

# BIOHARVEST

SCIENCES

**The Botanical Synthesis Company**

**Investor Presentation**  
December 2024

**NASDAQ: BHST**



# Forward Looking Statements

This presentation contains "forward-looking statements." The statements contained in this presentation that are not purely historical are forward-looking statements. Forward-looking statements give the Company's current expectations or forecasts of future events. Such statements are subject to risks and uncertainties that are often difficult to predict and beyond the Company's control and could cause the Company's results to differ materially from those described. In some cases, forward-looking statements can be identified by terminology such as "may," "should," "potential," "continue," "expects," "anticipates," "intends," "plans," "believes," "estimates," and similar expressions. These statements include statements regarding moving forward with executing the Company's global growth strategy. Although the company believes it has identified a path to profitability there is no assurance that profitability will be achieved as many factors beyond the control of the company could impact its potential for profitability such as changes in consumer preferences, increases in costs and changes in government regulation. The statements are based upon current beliefs, expectations and assumptions and are subject to a number of risks and uncertainties, many of which are difficult to predict. The Company is providing this information as of the date of this presentation and does not undertake any obligation to update any forward-looking statements contained in this presentation as a result of new information, future events or otherwise, except as required by law. We have based these forward-looking statements largely on our current expectations and projections about future events and financial trends affecting the financial condition of our business. Forward-looking statements should not be read as a guarantee of future performance or results and will not necessarily be accurate indications of the times at, or by, which such performance or results will be achieved.

# Corporate Overview

BioHarvest Sciences is a biotech innovator & inventor of Botanical Synthesis – a new process to synthesize plant-based molecules – providing the world with consistent, reliable, economically viable & patentable potent molecules for the next generation of therapeutic solutions.

- **Patented Botanical Synthesis Technology Platform:** Industrial scale process that economically produces patentable, plant-based molecules with the highest levels of consistency and purity – a compelling alternative to chemical synthesis or biologics
  - Enables the homogenous production of non-GMO phyto-medicinal molecules (small and complex) turning thousands of plants into predictable, reliable sources of new therapeutic molecules **without growing the plant itself**
- **Products Division Commercialized at Industrial Scale:** Successful direct-to-consumer sale of grape-derived nutraceutical product serves to rapidly monetize and validate the power of the Botanical Synthesis technology process
- **Defined Path to Breakeven:** Announced revenues of **\$6.5** million in Q3 2024 (101% growth) with gross margins expanding 1,200 bps from 45% in Q3 2023 to 57% in Q3 2024 and adj. EBITDA breakeven expected in 2H 2025
- **Disrupting Multiple High Growth Verticals:** Platform technology applicable to pharmaceuticals, cosmeceuticals, nutraceuticals, nutrition and other industries
- **February 2024 Launch of CDMO Business Unit:** Contract Development & Manufacturing Organization (“CDMO”) services business unit offers the industry access to the patented Botanical Synthesis Platform, as a service



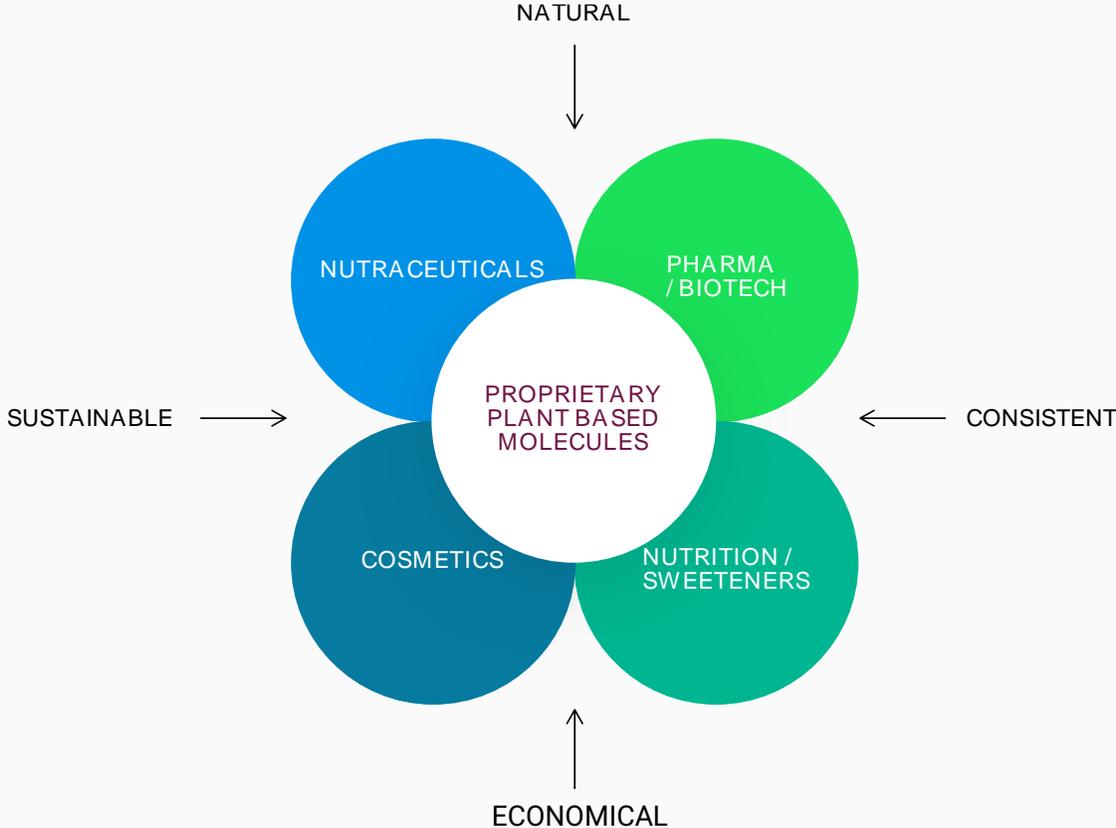
## BioHarvest Sciences NASDAQ: BHST

Share Price <sup>1</sup>	US\$6.18
Market Cap <sup>1</sup>	\$110.0M
Q3 24 Revenue	\$6.5M+
Shares Outstanding	17.3M
Float	12.6M
Insider Ownership	37.9%

1. As of 11/26/2024

# VISION

BHST is Addressing Unmet Health & Wellness Needs With Patentable Plant Molecules Produced Consistently & Economically With the Highest Levels of Sustainability

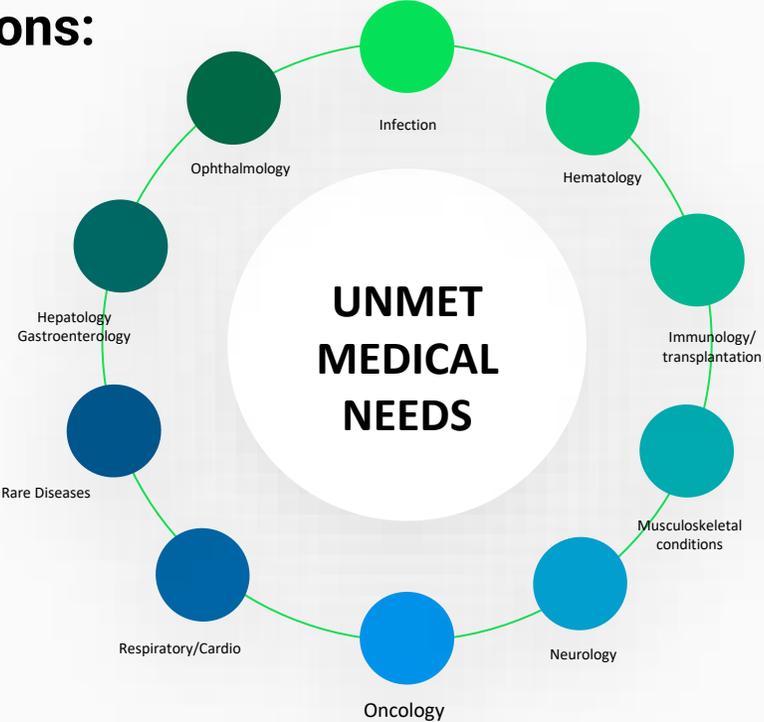


**NORTH STAR OF BHST IS TO DEVELOP, MANUFACTURE & DEMOCRATIZE 5-10 MOLECULES FROM PLANTS THAT CHANGE THE WORLD OF HEALTH & WELLNESS FOR HUNDREDS OF MILLIONS OF PEOPLE WHILE PRESERVING THE PLANET FOR GENERATIONS TO COME**

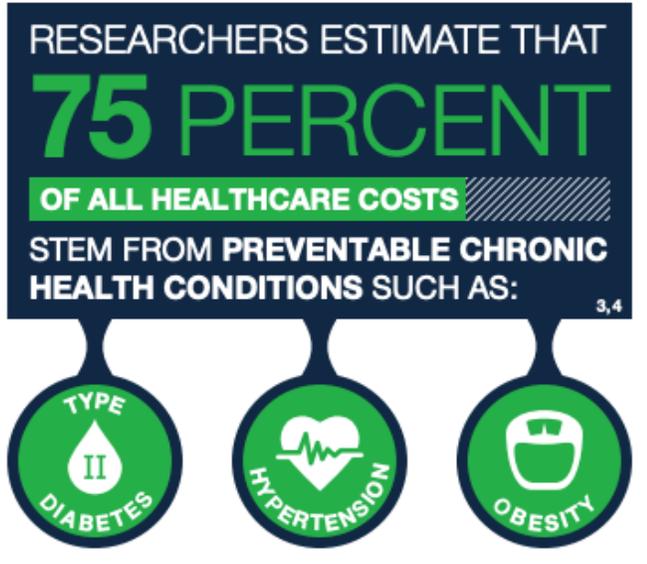
# Curative & Preventative Applications

BHST is Addressing Unmet Health & Wellness Needs With Patentable Plant Molecules Produced Consistently & Economically With the Highest Levels of Sustainability

## Curative Applications:



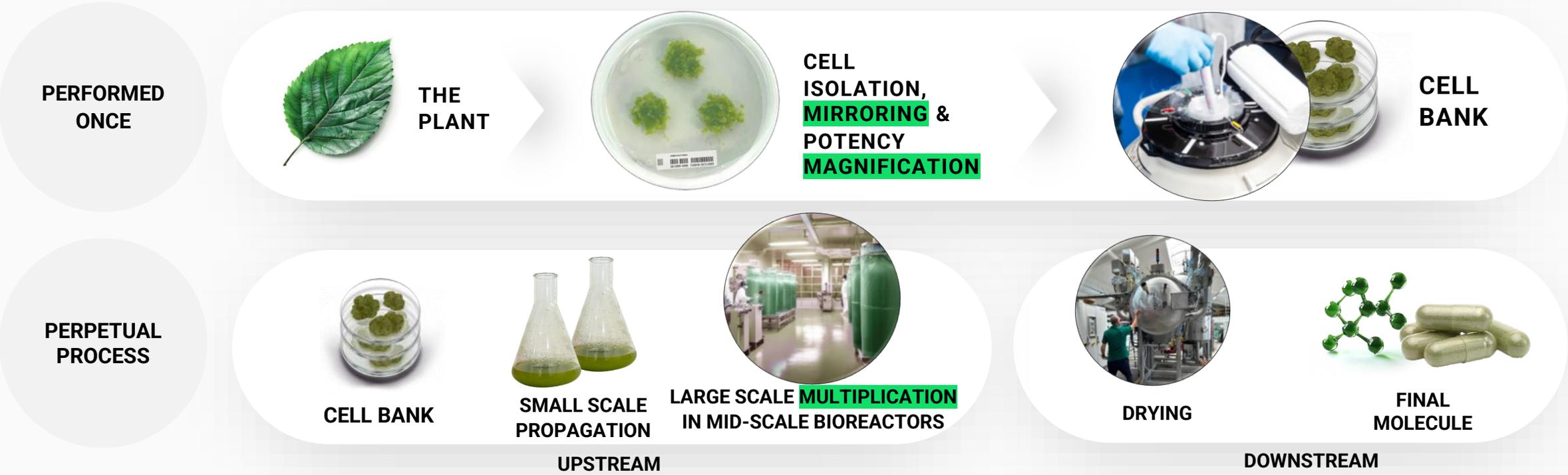
## Preventative Applications:



- Health & Wellness
- Longevity

# Invested \$100M Into Proprietary Technology Process Which Enables Development of Molecules for Next-Gen Therapeutic Solutions

We only require the plant once to **mirror**, **magnify** and **multiply** plant cells with unique phytomedicinal compounds.



- ▶ Global Leader in Plant Cell Biology with 15+ Years of Development and ~\$100M Invested in the Platform
- ▶ 14 Granted Patents – Multiple Pending

# Turning Plants Into a Scientifically Reliable Source of Patentable Biological Molecules

## Botanical Synthesis Offers Significant Advantages in Production of Simple and Complex Molecules



### Consistency

Production inherently has a degree of control not possible in nature.



### Patentability

Botanical compositions patentable given concentrations not possible in nature.



### Optimal Bioavailability

Maintaining the metabolites original molecular conformation while enabling the elicitation of certain important molecules.



### Cleanliness / Purity

Inherently clean process due to aseptic growth conditions.



### Environmental Sustainability

Botanical synthesis uses much less resources, including land, water and electricity. In addition, growing a plant cell only requires a 'real' plant one time for future replication.



### Economic Viability

Cells are grown directly in bioreactors and harvested every 3 weeks which creates up to 17 harvest cycles per year. The result is an order of magnitude lower cost of production.



### Non-GMO

Molecular structure of the plant compounds are not changed in any way.

# BHST has 2 Growth Engines Powered by Our Botanical Synthesis Process



## D2C WELLNESS BUSINESS UNIT

- CDMO PROOF OF CONCEPT / MARKET VALIDATION
- LEARNED TO EFFICIENTLY MANUFACTURE AT SCALE
- CASH GENERATOR



## CDMO SERVICES BUSINESS UNIT

Anchored by Dec. 2024 Deal with Tate & Lyle

APPLYING BOTANICAL SYNTHESIS AS A CDMO TO DEVELOP:

- SIMPLE & COMPLEX MOLECULES
- MULTIPLE VERTICALS
- 3 DEALS SIGNED  
+ ROBUST PIPELINE

**BIOLOGICS+**  
BY BIOHARVEST SCIENCES



# Introducing VINIA®: Our Flagship Red Grape Cell-Derived Direct-to-Consumer Nutraceutical Product

- **VINIA® is BioHarvest's first commercial product**, a proprietary nutraceutical containing the entire matrix of red grape polyphenols, including Piceid Resveratrol
- **Botanical Synthesis process increases Piceid Resveratrol concentration by at least 100x versus regular grapes** (a principal health-benefitting compound in red grapes)
- Breakthrough red grape cell powder that significantly increases artery dilation and blood flow, enhancing delivery of oxygen to cells & removal of toxins from the body
- **Proof of concept and market acceptance with \$2M in sales in May 2024**, validating the demand for products created using inherent advantages of Botanical Synthesis
  - Growing customer satisfaction (**4.8/5** average rating and **7,000+** verified online reviews) coupled with positive feedback from healthcare professionals
- VINIA® is patent-protected with 3 peer-reviewed studies and 8 scientific studies
- Available in the U.S., expanding into the Canadian market on recent regulatory approval, with additional regulatory efforts underway in Europe, Japan and China



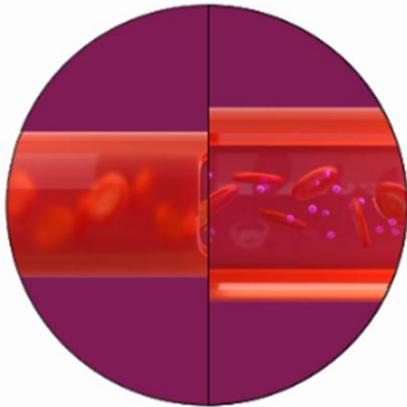
**Providing Better Blood Flow for a Better Life:**

*\*These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease*

# Products Anchored in Science & Backed by Clinical Trials

## 70% INCREASE IN ARTERY DILATION

Our clinical trial showed that VINIA increased the dilation of arteries by at least 70% for **each person who took VINIA daily for 90 days.\***



BEFORE

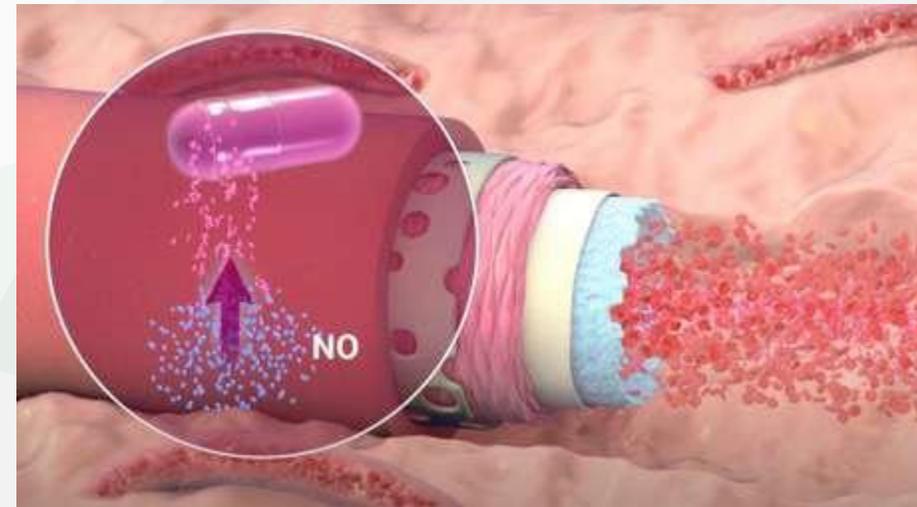
AFTER

### 120% Increase in Nitric Oxide

Our in vitro studies show that VINIA boosts nitric oxide production by 120%, this helps blood vessels dilate to promote proper blood flow.

### 50% Decrease in ET-1

Our in vitro study shows that VINIA decreases Endothelin-1 by 50%, a peptide that increases as you age, constricts blood vessels and slows down blood.



Clinical trial published in peer reviewed scientific journals

[bioharvest.com/clinical-studies](https://bioharvest.com/clinical-studies)

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# Scaling Grape Molecule Across 3 New Higher Margin Verticals in Next 24 Months

Testament to BioHarvest's Ability to Scale and Enter New Markets

## VINIA Capsules

Flagship Nutraceutical  
Superior Blood Flow



## VINIA Hot Beverages

Launched December 2023  
Superior Energy & Alertness  
>\$5B Market<sup>1</sup>



## VINIA Hydration

Launching H1-25  
Superior Hydration  
>\$15B Market<sup>1</sup>



## VINIA Skincare Products

Launching H2 2025  
Superior Beauty  
>\$13B Market<sup>1</sup>



Relative Gross Profit Profile per Capsule Equivalent

1.0x

\$2M+ Sales per Month

1.3x

\$1.5M Since Launch

1.3x

Launching H1 2025

> 10.0x

Launching H2 2025

Launched Dec 2024

<sup>1</sup>Functional Coffee - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts 2019 - 2029; <sup>2</sup>Functional Coffee - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts 2019 - 2029; <sup>3</sup>DATA HORIZON RESEARCH - FUNCTIONAL TEA MARKET 2 RESEARCH 2024; PRECEDENCE RESEARCH - Electrolyte Drinks Market (By Type: Isotonic, Hypotonic, Hypertonic; By Packaging: PET Bottles, Cartons, Beverage Cans, Tetra pack, Pouches & Sachets; By Distribution Channels: Online, Offline) - Global Industry Analysis, Size, Share, Growth, Trends, Regional Outlook, and Forecast 2023-2032; STATISTA DEC 2022 - SKIN CARE & BEAUTY MARKET ESTIMATES

# Repeating the VINIA Playbook: Olive & Pomegranate Cells

Business Model Can be Easily Replicated Across New Plant Molecules

Olive & Pomegranate Cell Molecules Being Developed as Parallel Product Lines

## Addressing Consumer Needs Through New Molecules

- **Olives:** Providing at least **15X** concentrated amounts of Verbascoside concentration vs. a regular olive: a compound with antioxidant, anti-inflammatory and antineoplastic properties .<sup>1</sup> **Focus on Liver Health, Cholesterol & Joint Health**
- **Pomegranates:** Providing at least **10X** concentrated amounts of PGG Polyphenol (1,2,3,4,6-pentagalloyl glucose): a compound with anti-microbial, anti-diabetic, anti-inflammatory and anti-tumor properties<sup>2</sup>. **Focus on Brain Health.**

## Mirroring the VINIA Playbook

- Olives and Pomegranate Cell powders can be expanded across Hot Beverages, Snacking, Hydration Powders, Skincare and more to provide a full suite of nutraceuticals

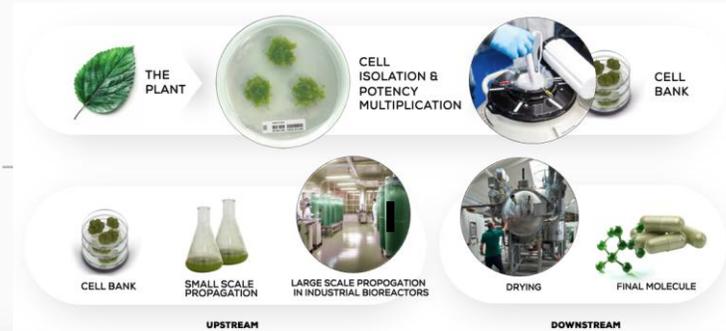
## Sell Through Opportunities

- Further integrate consumers into the BioHarvest ecosystem
- Loyal & growing subscriber base provides captive audience for new products



1) <https://www.sciencedirect.com/science/article/abs/pii/S0944711323003884>  
2) <https://www.sciencedirect.com/science/article/abs/pii/S1756464617304334>

# BHST has 2 Growth Engines Powered by Our Botanical Synthesis Process



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**BIOLOGICS<sup>+</sup>**  
BY BIOHARVEST SCIENCES

# Introducing **BIOLOGICS<sup>+</sup>** CDMO Products & Services

BY **BIOHARVEST** SCIENCES

## BioHarvest Sciences Botanical Synthesis CDMO has the Potential to Become an Emerging Force in Plant-based Biologics Development

- **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 enables BioHarvest to offer disruptive innovation via Botanical Synthesis for market leaders in **cosmeceutical, nutraceutical & food nutrition verticals with unique plant molecules**
- Development of plant-based Biologics<sup>+</sup> molecules create a **safer, faster and less expensive** pipeline of molecules for next-gen therapeutics vs existing small and complex molecule solutions available to pharma.
- CDMO partners own all IP rights to the new developed molecules
- **Biologics<sup>+</sup> can be pursued through full FDA-approved drugs in both regulatory approval pathways:** Biological drugs and Botanical drugs
- CDMO unit provides unique optionality on top of existing high performing products business



# CDMO ENGINES FOR GROWTH

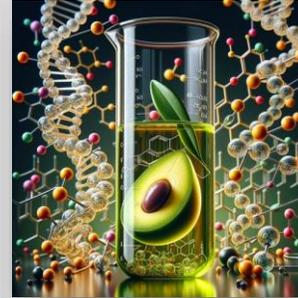
## Pharma & Biotech



**Pharma:** (a) Over 140 existing Rx small molecules utilize plant-based API, KSM, or excipients (b) pursuit of new molecules in clinical Ph1+

**Biotech:** Over 100 biologics including vaccines, adjuvants, antibodies, and proteins that originate from plants

## Nutraceuticals



Major Health and Wellness focus driven by preventative medicine and move away from RX world of side effects

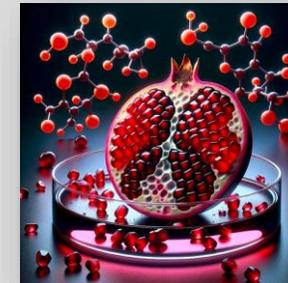
## Cosmetics



Top players targeting 100% naturally derived ingredients by 2030, driven by major pressure from consumers

## Nutrition & Sweeteners

*Anchored by Dec. 2024 Deal with Tate & Lyle*



Significant Applications throughout the food and beverage market driven by sub optimal solutions today (i.e. Stevia)

Higher Margin | Lower Volume

Lower Margin | Higher Volume

# CDMO ENGINES FOR GROWTH

## Pharma & Biotech

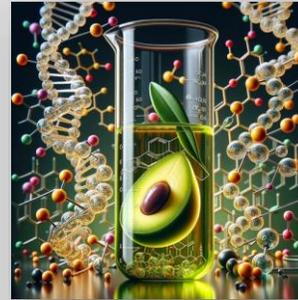


**SUPER HIGH MARGIN MOLECULE REPLACEMENT & NEW MOLECULE DEVELOPMENT**

**65% OF FOCUS**

**>\$5,000 KG**

## Nutraceuticals



**DEVELOPMENT OF MOLECULES TO DRIVE DIFFERENTIATION IN MAJOR COMPETITIVE PROFIT POOLS (BEETS, ASHWAGANDA)**

**10% OF FOCUS**

**> \$700 KG**

## Cosmetics



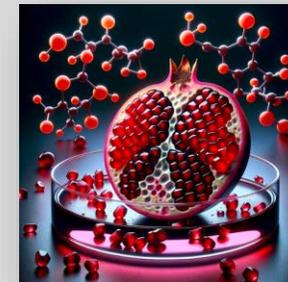
**DEVELOPMENT OF NEW HIGH MARGIN MOLECULES THAT WILL DRIVE INDUSTRY DIFFERENTIATION FOR 2-3 GLOBAL PLAYERS**

**15% OF FOCUS**

**>\$2,000 PER KG**

## Nutrition & Sweeteners

*Anchored by Dec. 2024 Deal with Tate & Lyle*



**DEVELOPMENT OF SUPER HIGH VOLUME / LOWER MARGIN MOLECULES THAT WILL CHANGE THE FOOD CHAIN & FORCE BHST TO BECOME THE LOWEST COST PRODUCER OF MOLECULES**

**10% OF FOCUS**

**>\$500 KG**

**TATE & LYLE**

Higher Margin | Lower Volume

Lower Margin | Higher Volume

# CDMO Staged Development Process

## Three Contracts Already Signed with Tier-1 Partners (Across Multiple Verticals)

- Contracts signed include partnership with ingredient solutions world leader Tate & Lyle for next-generation sweeteners
- Platform is resonating with industry: In advanced negotiations with several other companies



Development Timeline: 15-24 Months

Non-Recurring Engineering (NRE) Costs: \$1.8M - 2.5M, paid for by CDMO partner

- Process begins with customer initiation where specific plant and compounds is chosen; cell culture development and elicitation completed
- **Within 6-9 months customer can receive kilograms of molecules for development and clinical trials**
  - Requires \$0.5-1M non-refundable, milestone driven capital commitment from customer
- Development completes with industrial production of chosen compound and royalty model put into place with customer (targeting ~70%+ gross margins)

## Botanical Synthesis CDMO Development Stages



# The CDMO Sales Funnel: An Illustrative Case Study

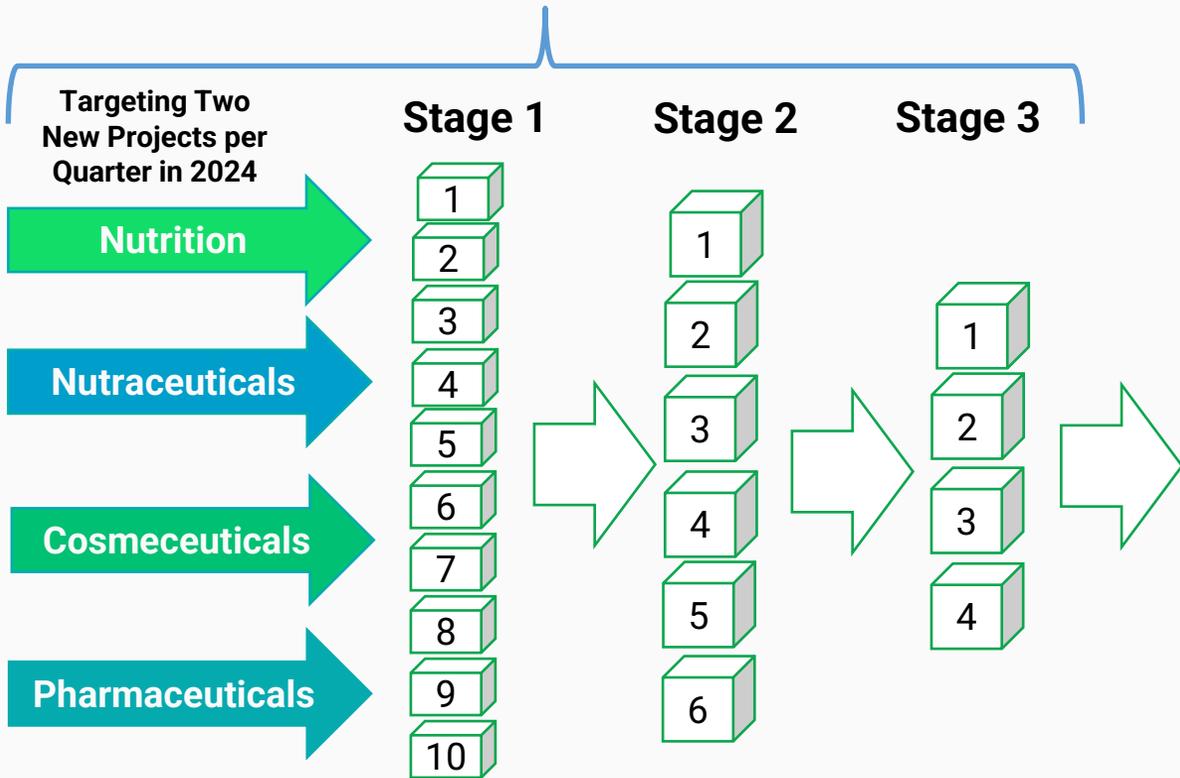
*Each Ten Projects Have the Potential to Generate \$100M+ in Revenue Over 5 Years*

## CDMO Projects

~15-24 Month Development Cycle  
~\$1.8-2.5M in NRE Revenue per Project

## Continuous Contract Manufacturing

Predictable, High-Margin Royalty Revenues



### Illustrative CDMO Revenue per Ton Produced

Customer Type	Tons per Year	Price per Ton	Royalty Revenue/Ton
Pharmaceuticals	5	>\$5M	\$4M/Ton
Cosmeceuticals	30	>\$1.5M	\$1.2M/Ton
Nutraceuticals	100	\$600-800K	\$400K/Ton
Nutrition	500	<\$500K	\$300K/Ton

\*Assuming 4 of 10 projects make it to commercialization stage within 24 months, with one of each customer type. Revenue dependent on client mix.

# In-House Biotech Manufacturing and R&D Facilities

## World Class Biological Production and R&D Team in Israel

- **BioHarvest is currently producing VINIA in a state-of-the-art biological production facility in the center of Israel**
  - Production facility located in Yavneh, Israel
  - Corporate and R&D offices located Rehovot, Israel
- Yavneh Facility fully optimized for industrial production with a **20 metric ton per year production capacity** (est. \$55 Million of product per annum)
- Botanical Synthesis allows BioHarvest to set up new facilities producing unique patentable plant molecules using a **fraction of the time, space, electricity, water and manpower** required for conventional agriculture
- VINIA product line is distributed in North America leveraging world-class DTC capabilities
- **May 2024:** Acquired 80,000 sq. ft. corporate campus in Israel, including 12 clean rooms and the space for a 50 metric ton production facility
- **Future Target:** Planning to construct a 150-160 metric ton manufacturing facility in the United States to be completed by end of 2026



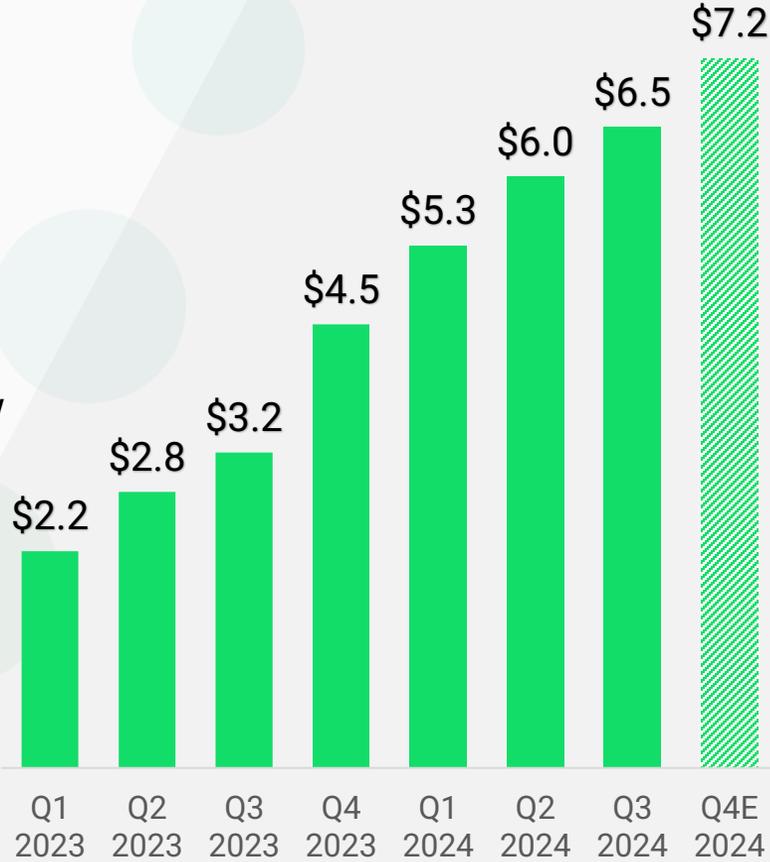
# Financial Highlights

- **Success of VINIA® Red Grape Cell product line** drove TTM revenues to a record of \$22.4 million, reflecting a year-over-year increase of 112%
  - 90% of VINIA.com revenue is generated from recurring subscriptions
  - 91% of those on subscriptions of 3 months or more
- **Margin enhancement initiatives** increased gross margins in Q3 24 to 57% vs. 45% in the same year-ago quarter and 18% two years ago
  - Recently converted VINIA shipments from 30 & 60 count bottles to a singular 90 count in a redesigned package, saving an est. 3% in gross margin
- **Marketing efficiency increasing** with industry leading customer acquisition cost. Q3 2024 subscription base increased by 128% with SG&A only increasing by 67%
- **Investing for Growth:** Investing heavily to scale with VINIA® sales takeoff, incremental new products **and defined path to adj. EBITDA breakeven in 2H 2025**
- **CDMO Optionality:** Long-term royalty potential through CDMO services business unit

(USD \$ in Millions)	TTM as of Q3 2024	Fiscal 2023	Fiscal 2022	Fiscal 2021
Revenue	\$22.4	\$12.7	\$5.5	\$2.1
Gross Profit Margin	54.0%	44.5%	22.2%	31.9%

## Quarterly Revenue\*

\$ in Millions



\*As of 9/30/2024

# Management Team with Track Record of Innovation & Commercial Excellence



**Ilan Sobel**

Chief Executive Officer  
25+ years developing & executing strategic growth strategies



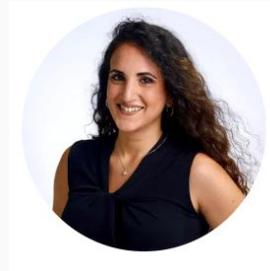
**Dr. Zaki Rakib**

Chairman of the Board  
30+ years experience developing disruptive technologies



**Dr. Yochi Hagay**

Chief Technology Officer  
20+ years experience in the pharmaceutical & biotech space



**Bar Dichter**

Chief Financial Officer



**Dr. Ilana Belzer**

Chief Operating Officer  
Extensive experience overseeing biotech companies



**Dr. Malkit Azachi**

Vice President R&D  
20+ years experience developing biotechnologies



**Dr. Brian Cornblatt**

Chief Medical Officer  
17+ years of product development & clinical research expertise



# Investment Highlights

- **BioHarvest Botanical Synthesis process technology represents a generational opportunity for pharmaceutical and health & wellness markets**
  - Patented technology platform optimizes the production of the phyto-medicinal molecules in plants to develop pharmaceutical and health and wellness products
  - Unique plant cell R&D capabilities and ability to manufacture at scale could change multi-billion-dollar industries
- Botanical Synthesis Technology fuels a **high performing D2C Products Business** as well as a newly launched **CDMO Service business with 3 contracts already signed (incl. tier-1 Tate & Lyle)** and a **strong pipeline**
- VINIA<sup>®</sup> red grape cell flagship product line, **reaching record revenues of \$6.5M** in Q3 2024 (101% YoY *growth*)
  - As of EOY 2023, 90% of VINIA.com revenue is generated from subscriptions, with 91% of those on recurring subscriptions of 3 months or more
- **Now selling 7 SKUs over next twelve months** in new adjacent consumer wellness categories (including Coffee & Tea) with further plans to harness molecules from Olives and Pomegranates to launch parallel product lines
- **New High Margin CDMO Service Business allows major innovators across pharmaceutical and health & wellness verticals (i.e. Tate & Lyle) to avail themselves of the Botanical Synthesis process technology and provides the Company with unique optionality** on top of existing high performing products business
- **Strengthened balance sheet, identified path to adj. EBITDA breakeven in 2H 2025 and completed Nov. 2024 Nasdaq uplisting**



# Contact Us

**Investor Relations**

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