

## عنوان مقاله:

Can the Soybean extract (glycine max) has a benefit effect for inducing adipose stem cells to the cartilage tissue cells

## محل انتشار:

اولین کنگره بین المللی مهندسی بافت و پزشکی بازساختی ایران (سال: 1397)

تعداد صفحات اصل مقاله: 1

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## خلاصه مقاله:

**Introduction** In recent years, many studies has been done on the effects of several plant on cartilage disease and arthritis.in addition, soy protein utilized as scaffold for tissue engineering. **Objectives** The present study is an experimental study to evaluate the effect of Soybean extract on growth and differentiation of adipose-derived cells to the sox9, aggrecan and collagene II genes expression.**Methods**Adiposity stem cells were extracted The cells were isolated after the third passage and were divided into three groups, including control, treatment with TGF-  $\beta$ 1, and treatment with soybean extract. After 72 hours, cell viability determined by MTT assay. After 2 weeks, sox9, aggrecan and collagen II gene expressions were assessed by real-time PCR technique. Data were statistically analyzed by one-way ANOVA and Tukey s post-hoc test using SPSS 20.**Results**The results of MTT assay showed a significant increase in viability in the soybean groups and TGF- $\beta$ 1 group compared with control group ( $p < 0.05$ ). The RT-PCR indicated a significant increase in the expression of sox9, aggrecan and collagen II genes in soybean and TGF- $\beta$ 1 groups compared with the control group, and also, the mean CT associated with sox9, collagen II gene had a significant increase in soybean and TGF- $\beta$ 1groups ( $p < 0.05$ ).**Conclusion**This seems soybean extract, moreover benefits effective in the treatment of cartilage damage, May have been helpful as a medium complement in cartilage cell culture and tissue engineering

## کلمات کلیدی:

Cell culture, Adipose Stem Cell, Soybean, Cartilage

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