Controlled Doebner-, Groebke- and Ugi-type Multicomponent Reactions Involving Aminoazoles with Further *In Vitro* Antibacterial and Antiviral Activity Evaluation Studies of the Reaction Products

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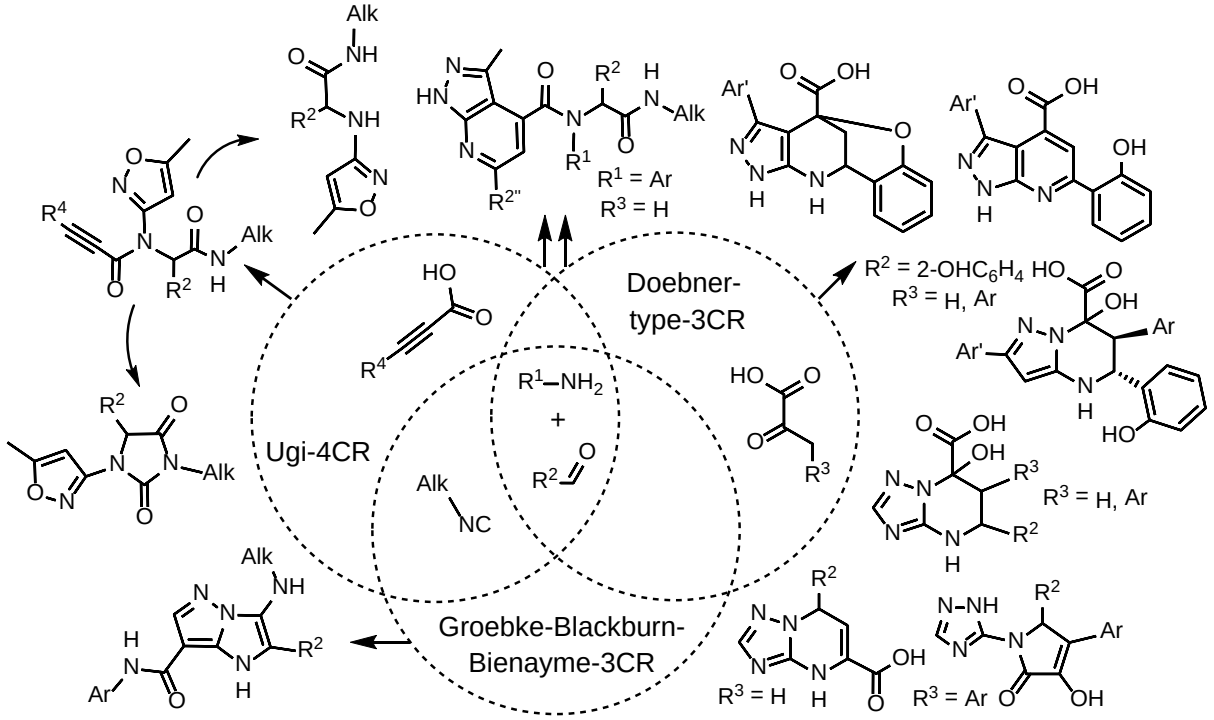
Recently the focus of Organic Chemistry has concentrated on the creation of libraries of structurally complex compounds for filling and systematical investigation of the chemical space within the concepts of Diversity and Medical oriented syntheses with the aim of finding new biologically active compounds.[1-3] From this point of view, MCRs, i.e. of Doebner-[2] and Ugi-types,[3] and their combinations are the powerful tool to access the diversity as well as the complexity of final compounds in one-pot procedure.

In the present study the series of aminoazoles was applied in a controlled Doebner-3CR, Groebke-3CR and Ugi-4CR that were often followed by the subsequent post-transformations. Moreover, a modification of the classical Ugi-4CR by introducing pyrazolopyridine carboxylic acids previously synthesized in the Doebner-3CR[2] was carried out. Antimicrobial and antiviral activity of the compounds synthesized was studied as well showing their probiotic properties and activity against A/H1N1 virus.



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