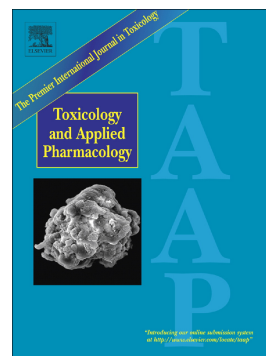


Accepted Manuscript

Met-enkephalin improves metabolic syndrome in high fat diet challenged mice through promotion of adipose tissue browning

Jinning Suo, Xiangzhong Zhao, Xin Guo, Xiulan Zhao



PII: S0041-008X(18)30421-6
DOI: doi:[10.1016/j.taap.2018.09.015](https://doi.org/10.1016/j.taap.2018.09.015)
Reference: YTAAP 14394

To appear in: *Toxicology and Applied Pharmacology*

Received date: 15 July 2018
Revised date: 7 September 2018
Accepted date: 13 September 2018

Please cite this article as: Jinning Suo, Xiangzhong Zhao, Xin Guo, Xiulan Zhao , Met-enkephalin improves metabolic syndrome in high fat diet challenged mice through promotion of adipose tissue browning. *Ytaap* (2018), doi:[10.1016/j.taap.2018.09.015](https://doi.org/10.1016/j.taap.2018.09.015)

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

**Met-enkephalin improves metabolic syndrome in high fat diet challenged mice through
promotion of adipose tissue browning**

Jinning Suo^a, Xiangzhong Zhao^b, Xin Guo^a, Xiulan Zhao^{a,*}

^aInstitute of Toxicology, School of Public Health, Shandong University, Jinan, Shandong 250012, P.R. China. Email address: 965809773@qq.com (Jinning Suo); xguo@sdu.edu.cn (Xin Guo).

^bSchool of Food & Engineering, Qilu University of Technology, Jinan, Shandong 250353, P.R. China. Email address: 13506416163@163.com (Xiangzhong Zhao).

*Send correspondence to:

Dr. Xiulan Zhao

Address: Institute of Toxicology, School of Public Health, Shandong University,

44 West Wenhua Road, Jinan, Shandong 250012, P.R. China.

Email address: zhao.xl@sdu.edu.cn

Tel.: (86) 531 88382132;

Fax: (86) 531 88382129.

¹ **Abbreviations:** β ARs: β -adrenoceptors, ATGL: adipose triglyceride lipase, BAT: brown adipose tissue, E-WAT: epididymal WAT, FFA: free fatty acids, GTT: glucose tolerance test, HFD: high-fat diet, HSL: hormone sensitive lipase, *Il-1 β* : interleukin-1 β , ITT: insulin tolerance test, iWAT: inguinal WAT, MetEnk: Met-enkephalin, OXPHOS system: oxidative phosphorylation system, PKA: protein kinase A, *Tnf- α* : tumor necrosis factor- α , UCP1: uncoupling protein 1, WAT: white adipose tissue.

Download English Version:

<https://daneshyari.com/en/article/10158579>

Download Persian Version:

<https://daneshyari.com/article/10158579>

[Daneshyari.com](https://daneshyari.com)