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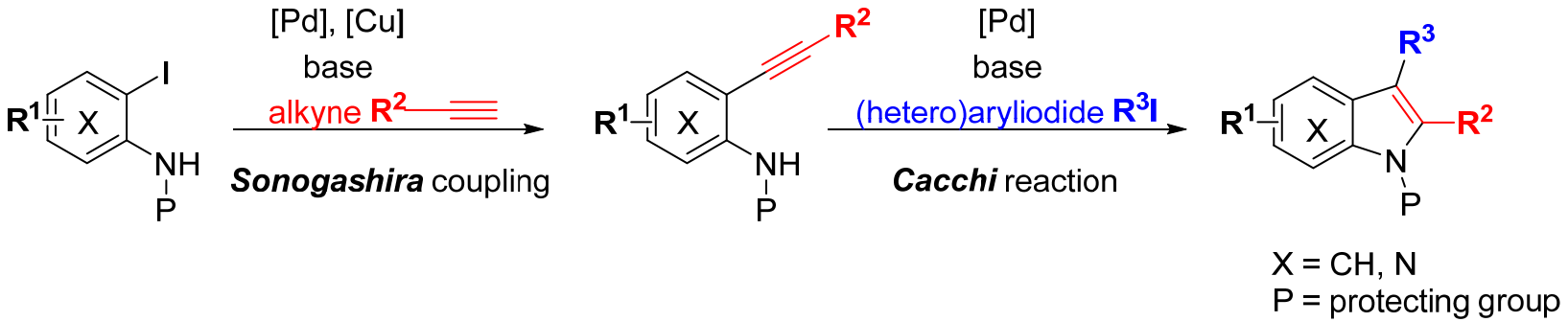
Diversity-oriented synthesis of biheteroaryls as apoptosis inducers and biindole derivatives with variable (hetero)cyclic bridges against therapy resistant bacteria

Indole as a heteroatomic molecule with its simple bicyclic structure is found in a vast number of organisms, both as a building block for proteins as well as chemically modified indole derivatives that function as neurotransmitters. In past decades, scientific literature has been published, in which indole alkaloids have been isolated from small organisms. Some of these indole-based alkaloids were proven to exhibit anti-microbial, anti-inflammatory as well as apoptosis inducing properties, among many others. Therefore, establishing methodologies for the synthesis of various substituted indole derivatives may help to discover novel biologically active compounds. Substituted indoles can be synthesized via one-pot sequential palladium-catalyzed Sonogashira-Cacchi protocol. Variation of the coupling agents used for synthesis should enable a diversity-oriented library of substitued indoles.



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