Large Scale Synthesis of Daridorexant

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Sleep disorders are very common and affect ca. 240 million people worldwide every year. Although drugs like benzodiazepines or Z-drugs are available, they suffer from serious side effects. Dual orexin receptor antagonists (DORA) are a new class of medication which may offer several advantages. Ideally for patients the quality and quantity of sleep and daytime performance should be improved, without having the drawback of tolerance or physical dependency. Idorsia has discovered and developed Daridorexant, a drug with such a profile, which was approved for medical use in the US, Germany, and Italy in 2022. ¹ The poster will show an efficient synthesis of Daridorexant on kilogram scale including the synthesis of the three registered starting materials.

Daridorexant

[1] C. Boss, J. Gatfield, C. Brotschi, B. Heidmann, T. Sifferlen, M. von Raumer, G. Schmidt. J. T. Williams, A. Treiber, C. Roch, *ChemMedChem*, **2020**, *15*, 2286-2305.