FORMAL SYNTHESIS OF PLATENCIN FROM *O*-VANILLIN BY INTERMOLECULAR AND INTRAMOLECULAR DIELS-ALDER STRATEGIES, RESPECTIVELY

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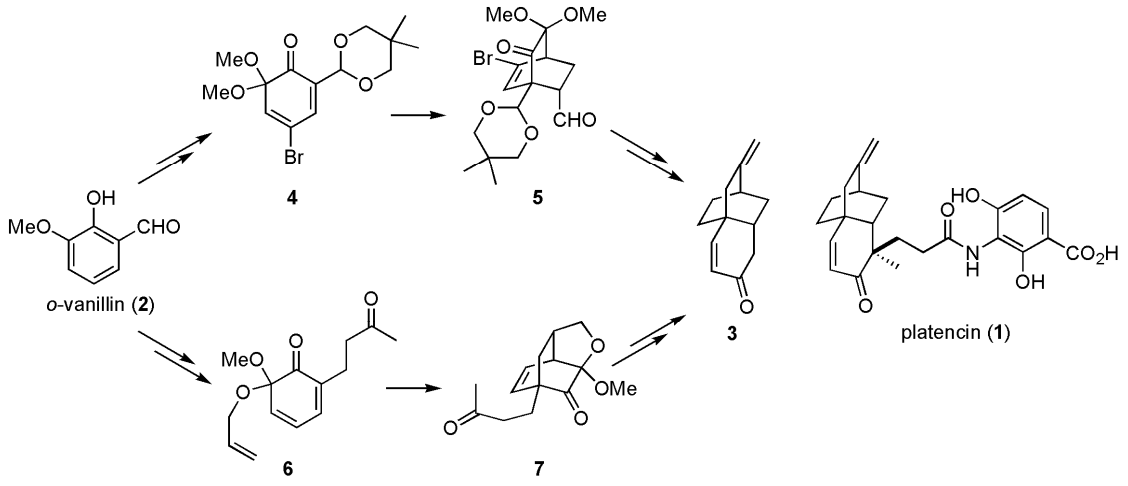
Platencin (**1**) was isolated from *Streptomyces platensis* MA 7339 in 2007 which showed highly potent and broad-spectrum activity against many multidrug-resistant pathogens. [1] In this formal synthesis, we have developed two different procedures to synthesize tricyclic core **3** from *o*-vanillin (**2**) by intermolecular and intramolecular Diels-Alder strategies, respectively. In the intermolecular Diels-Alder strategy, Diels-Alder reaction of masked *o*-benzoquinone **4** and an aldol condensation were the key steps in the construction of the tricyclic core of platencin.[2] In the intramolecular Diels-Alder strategy, Diels-Alder reaction of masked *o*-benzoquinone **6**, an aldol condensation, and stereoselective hydrogenation were the key steps. The detail will be discussed.



[1] Jayasuriya, H.; Herath, K. B.; Zhang, C.; Zink, D. L.; Basilio, A.; Genilloud, O.; Diez, M. T.; Vicente, F.; Gonzalez, I.; Salazar, O.; Pelaez, F.; Cummings, R.; Ha, S.; Wang, J.; Singh, S. B. *Angew. Chem. Int. Ed.* **2007**, *46*, 4684.

[2] Hsu, D.-S.; Hwang, T.-Y. *Eur. J. Org. Chem.* **2018**, 4689.