



Aged Garlic Extract brings various health benefits

The 7th International Garlic Symposium, organized by UCLA (USA), was held in Munich, Germany, from April 26 to 28 this year. Authoritative researchers from 8 countries presented their latest research results about garlic in a wide range of fields. Among them, the health benefits of "Aged Garlic Extract," produced by Wakunaga Pharmaceutical Co.,Ltd., raised special awareness. Here are some of the interesting research results.

Aged Garlic Extract promotes bowel movements

The intestine, which is responsible for food digestion and nutrient absorption, has its own neural network that plays an important role in controlling various intestinal functions. The enteric nervous system (ENS), also known as the "second brain," is known to interact with the brain, and damage or abnormality in the ENS is associated with human gastrointestinal (GI) diseases.

Elderly people often complain of dysphagia, loss of appetite, dyspepsia and colonic dysfunction

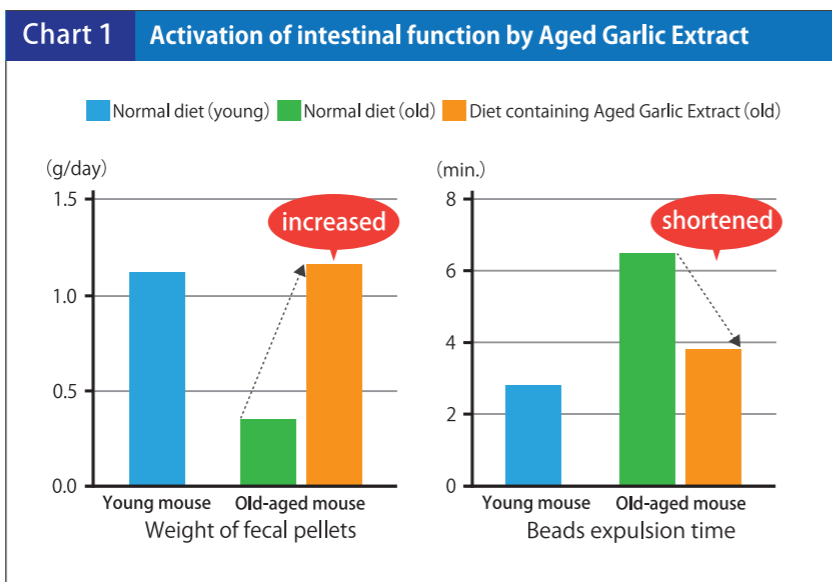


due to age-associated GI disorders. These conditions significantly reduce their quality of life, yet treatment options are very limited and the outcome is unsatisfactory mainly because the underlying mechanisms are not fully understood.

Dr. Ryo Hotta and his team at Harvard Medical School (USA) focused on understanding the mechanisms of age-associated colorectal dysmotility by careful examination of the ENS in old mice. They also evaluated the capacity of enteric neural stem cells (ENSC), isolated from old mice. They then treated the cells and mice with Aged Garlic Extract (AGE) and examined the effects on colorectal motility and

enteric neural cell biology. They found that colorectal motility was significantly impaired and ENSC numbers decreased in old mice, whereas these abnormalities were partially restored by feeding AGE to old mice for 2 weeks. (see Chart 1)

Further studies using ENSC culture demonstrated that AGE promotes cell survival. Additionally, AGE reduced oxidative stress in the ENS of old mice. These results showed that AGE exerts neuroprotective effects on ENS and partially reverses morphological abnormalities in old mice, suggesting the mechanisms of AGE act to restore colorectal dysmotility associated with aging mice.



Aged Garlic Extract inhibits cognitive decline

The prevalence rate of dementia is increasing in the world as the elderly population grows. In addition to age, the decline in cognitive function is also hinted to be linked with oral diseases such as periodontitis and cardiovascular diseases such as hypertension and arteriosclerosis. It has been shown that the ingestion of Aged Garlic Extract (AGE) inhibits the progression of periodontal disease, improves blood circulation and blood pressure and reduces the progression of arteriosclerosis. At this symposium, new research findings were reported: AGE showed beneficial effects on the brain and nervous system, improving memory and inhibiting cognitive decline. In a study conducted by Profes-

sor Zezong Gu and his team at the University of Missouri (USA), a group of old mice fed a diet containing AGE showed better memory and behavior compared to a group of mice fed a normal diet.

Also, Professor Matthew Budoff and his team at UCLA (USA) conducted a clinical trial on 72 subjects (average age: 53 years) to test cognitive functions such as memory, attention and language. The results showed that more subjects were judged to have sound cognitive function in the group that took the AGE for three months.

From these findings, it can be expected that AGE can improve memory and cognitive function



Prof. Matthew Budoff
UCLA Medical School (USA)

and thus plays a significant role in extending healthy life expectancy.

Aged Garlic Extract improves aerobic capacity

Arterial stiffness is a risk factor for cardiovascular disease and progresses with age. It also worsens blood circulation, which in turn reduces the supply of oxygen and energy sources to muscles. This leads to decreased aerobic capacity. In previous studies, Dr. Karin Ried and her team at the National Institute of Integrative Medicine (Australia) have proven that Aged Garlic Extract (AGE) is effective against hypertension. They have found that three month of consumption improves arterial stiffness and "rejuvenates" blood vessels.

In the study presented at the symposium, Dr. Ried hypothesized that AGE can increase oxygen uptake due to improved blood flow, which leads to the improvement of aerobic capacity. She conducted a clinical study with middle-aged endurance athletes. The study looked at the exercise capacity of 75 subjects (average age: 53 years) who performed aerobic exercises, such as 30 minutes of cycling or running three times a week, while they took either AGE or a placebo for 12 weeks. The results suggested that the increase in oxygen uptake during exercise was larger in the AGE group (left side of

Chart 2) compared to the placebo group.

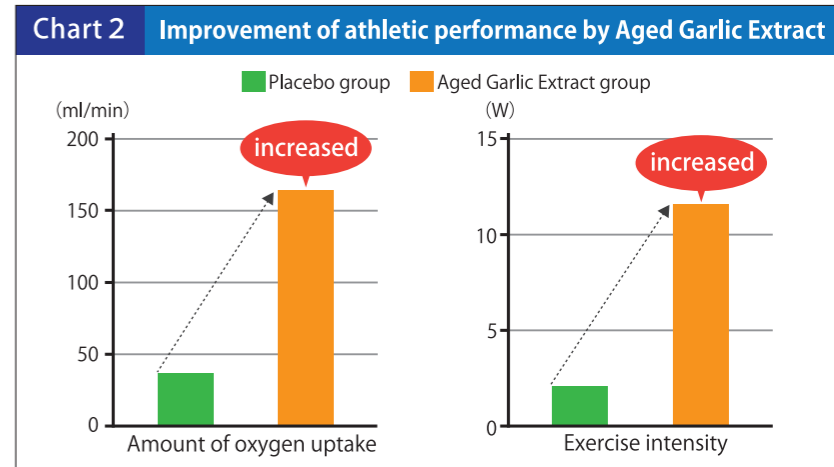
Furthermore, when exercise intensity and recovery time from muscle fatigue were evaluated as indices of endurance and physical strength, it was confirmed that the exercise intensity value was increased in the AGE group (right side of Chart 2) and that recovery from muscle fatigue was faster. This means that the group recovered quicker from muscle fatigue due to decreased lactate buildup and improved aerobic exercise capacity, which is a useful result for those who regularly engage in exercise.

The above results indicate that AGE is not only effective against arterial stiffness and hyperten-



Dr. Karin Ried
National Institute of Integrative Medicine (Australia)

sion, but also improves the exercise capacity of healthy people and helps to build a body resistant to fatigue.



Column: The history of garlic



Garlic has a long history and has been utilized since about 6,000 years ago in ancient Egypt. Various literature shows that it was used not only for food, but also for treating illnesses and maintaining health in times when there were no pharmaceuticals available. For example, it was given as a valuable source of vitality to the workers who built the pyramids in Egypt. In Japan, it was also mentioned in the country's oldest medical book "Daido Ruijyuhō" (808 CE) and in "The Tale of Genji," which is considered to be the world's oldest full-length novel, written in the early 11th century.

In 1960, Manji Wakunaga, founder of Wakunaga Pharmaceutical Co., Ltd., developed a safe "Aged Garlic Extract" by aging garlic based on the idea that "garlic with less odor and irritable substances is more suitable for enhancing the natural healing power." "Aged Garlic Extract" contains sulfur compounds that are beneficial for health but not found in fresh garlic. The useful functions of "Aged Garlic Extract" in disease prevention and health improvement are widely recognized around the world.

Summary : The International Garlic Symposium, held approximately every five years since 1990, is a forum for discussions and information sharing of various topics related to the health benefits of garlic as well as the identification of its active components and its mechanisms of action.

Authoritative researchers in different fields have

shown that garlic can prevent or reduce the impact of diseases, such as cardiovascular, brain, gastrointestinal and oral diseases. They also revealed several of its active ingredients and studied their mechanisms of action.

The major focus of the 2024 symposium was on the health effects of "Aged Garlic Extract." The aging of garlic produces sulfur compounds such

as S-allylcysteine and S-1-propenylcysteine, and their effects on hypertension and arteriosclerosis were confirmed. New findings in the field of periodontal disease, abdominal aortic aneurysm, pediatric neuroblastoma and COVID-19 were also reported. Research on "Aged Garlic Extract" will be continued to further explore its potential beneficial effects for the improvement of health.



7th International Garlic Symposium



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