

## **Abstract**

Diatoms are a significant protist group. They've been getting a lot of attention because of their various silica cell walls since their discovery at the end of the 18th century. Even though the mechanism of the morphologically variable cell wall synthesis is well known in terms of shape and ornamentation, only recently it has been enabled to investigate the diatom silicification on the molecular basis. The knowledge of the silica cell wall synthesis can then be used to understand general aspects of biosilica handling and to enlighten the possible evolutionary substance and the progress of this phenomenon.

Key words: biomineralisation, diatoms, long chain polyamines, nanostructure, silaffins, silica transporters, silica deposit vesicle, silicification