

عنوان مقاله:

(Lesser known factors in having diabetes; focus on : aralkylamine Nacetyltransferase (AANAT

محل انتشار:

کنفرانس بین المللی ژنتیک و ژنومیکس انسانی (سال: 1400)

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خلاصه مقاله:

Backgrounds : Today, the effect of HLA-DQA\, HLA-DQB\, and HLA-DRB\ genes in the development of diabetes has been confirmed. In this study, we intend to examine the role of aralkylamine N-acetyltransferase (AANAT) gene in having diabetes which is generally effective in regulating circadian rhythms and melatonin levels. Materials and Methods : Two rats named I and II were tested. rat I was kept in a dark environment away from light. rat II were kept in a well-lit environment away from darkness. Both rats were kept in these environments for 3 months. The rats were similar in age and are healthy as well as the same diet. The number of insulin receptors, blood melatonin levels, and blood sugar levels was measured in two rats on a regular basis. Results : After three months, the level of blood melatonin in rat I increased from 7.5 mg to 11.2mg, in rat II, the level of blood melatonin decreased from 6.8 mg at the beginning of the experiment to 2.1 mg at the end. measurements of insulin receptors in rats I and II show that by increasing melatonin levels, which means increasing the expression of AANAT, the number of insulin receptors dropped and blood sugar levels increased in rat I, in contrast, by decreasing expression of AANAT in rat II promote the number of insulin receptors increase. Conclusion : Due to changes in the level of Insulin with an increase or decrease in the expression of the AANAT gene in rats, it seems that the AANAT gene is related to diabetes.

کلمات کلیدی:

AANAT, diabetes, Insulin, Melatonin, rat

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