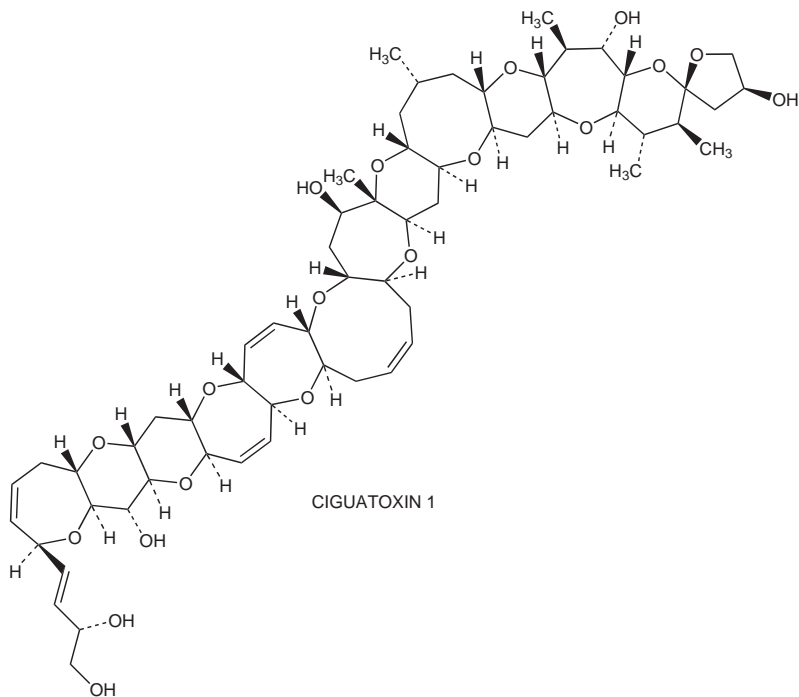


2270. Ciguatoxins. CTX. Potent sodium channel activators found in a wide variety of fish, the toxins were ultimately traced to a dinoflagellate *Gambierdiscus spp.* Family of lipid soluble polyether toxins responsible for ciguatera food poisoning; structural variations are associated with the oceanic region from which the dinoflagellate originates. Isoln from eels: P. J. Scheuer *et al.*, *Science* **155**, 1267 (1967). Purification from dinoflagellate: R. Bagnis *et al.*, *Rev. Int. Oceanogr. Med.* **45-46**, 29 (1977). Structure: M. Murata *et al.*, *J. Am. Chem. Soc.* **112**, 4380 (1990). Purification and characterization of 3 major forms CTX 1-3: R. J. Lewis *et al.*, *Toxicon* **29**, 1115 (1991); absolute configuration: M. Satake *et al.*, *J. Am. Chem. Soc.* **119**, 11325 (1997). Isoln and characterization of Pacific CTX: R. J. Lewis, A. Jones, *Toxicon* **35**, 159 (1997); of Caribbean CTX: J.-P. Vernoux, R. J. Lewis, *ibid.* 889; of Indian CTX: B. Hamilton *et al.*, *ibid.* **40**, 685 (2002). Effect on sodium channels: J.-N. Bidard *et al.*, *J. Biol. Chem.* **259**, 8353 (1984); E. Benoit *et al.*, *Neuroscience* **71**, 1121 (1996). Review of use as research tool: J. Molgo *et al.*, *Methods Neurosci.* **8**, 149-164 (1992); of mechanism of action: C. Frelin *et al.*, *ACS Symp. Ser.* **418**, 192-199 (1996); of neurobiological actions: C. Mattei *et al.*, *J. Soc. Biol.* **193**, 329-344 (1999).



CTX-1. [11050-21-8] C₆₀H₈₆O₁₉; mol wt 1111.31. White solid. LD₅₀ i.p. in mice: 0.25 μg/kg (Lewis 1991).

CTX-2. [142185-85-1] C₆₀H₈₆O₁₈; mol wt 1095.31. White amorphous solid. LD₅₀ i.p. in mice: 2.3 μg/kg (Lewis 1991).

CTX-3. [139341-09-6] C₆₀H₈₆O₁₈; mol wt 1095.31. Total synthesis: M. Inoue, M. Hiram, *Synlett* **2004**, 577. White amorphous solid. LD₅₀ i.p. in mice: 0.9 μg/kg (Lewis 1991).