

Synthesis of hybrid 1-5 disubstituted Tetrazoles by Ugi-azide reaction

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Multicomponent reactions (MCR) are powerful tools toward the synthesis of a large variety of interesting scaffolds even heterocycles. MCR are defined as one pot processes in which three or more reagents are sequentially combined to afford products having the majority of the atoms present in the starting reagents. The main applications of MCR are in Diversity Oriented Synthesis (DOS) and Combinatorial Chemistry (CC). The most important MCR are the isocyanide-based multicomponent reactions (I-MCR) such as Ugi reactions e.g. the classic Ugi-4CR, Ugi-3CR, Ugi-Smiles, Ugi-Nenajdenko, Ugi-Interrupted (Groebke-Blackburn-Bienaymé), and Ugi-azide. This latter allows the synthesis of 1,5-disubstituted Tetrazoles of high interest in medicinal chemistry because their ability to adopt conformations of *cis*-amide bond of peptides. On this occasion, I will show my results lately published just regarding the use of the Ugi-azide reaction towards the synthesis of 1,5-disubstituted Tetrazole-based hybrid compounds and some of their applications, mainly in medicinal chemistry.