



The Future of Sustainable Protein Production

We aspire to liberate the world from animal-based ingredients, reshaping the production of functional proteins through indoor-cultivated plants as a sustainable, scalable, cost-effective platform powered by advanced molecular biology technology.

Proven Leadership & Cutting-Edge Facilities



Tal Lutzky
CEO & Co-Founder
Agronomist, vastly experienced with agricultural crops cultivation.



Prof. Alexander Vainstein
Co-Founder & Advisor
Leading expert in the field of metabolic and genetic engineering.



Amir Tiroler
CTO & Co-Founder
Agronomist, specializing in molecular biology and active compounds.

Our BOD - Michal Goren-Miller, Hagai Stadler, and Jacques Beer - brings decades of proven success in transforming ideas into industry impact.

\$7M+ funding secured from leading investors, including major dairy manufacturers (Tnuva, Tempo, OurCrowd, Hilliyon Holdings, Blue Desert, Happiness Capital).

State-of-the-art facilities in Caesarea:

- 100m² molecular biology lab
- Pilot-scale protein extraction room
- 1000m² production greenhouse

Let's grow a better future together.

Contact: Tal Lutzky
tallutzky@plantopia.bio
Plantopia.bio



The Challenge: Unsustainable Protein Production

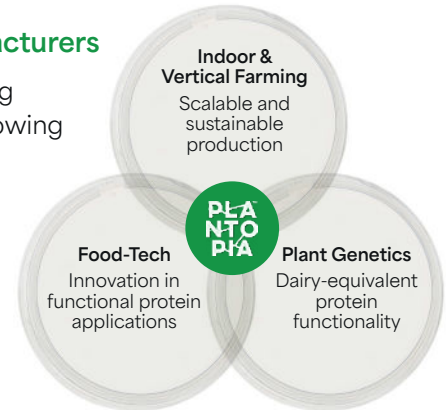
Animal-based protein production is **resource-intensive and inefficient**, using **80% of global farmland** to deliver just **20% of calories**. It drives deforestation, carbon emissions, and water waste while failing to meet the rising global demand for food.



Two primary alternatives - **Precision Fermentation** and **Mammalian Cell Culture** - face significant challenges: They are **costly**, deliver **low yields**, and require **massive capital investments** for scale. Infrastructure and skilled labor shortages further limit viability, leaving the market without a truly scalable non-dairy solution.

Our Solution: Plants as Bio-Manufacturers

Plantopia's advanced molecular farming platform, protected by a robust and growing patent portfolio, transforms plants into **efficient, scalable bio-factories** for functional protein production. Our solution utilizes advanced proprietary technologies from **three emerging fields**.



Our Distinctive Value Creation



Innovative Inducible
GMO Technology



High yields with
low operating costs



Advanced Molecular
Farming



Highly scalable with low
CAPEX requirements



Edible plants in a
controlled environment



Regulation friendly for
a short time to market



Versatile Technology
with proprietary processes



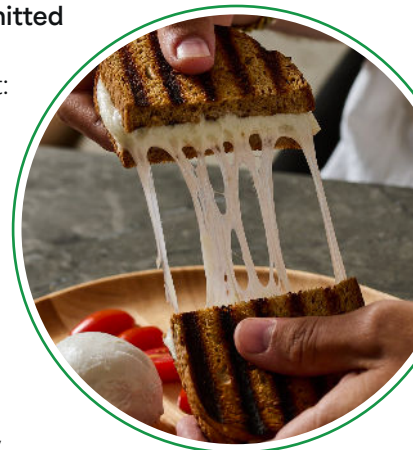
Plant as a Platform enabling
a wide range of compounds

Our Breakthroughs in Casein Development

The **\$3.5B global casein market**, growing at **7% CAGR** to reach **\$5.5B by 2032**, is led by the **food and beverage** sector. North America and Europe account for over two-thirds of the market, with increasing demand for high-quality non-dairy alternatives.

Plantopia's **proprietary technology**, with **4 submitted PCTs**, is redefining casein production. We have achieved significant milestones that set us apart:

- Successfully expressed all **4 key casein proteins** (α₁, α₂, β, κ).
- Achieved **complete equivalency** to milk-based casein in molecular structure.
- Proven **micellization** and **coagulation functionality**, matching dairy performance.
- Developed ready-to-use applications for plant-based dairy products.
- Positioned to deliver casein at **price parity** (\$15-20/kg) while maintaining full functionality.



These breakthroughs position Plantopia as a leader in sustainable, functional casein solutions - poised to disrupt traditional dairy markets.