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**ABSTRACT**

Course work 49 pages, 10 drawings, 2 tables, 39 source

## STONEWORTS ALGAE, PLASMA MEMBRANE, AMMONIUM TRANSPORT SYSTEM

Purpose – to study changes current law ammonium ions across the plasma membrane of cells *Nitella flexilis* by varying the ionic composition of the medium and the electrophysiological parameters of the membrane.

In operation, to investigate changes in the electrophysiological characteristics of the plasma membrane of cells interstices *Nitella flexilis* when introduced into the environment micromolar concentrations of ammonium chloride.

Research carried out by means of the membrane glass microelectrodes in the mode of fixing of current and voltage.

The study found depolarizing action micromolar concentrations of ammonium chloride in the interstices *Nitella flexilis* cells with an activated ammonium transport system. The experimental dependence of the shear resistance and the capacity of the content of ammonium ions in the environment described by Michaelis-Menten equation. In experiments conducted in the mode of fixing the potential of the plasma membrane, it showed that the addition of ammonium chloride was formed on Wednesday directed into the cell electric current. The experimental dependence of the current on the concentration of ammonium chloride, ammonium environment can be satisfactorily approximated by Michaelis-Menten equation.

The influence of the magnitude of the electrical potential of the plasma membrane of cells interstices *Nitella flexilis* on the calculated values of the Michaelis constant and maximum current through the transport system of ammonium. Wherein at least depolarization  $M$  increases, and the maximum current - is reduced. These curves show a dramatic change in the activity of the transport system of ammonium shear electrophysiological characteristics of the membrane. Probably endogenous activity regulation ammonium transport system may be associated with change mechanism electrophysiological parameters membrane.