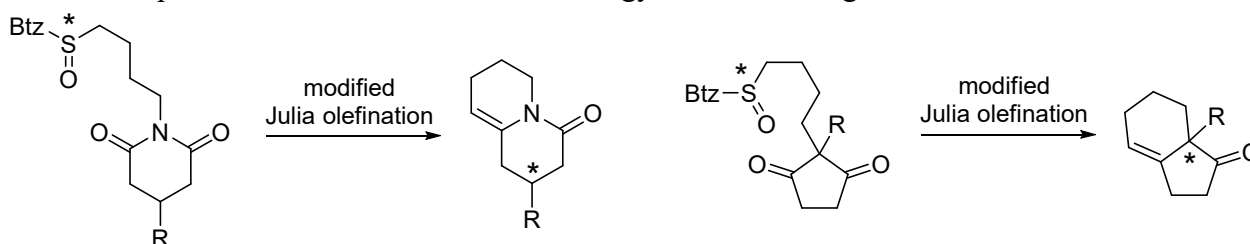


## Asymmetric modified Julia olefination: from synthetic methodology to multistep synthesis

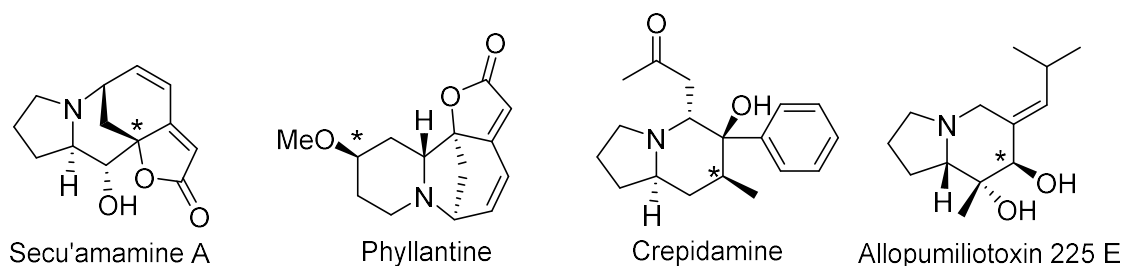
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**Context:** The preparation of substituted and functionalized alkenes is a great challenge in organic chemistry. Since the initial work of S. Julia in 1991, the olefination of modified Julia has been one of the most important reactions to prepare C=C bonds.<sup>1</sup> Over the decades, this transformation has been widely used in organic synthesis due to its advantages in terms of mild reaction conditions and controlled E/Z selectivity.<sup>2</sup> The extension of the modified Julia Reaction to carboxylic acid derivatives has been extensively studied in our group.<sup>3</sup>

**PhD program:** We now aim to develop an intramolecular asymmetric version of the modified Julia olefination using chiral sulfoxides in order to propose an efficient and selective synthesis of useful chiral alkenes or enamides. In this context, the feasibility of the reaction and then the scope and limitations of this methodology will be investigated.



Depending on the results observed, the total synthesis of a natural product such as alkaloids will be considered.



The PhD candidate should have a strong background in organic chemistry (M2 degree) and should be highly motivated. For further information, please contact me. ([david.gueyrard@univ-lyon1.fr](mailto:david.gueyrard@univ-lyon1.fr))

[1] Baudin, J. B.; Hareau, G.; Julia, S. A.; Ruel, O. *Tetrahedron Lett.* **1991**, *32*, 1175–1178.

[2] Blakemore, P. R., in *Comprehensive Organic Synthesis II*, Knochel P. Ed., Elsevier, Amsterdam, **2014**, Volume 1, pp. 529-547.

[3] Gueyrard, D., *Synlett*, **2018**, *29*, 34-45.