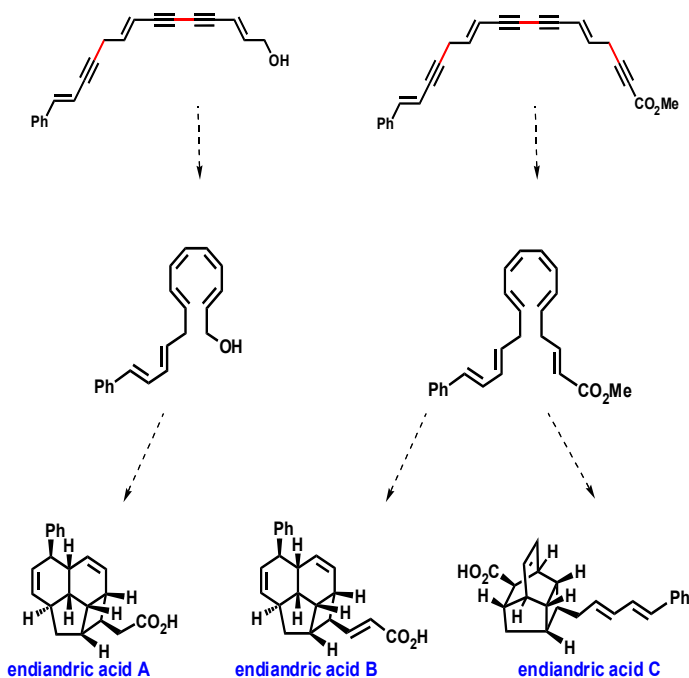


A Biomimetic and Convergent Approach to the Endiandric Acids Cascade

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The endiandric acids are a class of naturally occurring polyketides found in the endangered plant *Endiandria introrsa*. Endiandric acid H is of particular interest because of its anti-inflammatory properties. These acids are found as racemates in nature, suggesting a biosynthesis via non-enzymatic electrocyclizations from polyunsaturated precursors. Construction of these precursors would provide access to endiandric acids D-G, which can undergo intramolecular Diels-Alder reactions to yield endiandric acids A-C.



The work this summer was directed towards a convergent and biomimetic synthesis of the Endiandric Acids. Recent advances in palladium cross-coupling chemistry were enlisted in the synthesis of the polyene precursors to the cascade. Negishi and Suzuki couplings were explored as possible methods of obtaining the skipped diene intermediates. Sonagshira coupling was used and demonstrated as a likely method of coupling the internal alkynes in the precursor and reduction studies of the internal alkynes were carried out to model the eventual conversion of the synthetic target to the activated precursor to the cascade.

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