

Total Syntheses of Amphidinolide X and Y. Marine dinoflagellates of the genus *Amphidinium* sp. living in symbiosis with the Okinawan flatworm *Amphicolops* spp. are exceptionally rich sources of bioactive natural products. To date, they give rise to more than 30 novel metabolites, among them amphidinolide X and Y, which exhibit potent cytotoxic properties against various cancer cell lines in standard assays. The promising cytotoxicity and their rather unique structural features prompted us to pursue a total synthesis of those compounds^{1,2} as well as of several nonnatural analogues, which should allow for more detailed investigations of their biological properties.

[1] Alois Fürstner, Egmont Kattnig, Olivier Lepage *J. Am. Chem. Soc.* **2006**, *128*, 9194.

[2] Olivier Lepage, Egmont Kattnig, Alois Fürstner *J. Am. Chem. Soc.* **2004**, *126*, 15970.