



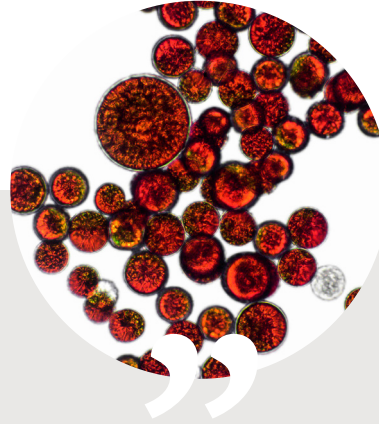
A NEW GROWTH MARKET
PRODUCT INNOVATION WITH ASTAXANTHIN

NEW FINDINGS FROM SCIENCE



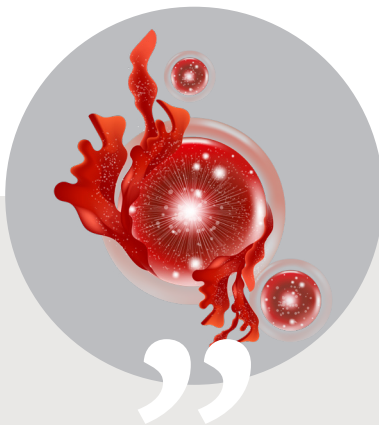
[...] astaxanthin modulated the mitochondrial functions through a new mechanism that is independent from its antioxidative function.

Y. Nishida, A. Nawaz, K. Hecht and K. Tobe,
“Astaxanthin as a Novel Mitochondrial Regulator:
A New Aspect,” vol. 14, no. 1, pp. 1-39, 2022,
doi: 10.3390/nu14010107



As a centre of the cellular metabolism and important regulators of the redox equilibrium, mitochondria play a decisive role in the development and progression of diseases. Enhanced oxidative stress can harm mitochondria, while the subsequent mitochondrial dysfunction produces a surplus of mitochondrial reactive species causing cellular damage.

S. H. Kim and H. Kim,
“Inhibitory effect of astaxanthin on oxidative stress-induced
mitochondrial dysfunction-a mini-review,”
Nutrients, vol. 10, no. 9, 2018, doi: 10.3390/nu10091137.



In summary, it can be stated that not only through the direct and indirect effect of its strong antioxidative activity, astaxanthin affects several biological defence mechanisms while also contributing to the maintenance and increase of the mitochondrial activity by affecting directly the AMPK/Sirtuins/PGC-1 metabolic pathway and other metabolic pathways.

S. Fakhri, F. Abbaszadeh, L. Dargahi, and M. Jorjani,
“Astaxanthin: A mechanistic review on its biological activities
and health benefits,” Pharmacol. Res., vol. 136, pp. 1-20, 2018,
doi: 10.1016/j.phrs.2018.08.012.



We are repeatedly fascinated by the great therapeutic potential we detect for astaxanthin on molecular and cellular bases, which can contribute to the improvement and maintenance of human health. Nature shows us a fascinating path, which we explore only very slowly in its entire breadth.

Prof. Andreas J. Kungl
(University of Graz)



A NEW GROWTH MARKET IS DEVELOPING – OBTAIN PRODUCTION CAPACITY

Current scientific findings will yield several new products with the vitaminoid astaxanthin gained from the alga *Haematococcus pluvialis*.

We are only at the start of a market development process. While the markets in the USA and Asia have already confirmed overproportional growth, Europe is only at the beginning of this development.

Start thinking about using this growth potential for your company now.

Our production process for natural astaxanthin is characterised by the following specifics:

- › in-house developed, closed indoor cultivation process (easily scalable)
- › comprehensive security and quality management through HACCP and FSSC 22000 certification
- › delivery guarantee due to non-seasonal production
- › sustainable production
- › continuous systematic selection of the best algal stems of *Haematococcus pluvialis*

SCIENTIFIC COLLABORATIONS

After more than 500 scientific studies on the positive effects of natural astaxanthin on human health, the effectiveness of astaxanthin as co-therapeutic agent is currently being researched, i.a., regarding COPD, immunology and infectiology.

BDI-BioLife Science has commissioned over 15 studies in the cosmetics area regarding biological cell protection and works closely with scientific institutions, universities and certified research facilities for research and development projects.

Our cooperation partners include:



ASTAXANTHIN COMPETENCE CENTRE

The globally used production technologies for natural astaxanthin often show great differences in quality. For premium pharmacological, nutritional and cosmetics

products, the highest astaxanthin quality standards are crucial. BDI-BioLife Science ranks among the top-class producers.



BiOLiFESCIENCE®

BDI-BioLife Science GmbH
Am Ökopark 22 | 8230 Hartberg | Austria
T +43 3332 32042 10 | office@bdi-biolifescience.com

www.bdi-biolifescience.com

