

## **Purification and characterization of neurotoxin produced by Clostridium botulinum type C 6813**

### **Abstract:**

The toxin produced by Clostridium botulinum type C 6813 (C-6813) was purified 1,009-fold from the culture supernatant in an overall yield of 30%. The specific toxicity was  $1.1 \times 10^7$  mouse minimum lethal doses per mg of protein. The toxin had a molecular weight of 144,000, composed of the light and heavy chains with molecular weights of 52,000 and 92,000, respectively, linked by one or two disulfide bond(s). The purified C-6813 toxin heavy and light chains reacted strongly with anti-type D heavy chain immunoglobulin G and anti-type C1 light chain immunoglobulin G, respectively. The amino acid compositions of C-6813 toxin heavy and light chains were more similar to those of type D heavy chain and type C1 light chain than to those of type C1 heavy chain and type D light chain, respectively. These results suggest that in the toxin produced by the type C strain at least two subtypes exist.