Cascade Based Approach for the Stereoselective Synthesis of Biologically Relevant Molecules

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Stereoselective synthesis of complex organic molecules that are biologically active and clinically important is a very desired goal in present day chemistry - possibly because of their immediate application in pharmaceutical industry as drugs with high market potential. One way that molecular complexity can be expeditiously constructed is by combining two or more distinct reactions into a single transformation. One of the most effective ways of achieving the carbon-carbon bond formation is through radical cyclization. The one-electron oxidation of carbanion is one of the easiest ways of generating carbon-centered radicals, however the synthetic potential of the oxidative cyclization of carbanion strategy has not been fully explored in the stereoselective synthesis of biologically important molecules. In this presentation, our cascade-based strategies towards the synthesis of some of the molecules will be discussed.

References