



An Accelerated Intermolecular Rauhut-Currier Reaction Enables the ()-Flueggenine C

Jeon, S.; Han, S. *J. Am Chem. Soc.* **2017**, *139*, 6302–6305.

Securinega alkaloids consisting of more than 70 natural products and are known since 1956

Recent isolation of bioactive natural products from *Flueggea virosa* enabled the isolation of various dimeric and oligomeric alkaloids expanding its structural repertoire

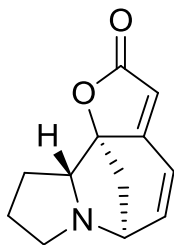
The biosynthesis of compounds **4** and **5** was reported using a self-catalyzed Baylis-Hilman reaction

flueggenine A (**4**) showed modest cytotoxicity against the P-388 tumor cell line

Flueggenine D and fluevirosinine B exhibited promising anti-HIV activities

The first asymmetric total synthesis of flueggenine C (**6**), a C,C-linked dimeric securinega Alkaloid was achieved in this work.

Natural products containing the DMOA (1) core



n

Monomeric, dimeric and oligomeric alkaloids

Retrosynthetic Analysis of Flueggenine C (6)



N⁻

nucleophilic catalyst

Possible modes of reactivity in Rauhut-Currier reactions

Conventional Intermolecular RC Reaction





Mechanistic explanation

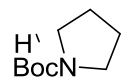
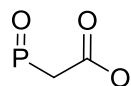


|

Mechanistic explanation

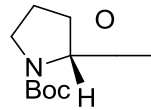


N

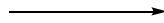
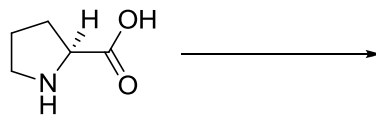
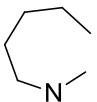


BocN

Mechanistic explanation

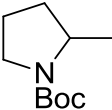


B





Mechanistic explanation



R