(Stimulates early hatching of potato cyst nematodes)

K. Tanino, M. Takahashi, Y. Tomata, H. Tokura, T. Uehara, T. Narabu, M. Miyashita, Nat. Chem. 2011, 3, 484-488

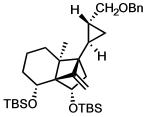
- 1. mCPBA, DCM
- 2. Me<sub>3</sub>Al, Al(OTf)<sub>3,</sub> DCM
- 3. DBU, DCM
- 4. CH<sub>2</sub>=CHMgBr, CeCl<sub>3.</sub> THF

- 5. TBHP, Ti(OiPr)<sub>4,</sub> MS4Å
- 6. TMSOTf, 2,6-lutidine, DCM, then HF•Py

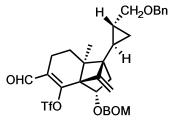
- 7. DIBAI-H, THF,
- 8. TBSOTf, 2,6-lutidine, DCM
- 9. mCPBA, DCM

- 10. LDA, then TBSCI, HMPA, THF
- 11. DIBAI-H, DCM,
- 12. (OEt)<sub>2</sub>P(O)CH<sub>2</sub>CO<sub>2</sub>Et, NaH, THF

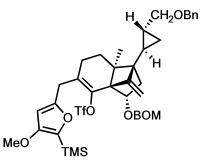
- 13. DIBAI-H, THF
- 14. 1, Et<sub>2</sub>Zn, CH<sub>2</sub>I<sub>2</sub>, DCM
- 15. NaH, BnBr, TBAI, DMF
- 16. TBAF, THF
- 17. o-NO<sub>2</sub>C<sub>6</sub>H<sub>4</sub>SeCN, Bu<sub>3</sub>P, THF
- 18. H<sub>2</sub>O<sub>2</sub>, THF

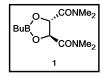


- 19. HF•Py, THF
- 20. TBSCI, im, DMF
- 21. DMP, DCM
- 22. HF•Py, THF
- 23. BOMCI, DIPEA, TBAI
- 24. £BuOCH(NMe<sub>2</sub>)<sub>2.</sub> DMF
- 25. Tf<sub>2</sub>O, 2,6-(*t*-Bu)<sub>2</sub>Py, DCM



- 26. **2**, *t*-BuLi, THF
- 27. PPTS, DMF, H<sub>2</sub>O
- 28. TMSCI, im, DMF







44. TMSCI, im, DMF 45. DMP, DCM

46. NaClO<sub>2,</sub> NaH<sub>2</sub>PO<sub>4</sub> 2-methyl-2-butene, *t*BuOH 47. 3M HCl, CH<sub>3</sub>CO<sub>2</sub>H, H<sub>2</sub>O