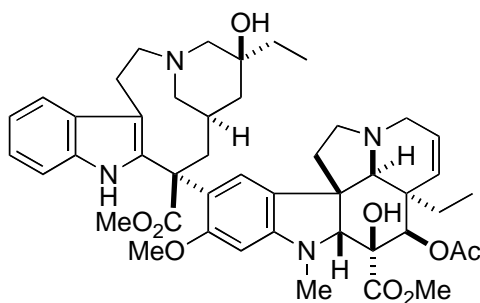


(+)-Vinblastine (111022-TKGP)

T. Fukuyama, S. Yokoshima^{1), 2)}

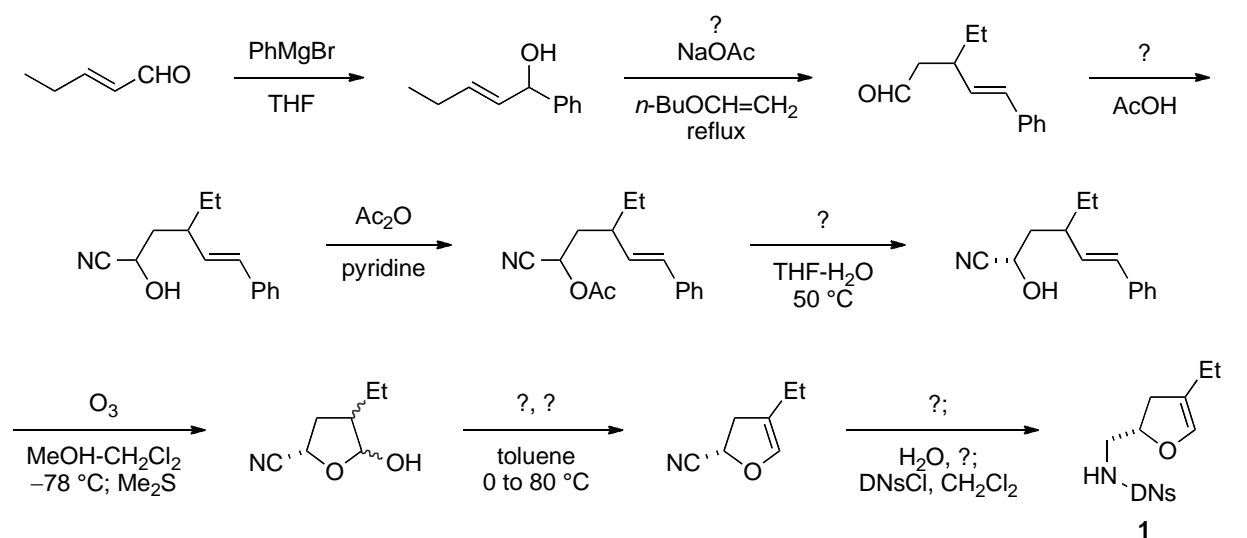


Activity

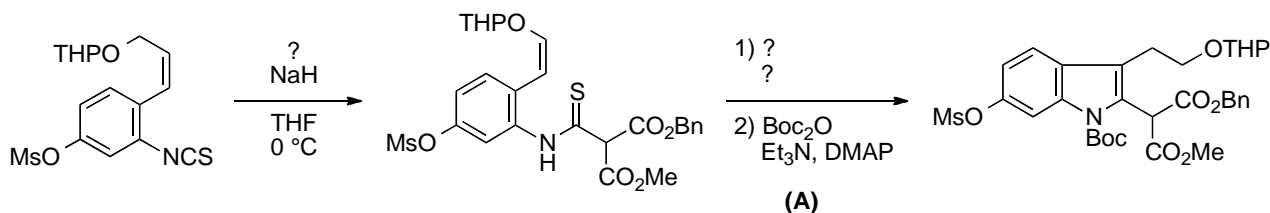
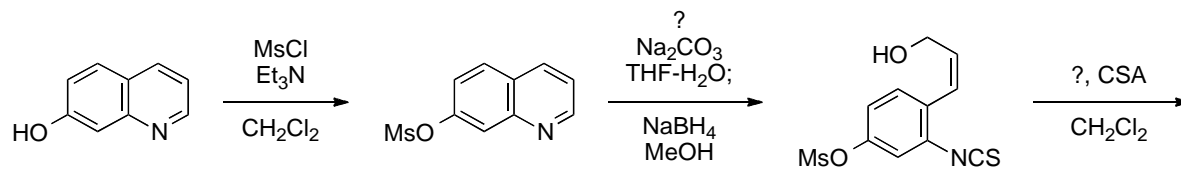
Antitumor (抗腫瘍活性)

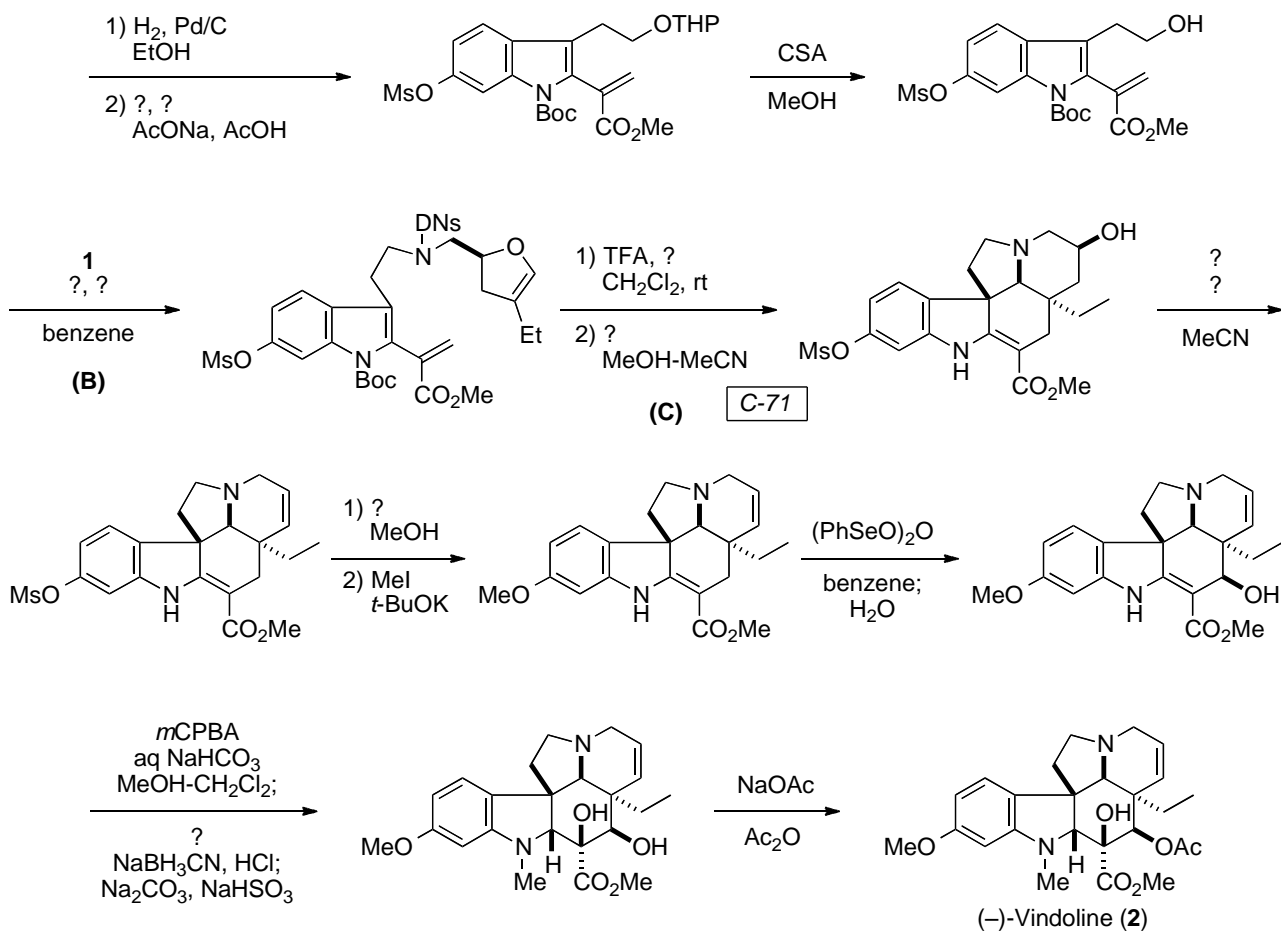
Key Reactions

(A) radical-mediated indole synthesis, (B) Mitsunobu reaction of DNs amide, (C) [4+2] cycloaddition, (D) macrocyclization of Ns amide, (E) stereoselective coupling

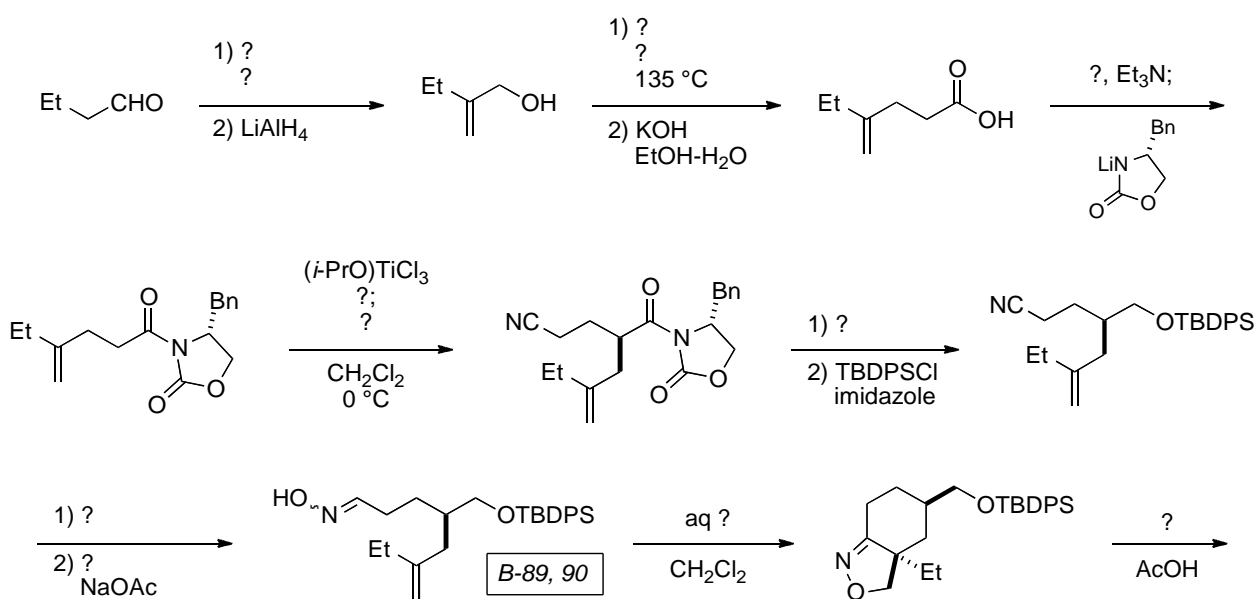


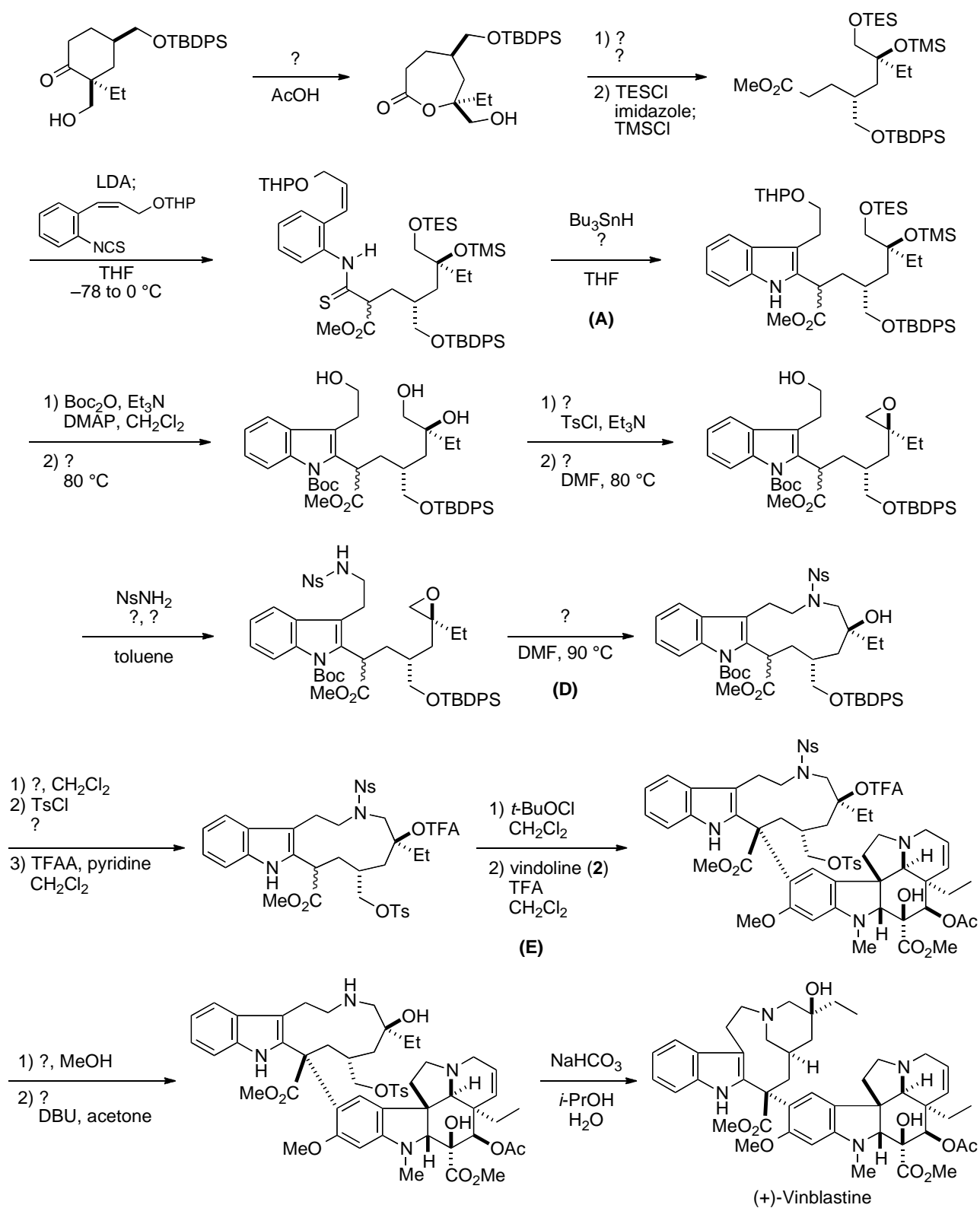
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References:

- 1) S. Yokoshima, T. Ueda, S. Kobayashi, A. Sato, T. Kuboyama, H. Tokuyama, T. Fukuyama, *J. Am. Chem. Soc.*, **124**, 2137 (2002)
- 2) S. Kobayashi, T. Ueda, T. Fukuyama, *Synlett*, 883 (2000)