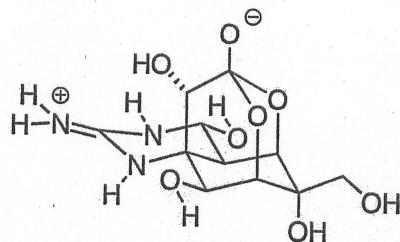


Tetrodotoxin (TKGP-081206)

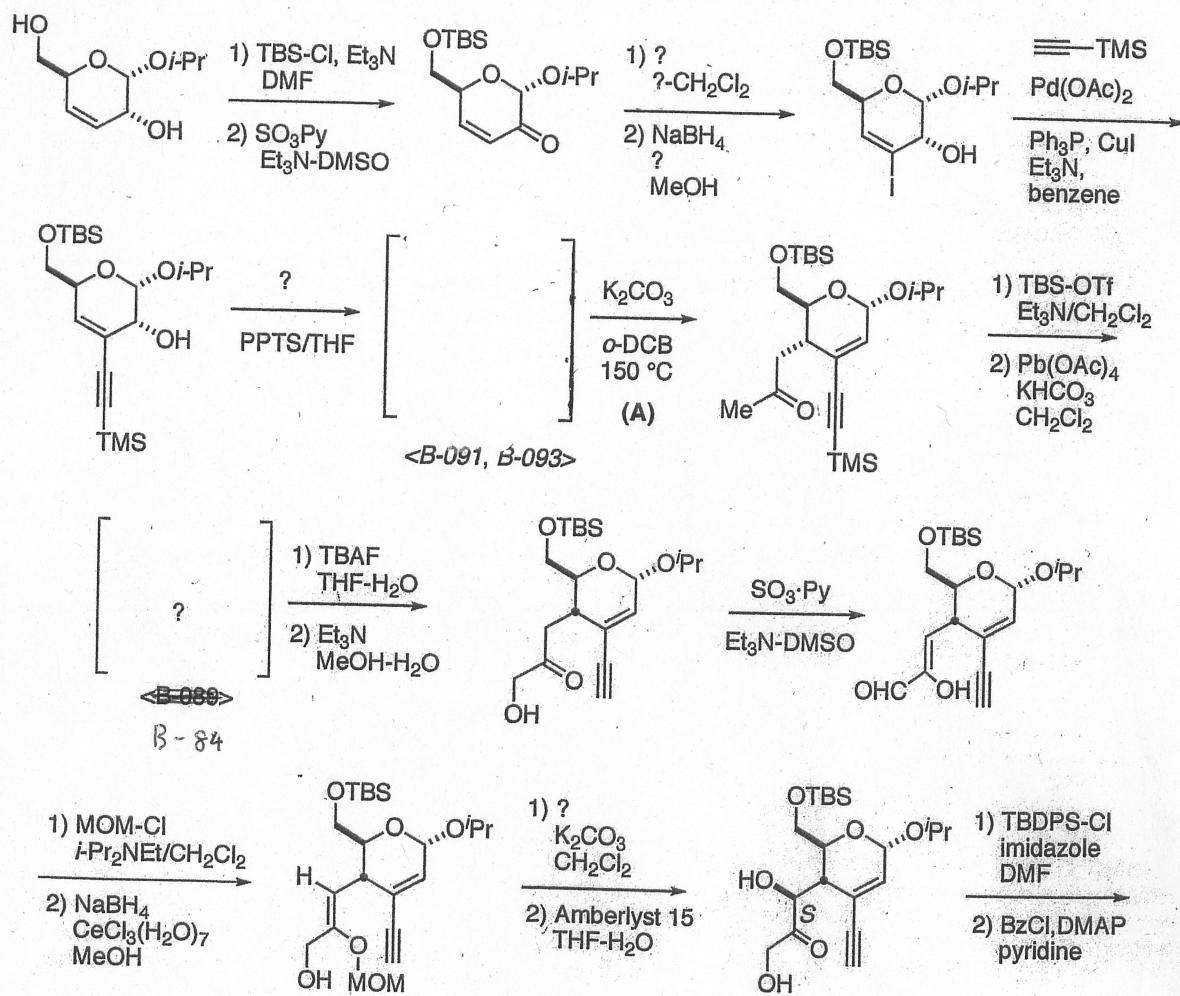
M. Isobe, T. Nishikawa, N. Ohyabu<sup>1)</sup>



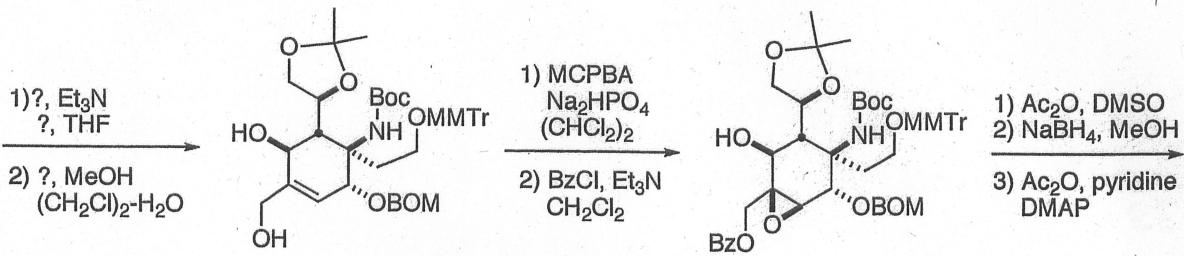
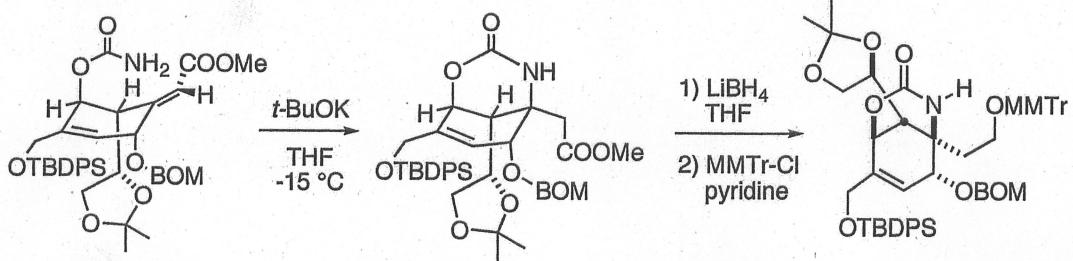
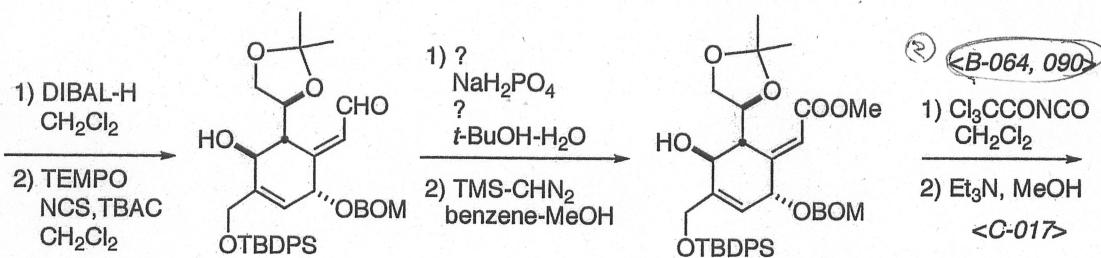
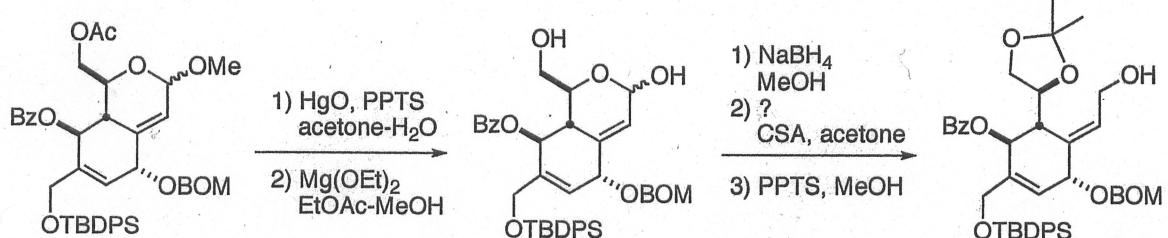
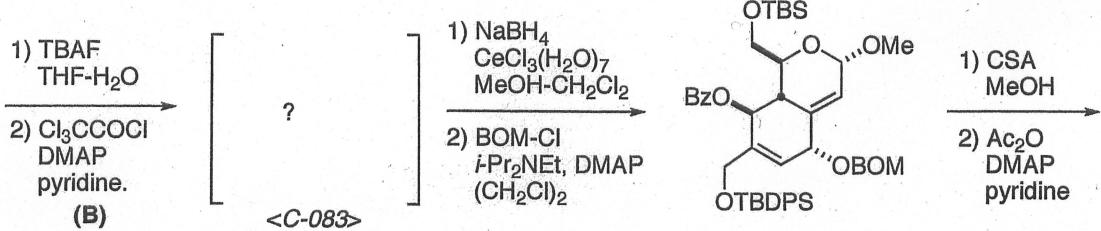
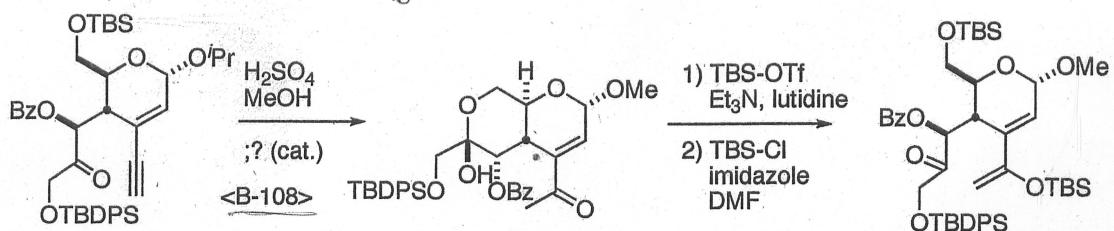
**Activity** paralytic toxin, specific blockage of sodium ion influx through  $\text{Na}^+$  channel

**Key Reactions**

- (A) Claisen rearrangement of (2*R*)-O-to-(4*S*)-C chirality transfer
- (B) Directed aldol reaction for the chiral cyclohexane ring formation
- (C) *syn*-Enolate epoxide opening for dihydropyran ring formation



B 64





## References

- 1) Ohyabu, N.; Nishikawa, T.; Isobe, M. *J. Am. Chem. Soc.* **2003**, *125*, 8798-8805.
- 2) 磯部稔、大藪紀雄、西川俊夫、有機合成化学協会誌、**65**, 492-501 (2007)
- 3) Nishikawa, T.; Urabe, D.; Isobe, M. *Angew. Chem. Int. Ed.* **2004**, *43*, 4782-4785.
- 4) Urabe, D.; Nishikawa, T.; Isobe, M. *Chem. Asian J.* **2006**, *1-2*, 125-135.

