

Synthetic 9-cis beta Carotene for treatment of retinal degeneration (Ramot)

code: 10-2017-1079

[Ehud GAZIT](#), T.A.U Tel Aviv University, Life Sciences, School of Molecular Cell Biology & Biotechnology

9-cis β -carotene-rich is an effective treatment for retinal diseases. Its production in algae was a bottleneck of clinical trials. Now there is a new a synthetic method for its production.

BACKGROUND

Age related macular degeneration (AMD) and Retinitis pigmentosa (RP) are a leading cause of vision incapacitation and blindness worldwide (>30 million people). In recent clinical studies, we demonstrated that oral treatment with the 9-cis β -carotene-rich *Dunaliella Bardawil* algae significantly improved visual function in patients with neuro-retinal degeneration. In the last decade, the algae 9-cis β -carotene content was extremely low due to environmental conditions. Hence clinical trials with the algae could not be pursued, stressing the need for manufacturing synthetic 9-cis β -carotene that will be readily available for treatment and enable tight control of drug dosage.

THE TECHNOLOGY

A novel practical cost-effective synthetic route for 9-cis-beta carotene was developed. In organotypic cultures of retina from mice, the synthetic 9-cis-beta carotene rescued photoreceptors from degeneration. These studies suggest that synthetic 9-cis-beta-carotene is biologically active and may possibly be an effective treatment for retinal dystrophies.


THE PRODUCT

Synthetic 9-cis-beta carotene formulated as a high purity drug. The 9-cis has the following advantages over other type of beta-carotenes: high purity, cost effective, ability to produce in high scale, high concentrations, and stability and storage properties.

INTELLECTUAL PROPERTY

Provisional patent filed regarding the proprietary synthetic route of synthetic 9-cis β -carotene

Contact for more information:

Tali Aloya , BD Life Sciences, +972-3-7684939

Ramot at Tel Aviv University Ltd. P.O. Box 39296, Tel Aviv 61392 ISRAEL

Phone: +972-3-6406608

Fax: +972-3-6406675