

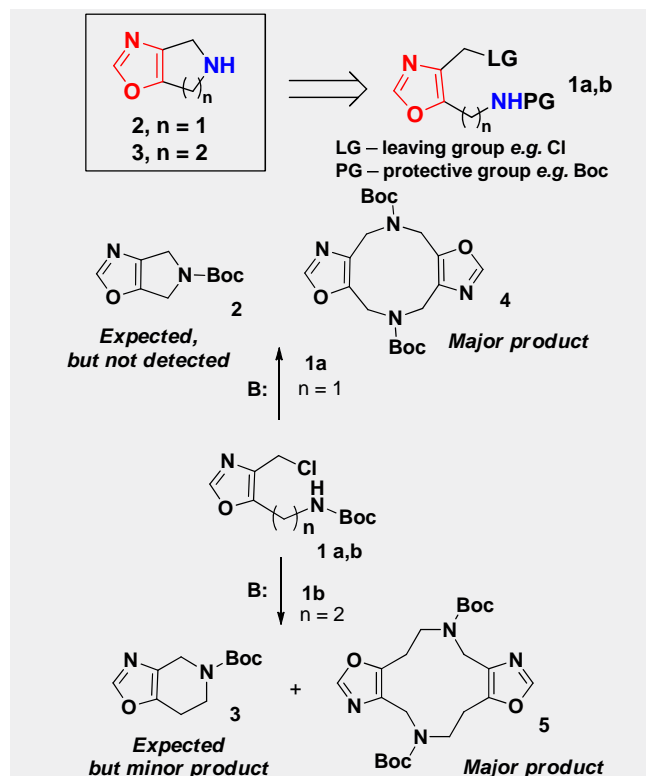
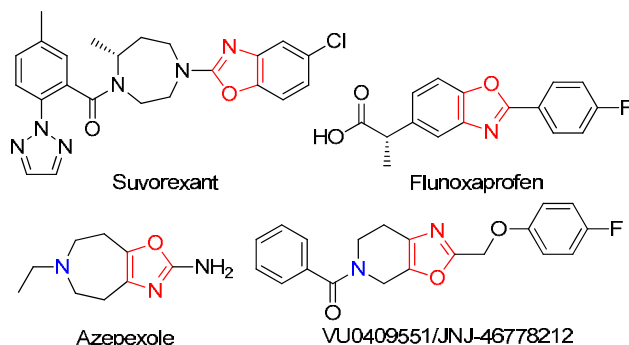
Unexpected macrocycles formation in a synthesis of fused aza-cycloalkyl oxazoles.

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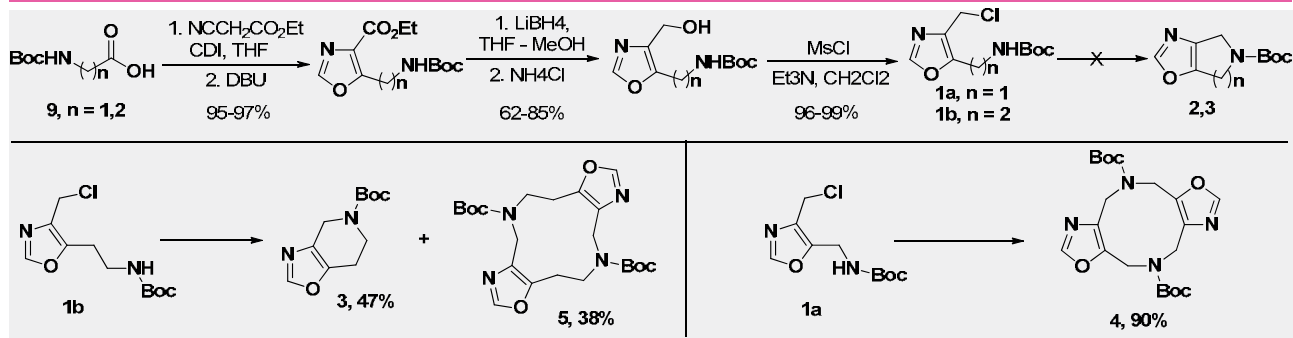
Introduction and Aim

Oxazole is a well-recognized biologically relevant heterocyclic template which is widespread among natural compounds (such as marine alkaloids) and synthetic drugs. Fused oxazoles have been widely used in drug discovery, which is confirmed by structures of several marketed drugs and clinical candidates.

In a course of our in-house BB collection enhancement by chemotypes **2** and **3**, the base promoted cyclization of oxazole-based N-Boc-protected aminochlorides **1 a,b** was investigated. Unexpectedly the desired [5,5] fused bicyclic product **2** was not formed in the reaction meanwhile [5,6] fused bicyclic product **3** appears a minor product. In both cases the 10- or 12-members macrocycles type **4** or **5** were identified as a major products of the reaction. The structure of the compounds formed was unambiguously solved by the single X-ray diffraction study.

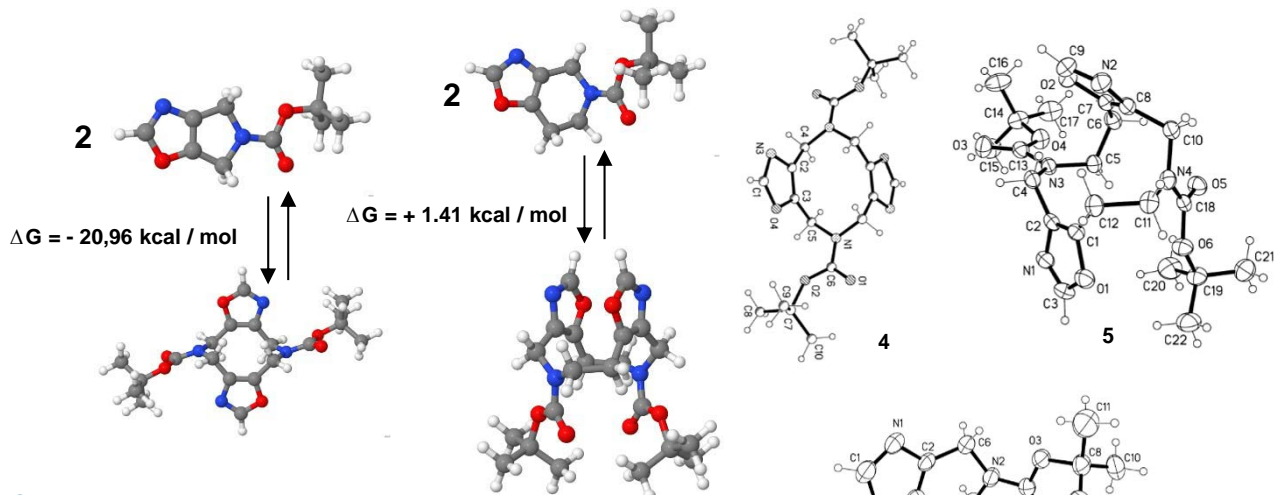


Synthesis



In silico study, DFT, M06-2X/6-311+G**

X-ray



Contacts