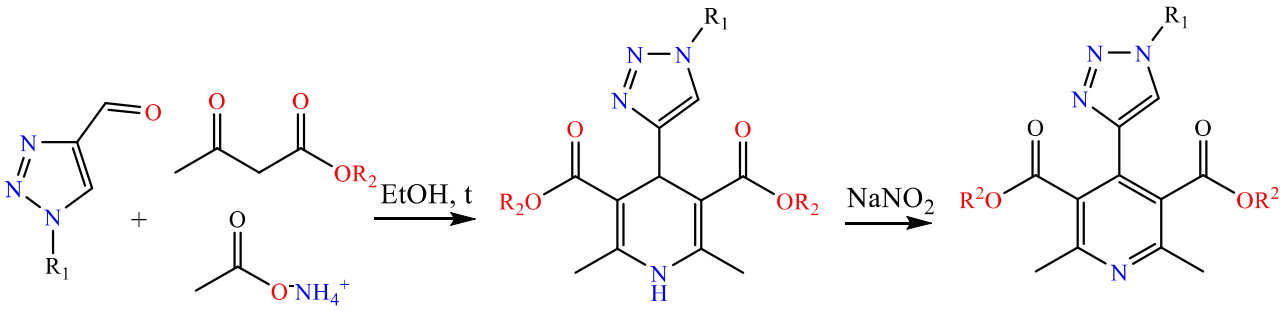
1,4-Dihydropyridines are of great interest while modeling biological processes for many reasons. Firstly, they constitute synthetic analogs of NADH – coenzyme central to metabolism, which is involved in many redox reactions, carrying electrons from one molecule to another. Secondly, a large group of calcium antagonist drugs is represented by 1,4-dihydropyridine derivatives (nifedipine, nitrendipine, nimodipine, amlodipine, lacidipine, felodipine, nicardipine, isradipine, lercanidipine, etc.).

Hantzsch reaction allows the preparation of symmetrical 1,4-dihydropyridines using wide range of practically available aliphatic, aromatic or heterocyclic aldehydes, various derivatives of acetoacetic ester and ammonia (or primary amines). This makes the reaction very promising for the search for new biologically active compounds and their further chemical modification.

At the same time, 1,4-dihydropyridines comprising 1,2,3-triazole moiety at C4 have not been described in the literature. Thereby, we applied Hantzsch reaction to the synthesis of 2,6-dimethyl-4-(1*H*-1,2,3-triazol-4-yl)-1,4-dihydropyridine-3,5-dicarboxylates and 2,6-dimethyl-4-(1*H*-1,2,3-triazol-4-yl)pyridine-3,5-dicarboxylates.

The structure and purity of the synthesized compounds were proved by ^{1}H and ^{13}C NMR spectroscopy as well as LC-MS experiments.



R_1 = Alk, Ar, Ht
R_2 = Alk, Ar