

### 1.3 Toxins and Biological Weapons Control

"Biological" refers to a wide variety of agents. Biological agents must infect and replicate within the target to exert their deleterious effects. (Chemical agents, on the other hand, can be lethal in a variety of ways, including when they cause massive tissue damage.) Toxins share characteristics of both chemical and biological agents. Toxins are also inanimate molecules, but they generally have a higher specificity or better fit for their cellular targets than known chemical agents. Because of their higher specificity, toxins are more potent and thus only very small amounts are necessary to interfere with physiological, that is, living processes. Toxins bind or attach to specific cellular molecules and selectively disrupt certain bodily functions. Bioregulators are small peptides that often control the release of hormones and could be considered master switches of life. Disruption or overloading of these bioregulators could lead to selective inhibition of physiological processes.

The reason why toxins are included with biological weapons in the Biological and Toxin Weapons Convention can be found in the Convention's rather circuitous historical record. Particularly significant was the fact that a major review by the National Security Council of the United States grouped toxins with biological agents in 1970 because, at that time, production processes were similar. The United States government had renounced