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OptiBiotix Health PLC
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OptiBiotix Health plc
("OptiBiotix" or the "Company" or the "Group")

Microbiome Modulators overview

OptiBiotix Health plc (AIM: OPTI), a life sciences business developing compounds to tackle obesity, high cholesterol, diabetes and skincare, provides an overview of its MicroBiome Modulators product range.

Market need

Numerous research studies have highlighted the role of the microorganisms that live in or on our bodies, collectively called the microbiome, in maintaining health and preventing chronic disease. There are now almost weekly reports on this 'microbiome revolution' and the potential impact of the microbiome to improve health and prevent disease. These include the role of the gut microbiome in cancer (seeGut microbiota modulation: a novel strategy for prevention and treatment of colorectal cancer | Oncogene (nature.com)), healthy ageing (seeThe gut microbiome as a modulator of healthy ageing | Nature Reviews Gastroenterology & Hepatology) and how the gut microbiome impacts on a patients response to drug treatmentDrug-microbiota interactions: an emerging priority for precision medicine | Signal Transduction and Targeted Therapy (nature.com), including the absorption of paracetamol by gut microbes reducing its effect. With increasing recognition of the role of the microbiome in health and disease comes the potential to develop strategies to change the microbial composition of the microbiome as a dietary or treatment option to improve health outcomes, prevent chronic diseases, and/or improve the efficacy or reduce thetoxicity of drug treatments.

The Microbiome Modulator product portfolio has been developed to meet this need.

Meeting the market need

OptiBiotix has developed a number of unique, patented technologies, which allow it to create dietary ingredients, supplements, or therapeutic products to increase the efficacy of existing probiotics and precision engineer the microbiome.

The OptiBiotix approach is based on the premise that gut microbes have adapted to co-exist with humans by utilising compounds not useable by their human host. OptiBiotix has developed a number of platform technologies which allows it to examine a microbe's genome to identify its ability to utilise specific substrates. After obtaining this information, it needs to be validated for its functionality in human gut models. This has been performed for multiple microbes on a number of occasions which consistently show that a combination of the prebiotic and parent strain from which it was produced increases growth, metabolic activity, and health benefits far greater than using the probiotic alone or a combination of the probiotic and other prebiotics. Further studies have shown the ability of these products to modify microbiome composition and significantly increase specific short-chain fatty acids ("SCFA"), the molecular messengers produced by bacteria. SCFA are widely known for their importance in gut health, immunity and are one of the main ways in which the gut microbiome contributes to better health and prevent chronic disease.

Once we validated the improvements for each microbe, we use protein synthesis techniques for the large scale production of unique substrates specific for the optimum growth of that microbe. This required an extensive programme of work over two years but was completed successfully and the process patented. This allows the Company to create substrates which boost the growth of specific genera or species of microbes that have been connected with cancer, improving drug treatments, the development of chronic diseases, or even the ageing processHealthy longevity: The role of the gut microbiome (medicalnewstoday.com). This ability to identify and

create products which selectively enhance the growth and activity of specific microbes is a new concept but has the potential to revolutionise health benefits of existing probiotics and the possibility, with further studies, to improve drug therapies for a range of diseases. Microbiome modulating approaches are a largely unexplored area of opportunity for both the food and pharmaceutical industry but have the potential to transform healthcare. If the microbiome is the future of healthcare, having an approach to precision engineer the microbiome to enhance those microbes that deliver health benefits is the pathway to achieving that aim.

Current position

The Company has developed a number of products created using its technology platforms which have beenbeen tested by academic groups.The technology has been applied to multiple microbial species and strains with the first available product developed for Lactobacillus species as they dominate the global probiotic market with 65% market share by revenue (Coherent Market Insights, 2023). The Company has been working with academic and industry partners and nowhave published seven papers on their findings which have been published and/or presented at international conferences, providing an independent assessment of the technology and the products ability to selectively improve growth and improve a health condition. A further publication which has been submitted as a joint publication with DSM shows the ability of OptiBiotix's microbiome modulators to selectively enhancethe growth of *Lactobacillus rhamnosus GG* ("LGG"), the world's bestselling probiotic. Presentations and publications help build awareness of OptiBiotix's technology and products in international markets, and are key to the engagement of large industry partners who may wish to license or acquire the technology or products, and provide the supporting material for the marketing and launch of products.Current studies to date have shown:-

1. The ability to create unique products for a range of different beneficial microbes. These may be commercial probiotics or beneficial bacteria in the gut associated with a health benefit
2. The ability of these products to greatly enhance the growth rate and health benefits of these beneficial microbes and the bioactives (SCFA's) they produce
3. The ability of these products to maintain high levels of a probiotic in the gut for longer than if using the probiotic alone

This technology is applicable to a wide range of microbial species with short term opportunities with nutraceutical company partners who wish to improve the performance of their existing probiotics or more long-term, pharmaceutical companies interested in improving drug therapies. This has created interest from a spectrum of potential partners with a view to licensing the technology, co-development of specific products for partners, or the production and sale of aningredient to boost the performance of products containing Lactobacilli species. The Company believes these options are not mutually exclusive.

Current commercial focus is on launching a generic Lactobacillus boost product; codeveloping strain specific products with large companies who have high volumes of a specific probiotic species, and more longer-term exploring opportunities with the increasing number of pharmaceutical companies who have interest and expertise in the microbiome and its ability to deliver health benefits. The Company has been in discussionswith a wide range of industry partners since 2023 and will make announcements on timelines and launch dates once in a position to do so.

Stephen O'Hara, CEO of OptiBiotix Health plc commented:*"We are pleased at theprogress we have made with our microbiome modulators to date. We have developed unique science, scaled up processes, created a broad patent portfolio, published and presented our studies at international conferences, and in the last 12 months better understood the wide range of opportunities from partner discussions to help develop our commercial proposition. We arenow focused on taking these unique products to market. We believe this is likely to include a combination of OptiBiotix's own brand, partner brands for specific strains, co-development and license deals across different industry sectors (nutraceutical food ingredient, and pharma).*

"This ability to identify and create products which selectively enhance the growth and activity of specific microbes is a new concept but has the potential to revolutionise the probiotic industry and in time microbiome-based products and therapies. If we achieve these aims, theseproductsoffer the possibility for improved products and new treatment strategies for a range of diseases andthepotential for a significant enhancement in the value of the Company."

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About OptiBiotix - www.optibiotix.com

OptiBiotix Health plc (AIM: OPTI), which was formed in March 2012, brings science to the development of compounds which modify the human microbiome - the collective genome of the microbes in the body - in order to prevent and manage human disease and promote wellness.

OptiBiotix has an extensive R&D programme working with leading academics in the development of microbial strains, compounds, and formulations which are used as active ingredients and supplements. More than twenty international food and healthcare supplement companies have signed agreements with OptiBiotix to incorporate their human microbiome modulators into a wide range of food products and drinks.

OptiBiotix is also developing its own range of consumer supplements and health products. The Company's current areas of focus include obesity, cardiovascular health, and diabetes.

Forward-Looking Statements

Certain statements made in this announcement are forward-looking statements. These forward-looking statements are not historical facts but rather are based on the Company's current expectations, estimates, and projections about its industry; its beliefs; and assumptions. Words such as 'anticipates,' 'expects,' 'intends,' 'plans,' 'believes,' 'seeks,' 'estimates,' and similar expressions are intended to identify forward-looking statements. These statements are not guarantees of future performance and are subject to known and unknown risks, uncertainties, and other factors, some of which are beyond the Company's control, are difficult to predict, and could cause actual results to differ materially from those expressed or forecasted in the forward-looking statements. The Company cautions security holders and prospective security holders not to place undue reliance on these forward-looking statements, which reflect the view of the Company only as of the date of this announcement. The forward-looking statements made in this announcement relate only to events as of the date on which the statements are made. The Company will not undertake any obligation to release publicly any revisions or updates to these forward-looking statements to reflect events, circumstances, or unanticipated events occurring after the date of this announcement except as required by law or by any appropriate regulatory authority.

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