OR19 – Rh(III)-Catalyzed Synthesis and Functionalization of \(N\)-Heterocycles via C–H Bond Activation

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With considerable progress in medicinal chemistry, the construction of heterocycles has received increasing attention in the past decades. In particular, \(N\)-heterocycles such as indoles, indolines, indazoles, and cinnolinones are widely found to be biologically relevant scaffold in natural products, pharmaceuticals, agrochemicals, and functional materials. Therefore, the directing group-assisted \(N\)-heterocycles synthesis via C–H bond activation is highly attractive in pharmaceutical industry. Recently, our groups reported the rhodium-catalyzed tandem heterocycle formation and functionalization via C–H activation reaction of anilines, hydrazines, azobenzenes, and etc. Moreover, we recently focused the construction of other \(N\)-heterocycles via tandem C–C bond formation followed by intramolecular cyclization.\(^1\)

We herein describe a brief summary of our recent works and present progress works to synthesize other biologically relevant heterocycles via C-H activation.

Reference