



- First isolated from the fermentation of *Nodulisporium* sp. MF5954 (Merck)
- LD<sub>90</sub> = 15 µM toward flea feeding assay
- Activator of a subset of ligand-gated chloride ion channel in arthropods but in mammals
- HAT initiated radical polar crossover cascade to generate trans decalin

**Isolation:**

Ondeyka, J. G. et al. *J. Nat. Prod.* 2003, 66(1), 121-124. <https://doi.org/10.1021/np020339u>

**Total synthesis:**

Pronin, S. V. et al. *J. Am. Chem. Soc.* 2018, 140, 40, 12770–12774. <https://doi.org/10.1021/jacs.8b09965>

Smith, A. B. et al. *J. Am. Chem. Soc.* 2018, 140, 40, 2036–2038. <https://doi.org/10.1021/ja00058a060>

**Synthetic study:**

Okada, T. *Journal of Synthetic Organic Chemistry, Japan* 2019, 77 (8), 845-848.

<https://doi.org/10.5059/yukigoseikyokaishi.77.845>

**Retrosynthetic Analysis:**

