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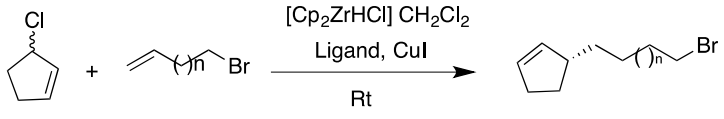
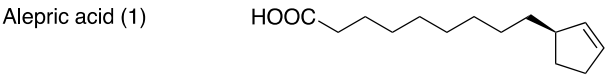
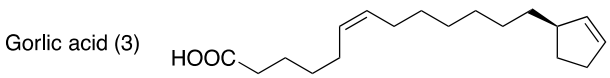
Dynamic kinetic asymmetric transformations with hard nucleophiles: Cyclopentenes for anti-tuberculosis and antibiotics

Hadia Almahli and **Stephen P Fletcher**
University of Oxford, UK

I will describe the asymmetric additions of alkyl nucleophiles to racemic allylic chlorides, to access important cyclopentene containing natural products. These natural products have timely biological activity and the eventual synthesis of derivatives will help develop structure-activity relationships. Cyclopentene natural products alepric acid (1), aleprestic acid (2), and gorlic acid (3) have not previously had their synthesis reported. The asymmetric addition reaction is a dynamic kinetic asymmetric transformation (DYKAT) to a racemic allylic chloride to give cyclopentenes with high level of ee [2].







Biography

Hadia Almahli has obtained her master and PhD in pharmaceutical chemistry in the university from Paris XI- France in 2010, she did her postdoctoral studies in France as well. She was assistant professor in the faculty of pharmacy- Aleppo University in Syria, and then she was assistant professor in the faculty of pharmacy in Egypt.

hadia.almahli@chem.ox.ac.uk

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