

# Inhibitory effect of a toxic peptide isolated from a waterbloom of *Microcystis* sp. (cyanobacteria) on iron uptake by rabbit reticulocytes

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M. Rojas, M. T. Nuñez and F. Zambrano. Inhibitory effect of a toxic peptide isolated from a waterbloom of *Microcystis* sp. (cyanobacteria) on iron uptake by rabbit reticulocytes. *Toxicon* 28, 1325-1332, 1990.-The effect of a soluble toxin purified from the algae bloom of a eutrophic lake dominated by *Microcystis* on the receptor-mediated endocytosis of ferro-transferrin in rabbit reticulocytes was studied. The toxin was a very effective inhibitor of cell iron uptake. Kinetic studies using <sup>125</sup>I, <sup>59</sup>Fe-labeled transferrin indicated that the step of ferrotransferrin internalization was selectively inhibited by the toxin while the surface receptor-binding capacity, the externalization of previously internalized transferrin, and the cellular ATP levels were not affected. These findings indicate that the reduction of iron uptake caused by the toxin is due to inhibition of the internalization of surface-located transferrin-transferrin receptor complexes, perhaps due to a disruption of cytoskeleton