

Investigation of the Effect of Metformin, Sulfonylurea, and Galega officinalis on the Development of Oxidative Processes in Erythrocytes Under Insulin Resistance

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Diabetes is one of the most actual issues in today's world. 90% of 800 million diabetics have type 2 diabetes. In our experiment, we studied the Galega Officinnalis plant, which is used in traditional medicine, with the 2 most commonly used and most effective drugs in this disease. In our research, we separated erythrocytes. We washed the blood separated from the plasma 3 times with HCl buffer and centrifuged it. The blood sample was incubated with metformin and sulfonylurea at a temperature of 37°C in a thermostat. Then we measured the antioxidant capacity of our 3 research objects with a luminometer. Galega officinalis showed the highest antioxidant capacity, then metformin and the lowest effect was shown by the drug Amaryl. From this we conclude that the best means of protecting the body from oxidative stress is the Galega Officinalis. The reason for this is the antioxidant substances it contains.. The reason for this is the antioxidant substances it contains. The amount of biological substances it contains also depends on where it is grown. Goat's Rue plant growing on sulfurous soils is rich in SH groups, which is also a strong antioxidant. Soils rich in mud volcanoes, such as the Shirvan reserve, are sulfurous due to the gases and liquids spewed by the volcano. We also collected Galega Officinalis plant in the summer, in June, dried it under cover, and prepared its infusions. As a result, we concluded that Galega officinalis growing on sulfurous soils is more effective in the treatment of diabetes.

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