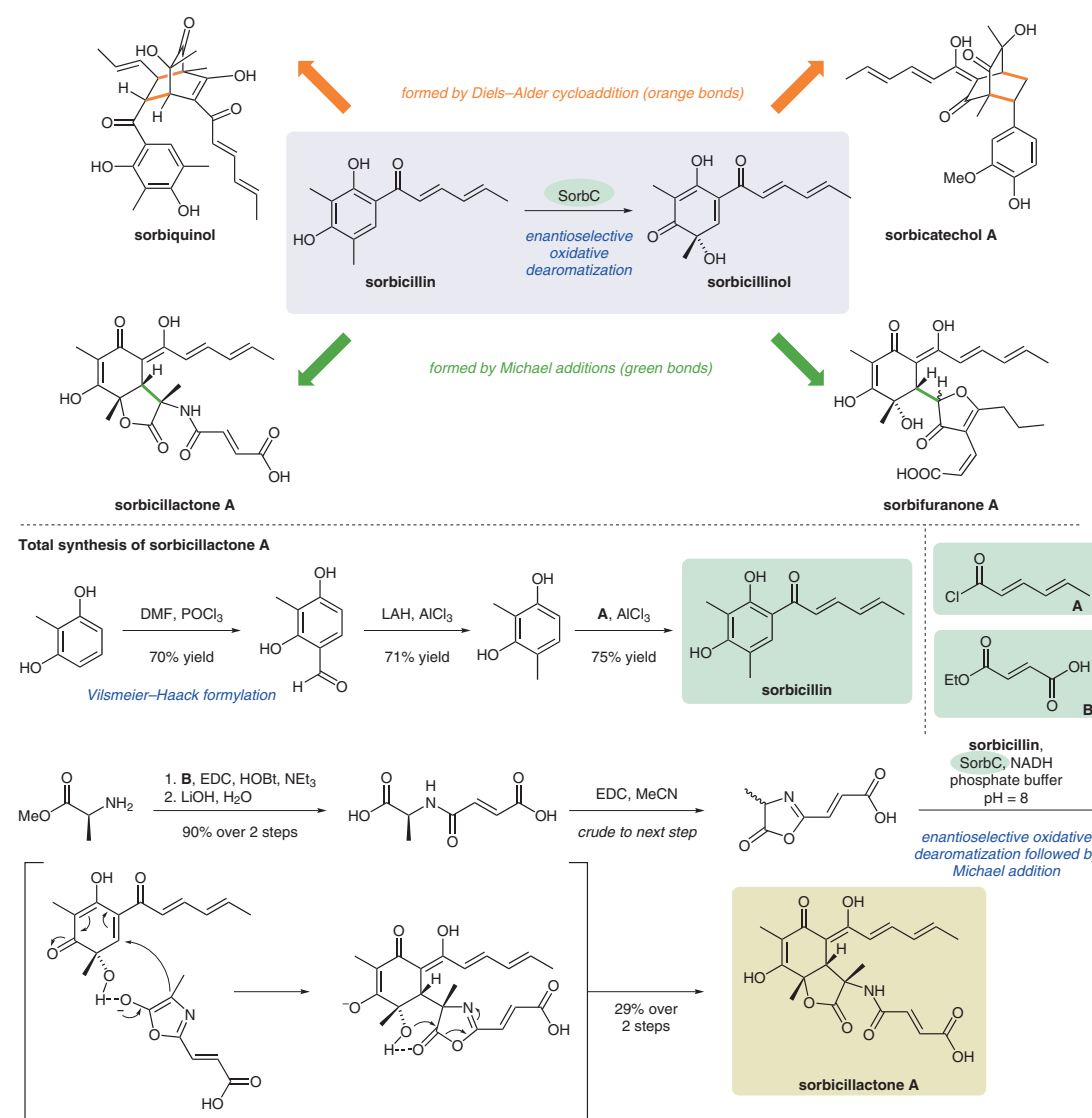


A Convergent and Short Synthesis of Sorbicillactone A



Significance: Sorbicillinoids are a large family of natural products with a wide range of biological activities. Specifically, sorbicillactone A has substantial anti-leukemic and anti-HIV activities. The highly structurally diverse sorbicillinoids are biosynthesized from the precursor sorbicillinol via either Michael additions or Diels-Alder reactions.

Comment: The installation of all stereogenic centers is achieved in one key step with the enzyme SorbC, which converts sorbicillin into sorbicillinol and, in the same pot, intercepts the latter with an azlactone nucleophile. The concise total synthesis of sorbicillactone will facilitate future SAR studies and biological evaluations.