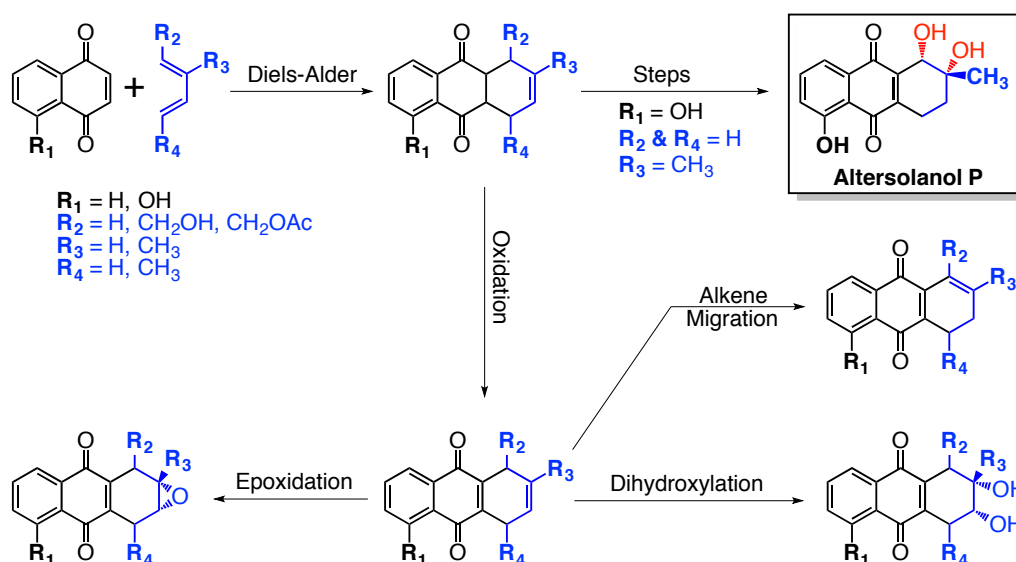


Synthetic Studies Toward Altersolanol Derivatives



Altersolanol P (AP), a new member of the altersolanol family of compounds, is the inspiration for multiple synthetic studies in our laboratory. The altersolanols, and structurally similar compounds, exhibit antibacterial activity. Previously in our laboratory, we synthesized a synthetic intermediate containing the complete carbon framework of AP via Lewis acid-mediated Diels-Alder cycloaddition on multi-gram scale (in 80% yield and 8:1 regioselectivity).¹ We are examining Diels-Alder reactions (Gillian and Howard), dihydroxylations (Brandon), and epoxidations (Tobias) to diversify our molecular library of altersolanol derivatives. New compounds will be tested for antibacterial activity.

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¹ S. Merwin Kennedy, Jevica B. Salim, Andrew J. Smaligo, Brandon L. Frey, Tobias C. Bentzel, and Magenta J. Hensinger, "Studies toward altersolanols: synthesis of 5-hydroxy-2-methyl-1,4-dihydroanthracene-9,10-dione," Journal of Undergraduate Chemistry Research **2017**, 16 (2), 44–47 (<http://bit.ly/2rzNUQP>).