

## Microalgal blooms: A global issue with negative impact in Chile

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Ecological and health problems posed by microalgal blooms (red tides) occurring in the Southern part of Chile are reviewed. Out of the six human illnesses provoked by microalgal toxins, paralytic shellfish poisoning is the most important, because of its high mortality rate and the high levels of phycotoxins found in contaminated molluscs. Saxitoxin and its analogues bind to a receptor in the voltage-gated sodium channel of neural membranes. The most important toxin-producer microalgae are *Alexandrium catenella* and *Dinophysis acuta*. Phycotoxins become concentrated by filter-feeding shellfish, like *Mytilus chilensis*. Highly sensitive methods available for detection of microalgal toxins are analyzed.