

**USE OF THE EXTRACTS OF CYANOBACTERIA *CALOTHRIX MARCHICA*, *NOSTOC HALOPHYLUM*
AND *SPIRULINA PLATENSIS* FOR THERAPEUTIC PURPOSES**

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One of the current problems of society is the establishment of an alternative natural treatment for diabetes that is harmless to human health.

The aim of our work was to study the level of glucose and the concentration of insulin in experimental alloxan diabetes on the background of the administration of the extracts from cyanobacteria to an experimental group of laboratory rats.

In the present study, the influence of the action of the alcoholic extracts of cyanobacteria *Calothrix marchica*, *Nostoc halophyllum* and *Spirulina platensis* on the activity of the endocrine pancreas in the case of experimental diabetes was monitored.

The research was conducted on a group of 48 rats who were given alloxan in order to provoke the classic symptoms of type II diabetes.

As a rule, 2-3 days after the injection of the diabetogenic agent, the glucose samples were analyzed and thus the onset of the disease in mammals is determined. Most of the time, diabetes is confirmed at the end of the experiments, when the blood is collected for various tests, including blood sugar. At the onset of the disease, extracts from the cyanobacteria *Calothrix marchica*, *Nostoc halophyllum* and *Spirulina platensis* were administered orally through the liquid consumed by the rats in the form of liquid nutritional supplements.

During the research, a considerable increase in blood sugar was observed in the group with experimental diabetes in relation to the control samples.

As a result of the research, it was found that the glycemia in control subjects is 5.5 ± 0.62 mmol/l, and in the group with experimental diabetes - 16.9 ± 1.75 mmol/l. An important aspect is observed in the group where the *Calothrix marchica* supplement was administered on the background of alloxanic diabetes, a decrease in blood glucose level up to 8.8 ± 0.94 mmol/l is highlighted. A slightly weaker hypoglycemic effect was observed in the group where *Nostoc halophyllum* and *Spirulina platensis* were administered on the background of experimental diabetes - 10.5 ± 1.88 mmol/l; 9.1 ± 1.17 mmol/l.

In conclusion, the use of alcoholic extracts of the cyanobacteria *Calothrix marchica*, *Nostoc halophyllum* and *Spirulina platensis* demonstrated a beneficial effect in the treatment of type II diabetes and can be recommended as nutritional supplements in this case.

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