

 BIOMEDICAL RESEARCH ON TRACE ELEMENTS  
Japan Society for Biomedical Research on Trace Elements

[Available Issues](#) | [Japanese](#)

Author:  [ADVANCED](#) | Volume  Page

Keyword:   |



[TOP](#) > [Available Issues](#) > [Table of Contents](#) > [Abstract](#)

ONLINE ISSN : 1880-1404

PRINT ISSN : 0916-717X

## Biomedical Research on Trace Elements

Vol. 15 (2004) , No. 1 76-78



[\[Image PDF \(360K\)\]](#) [\[References\]](#)

### The physiological effects of the undercurrent water from Mt. Fuji on type 2 diabetic KK-A<sup>y</sup> mice

[Yusuke Adachi](#)<sup>1)</sup>, [Ippei Motomura](#)<sup>1)</sup>, [Rie Ueda](#)<sup>1)</sup>, [Hiroyuki Yasui](#)<sup>1)</sup>, [Ayako Kiyomasu](#)<sup>1)</sup>, [Jitsuya Takada](#)<sup>2)</sup> and [Hiromu Sakurai](#)<sup>1)</sup>

1) Department of Analytical and Bioinorganic Chemistry, Kyoto Pharmaceutical University

2) Research Reactor Institute, Kyoto University

(Accepted: January 23, 2004)

#### Abstract:

Recently, it has been reported that vanadium exists in a relatively high concentration in the natural water around Mt. Fuji in Japan. Vanadium is known to have a blood glucose lowering effect and improve the diabetic state in human and rodents. Therefore, many researchers have interested in the relationship between diabetes mellitus and vanadium in the undercurrent water from Mt. Fuji. In this study, we examined whether or not 3- or 5-fold concentrated undercurrent water from Mt. Fuji improves hyperglycemia and diabetic state in type 2 diabetic KK-A<sup>y</sup> mice with obesity. The concentrated undercurrent water given as drinking water did not reduce high blood glucose level, however, suppressed the progress of obesity, in terms of body weight gain, by the treatment for 12 weeks. Moreover, vanadium was found to accumulate in the tissues such as bone, spleen and liver by the treatment of 5-fold concentrated undercurrent water from Mt. Fuji for 12 weeks.

**Key words:** [concentrated undercurrent water from Mt. Fuji](#), [type 2 diabetes mellitus](#), [obesity](#), [KK-A<sup>y</sup> mice](#), [vanadium](#)

To cite this article:

Yusuke Adachi, Ippei Motomura, Rie Ueda, Hiroyuki Yasui, Ayako Kiyomasu, Jitsuya Takada and Hiromu Sakurai, "The physiological effects of the undercurrent water from Mt. Fuji on type 2 diabetic KK-A<sup>y</sup> mice", Biomedical Research on Trace Elements, Vol. **15**, pp.76-78 (2004) .

---

JOI JST.JSTAGE/brte/15.76

Copyright (c) 2005 by Japan Society for Biomedical Research on Trace Elements

---

