

- (4) special circumstances could lead to their use as chemical warfare agents but it is unlikely that they would be stockpiled in preference to V-agents; and,
- (5) when their toxicology is better understood, it may be possible that their toxic principles may be incorporated into more tractable substances, but this seems unlikely to happen in the near future.

There are several important conclusions to draw from these observations. First, production of protein toxins was technically possible, but it was a difficult and expensive process, particularly if one wanted to produce relatively large quantities for military purposes. Two important toxins listed above, saxitoxin and tetrodotoxin, are low molecular weight non-protein toxins from marine organisms. The group of CBW consultants to the WHO did not mention in their report that the possibility existed for chemical synthesis of these toxins, although the techniques were available in the late 1960s. Furthermore, the chemical synthesis of peptides was not mentioned. Incapacitating agents, although discussed, appear to have been discounted. As a result, some of their observations might now be open to further consideration.

There has been a tremendous number of highly potent peptides identified that control biological processes. Many of them are small peptides that are relatively easy to synthesize and manipulate chemically, and it is now feasible to produce sizeable