Base-dependent formation of cis and trans olefins and their application in the synthesis of 5-oxo-ETE receptor antagonists

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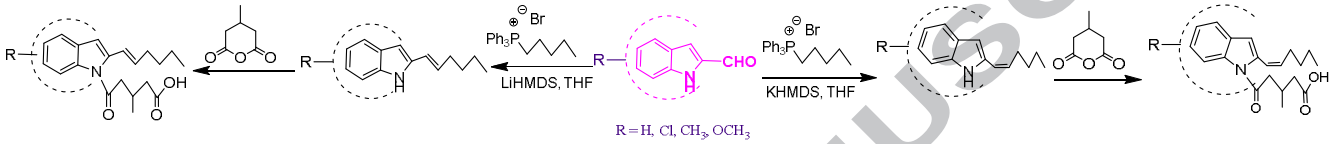

5-Oxo-ETE is the most potent eosinophil chemoattractant among lipid mediators. We have developed two 5-oxo-ETE receptor antagonists. In the course of the work, we have developed a procedure to selectively introduce a cis and trans double bond in an alkyl side chain. Reacting indolecarboxaldehydes with alkyl ylides using the Li base affords the trans olefins, whereas using the K base yields the cis olefins.