

## عنوان مقاله:

Molecular phylogenetic study of toxic cyanobacterium *Anabaena* sp. strain B<sup>3</sup> isolated from Lavasan Lake, Tehran ((Iran

## محل انتشار:

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## خلاصه مقاله:

Lavasan Lake situated in the north-east of Tehran (Iran) is a complex ecosystem of cyanobacterial strains with an ability to produce a wide range of toxic natural compounds that may lead to many problems or even death of humans and animals. Based on the report of toxic cyanobacterial strains present in the Lavasan Lake, the morphological and phylogenetic study of the toxic strain purified from Lavasan Lake water, was performed using 16S rRNA and ITS gene markers. According to the results, the phylogenetic tree was drawn based on 16S rRNA gene, non-toxic strains with the toxic strain *Anabaena* sp. strain B<sup>3</sup> (CCC B<sup>3</sup>) were not clustered within a cloud. In addition, the ability to produce toxins appears to be lost over time. The results of ITS gene analysis using Mfold showed that, the most important difference between the toxic strain *Anabaena* sp. B<sup>3</sup> with other non-toxic strains of *Anabaena* sp. has the number of nucleotides at terminal bilateral bulge and the number of loops at bilateral bulge in the D<sub>1</sub>-D<sub>1</sub> helix. However, Box B helix structure was not different in any of the strains. This is the first report of molecular phylogeny of a toxin-producing cyanobacterium isolated from the Lavasan Lake.

## کلمات کلیدی:

Cluster, Ecosystem, Internal transcribed spacer (ITS), Structural genes, 16S rRNA

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1537154>

