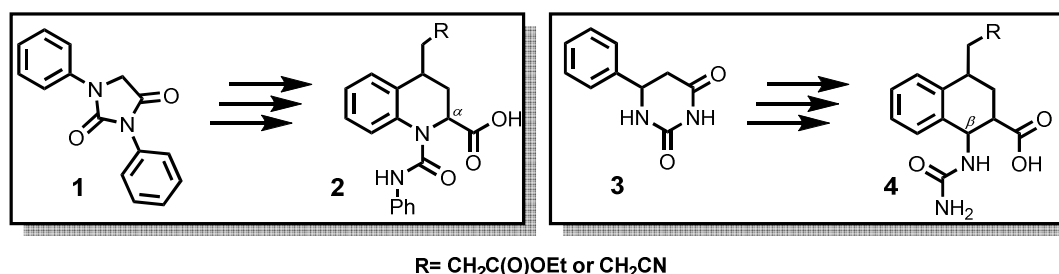


DESIGN OF A FREE RADICALS PROCESS, BASED ON XANTHATES CHEMISTRY, TO PRODUCE NEW SYNTHETIC AND OPTICALLY ACTIVES (α and β) AMINO ACIDS

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The synthesis of β -amino acids optically actives, is still a challenge in organic synthesis. In recent years, has been reported a series of different mechanisms of synthesis to obtain β -amino acids and derivatives efficiently. Nevertheless, few of them are based on using chemo-enzymatic process. Indeed, several methodologies have been developed to produce α and β amino acids optically actives, among them are: kinetic resolutions with synthetic catalyst, biocatalytic process to isomerize α to β amino acids. Here in, we report a methodology to produce α and β amino acids, though reactions of allylation, radical addition cyclization-oxidation and the possible enzymatic hydrolysis using hydantoinases from legume. We used the Hydantione **1** and Dihydrouracil **3**, which after allylation, in the ($-\text{CH}_2-$) α -carbonyl position, followed by a radical cascade addition cyclization-oxidation, and submitted to enzymatic conditions, to obtain the hydrolysed products α and β amino acids precursors **2** and **4**, (Scheme. 1).



Scheme 1. General scheme of the methodology