ANATOXIN-a — CHEMISTRY, OCCURENCE, EFFECTS

Summary

Cyanobacterial water blooms are one of the most serious concerns for water bodies worldwide. Massive cyanobacterial proliferation causes many adverse consequences, such as change of abiotic conditions, which in turn leads to disturbances in the structure of local water ecosystems. Additionally, cyanobacteria are able to exert direct influences on other organisms, i.e. producing cyanotoxins. It is estimated that up to 75% of cyanobacterial blooms is toxic. Cyanotoxins are a group of compounds of different chemical properties and biological activities. According to their chemical structure, cyanotoxins are divided into cyclic alkaloids, peptides and lipopolysaccharides (LPS). Among them anatoxin-a, a secondary metabolite of potent neurototoxic activity, can be found. The aim of the present paper was to present the current state of knowledge on that cyanotoxin.