

Abstract for BIOMED 2024

Vinia, the first botanical synthesis based product from BioHarvest, improves vascular function, blood flow and diabetic parameters. Dr. Yochi Hagay

BioHarvest Sciences stands at the forefront of biotech innovation as a pioneer in plant cell biology. Our groundbreaking Botanical Synthesis platform technology revolutionizes the production of Non-GMO plant-based botanical compounds compositions without growing the plant. These compositions exhibit homogeneity, consistency and preserve metabolites in their original molecular structure and conformation, potentially featuring elicited components compared to the original plant.

Botanical Synthesis is the process where the plant cells grow in industrial large scale bioreactors, offering a scalable and sustainable method for producing primary and secondary metabolites. Bioharvest's Botanical Synthesis process allows to turn 500,000+ plants into scientifically reliable source of plant molecules for the next generation of therapeutic solution, cosmeceuticals, nutraceuticals, nutrition, and other industries.

BioHarvest's first in line flagship product VINIA® is Red Grape Cells having a diverse complex of red grape polyphenol in their natural state; piceid resveratrol, quercetin, anthocyanins, tannins, catechins including proteins and fibers produced without solvent extraction or genetic modification. Through Botanical Synthesis process, we have achieved a 100-fold increase in piceid resveratrol levels compared to conventionally grown grapes in the vineyard.

Vinia has undergone rigorous in vitro, pre-clinical and clinical studies with results published in peer review journals. BioHarvest clinical trials demonstrate that daily consumption of VINIA for three months improved cardiovascular parameter such as FMD, decreased DBP and improved oxidative stress in subjects with mild hypertension who are not medically treated. In another randomized double-blind placebo-controlled trial conducted on subjects with type 2 diabetic has shown that 12-week supplementation of VINIA reduced HbA1c, improved insulin sensitivity and significantly influenced clock gene expression.

Expanding our product line, we have developed olive and pomegranate compositions, further validating the Botanical Synthesis process. BioHarvest is currently producing VINIA in a state-of-the-art biological production facility in the center of Israel and is successfully market it in Israel and the USA online direct-to-consumer as nutraceutical Product.

Bioharvest newly launched expansion into the contract development & manufacturing organization (CDMO) market, built upon the success of its commercially validated Botanical Synthesis technology process. CDMO unit allows disruptive innovation for market leaders in pharmaceuticals, cosmeceutical, nutraceutical & food nutrition verticals with unique plant molecules