

# Using $\alpha$ - and $\beta$ -Epimerizations of cis-2, 3-Bis (hydroxymethyl) - $\gamma$ -butyrolactone for the Synthesis of Both Enantiomers of Enterolactone

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## Abstract

In the context of asymmetric synthesis, epimerization is usually problematic. Here, we describe the use of the epimerization of cis-2,3-bis(hydroxymethyl)- $\gamma$ -butyrolactone for the synthesis of enterolactones with anti-carcinogenic, anti-inflammatory, anti-angiogenic, and antioxidant activity. Selective  $\alpha$ - or  $\beta$ -epimerization of a  $\gamma$ -butyrolactone was used to selectively synthesize both enantiomers of enterolactone. Theoretical and kinetic studies were performed to elucidate the epimerization mechanism.

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## Biography

Takeyuki Suzuki is working at Osaka University, Japan.