

OptiBiotix - The Promise of the Human Microbiome

Modifying the human microbiome for the prevention and management of human disease

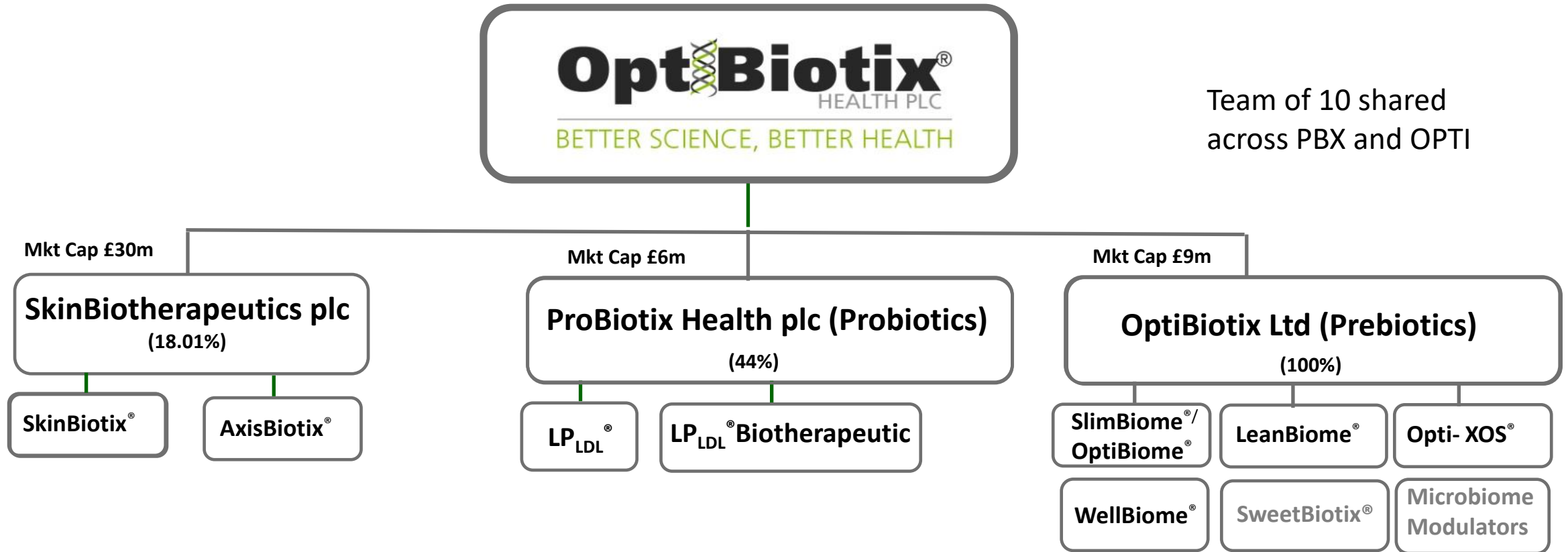


BETTER SCIENCE, BETTER HEALTH

Investor presentation May 2023

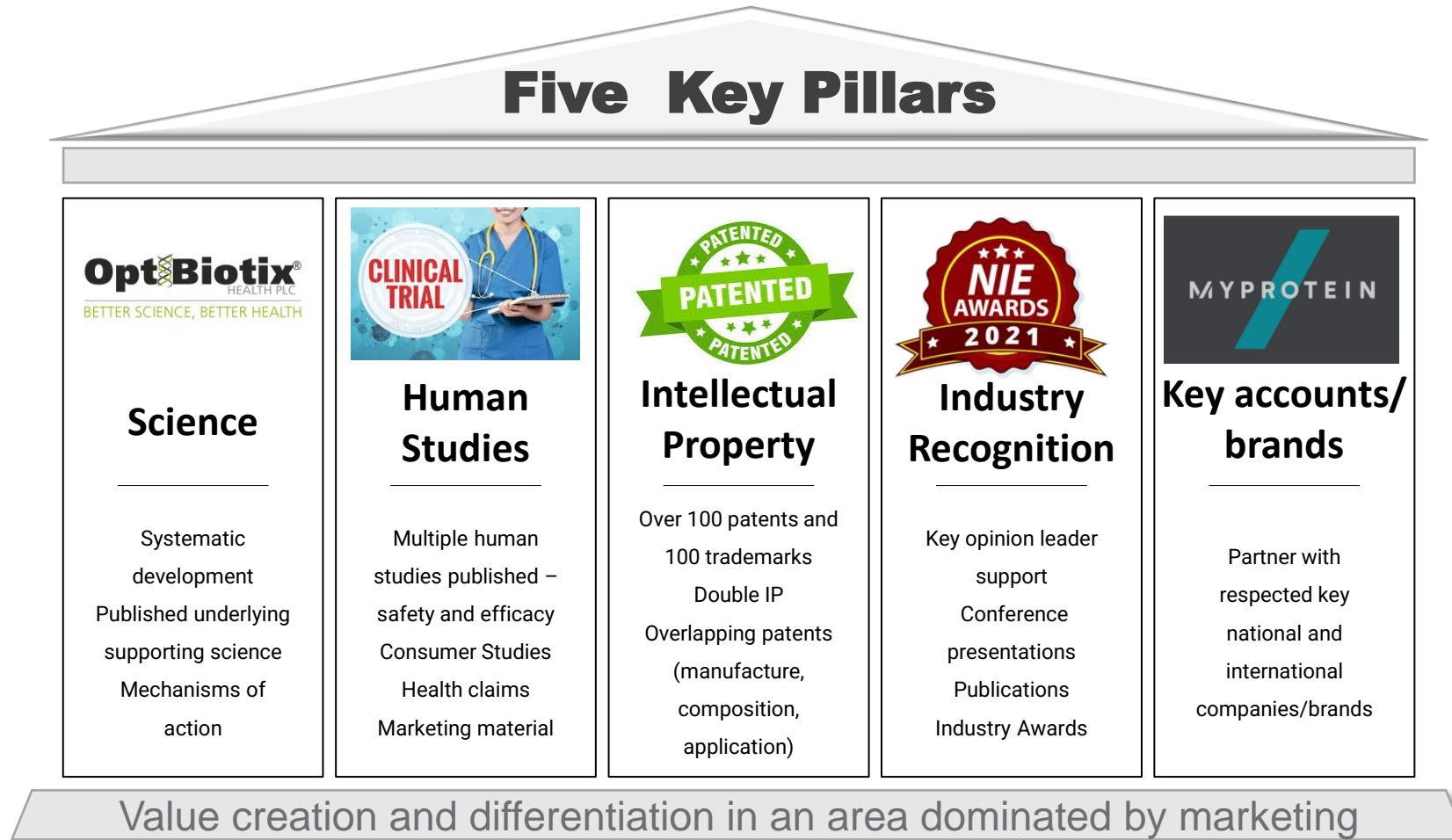
1. The Company – have we created sustainable value?
2. Strategy overview
3. Is the strategy working?
4. Are key partners delivering to their forecasts?
5. Why was 2022 a poor year and is that temporary or a sign of future potential sales?
6. Is the investment in E-commerce working?
7. First Generation products 2023 – Update May 2023 – looking much better than 2022
8. Second generation products – pathway to commercialisation
 - i. SweetBiotix
 - ii. Microbiome modulators
9. Revenue potential through to 2026

Overview: Multiple positions in the microbiome field



OptiBiotix identified as a key player in the microbiome space in industry reports (sees - <https://www.openpr.com/news/2004286/what-s-driving-the-human-microbiome-market-size-key-players>;

Probi acquires 13% stake in Bliss (oral health) for £4.84m (July 2021) at £38m valuation and revenues 2021 of £1.9m



Multiple publication carried out by a wide range of Universities (similar number for ProBiotix)-critical for product health claims/large partners



A pilot study to assess the effect of a fibre and mineral formulation on satiety and satisfaction when taken as part of a calorie restriction diet in overweight and obese women

Enzyme synthesis and structural characterization of theanarone from *Bacillus subtilis* CECT 30

Laura Ruiz-Arteaga, María Luz Sanz, Blanca de las Rivas, Rosario Muñoz, Sofia Koldas, María Luisa Jimeno, and F. Javier Moreno

J. Agric. Food Chem., Just Accepted Manuscript • DOI: 10.1021/acs.jafc.7b00005 • Publication Date (Web): 13 Nov 2017

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Sweetness and sensory properties of commercial and novel oligosaccharides of prebiotic potential

Laura Ruiz-Arteaga, O. Osvaldo Hernandez-Hernandez, Sofia Koldas, F. Javier Moreno, A. R. Liza Mathew

Institute of Food Science Research, CIAL (CSIC-UAM), Nicolas Cabrera 9, 28049, Madrid, Spain

Transglycosylation of Steviol Glycosides and Rebaisidolide A: Synthesis Optimization, Structural Analysis and Sensory Profiles

Ana Muelares-Labrador, S. Bruna Acarante, J. Luis Lebrón-Aguilar, J. Quintana López, Plácido Galindo-Irando, Sofia Koldas, Liza Mathew, Robert A. Rastal, F. Javier Moreno, O. Osvaldo Hernandez-Hernandez

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High-Yield Synthesis of Transglycosylated Mogrosides Improves the Flavor Profile of Monk Fruit Extract Sweeteners

Ana Muelares-Labrador, S. Bruna Acarante, Rosa Lebrón-Aguilar, J. Quintana López, Plácido Galindo-Irando, Sofia Koldas, Liza Mathew, Robert A. Rastal, F. Javier Moreno, O. Osvaldo Hernandez-Hernandez

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SlimBiome®

Preliminary investigation into the effects of SlimBiome® on food cravings and responsiveness to the food environment in healthy overweight and obese women following standard nutritional advice.

L. Achebe, H. Brennan, S. Koldas, S. O'Han, E. Lightowler, and A. Ahlstrom

Yolfram Brookes Centre for Nutrition and Health, Oxford Brookes University, Oxford, OX3 0BP, UK and *Vitality Health Plc, Haringey, York, YO10 1DG, UK

SlimBiome® reduces hunger and food cravings in healthy overweight and obese adults

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Yolfram Brookes Centre for Nutrition and Health, Oxford Brookes University, Oxford, OX3 0BP, UK and *Vitality Health Plc, Haringey, York, YO10 1DG, UK

Impact of SlimBiome® on satiety, satisfaction, weight loss and gut microbiome composition in overweight & obese women

L. Achebe, H. Brennan, S. Koldas, S. O'Han, E. Lightowler, and A. Ahlstrom

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Impact of SlimBiome® on glycaemic response and satiety in healthy adults

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WellBiome

Impact of WellBiome® on glycaemic response and satiety in healthy adults

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SweetBiotix

Synthesis and impact of sweet dietary fibres on faecal microbiome composition and activity

L. Achebe, H. Brennan, S. Koldas, S. O'Han, E. Lightowler, and A. Ahlstrom

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Microbiome Modulators

Development of a Targeted Synergistic Probiotic for Lactobacillus plantarum LP-LDL

L. Achebe, H. Brennan, S. Koldas, S. O'Han, E. Lightowler, and A. Ahlstrom

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In vitro evaluation of different carbohydrates on the selective fermentation of Lactobacillus plantarum LP-LDL

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Development of a synergistic probiotic for Lactobacillus plantarum LP-LDL

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Synthetic synthesis of galacto-oligosaccharides

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Development of WellBiome®, a synergistic probiotic formulation to optimise gut microbiome diversity in an ageing population

L. Achebe, H. Brennan, S. Koldas, S. O'Han, E. Lightowler, and A. Ahlstrom

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Synthesis and impact of sweet dietary fibres on faecal microbiome composition and activity

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Independent scientific studies allowed Optipharm to gain regulatory approval to make unique health claims for its products



Without humans studies you cannot claim a health benefit on packaging or website which limits marketing for any health condition



Science, Industry, and Retail Awards and Nominations: SlimBiome and LPLDL - Independent industry approval



food matters live...
winner
2017
Best Functional Ingredient
for Health and Wellbeing

WINNER
NUTRA
INGREDIENTS
AWARDS 2018
Weight Management
Ingredient of the Year

WINNER
NUTRA
INGREDIENTS^{ASIA}
AWARDS 2019
Weight Management
Ingredient of the Year

Grocer
New Product
Awards 2019
WINNER
New Product Award,
Breakfast



2018 Finalist
Best Functional
Ingredient
of the Year

FINALIST
NUTRA
INGREDIENTS
AWARDS 2018
Probiotic Product
of the Year

Miscellaneous



University of Reading Final Year graduate
won the IFST award for Young Scientist
Competition 2019 at IPC utilising LP_{LDL}.

CholBiome[®]
Daily Maintenance **X3**

FINALIST
NUTRA
INGREDIENTS ASIA
AWARDS 2020
Probiotic Product
of the Year

2019 Finalist
Best Nutraceutical
Product of the Year

FINALIST
NUTRA
INGREDIENTS
AWARDS 2019
Probiotic Product
of the Year

2019
Awards
Best Gut Health & Heart
Health Product

World presence and partners – demonstrates international scalability of products



THE HUT GROUP®



HOLLAND
&
BARRETT



Walmart 

OptiPharm 



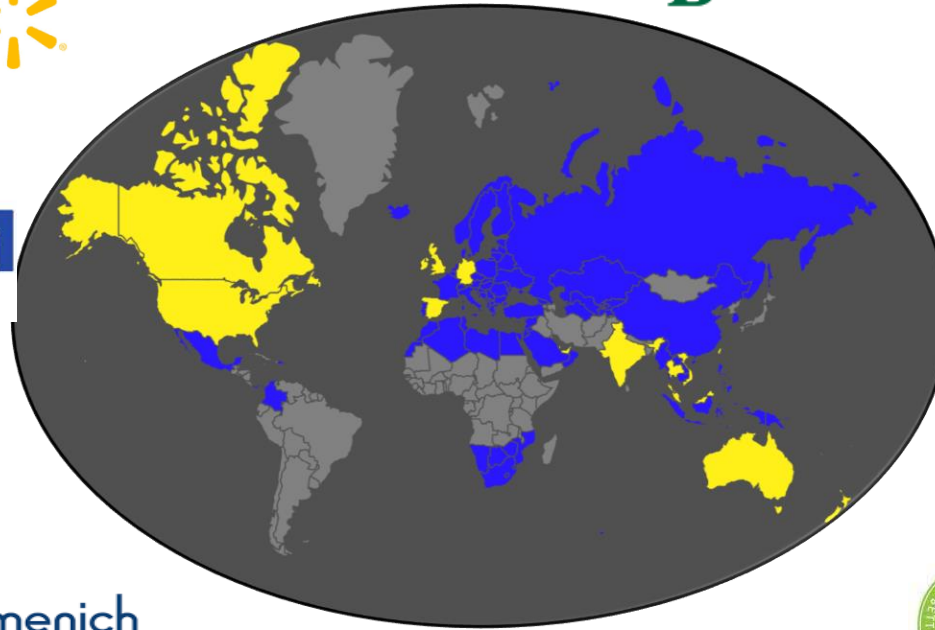

AGROPUR



PARADISE
FRUITS
by Jahncke



Anthem
BioPharma



 Cambridge
Commodities Ltd

Seed[•]



SmartforLife[®]



OptBiotix[®]
HEALTH PLC

Strategic Overview

Corporate Strategy: PLC raises funds and develops technology for business divisions to commercialise and create independent profitable divisions led by industry experienced CEO's with potential for separate exit (e.g SBTX, PBX) as IPO or increasingly as a trade sale with high industry M&A activity.

- i. Positions in multiple areas of the microbiome space
- ii. £8.8m funds raised to date with no debt and total assets worth substantially more than stock market value
- iii. PBX is a valuable asset with unique products and high uplift potential in a market with high M&A activity.
- iv. It has 20 times more sales than SBTX but is one fifth of its value. Intrinsic value recognised by industry. Potential for high shareholder return through listing on more liquid market or trade sale
- v. SBTX has an asset value of £5.6m (May 2023) to OPTI and provides ability to raise funds if required without the need for a placing. Reduces risk of ongoing concern or requirement for debt

Commercial Strategy: First generation products create industry and brand recognition and developed to achieve divisional profitability allowing investment in higher risk second generation products. Initial focus on B2B ingredients which provides low cost, low risk access to multiple global markets to prove concepts commercially, providing confidence to invest and build *own brand finished product solutions* to scale growth (CholBiome, SlimBiome Medical, GoFigure etc.). Focus on returning first generation products to profitability in 2023.

Second generation products have established scientific credibility (7 peer reviewed publications), a number of humans studies showing sweetness 2-3X that of sugar, attracted commercial interest of key partners (e,g Firmenich) who are leading companies in the field, and have shown can be manufactured to scale. Final steps to commercial launch in late 2023 or 2024

Is the Strategy Working?

	2020				2021			
Key metrics (£)	PreBiotics	ProBiotic	PLC	Group	PreBiotics	ProBiotic	PLC	Group
Revenue	557,539	821,126	£747,500 ¹	£1, 523, 244	1.1	1.1	£2,902,800 ¹	£2,212,982
% change YoY	151%	107%	103%	104%	59.3%	34%	288%	45.3%
EBITDA	£67,271	£88,762	NA	£5,710,232 ²	£13,000	£179,000	NA	£6,261,030 ²

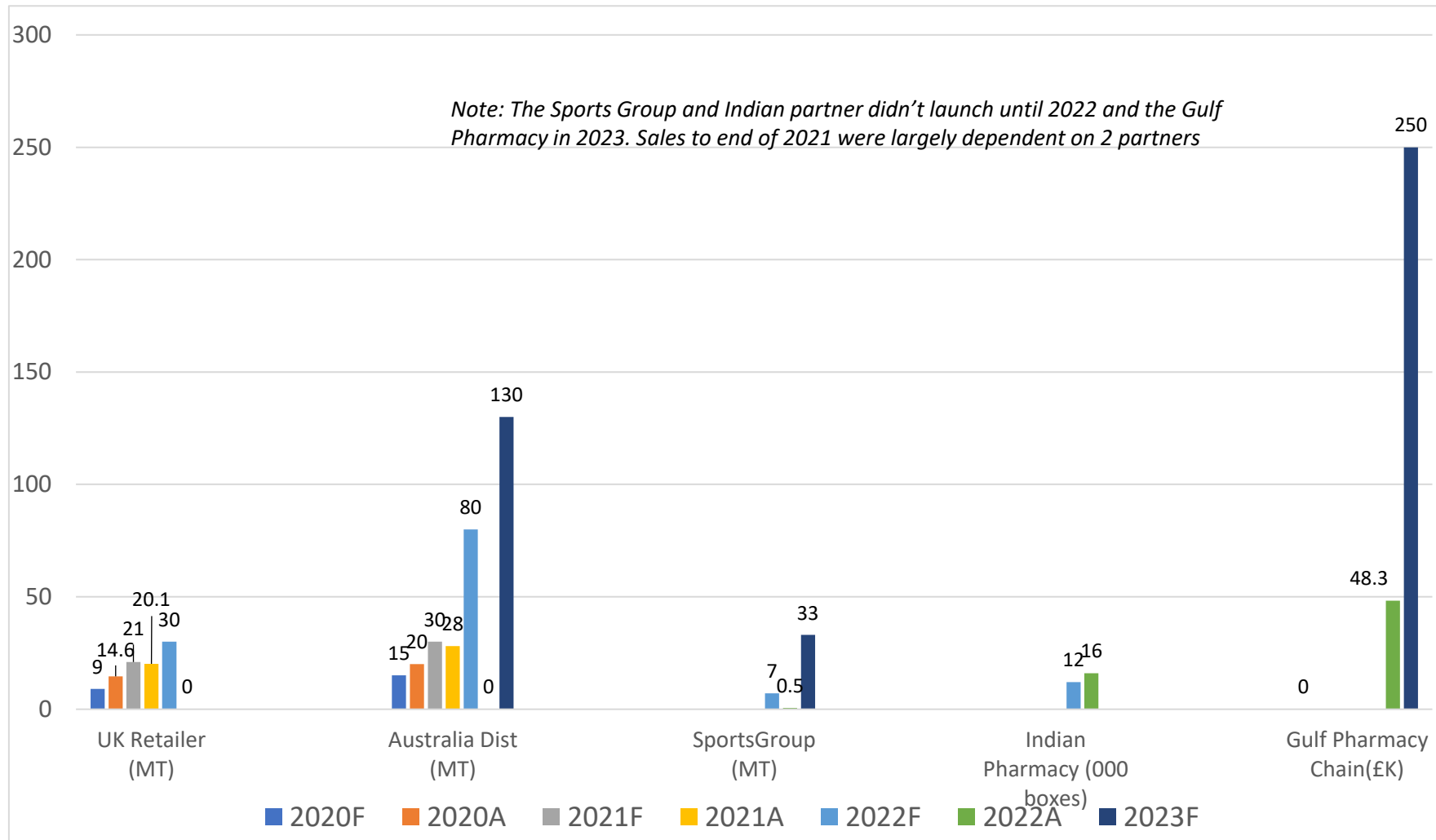
Key points:

- Probiotic and Prebiotic trading businesses profitable in 2020 and 2021 with the Group having a healthy balance sheet (~£20m)
- Sales of SBTX shares have provided £4.5m of cash between 2020-2023
- Current asset value of SBTX to OPTI is £5.6m (May 2023)

Notes:

1. Plc income derived from sale of SBTX shares
2. Includes reportable profit from increase in value of SBTX shares

Forecast v Actual 2020 – 2023: Are partners delivering on their forecasts (Yes up to 2021)



Why was 2022 a poor year and is that temporary or a sign of future potential sales?

Challenges 2022

- H2 2021: Post COVID high product demand and global supply chain concerns led partners to build high stock levels (£482K Q4 2021)
 - H1 2022: Global economic crisis led to partners reducing marketing, new product launches and territorial expansion (whilst holding large stock levels at the end of 2021 (approx. 30MT).
 - New product registrations (NAHDI) and product launches (Apollo) delayed till late in 2022 (Apollo : Sept 2022 or to 2023 Nahdi)
 - Revenue dependency on limited number of large partners (86% of sales in 2021 from 3 partners), limited E-commerce sales channels
- Given the history of partner performance we believe these challenges are likely to be temporary subject to no further deterioration in the global economy*

What do we need to do to get back on track

- Return to sales focus. Manage (or remove) existing partners to ensure return to forecasts (this gives a £3-5m baseline for 2025)
- Broaden partner base to reduce the risk of revenues being impacted by timing differences in restocking. Increase from 5 – 10 partners (USA and Asia focus).
- Increase number of channels to market – Sports nutrition (LeanBiome); Health Ageing Consumer products (WellBiome) – reduce dependency on cyclic weight management market. Exploit growing interest in microbiome in sport and ageing healthily
- Broaden SlimBiome product range- healthy snacks (puffs/Doritos), soups, shots, breakfast options, Slimbiome in ready meals, extending into healthy eating
- Invest in online direct to consumer sales – reduces partner dependency, higher final sale price and margin
- Reduce costs: all directors voluntarily took a 20% pay cut in Jan, removed joint broker (Cenkos), Rene (CEO prebiotix left), reducing NEDs from 4 to 2 at AGM

Commercialise second generation products 2023

- Materialise commercial opportunity in these unique products with global partners

SlimBiome®/OptiBiome®/ LeanBiome® : first generation formulation to reduce hunger & cravings

Increase sales with existing customers:

- i. Extended product range and territories – Optipharm have introduced Optiwoman and Optivegan range and ready meal sachet
- ii. Extend product range with Nahdi – Gummies, bars, deserts - mouse, soups (on going samples sent and new products planned)
- iii. Extend shops and online presence with Apollo Hospitals in India (Amazon India May 16th 2023/FlipKart etc to follow, doubled number of stores, aiming for 1000 stores by end of year, doubled sales in April 2023)
- iv. Extended channel into Sports nutrition (LeanBiome®) and Healthy Ageing (WellBiome®) Launched LeanBiome with THG with confirmed launches from new leading sports nutrition USA partner. WellBiome launched Q2 2023.

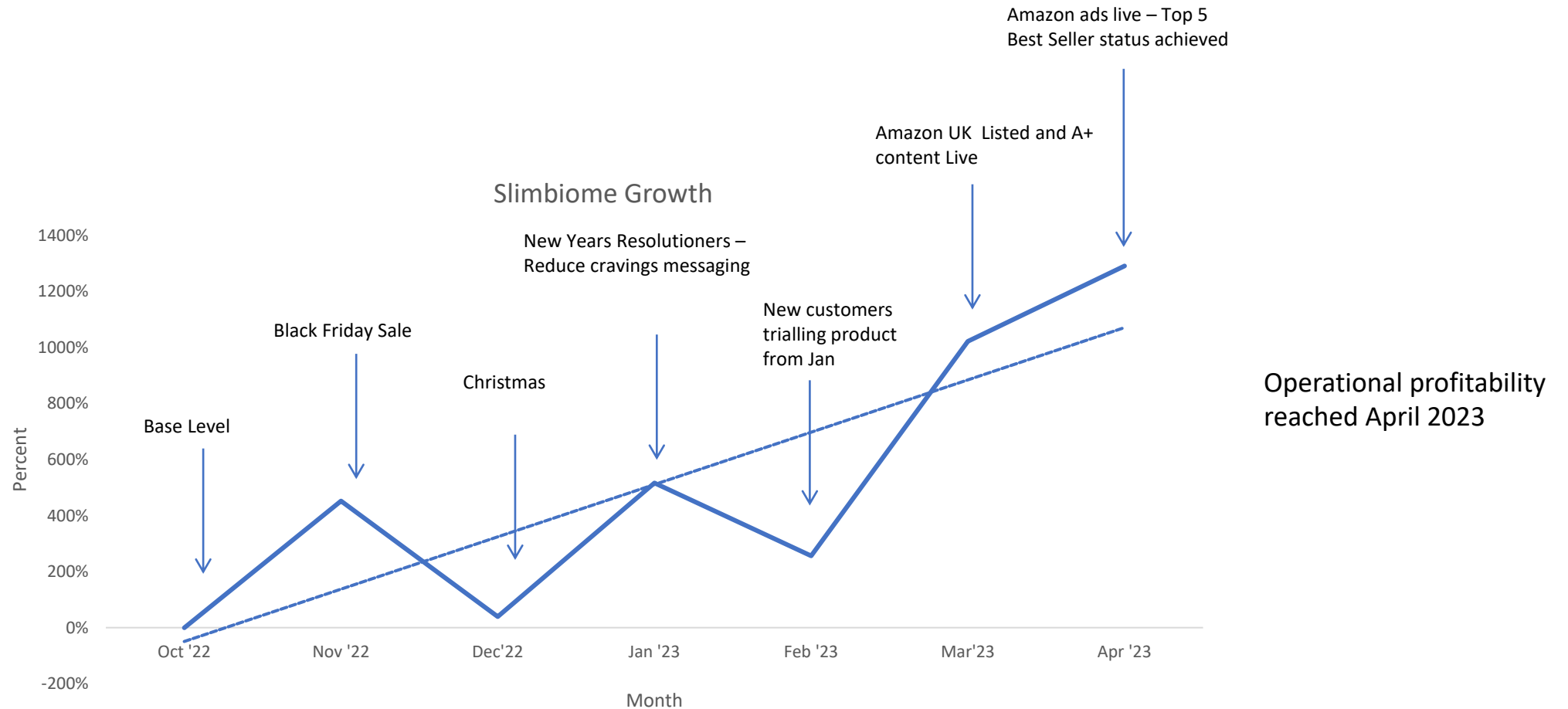
Invested in E-commerce (UK, Tmall, Amazon)

- i. On TMALL, Amazon UK, Walmart USA now live -focus on SlimBiome Medical uniqueness of product: Amazon Germany, Belgium. Netherlands to follow – April highest ever online sales 1200% increase in just over 6 months
- ii. Enhance online offering by adding more products (WellBiome launched on line Q2 2023, Amazon online by end of May)

Increase sales by bringing in new customers:

- i. First purchase orders from 2-3 USA customers (2 new large USA customers placing orders with their contract manufacturers)
- ii. First purchase orders from 3 customers in Asia Pacific including new customers in India – 3 new customers in Asia who have signed agreements and purchased, 1 new customer in India, major international corporate looking for India launch H2

Is the investment working : E Commerce sales growth



SweetBiotix: A portfolio of sweet low-calorie fibres created by combining prebiotic functional fibres and modified mogrosides or steviol glycosides in a single enzymatic step

Commercial Status:

- i. Manufacturing agreement signed with US partner September 2020 for mogroside product
 - i. Scale up optimization completed/optimised products received December 2022 as liquid, freeze dried in May
 - ii. Partner taste testing confirms product acceptability. Analytical testing and structural analysis underway
 - iii. Structural analysis underway to determine novelty and the regulatory pathway
 - iv. Independent peer reviewed publication confirms sweetness and prebiotic functionality highlighting health benefits – start of marketing
 - v. Six figure annual milestone paid during scale up plus six figure launch milestone
 - vi. Royalties 5% plus a further 5% on 11 named companies(Kelloggs, Nestle, Coca Cola ,Firmenich, Tereos, Cargill, Arla ,Tate and Lyle, Agropur, Givaudan, Tata)
- ii. Agreement signed with Firmenich July 2022 for stevia glycoside product
 - i. Manufacturing agreement signed and project progressing rapidly
 - ii. Manufacturing scale up underway, product produced and tested, process optimization underway to enhance yield
 - iii. Payments: Six figure payment per market approval (USA/Europe/Asia) - potential H2 2023/H1 2024
 - iv. One off six figure milestone when reaching \$5m and \$12m sales plus royalties on all sales

Next Steps:

Structural and functional analysis, regulatory approvals, partner application development and launch discussions

Microbiome Modulators (MM): designer synergistic prebiotics to precision engineer the gut or skin microbiome

Unique reverse enzyme technology

Novel and patent protected reverse enzyme technique creates prebiotic ingredients which selectively enhance the growth of specific microbial species and their bioactive metabolites

- The creates the ability to :-
 - **Precision engineer food to selectively enhance the growth of specific bacteria in the gut to prevent, manage and treat disease**
 - **Create targeted prebiotics which selectively enhance the growth and effect of an existing probiotic products – advanced synbiotics**
- Unique technology protected by multiple patents
- Ability to manufacture at scale (2022)

Commercial

- Creates multiple opportunities across large areas of healthcare
 - Microbiome ingredients: process and heat stable ingredients which can modify the microbiome in a highly targeted way to improve specific areas of health and wellbeing
 - General lactobacillus boost selective ingredient in dairy or as general health product
 - Create targeted synergistic prebiotic for existing commercial probiotics to selectively enhances its effect (an 'OptiBiotic') – A Probiotic boost.

'If you believe the microbiome is the future of healthcare then the ability to precision engineer the microbiome and change the relative amounts of specific bacteria is how you get there'

Second Generation Products: Gut Microbiome modulators - designer prebiotics to precision engineer the gut or skin microbiome

Development status:

- i. Proof of concept established with a reverse enzyme approach which showed:-
 - ✓ Ability to selectively increase microbial numbers
 - ✓ Ability to selectively increase the microbe's biological activity
 - ✓ **Ability to selectively increase the microbe's health effect**
- ii. IP filings supporting commercial proposition filed
- iii. Manufacturing scale up process completed 2022.
- iv. Structural and functional analysis underway to determine novelty. This will determine the regulatory pathway

Commercial:

- i. Early commercial interest established in Supply Side West Nov 2022 with USA corporate (\$16bn turnover). More detailed commercial discussions held in USA May 2023.
- ii. Opportunities for early launch of own product offering or partnering licensing deal H2 2023/ or 2024. Both options under active discussion.

This work has given OptiBiotix the ability to generate unique enzymes from individual microbial species which generate prebiotics which selectively enhance the growth of that microbial species. This is unique to OptiBiotix and creates the opportunity to precision engineer the gut or skin microbiome.

We believe this is a significant value enhancing product close to commercialisation

Revenue potential (current economic environment too volatile for a forecast!)

Assumptions:

1. No deterioration in global economic environment
2. Existing partners continue to recover and return to forecasts
3. Investment in E-commerce channels and products continues to deliver strong growth
4. SweetBiotix/ MM soft launch in 2023 with main launch 2024
5. 3 new USA partners deliver at least 50% of forecast
6. Marginal contribution from Opti-XOS

