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Synthesis of Novel Quinoline-substituted 1,4-dihydropyridine Derivatives via Hantzsch Reaction in Aqueous Medium: Potential Bioactive Compounds

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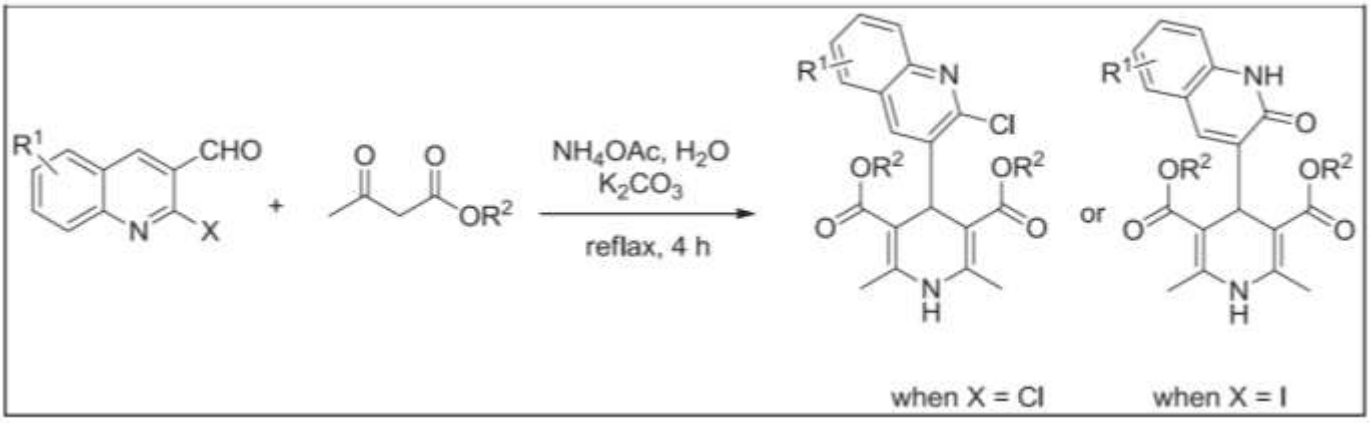
Abstract



The synthesis of a novel series of substituted 1,4-dihydropyridines was achieved in aqueous media by base-catalyzed three-component Hantzsch reaction of 2-chloroquinoline-3-carbaldehydes, ammonium acetate, and alkyl acteoacetate in good to high yields. Important advantages of this method are easy access to a library of novel quinoline and quinolone derivatives, green reaction conditions with water as solvent, and ease of purification.

Keywords: 1,4 dihydropyridine derivative, 2 chloroquinoline 3 carbaldehyde derivative, ammonium acetate, chloroquine, quinoline derivative, quinolone derivative, unclassified drug, aqueous solution, biological activity, drug purification, drug synthesis, hantzsch reaction.