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**A NEW RAPID SYNTHESIS OF  $\gamma$ -HYDROXYAMINOACIDS  
USING AS CHIRAL AUXILIARY A DERIVATIVE OF  
2- HYDROXYPINAN- 3 -ONE**

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$\gamma$ -hydroxy-substituted amino acids are an important class of natural products. They have been used in synthesis<sup>1</sup>, as enzyme inhibitors<sup>2</sup> and as probes in studies of biochemical pathways<sup>3</sup>, and many are constituents of biologically active peptides.<sup>4</sup> As a particular example,  $\gamma$ -valine has been isolated from the plant species *Kalanchoe daigremontiana*.<sup>5</sup> and it has been since used to determine the infidelity of the proof reading mechanism of the amino acylation of tRNA by valyl-tRNA synthetases, from *Escherichia Coli*.<sup>3</sup> Given the importance of hydroxylated amino acids, there is much interest in routes for the stereocontrolled synthesis of these compounds.

We describe a new strategy (figure 1) in four steps to obtain the (2S, 3R)  $\gamma$ -hydroxyvaline and its isomers<sup>6</sup> starting with the condensation of ethyl pyruvate with the chiral enolate of the oxazinone.

This condensation is carried out with different electrophiles (aldehydes, ketones) and the results are discussed.

This strategy opens the route to enantioselective synthesis of polyfunctionalised amino acids, which will be used in combinatorial chemistry.

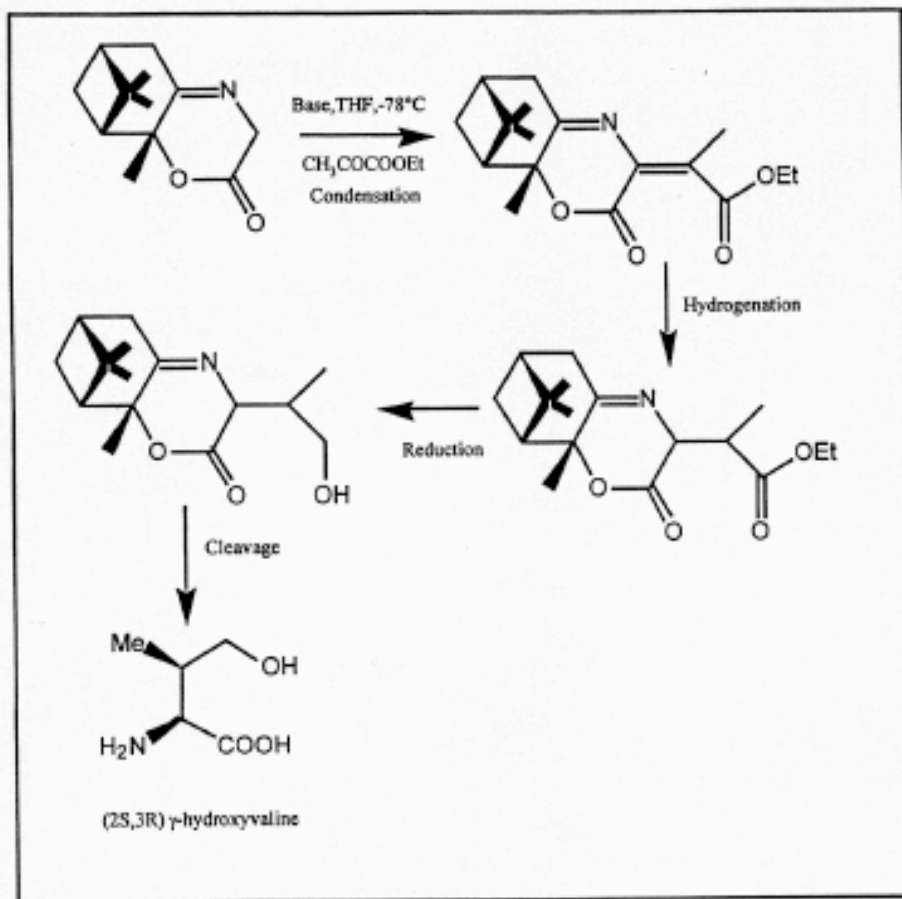


figure 1 : strategy envisaged.

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