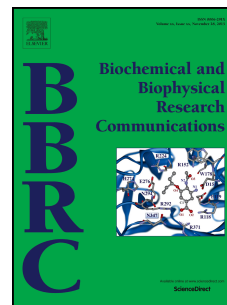


Accepted Manuscript

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PII: S0006-291X(15)30605-7

DOI: [10.1016/j.bbrc.2015.09.088](https://doi.org/10.1016/j.bbrc.2015.09.088)

Reference: YBBRC 34588

To appear in: *Biochemical and Biophysical Research Communications*

Received Date: 2 September 2015

Accepted Date: 16 September 2015

Please cite this article as: N.H. Tung, Y. Shoyama, M. Wada, H. Tanaka, Two activators of *in vitro fertilization* in mice from licorice, *Biochemical and Biophysical Research Communications* (2015), doi: 10.1016/j.bbrc.2015.09.088.

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Two activators of *in vitro* fertilization in mice from licorice

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ABSTRACT

Systems for artificial insemination have been established in some animals. However, due to limited availability of sperm and oocytes, more effective treatment methodologies are required. Recently, it was demonstrated that the rate of *in vitro* fertilization (IVF) in mice was improved by adding a water extract of licorice (*Glycyrrhiza uralensis*), but not glycyrrhizic acid, to the artificial insemination culture medium. In this study, we examined licorice extract for active compounds using bioassay-guided separation. The results indicated that isoliquiritigenin and formononetin were the active molecules in licorice that contributed to the improved rate of IVF.

Key words: sperm; licorice; glycyrrhizin; insemination; assisted reproductive technology (ART);

flavonoid; polyphenol; isoliquiritigenin; formononetin

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