# MGCPQQ supports cognitive health by:

#### **Creating new mitochondria**

Mitochondrion lose energy as people age, leading to impaired memory function and loss of muscle mass. Clinical and in-vitro studies show that MGCPQQ works against the causes of mitochondrial decline.

#### Stimulating Nerve Growth Factor (NGF)

Neurons are susceptible to lethal damage from oxidative stress, and neuronal death is a causal factor in age-related disorders. MGCPQQ may help nerves grow or recover after being damaged.





- **REGISTERED** on the European Union's Approved List of Novel Foods Ingredients
- APPROVED BioPQQ (MGCPQQ) has GRAS status and is the only supplement of its kind with NDI notification from the U.S. Food and Drug Administration
- **CERTIFIED** safe as an ingredient for food application by Japan's Ministry of Health, Labour and Welfare
- CERTIFIED by Informed-Choice
  and Informed-Sport quality
  assurance programs



MGCPQQ is a naturally derived, pure source of pyrroloquinoline quinone disodium salt (PQQ), which is found naturally in trace amounts in plants and several foods.

MGCPQQ is manufactured in Japan by Mitsubishi Gas Chemical Co. Inc. and is the only PQQ available for purchase by nutraceutical companies and supplement manufacturers in Europe.

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# Most Tested. Most Trusted.

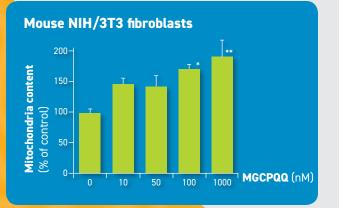
The most tested supplement ingredient of its kind, all-natural MGCPQQ has been proven to promote mitochondrial biogenesis and enhance mitochondrial function. It has also been shown to help improve cognitive function and memory.

The same safe, trusted ingredient known as BioPQQ in the United States, Canada and Japan

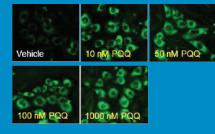


## **Most Researched.**

Increased amounts of MGCPQQ have been shown to boost mitochondria levels in mice.



#### MitoTracker Green FM Fluorescence detection (Ex/Em=485/520 nm)



#### Biochemistry, 2017, 56, 6615-6625

#### **In-Vitro Studies Show:**

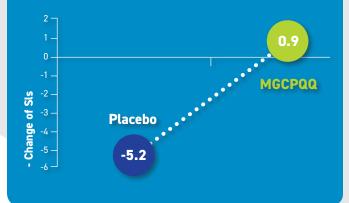
- Boosted Nerve Growth Factor<sup>1,2</sup>
- May help nerves in the brain and other organs grow or recover after being damaged<sup>3, 4</sup>
- Activation of energy-building organ growth<sup>11</sup>
- No toxicity<sup>5</sup>
- Extended life span of C. elegans

# Most Tested.

#### **Human Studies Show:**

- Increased memory recall<sup>10</sup>
- Short-term memory improvement<sup>10</sup>
- Better sleep, more energy, lower stress<sup>11</sup>
- Healthier skin<sup>12</sup>
- Help prevent high cholesterol levels<sup>13</sup>
- No adverse affects<sup>8</sup>

Attention and working memory scores on Stroop cognitive tests were significantly better after intake of 20 mg of MGCPQQ over 12 weeks.



#### Adv. Exp. Med. Biol. 2015, 876, 319-325.



### **Most Trusted.**

Results of a touch-M cognitive function test show that senior citizens taking 20mg/day of MGCPQQ experienced significant improvement in cognitive function.



#### **Animal Studies Show:**

- Higher learning ability and improved memory<sup>6</sup>
- Rebuilding of cells, immune system and brain function<sup>7</sup>
- No adverse affects<sup>8</sup>

Results for the Mood States cognitive function test show adults taking 20 mg/day of MGCPQQ experienced significant improvements in vigor, fatigue, tension-anxiety, depression, angerhostility, confusion and sleep.



Funct. Foods Health Dis. 2012, 2, 307–324

For references and to learn more, visit **mgcpqq.eu/clinical-studies.**