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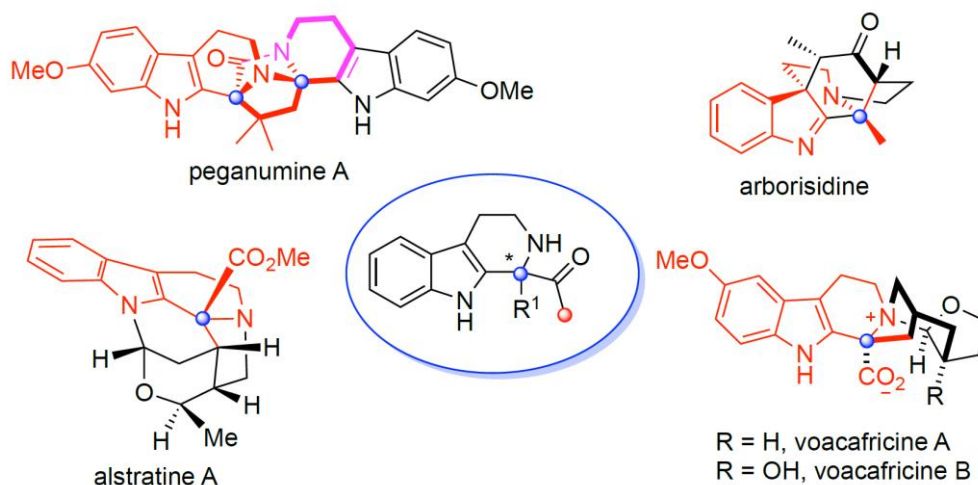
Gesellschaft Deutscher Chemiker
Ortsverband Bonn

*Catalytic Enantioselective Pictet-Spengler Reaction of Ketones:
Development and Applications in the Total Synthesis of Indole Alkaloids*

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Tuesday, June 20 at 5 pm (17 Uhr s.t.) in Hörsaal 2



The asymmetric Pictet-Spengler reaction (PSR) between tryptamine and aldehydes is now well-developed. Conversely, catalytic enantioselective PSR of ketone is essentially unexploited. In this presentation, we will present our work on the catalytic enantioselective PSR of tryptamine with 1,2-diones, α -ketoesters and α -ketoamide for the synthesis of enantioenriched 1,1-Disubstituted tetrahydro- β -carboline (THBC) and their application in the total synthesis of monoterpene indole alkaloids.¹

References

- a) C. Piemontesi, Q. Wang, J. Zhu, *J. Am. Chem. Soc.* **2016**, *138*, 11148-11151; b) R. Andres, Q. Wang, J. Zhu, *J. Am. Chem. Soc.* **2020**, *142*, 14276-14285; c) R. Andres, Q. Wang, J. Zhu, *Angew. Chem. Int. Ed.* **2022**, *61*, e202201788; d) R. Andres, F. Sun, Q. Wang, J. Zhu, *Angew. Chem. Int. Ed.* **2023**, *62*, e202213831; e) R. Andres, Q. Wang, J. Zhu, *Angew. Chem. Int. Ed.* **2023**, *62*, e202301517.