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Synthesis of *trans*-4-Methyl-*L*-Proline

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SYNTHESIS of *trans*-4-METHYL-*L*-PROLINE

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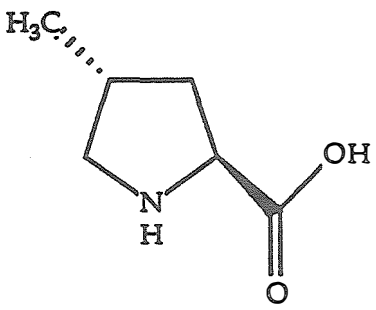
In connection with our long term goal of synthesizing enopeptin A, a novel antitumor and antibiotic depsipeptide, we require *trans*-4-methyl-*L*-proline as one of the most crucial precursors. Synthesis of 4-methyl-*L*-proline usually results in a mixture of *trans*-4- (1) and *cis*-4-methyl-*L*-proline (2) isomers. Previous methods do not provide a satisfying synthetic route with high ratio of the *trans* isomer. Our current research employs *trans*-4-hydroxy-*L*-proline (3), a relatively inexpensive and commercially available chemical, as the starting material. We expect to synthesize the target molecule with a net retention of configuration.



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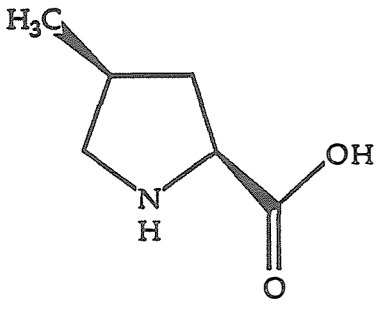

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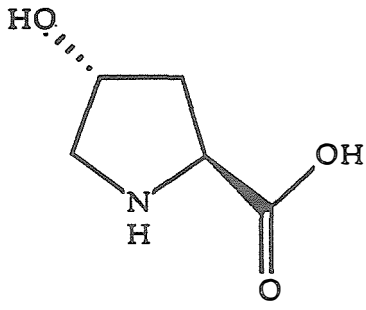

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