Anti-fatigue effects of *Acanthopanax senticosus* : randomized placebo-controlled trial

This study was presented at The 68th Annual meeting of the Japan Society of Nutrition and Food Science, 2014

[Study Objectives]

Currently, about 60% of the working population in Japan reports fatigue, and half of this fraction reports suffering from fatigue that persists for 6 months or longer. It is known that oxidative stress produced in the body by workload and other stresses contributes to the development of fatigue. If the condition is left unattended, not only will labor productivity decrease, but also aging may be accelerated, and lifestyle-related diseases may develop. To date, we have reported anti-stress and sleep-improving effects for *Acanthopanax senticosus*（AS）. However, there have been few reports on the effect of AS in alleviating chronic fatigue. Accordingly, we have investigated the effect of AS on chronic fatigue.

[Method of experiments]

Twelve subjects with fatigue on a daily basis whose d-ROMs (reactive oxygen metabolite-derived compounds) value, an indicator of in vivo oxidative stress, was moderate to slightly high (approximately 400 U.CARR) were randomized to 2 groups of 6 subjects each so that the d-ROMs values of the 2 groups would be comparable. The subjects of one group ingested 40 tablets of AS root powder-containing food (20 tablets after both breakfast and supper) for 8 weeks (AS group); the subjects of the other group ingested a placebo following the same regimen (placebo group). The effect of AS in alleviating fatigue was evaluated by the following indicators before ingestion, at week 4 of ingestion, and at week 8 of ingestion: d-ROMs value; BAP (biological antioxidant potential) value, which reflects antioxidative potency; d-ROMs/BAP value, which reflects the degree of oxidative stress; and visual analog scale (VAS) which reflects the subjective degree of fatigue.

[Results]

Changes in d-ROMs and d-ROMs/BAP values at week 8 in the AS group were significantly lower than those in the placebo group (Figures 1 and 2). In addition, the d-ROMs/BAP value at week 8 was significantly lower than that before ingestion in the AS group (Figure 2). For VAS as well, the score at week 8 was significantly lower than that before ingestion in the AS group (Figure 3). These results suggested that *Acanthopanax senticosus* decreases the subjective degree of fatigue and the degree of oxidative stress in people with fatigue on a daily basis, and therefore is for alleviating fatigue.

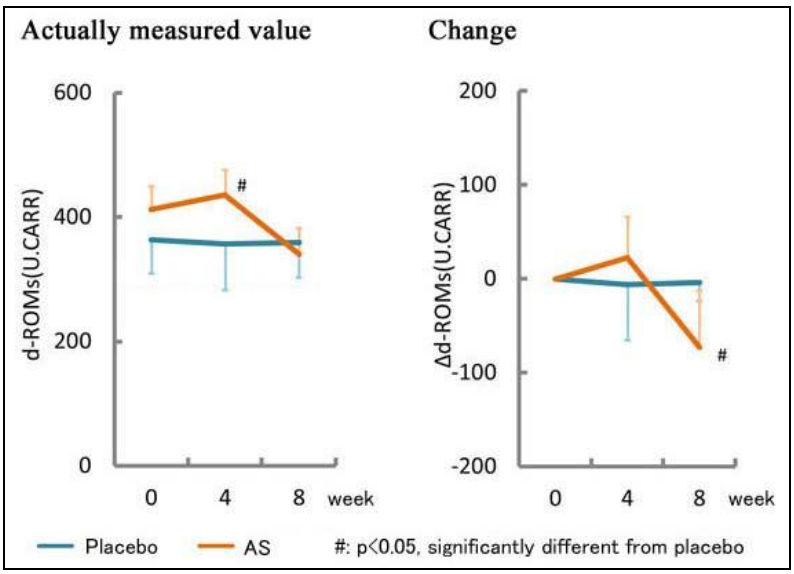

Figure 1. d-ROMs

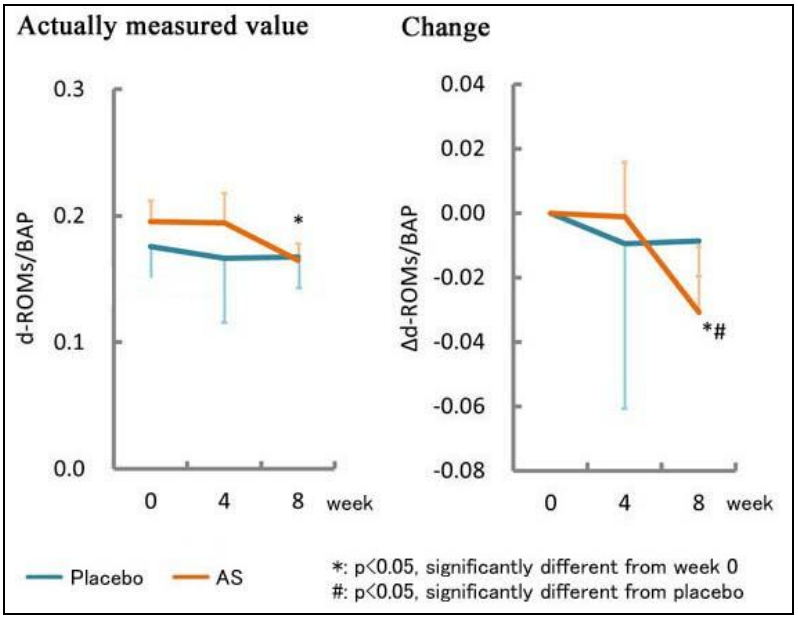

Figure 2. d-ROMs/BAP

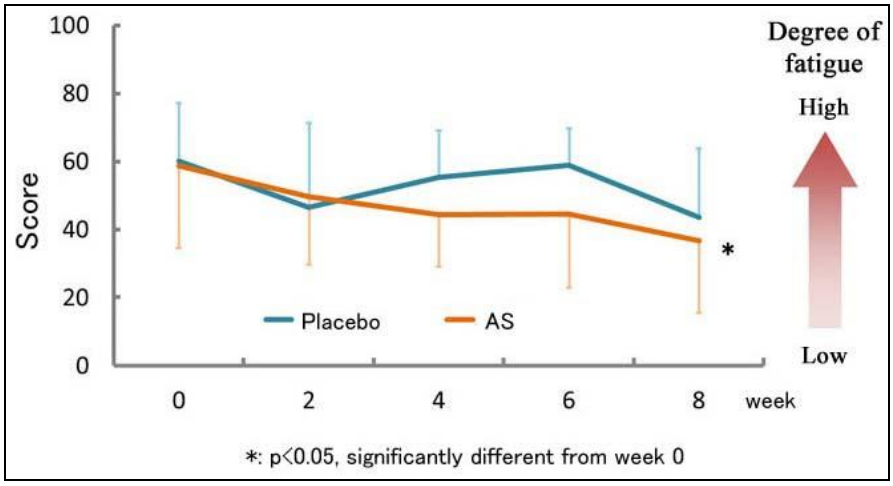

Figure 3. VAS

[Presentation at a scientific meeting]

Name of meeting:	The 68th Annual meeting of the Japan Society of Nutrition and Food Science (2014)
Title :	Anti-fatigue effects of *Acanthopanax senticosus* : randomized placebo-controlled trial
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