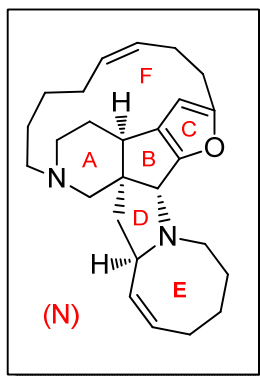


## Concise Synthesis of (-)Nakadomarin A

(-) Nakadomarin A (**N**) is a complex marine alkaloid of the manzamine family. The challenging structure and impressive biological activities (anticancer & antimicrobial) have made **N** an attractive target compound for the synthetic community



Let's have a look to Dixon's synthesis of **N**. The group has developed a strategic plan divided in two parts...

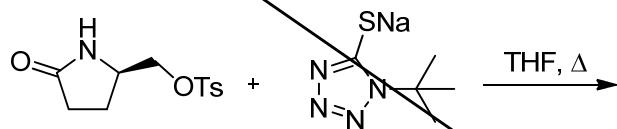
1. Find out compounds **A** to **F**
2. During the condensation step of **C+C'** to **D** two stereocenters are created. Explain the origin of stereoselectivity for each of them



Zacharias Amara  
Doctorant 2<sup>ème</sup> année  
Equipe Chimie Organique

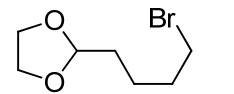
## Synthesis of (-)Nakadomarin A: Part 1

### Synthesis of the Pro-Nucleophile Fragment



A

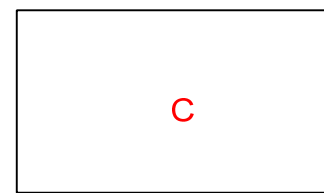
1. NaH,  $\text{Bu}_4\text{NI}$  (cat)



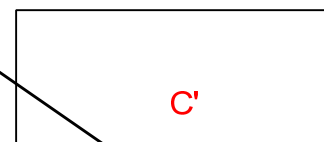
B

2. M PBA  
3. HCl

1.  $\text{S}_2\text{O}_8$   
2. LHMDS,  $(\text{MeO})_2\text{O}$



C



C'

### Synthesis of the Electrophile Fragment

1. NaH,  $\text{Bu}_4\text{NI}$  (cat)

## Synthesis of (-)-Nakadomarin A: Part 2

