

The effects of *Lavandula angustifolia* Ethanolic extracts on blood glucose level of male Syrian hamsters

Cağla Cakaloğlu and Bulent Gunduz

Canakkale Onsekiz Mart University, Turkey

Abstract

Statement of the Problem: Diabetes mellitus, known as chronic hyperglycemia and resulted from insulin deficiency, is a metabolic ailment. Diabetes disorders are related to long-term damages, such as dysfunction and shortness of eyes, nerves, heart and kidneys. Plants have generally used for traditional medicine to treat various diseases. *Lavandula angustifolia* is an important herb for alternative medicine. *L. angustifolia* essential oil is utilized to protect from various diabetes symptoms, such as increased blood sugar level (BGL), metabolic disorders, liver and kidney diseases, which are resulted from diabetes. The aim of the study is to investigate the effects of *L. angustifolia* ethanolic extracts on BGL of male Syrian hamster (*Mesocricetus auratus*). Methodology & Theoretical Orientation: *L. angustifolia* plant was purchased from the local herbalist in Çanakkale. The flower parts of the plant were extracted. The obtained extracts were dissolved in saline solution. The animals, used in this study, were divided into two groups, control and experimental. *L. angustifolia* extract doses were injected to experimental animals intraperitoneally for 20 days, one dose per day. Blood samples were taken from all animals on the 10th and 20th days and the blood sugar values were measured by commercial kit. Findings: The results of this study was summarized in figure 2. The *L. angustifolia* extract increased on BGL on the 20th day. Conclusion & Significance: *L. angustifolia* essential oils and extracts are utilized for the treatment of various diseases. These oils and extracts are also used as complementary medicine for the treatment of diabetes. The BGL is indicating diabetes disorder. However, there are little researches about the effect of *L. angustifolia* oil and extracts BGL. Our result indicates that *L. angustifolia* flower extracts increase BGL. Therefore, due to its effect on glucose level in long-term use of *L. angustifolia* should be considered.

Biography:

Cağla Cakaloglu is a master student in neuroendocrinology. The model organism in her study is photoperiodic animals such as Syrian hamster. The thesis that she works is 'Effects of lavender (*Lavandula angustifolia*) extract on melatonin and testosterone levels and testicular composition in Syrian hamsters (*Mesocricetus auratus*)'. The results of the thesis will allow the benefit of such medical plants.



Speaker Publications:

1. Moradi B, Abbaszadeh S, Shahsavari S, Alizadeh M, Beyranvand F (2018) The most useful medicinal herbs to treat diabetes. Biomedical Research and Therapy. 5(8): 2538-2551.
2. Moradi B, Abbaszadeh S, Shahsavari S, Alizadeh M, Beyranvand F (2018) The most useful medicinal herbs to treat diabetes. Biomedical Research and Therapy. 5(8): 2538-2551.

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