



INVESTOR PRESENTATION

Ofer Haviv, President & CEO
March 2022

DECODING BIOLOGY

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Agenda

- ✦ **Introduction**
- ✦ Fields of activity
- ✦ Main subsidiaries
- ✦ Summary

Annex I - Technology

Annex II - Financial Fundamentals

OUR VISION

Revolutionizing life-science based product discovery & development, utilizing cutting edge computational biology technologies.

DECODING BIOLOGY

Life-science product development

Low probability of success with high cost and long time-to-market

Pharmaceutical
Industry



Cost of developing a single pharmaceutical drug

In the 1970's

\$180 million

2000's – 2017

\$2.7 billion

Ag-chemicals
Industry



Time to develop a new crop protection product

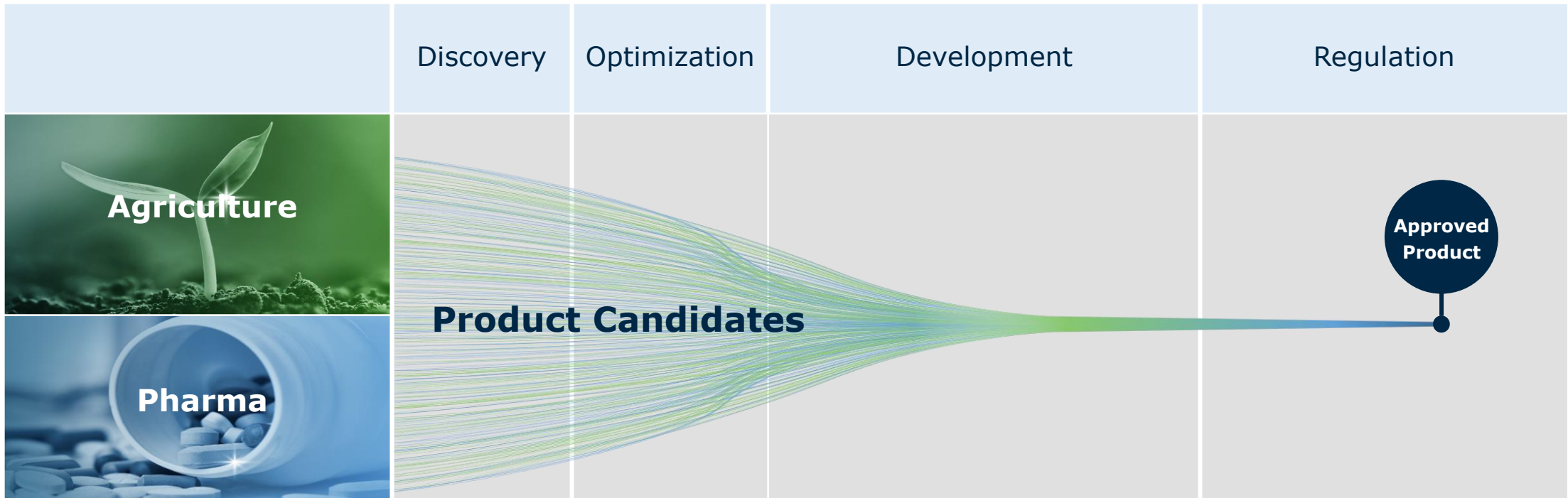
	1995	2000	2005-8	2010-15
Number of years between the first synthesis and first sale of product	8.3	9.1	9.8	11.3

Sources: CDER (Center for Drug Evaluation and Research), Food and Drug Administration, Tufts Center for the Study of Drug Development: <https://www.sciencedirect.com/science/article/abs/pii/S0167629616000291?via%3Dihub>
<https://www.forbes.com/sites/matthewherper/2017/10/16/the-cost-of-developing-drugs-is-insane-a-paper-that-argued-otherwise-was-insanely-bad/?sh=7533aa82d459>

Source: Phillips McDougall, 2016

Life-science product development

The ultimate case of a needle in the haystack



The challenge: Finding the winning candidates out of a **vast number of possible prospects**, that address **a complex myriad of criteria** to reach successful products



HUMAN HEALTH



AGRICULTURE



OTHER
INDUSTRIES

The opportunity

Utilizing an **advanced computational biology platform**, to identify the most promising candidates addressing multiple development challenges, towards successful **life-science products**:

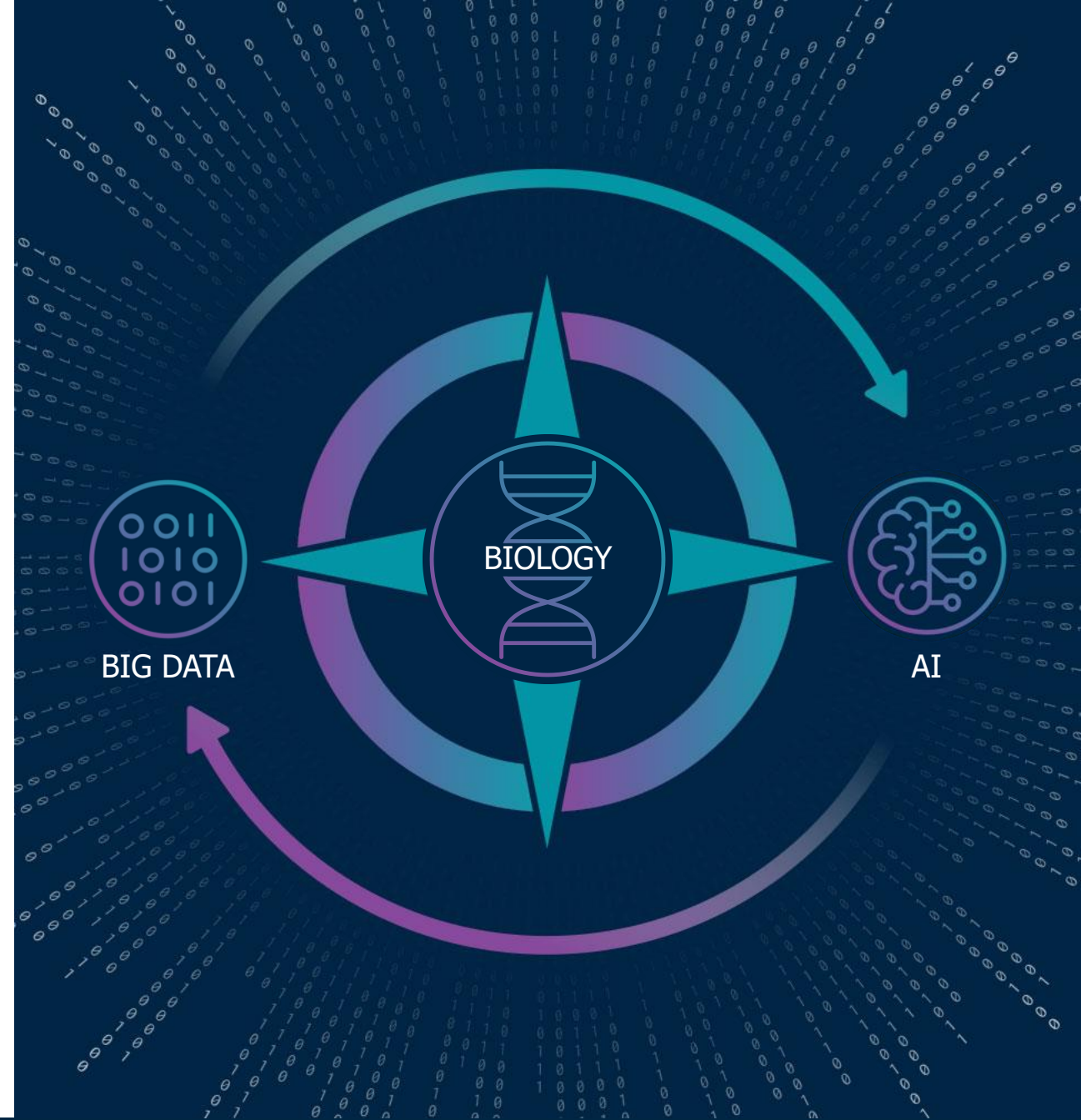
- Increase probability of success
- Reducing time and cost

When biology meets disruptive technologies

CPB[★] platform

Incorporating deep scientific understandings together with big data and advanced artificial intelligence technologies (AI), to successfully discover & guide the development of novel life-science based products.

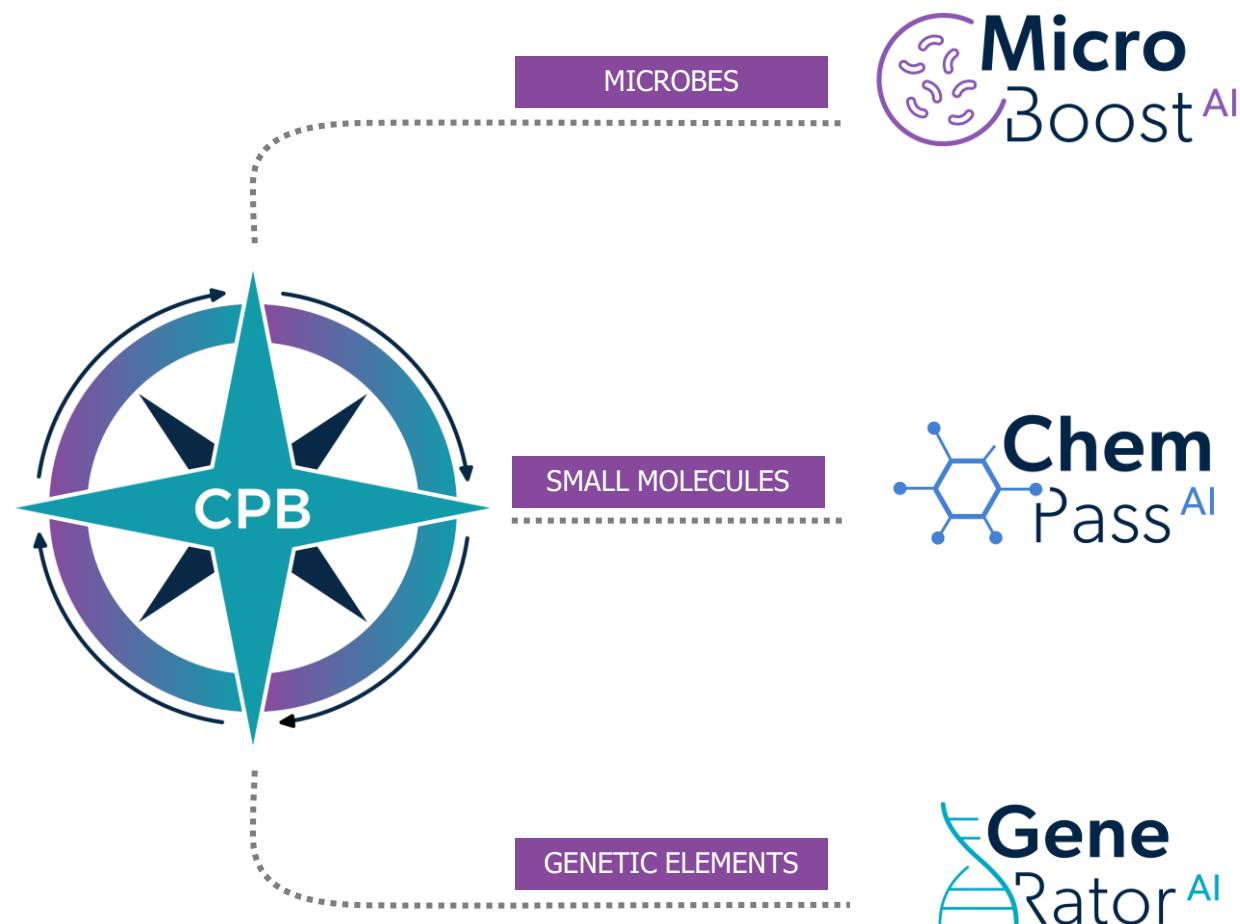
CPB[★] – Computational Predictive Biology



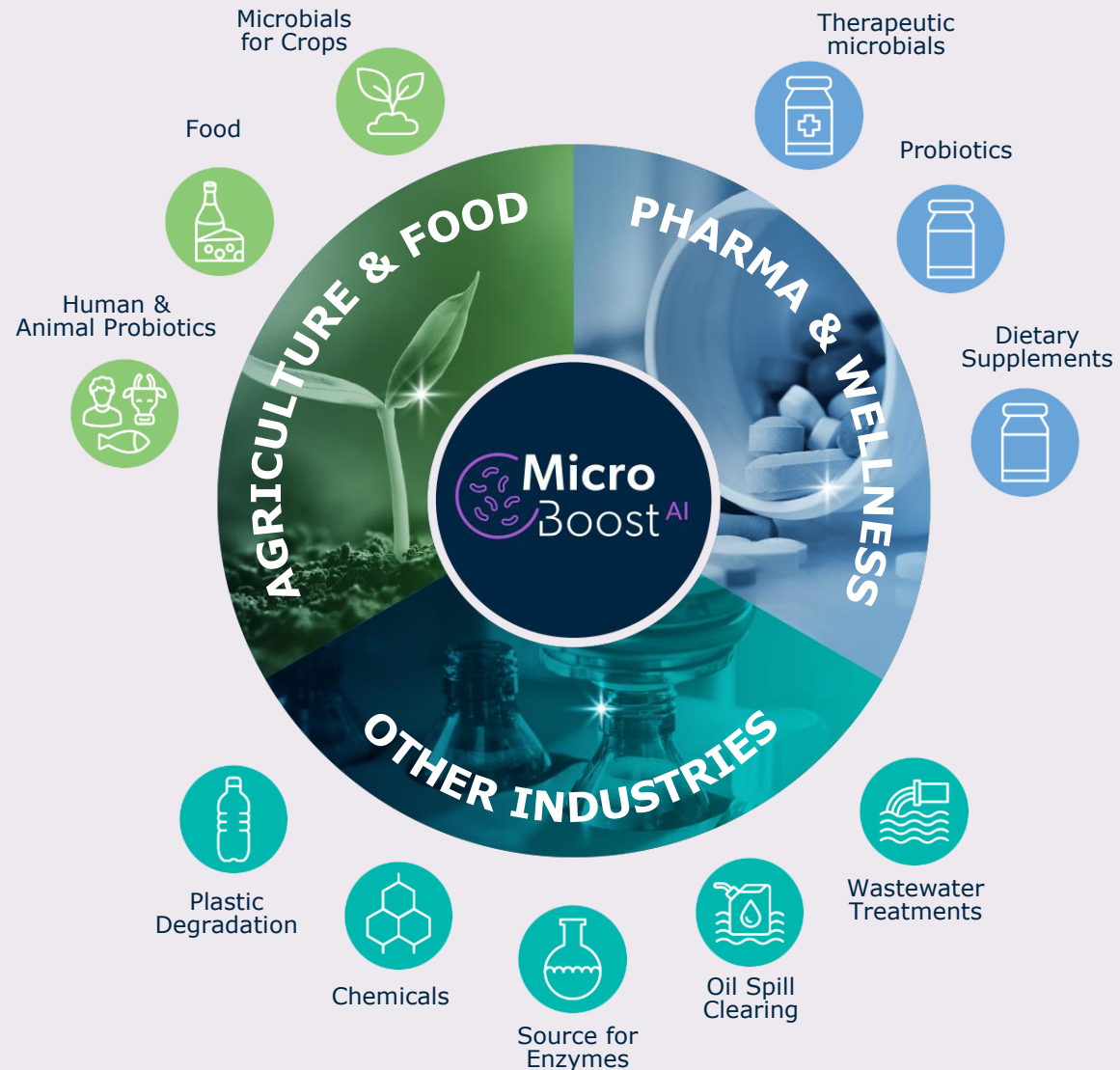
Tailor-made Engines for product discovery & development

The CPB platform enhances product discovery and development through dedicated **Engines** for products based on three core components:

- Microbes
- Small molecules
- Genetic elements



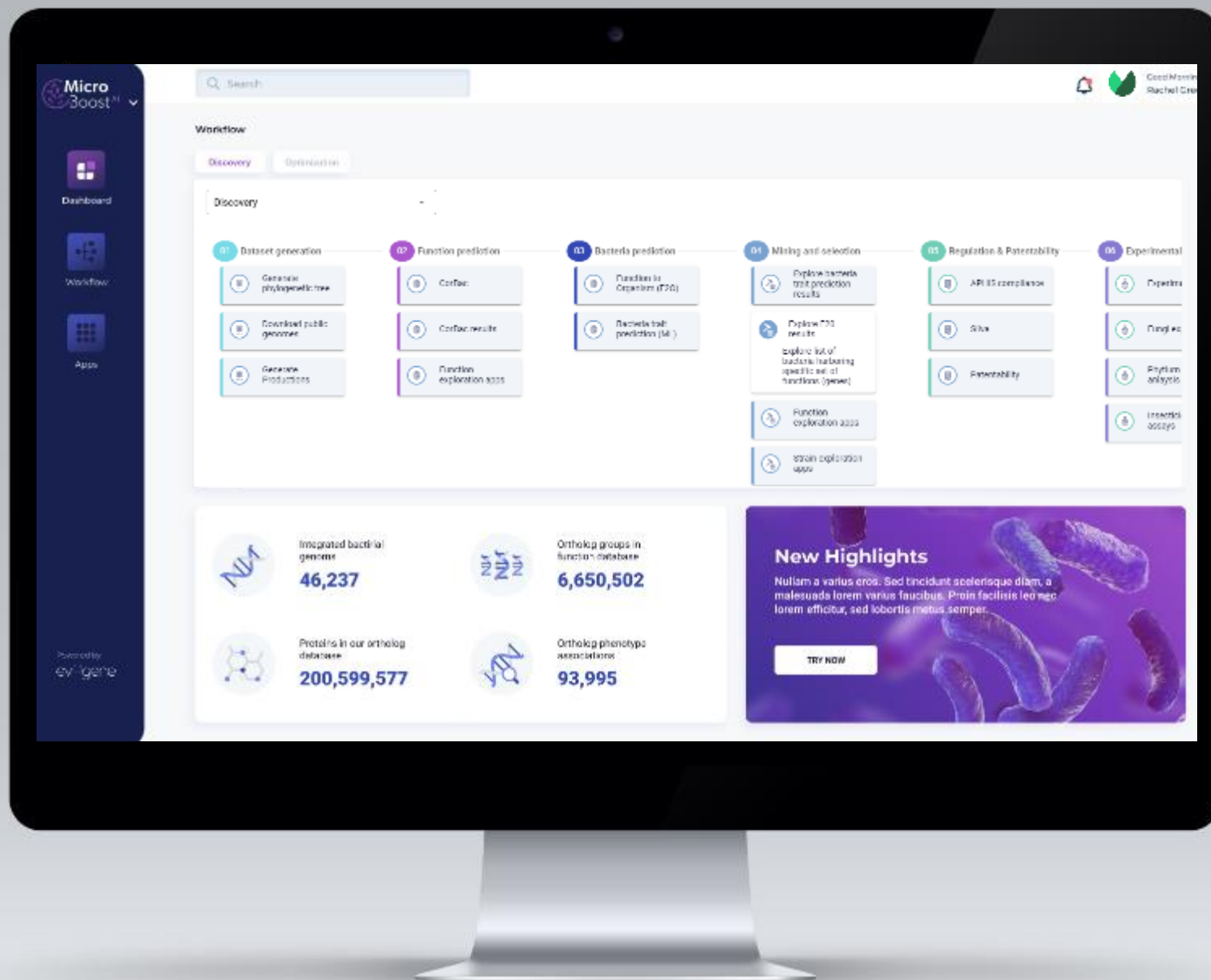
Case Study – Potential uses for MicroBoost AI



Developing an **eco-system** around our tech engines



User Interface



Business Model



1

Product-oriented subsidiaries powered by Evogene's technology

Establish independent entities focusing on a defined commercial field with an exclusive license to use Evogene's unique solutions for product development.

Subsidiaries:



Licensed to use Evogene's technological engines:



Business Model



2

Collaborations powered by Evogene's technology for the development of innovative products

Joint development with leading companies for defined products utilizing Evogene's unique solution. Typically, partner leads later-stage development and product commercialization.

Collaborations for product development:



Powered by Evogene's technological engines:



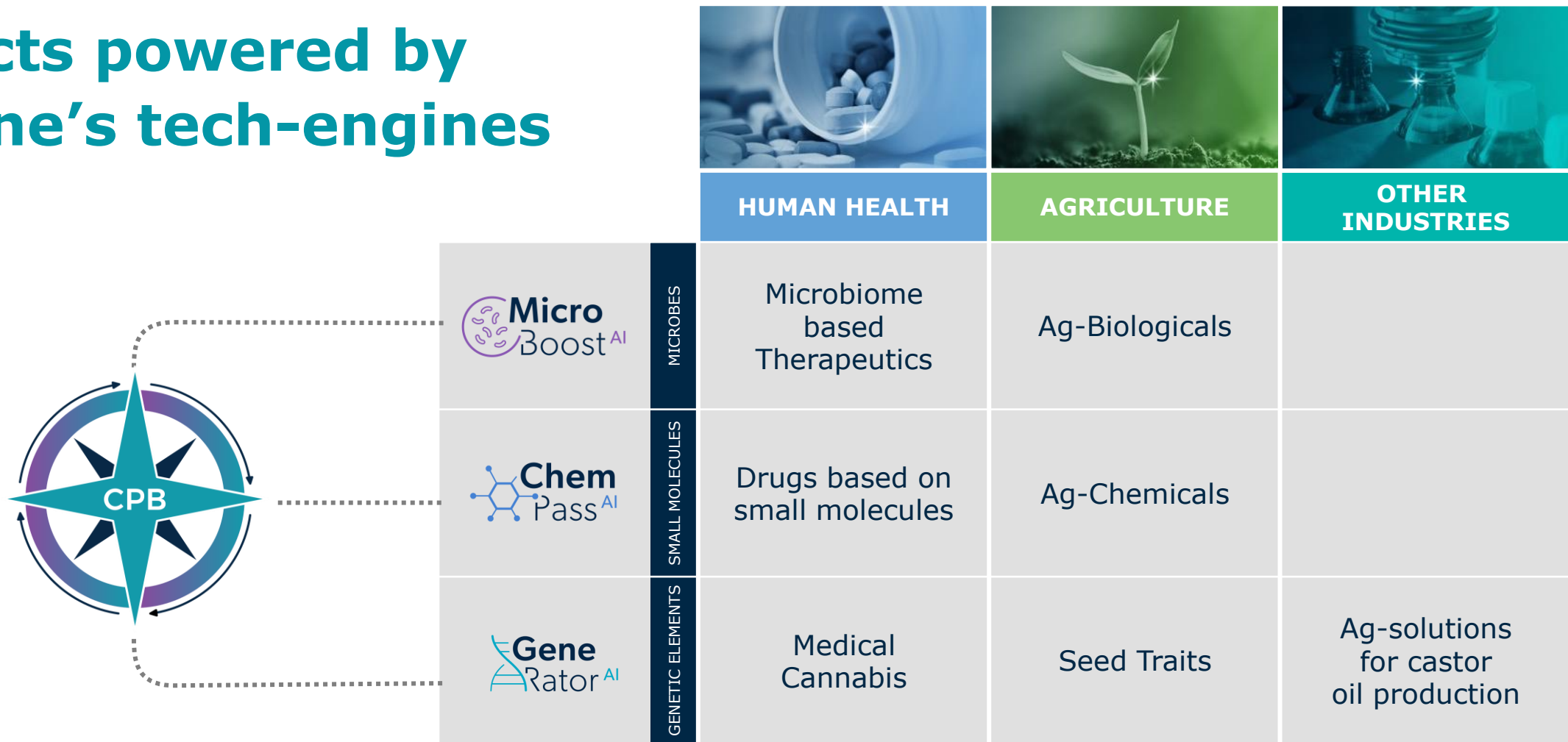
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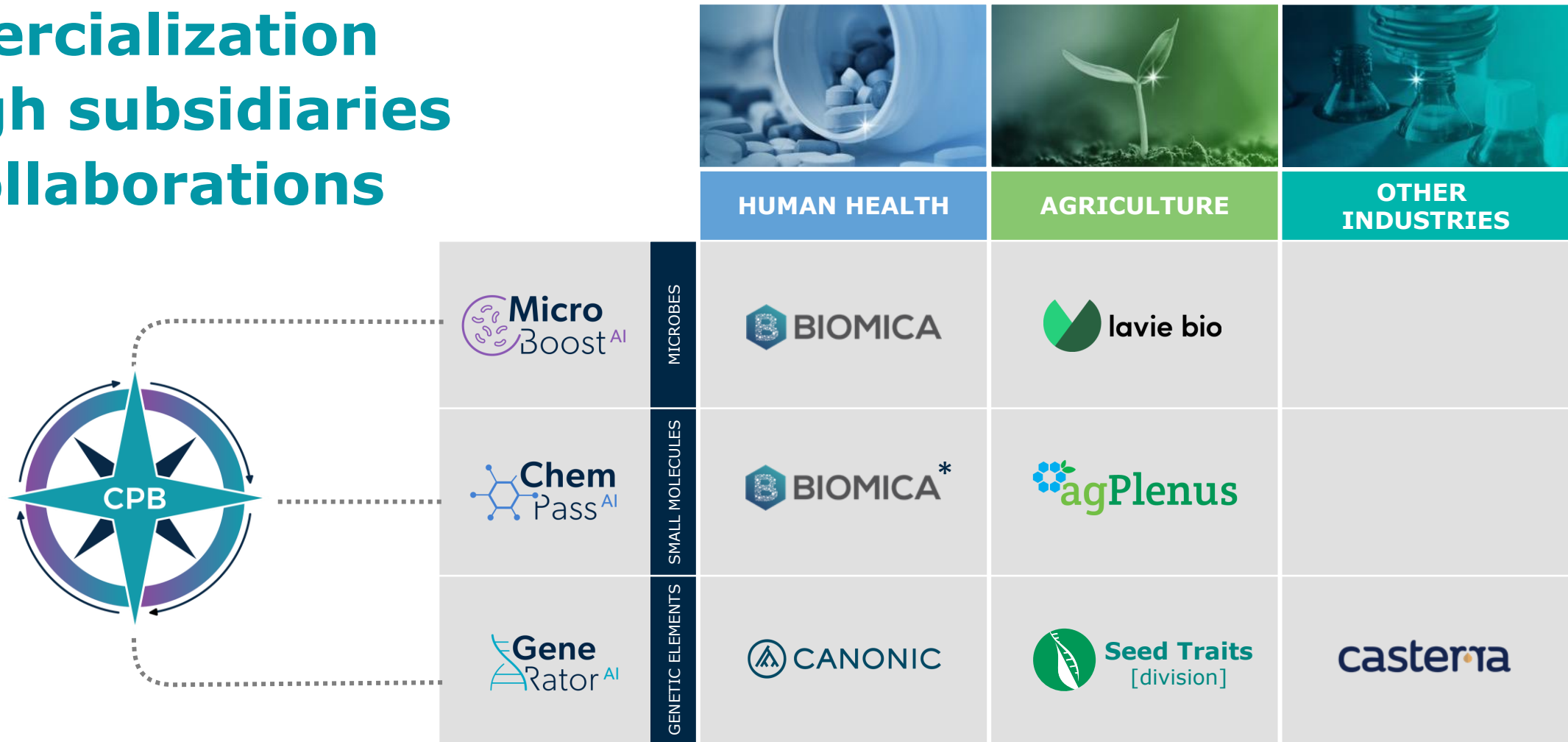
Annex I - Technology

Annex II - Financial Fundamentals

Current life-science based products powered by Evogene's tech-engines



Development & commercialization through subsidiaries and collaborations



* Non-exclusive license

Evogene Group



Human Health



93%*

Microbiome based Therapeutics

- Immuno-oncology
- GI- gastrointestinal-related disorders
- MDRO – multi-drug resistant organisms



100%*

Medical Cannabis

- High yield & consumer traits
- Therapeutic traits – currently inflammation & pain

Agriculture



98%*

Ag Chemicals

- Herbicides
- Insecticides
- Fungicides



70%* (28% Corteva)

Ag Biologicals

- Bio-Stimulants
- Bio-Pesticides



Internal division of Evogene

Seed Traits

- Yield improvement and drought tolerance
- Plant disease
- Insect control

Other Industries























100%*

Castor Oil Production

- Castor seeds & growth protocols

*Evogene holdings

Main Subsidiaries: Industry Landscape

							
Microbiome Based Therapeutics		Medical Cannabis		Ag-Biologicals		Ag-Chemicals	
Company Name	Market Cap/Funds Raised	Company Name	Market Cap/Funds Raised	Company Name	Market Cap/Funds Raised	Company Name	Market Cap/Funds Raised
	\$166m*		\$1.6B*		Raised \$116m# (Sep 2021)		Raised \$24m# (Jan 2017)
	\$320m*		\$4.3B*		€192m*		Raised \$45m# (June 2020)
	\$651m*		\$141m*		\$126m*		Raised \$55m# (Feb 2020)
	\$68m*		\$290m*		Raised \$430m \$2.0B## rep. (July 2021)		Raised \$10m# (Oct 2021)

* Public company – market cap as of March 9, 2022 (yahoo.finance.com)

Private company – amount raised in most recent financing round (crunchbase.com)

Private company - <https://www.forbes.com/sites/amyfeldman/2021/07/19/pivot-bio-nears-2-billion-valuation-as-it-raises-whopping-430-million-to-replace-synthetic-fertilizers-on-corn-and-wheat-sustainability/?sh=96ed3572273a>

The table presents valuation or amount raised in last financing round for a selected number of companies active in the same industries as our subsidiaries, is not a comprehensive list, and is presented for informational purposes only. There may be significant differences between companies active in each industry, and therefore the table does not indicate potential value for our subsidiaries, which may have no correlation to the information presented in the table and may differ significantly. Such differences may include, among others, company maturity stage, volume of sales, if any, product types, target market segments, pipeline maturity, technology, and financial position.

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Mission:

Discovery and development of novel therapies for microbiome-related human disorders using computational biology

Product Pipeline:



Immuno-oncology program:

- Combination therapy for cancer with checkpoint inhibitors
- Pre-clinical stage
- Addressable market size expected by 2026* – \$243B



GI related disorders:

- Inflammatory Bowel Disorder (IBD) – pre-clinical stage
- Irritable Bowel Syndrome (IBS) – discovery stage
- Addressable market size expected by 2026: Inflammatory Bowel Disorder \$22.4B, Irritable Bowel Syndrome** \$3.3B



MDRO:

- Multi Drug Resistant Organisms (antimicrobial resistance)
- Clostridium Difficile Infection (CDI) – discovery stage
- Methicillin-resistant Staphylococcus aureus (MRSA) – discovery stage
- Addressable market size expected by 2026: CDI*** \$1.7B, MRSA**** \$3.9B

Expected main near-term value drivers:

2022

- **IBD** - initiate scale-up for GMP production of drug candidate for IBD
- **Immuno-oncology** - readout from proof of concept, first in human study

2023

- **IBD** - Clinical batch production of drug candidate for IBD as preparation for Phase 1 in USA
- **Immuno-oncology** - Pre-IND Meeting with FDA

*<https://www.globenewswire.com/news-release/2019/07/17/1884118/0/en/Cancer-Immunotherapy-Market-To-Reach-USD-242-86-Billion-By-2026-Reports-And-Data.html>

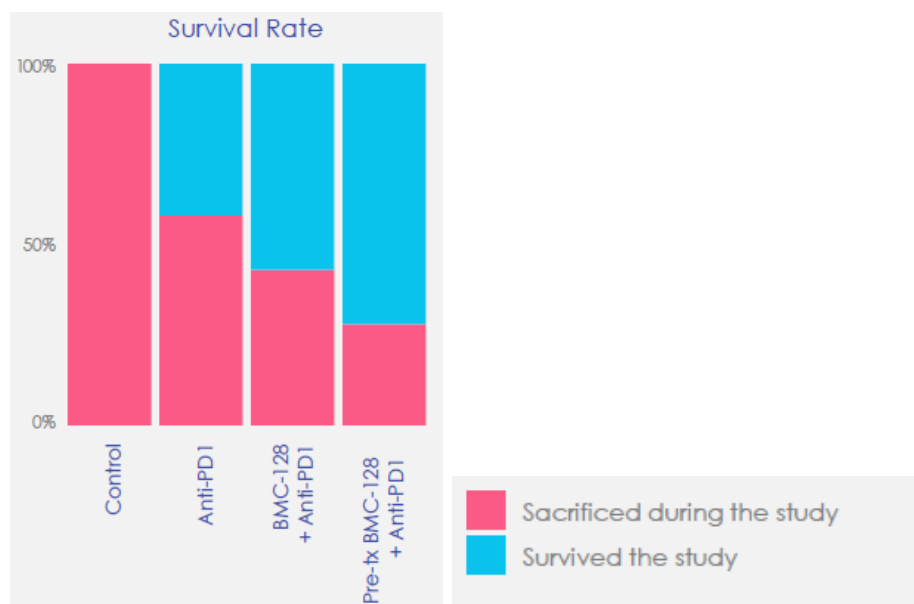
**https://www.grandviewresearch.com/press-release/global-inflammatory-bowel-disease-ibd-treatment-market?utm_source=blog.goo.ne.jp&utm_medium=referral&utm_campaign=Vrushali_7Aug_hc_InflammatoryBowelDiseaseTreatmentMarket_pr&utm_content=Content;
<https://www.grandviewresearch.com/industry-analysis/inflammatory-bowel-disease-ibd-treatment-market#:~:text=Report%20Overview,4.4%25%20from%202018%20to%202026..>, <https://www.bloomberg.com/press-releases/2019-07-23/ibs-treatment-market-size-worth-3-3-billion-by-2026-cagr-10-1-grand-view-research-inc>

***https://www.grandviewresearch.com/press-release/global-inflammatory-bowel-disease-ibd-treatment-market?utm_source=blog.goo.ne.jp&utm_medium=referral&utm_campaign=Vrushali_7Aug_hc_InflammatoryBowelDiseaseTreatmentMarket_pr&utm_content=Content;
<https://www.grandviewresearch.com/industry-analysis/inflammatory-bowel-disease-ibd-treatment-market#:~:text=Report%20Overview,4.4%25%20from%202018%20to%202026..>, www.globaldata.com/global-clostridium-difficile-infections-market-approach-1-7-billion-2026/

****www.prnewswire.com/news-releases/global-methicillin-resistant-staphylococcus-aureus-mrsa-drugs-market-to-reach-over-us-39-billion-by-2025-uptake-in-the-consumption-of-antibiotics-across-the-globe-to-fuel-market-growth-observes-transparency-market-research-676949593.html

Example Results:

Immuno-Oncology program – BMC128 potentiate the effect of anti-PD-1 therapy (immunotherapy) in-vivo



Improved antitumor activity in mice following the administration of BMC128, compared to treatment with immunotherapy alone

Biomica Announces Positive Pre-Clinical Results, Demonstrating Efficacy of BMC128 in Melanoma

Biomica's live biotherapeutic drug candidate, BMC128, significantly increased anti-tumor activity in combination with Immune Checkpoint Inhibitors in Melanoma. First-in-human, proof of concept study expected later this year

Biomica Announces Clearance for First-in-Human Phase I Study of BMC-128 in Combination with Bristol Myers Squibb's Anti-PD-1 Opdivo®

Clearance for Proof-of-Concept Phase I human trial in oncology received from Israeli Ministry of Health

Mission:

Commercialize effective, precise and stable medical cannabis products, based on decoding plant genetics, for optimized therapeutic effect

Product Pipeline:

MetaYield⁺ Products:



- Stable enhancement of total plant compounds:
 - Increased compounds per plant
 - Increased compounds per area
- Total Cannabis market size expected by 2024 – \$42.7B*

Precise⁺ Products:



- Stable enhancement of specific active compounds for pain and inflammation:
 - Medical indication focus
 - Compound profile focus
- Total Medical Cannabis market size expected by 2024 – \$25.6B*

*Source: Arcview Market research/BDS Analytics 2020

Expected main near-term value drivers:

2022

- **MetaYield⁺** - commercial launch and sales of second- generation products in Israel
- **Precise⁺** - Collect clinical data to support commercial launch in 2023 of variety reducing pain or inflammation

2023

- **MetaYield⁺** - commercial launch and initial sales of first product in Europe
- **Precise⁺** - Commercial launch of variety reducing pain or inflammation

First Products:

MetaYield products– increased compounds per area, addressing the T20/C4 (17%-24% THC & 1%-7% CBD) and T15/C3 (11%-19% THC & 0.5%-5.5% CBD) market segments.



Medical Cannabis aiming at high THC, high yield, big inflorescence and dense trichomes

Canonix Announces Full Commercial Launch of its First Medical Cannabis Products in Israel

Canonix moves ahead of schedule with the full commercial launch of its G-nnovation products, following positive feedback from patients during the company's pre-launch campaign

Canonix Announces Positive Results in Pre-Clinical Studies in its Precise Product Program for Medical Cannabis

The results support the successful identification of specific cannabis varieties with anti-inflammatory and pain relief properties, for which Canonix recently filed a patent application

Mission:

Design next-generation, effective and sustainable crop protection products by leveraging predictive biology & chemistry

Product Pipeline:



Herbicides:

- Novel MoA (Mode-of-Action) selective/non-selective herbicides
- Relevant target crops – Cereals, Rice, Corn, Soybean, Cotton, Canola, Sugar Beet, Other TBD
- Addressable market size expected by 2022*: \$34B
- Lead stage



Insecticides:

- Novel SoA (Site-of-Action)
- Addressable market size expected by 2022*: \$19B
- Hit-to-Lead stage

Expected main near-term value drivers:

2022

- **New MoA Herbicide** – enter an additional collaboration agreement
- **New MoA Herbicide** – expand data package for APTH1, AgPlenus' leading new MoA protein for the development of novel herbicides

2023

- **New MoA Herbicide** – phase advancement in one of the ongoing collaborations
- **New MoA Fungicide program** – initial greenhouse readouts

*<https://www.prnewswire.com/news-releases/global-3410-billion-herbicide-market-2022---research-and-markets-300458389.html>;
<https://www.marketsandmarkets.com/Market-Reports/insecticide-market-142427569.html>

Example Results:

New MoA Herbicide - APH1



Field test of APH1
against a panel of
grass and
broadleaf weeds –
untreated control vs
APH1



Greenhouse testing of APH1 – modified tobacco
plants with resistance trait vs unmodified control

AgPlenus Announces Reaching a 'Lead' Stage in its Novel Mode-of-Action Herbicide Program

This significant development milestone was achieved following positive results for product candidate APH1 in field tests with commercial level application rates on a broad panel of weeds

AgPlenus Announces Positive Results for a Herbicide Resistance Trait to its Leading Herbicide Product Candidate

Greenhouse proof-of-concept testing demonstrates resistance of modified model plants to AgPlenus' APH1 herbicide candidate

Mission:

Improve food quality, sustainability and agriculture productivity through microbiome based ag-biologicals technology and products

Product Pipeline:

Bio-stimulants (yield enhancement):

- Bio-stimulants 1– focus on wheat and additional cereals. Seed treatment/soil application. Commercial stage, first sales planned in 2022. Addressable market size*: for spring wheat ±25M acres.
- Bio-stimulants 2 – focus on corn and additional crops. Seed treatment. Pre-development stage. Addressable market size*: for corn – 120M acres.



Bio-pesticides (crop protection):

- Fruit rots – focus on fruit and vegetables. Foliar application. Target market*: >\$1B of chemicals usage. Development stage 2.
- Downey Mildew – Focus on fruit and vegetables. Foliar application. Development stage 1. Target market*: >\$350M of chemicals usage.
- Seedling disease – for corn and soy. Seed treatment. pre-development stage. Target market*: >\$500M.
- Bio-insecticides – for corn and soy. Seed treatment/foliar. Pre-development stage. Target market *: >\$1.5B existing traits & chemicals market.



Expected main near-term value drivers:

2022

- **Bio-stimulants** – build infrastructure for scale-up in 'result™' sales for spring wheat in 2023
- **Fruit rot bio-fungicides** – file for regulatory approval for leading product candidate LAV311 for fruit rot

2023

- **Bio-stimulants** – 'result™' product sales expansion in US and Canada for spring wheat
- **Bio-fungicides** - file for regulatory approval for leading product candidate LAV321 or LAV322 for downy mildew

*Dean ,R ,et al. (2012). The top 10 fungal pathogens in molecular plant pathology. Molecular Plant Pathology 13:414-430 (<https://academic.oup.com/fqs/article/2/3/111/5057759>)

Example Results:

- result™ inoculant (bio-stimulant)
- LAV 311 & LAV 312 leading bio-fungicide candidates for fruit rot



Lavie Bio's wheat field in the USA during harvest – **initial sales in 2022**



Example of treatment against Botrytis Cinerea in vines – untreated control vs treated vines

Lavie Bio Announces Commercial Launch of its First Microbiome-Based Product for Yield Improvement – result™





result™ inoculant initially introduced for spring wheat in North Dakota, following positive four-year field trials

Lavie Bio Reports Advancement in its Bio-Fungicide Program for Fruit Rots

Advancement to the pre-commercial stage follows positive results from three consecutive years of vineyard trials for fruit rot diseases

Subsidiaries

Expected main near-term value drivers

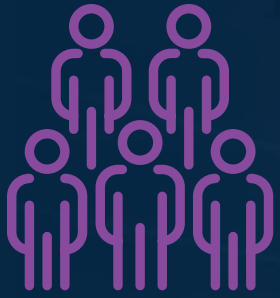
	2022		2023	
 BIOMICA	IBD – initiate scale-up for GMP production of drug candidate for IBD	Immuno-oncology – readout from proof-of-concept, first in human study	IBD – clinical batch production of drug candidate for IBD as preparation for Phase 1 clinical trials in USA	Immuno-oncology – pre-IND meeting with FDA
 CANONIC	MetaYield – commercial launch of second- generation products in Israel	Precise – collect user data for clinical indications to support commercial launch in 2023	MetaYield – commercial launch of first product in Europe	Precise – commercial launch of first product in Israel
 agPlenus	New MoA herbicides – enter an additional collaboration agreement	New MoA herbicide – expand data package for APTH1, AgPlenus' leading new MoA protein for the development of novel herbicides	New MoA herbicides – reach milestone in one of the ongoing collaborations	New MoA fungicide – initial greenhouse readouts
 lavie bio	Bio-stimulants – build infrastructure for scale-up in 'result™' sales for spring wheat in 2023	Bio-fungicides – file for regulatory approval for leading product candidate LAV311 for fruit rot	Bio-stimulants – 'result™' product sales expansion in US and Canada for spring wheat	Bio-fungicides – file for regulatory approval for leading product candidate LAV321 or LAV322 for downy mildew

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140
Employees

Computational systems biology

Computational chemistry

Bioinformatics Molecular biology

Microbiology Genetics Biochemistry



30 %
PhDs



56 %
Women

Incl. chairperson
of the board

Summary

Our vision - Revolutionizing life-science based product discovery & development, utilizing cutting edge computational biology technologies.

.....

CPB platform - a unique technology platform stemming from the incorporation of deep scientific understandings of biology together with big-data and artificial intelligence technologies

.....

The CPB's three unique engines target to improve the development of products based on the following core components:

1. MicroBoost AI – for products based on microbes
2. ChemPass AI – for products based on small molecules
3. GeneRator AI – for products based on genetic elements

Dual based business model - utilizing Evogene's solutions for:

1. Product development & commercialization through subsidiaries
 2. Product development & commercialization through collaborations
-

Four main market-oriented subsidiaries, each with a clear milestone roadmap:

1. Biomica – human-microbiome based therapeutics
2. Canonic – medical cannabis
3. AgPlenus – ag-chemicals
4. Lavie Bio – ag-biologicals

Significant catalysts expected in the next 12 months across the subsidiaries and in Evogene's technological offering

A hand in a purple glove holds a glowing blue ring. From the ring, numerous rays of light, each composed of a sequence of binary digits (0s and 1s), radiate outwards. The background is a soft gradient of purple and blue.

THANK YOU!

evogene
DECODING BIOLOGY



Annex I: Technology

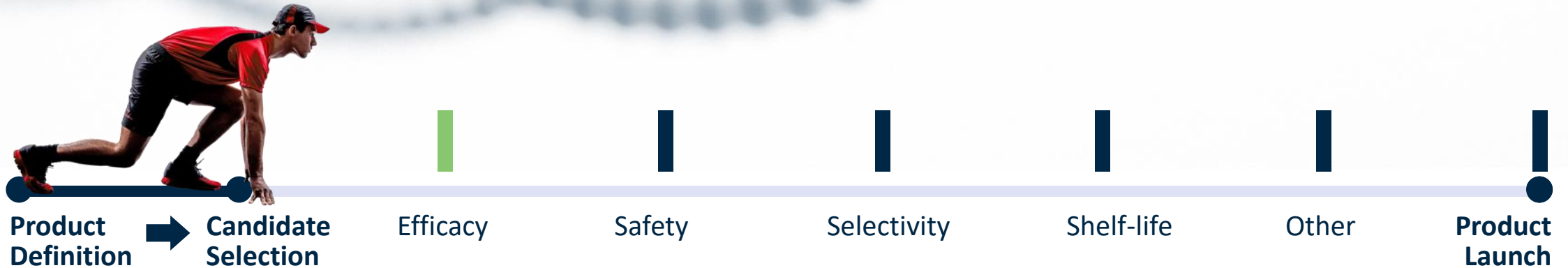
The **challenge** in creating life-science based products



The **challenge** in creating life-science based products

Common practice

Discovery – selection of product candidates mainly addressing efficacy



The **challenge** in creating life-science based products

Common practice

Discovery – selection of product candidates mainly addressing efficacy

Development – inefficient optimization & difficulty in addressing a single challenge without impairing others



- ✗ Low probability of success
- ✗ Long time to market
- ✗ High development costs



Evogene's AI-based solution: Discovery

A multi-attribute computational selection of product candidates, addressing relevant challenges using dedicated training data sets and AI.



Product
Definition



Candidate
Selection

Efficacy

Safety

Selectivity

Shelf-life

Other

Product
Launch

Evogene's AI-based solution: Development

A multi-attribute computational analysis, addressing a specific development challenge of the selected candidate, without impairing its ability to address other product attributes.



Evogene's AI engines provide tailor-made solutions

✦ Discovery

Computational prediction of candidates, to serve as the **product's core-component**, addressing multiple key product attributes.

✦ Development

Computational driven solution for guiding and assessing the optimization process of the **selected core component**, without impairing other key product attributes.





Annex II: Financial Fundamentals

Key Financials: Balance Sheet

Key Points:

- Consolidated cash position: ~\$54 million as of 31.12.2021, of which ~\$8 million is appropriated to Lavie Bio
- No bank debt
- Listed on TASE (2007) and NASDAQ (2016)

Thousands of US \$	31.12.2021	31.12.2020
Current Assets	56,890	51,823
Long-Term Assets	19,414	20,092
Total Assets	76,304	71,915
Current Liabilities	6,882	9,676
Long-Term Liabilities	6,002	5,357
Equity attributable to equity holders of the Company	54,031	46,045
Non-controlling interest	9,389	10,837
Total Liabilities & Shareholders Equity	76,304	71,915