Total synthesis of welwistatin using rhodium (II) catalyzed diazoketone rearrangement

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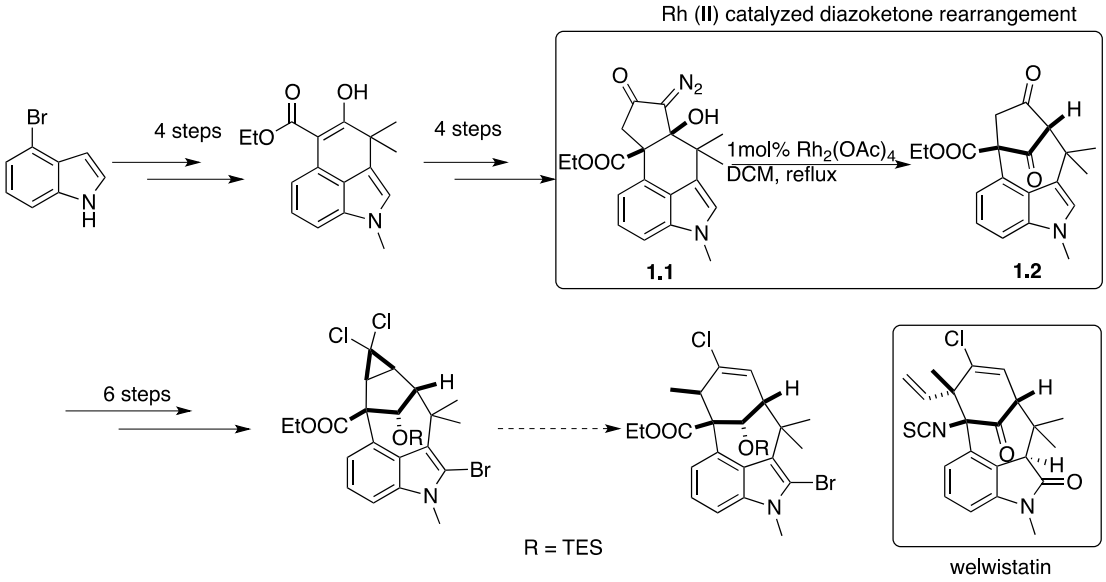
Abstract

(−)-Welwistatin is a natural product showing significant anti-multiple drug resistance (anti-MDR) activity. In 2012, Rawal[1] and Garg[2] independently published the total synthesis of welwistatin. As recent as 2015, Hatakeyama[3] developed a strategy to synthesize it in 24 steps.

The aim of this project is to utilize the rhodium (II) catalyzed diazoketone rearrangement as the key step in a synthetic approach to welwistatin. The α-diazo-β-hydroxyketone intermediate **1.1** has been synthesized to investigate the strategy. We found that the [4.2.1] bicyclic dione **1.2** was found as the sole product in good yield (77% brsm). Efforts to convert it to the welwistatin core structure are ongoing.



References

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