ENBIOSIS

INNER VOICE OF YOUR BODY

INTRODUCTION

Diabetes

Eczema

Obesity

Digestive
Problems

Depression

Problem

Microbiome imbalance is one of the leading causes of many diseases such as obesity, digestive problems, diabetes, cardiovascular disorders, depression etc. In most cases, conventional medical treatments are insufficient to provide a solution.
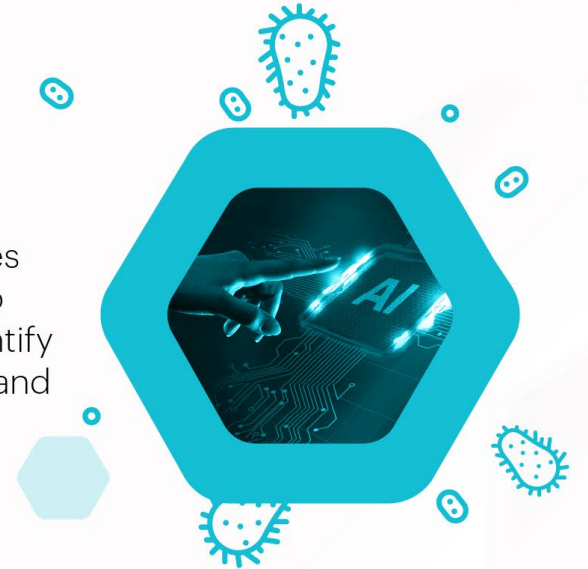
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INTRODUCTION

Solution

Our artificial intelligence-powered technologies analyze the human gut microbiome in order to provide personalized health solutions and identify biomarkers for microbiome-based diagnostic and therapeutic products.

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OVERVIEW

ENBIOSIS Microbiome Biomarkers Are Used For:

 Personalized Nutrition And Diet Technologies

 Microbiome Based Liquid-biopsy And Diagnostics

 Next Generation Probiotics And Biotherapeutics

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CORE TEAM

Ömer Özkan
Founder & CEO

Founded 4 technology start-ups.
Renewable energy development in Turkey & Ukraine.

Ph.D. Ufuk Nalbantoğlu
Co-founder - CTO

15 years of experience in microbiome research. Principal investigator of NIH, NFS, and DTRA funded projects. Built the bioinformatics software of Earth Microbiome Projects

Assoc. Prof. Aycan Gündoğdu
Co-founder - CSO

The national laboratories of the Sunshine Coast, Queensland Department of Health, and CSIRO, Head scientists of Turkish National Microbiome Project, EU Human Microbiome Studies committee member

Prof. Dr. Dr. André Gessner
Molecular biologist and specialist immunologist

Focused on molecular infection immunology, infectious diseases, and the role of the microbiome for diseases. Reviewer for several international journals and scientific societies, including the German Research Society (DFG) and the German Ministry of Education and Science (BMBF).

Dr. Adam Killpartrick
US Business development

15 years in the functional medicine field; currently holds certifications as a Functional Medicine Practitioner, a Certified Nutrition Specialist, a Certified Ketogenic Nutrition Specialist as well as his a Diplomate through the American Clinical Board of Nutrition.

MD. Varol Tunalı
Medical Director

10 years of medical industry experience. Focused on Microbiology and Infectious Diseases.

Ph. D. Emre Onuk
CDO

10 years of data science and machine learning experience. Specialist in signal processing, estimation&detection and optimization. Researcher at METU, Brown University, Northeastern University, UCLA.

Özlü Yalaza
Board Member

Founder of Pragma, the leading investment bank of Turkey. 20+ years of investment banking and principal investment experience. MBA in The University of Texas at Austin. BS in Chemical Engineering from Boğaziçi University.

COMPANY VERTICALS

Wellness

- Personalized Diet Engine

- Personalized Prebiotics

- Personalized Probiotics

1

⊙〉 **Products On** Market
*Wellness: Personalized Prebiotics Prepared

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COMPANY VERTICALS

Diagnostic

- IBS
- IBD
- Colon Cancer
- Non-Alcholic Fatty Liver Disease
- Heart Diseases

2
Upcoming Products
*Diagnostic: Non-Invasive Multi-Disease Diagnostic Model Developed

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COMPANY VERTICALS

Therapeutic

- Disease management with micro-biome diet

- Bacteriophage therapy

- Personal therapy solutions

- Biotherapeutics

- Smart microbiome transplant

78%

Success In Treating IBS

3

› **Long Term** Products
*Therapeutic: 78% Success In Treating IBS,
IBS Management Service On Sale,
%83 Success In Treating Chronic Constipation

83%

**Success In Treating
Chronic Constipation**

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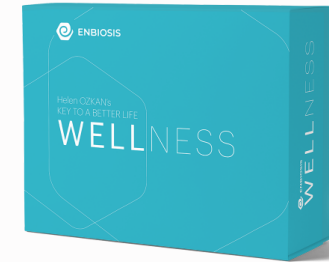
PRODUCTS ON MARKET

Microbiome Analysis

- Microbiome Analysis
- Food Scores
- Microbiome Age
- Microbiome Diversity
- Disease Tendencies

Personalized Prebiotics

ENBIOSIS' advanced algorithms have generated many recipes for the various clusters formed in our data biobank.
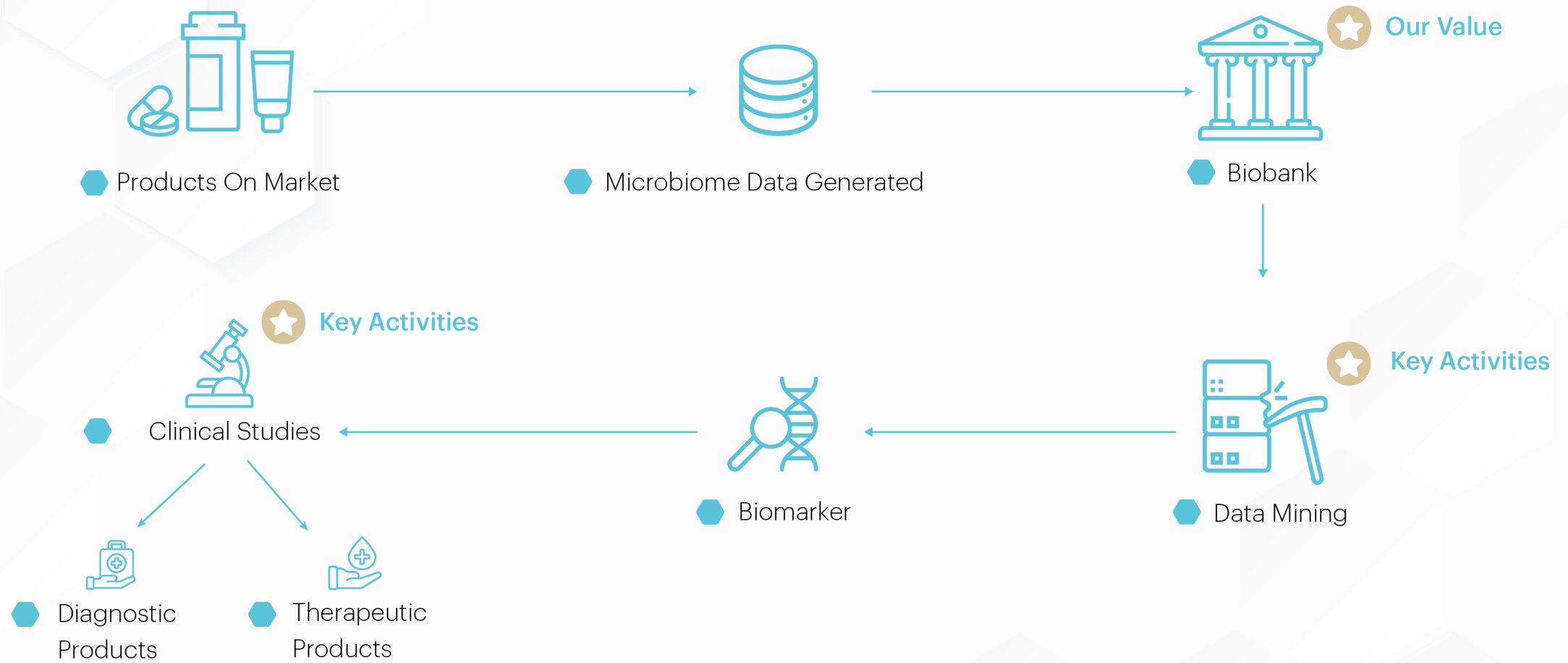
Wellness Subscription Package

- Microbiome analysis twice a year
- Personalized nutrition program
- Monthly personalized prebiotic delivery
- 24/7 dietitian support via the app
- 1 dietitian meeting per month

ENBIOSIS MICROBIOME PLATFORM

Products On Market → Microbiome Data Generated → Biobank ⭐ **Our Value**

Clinical Studies ⭐ **Key Activities** ← Biomarker ← Data Mining ⭐ **Key Activities**

Diagnostic Products

Therapeutic Products

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CLINICAL STUDIES

Our Clinical Studies Prove The Power Of Personalized Health Solutions Based On The Gut Microbiome.

*The abstract of our clinical study on IBS management is now available in Gastroenterology (Impact factor 17)

83% of subjects in our study on chronic constipation achieved success with the ENBIOSIS microbiome diet.

CUSTOMER JOURNEY

1

Stool sample is easily taken by following the steps written on the kit.

2

DNA analysis of the bacteria in the sample is conducted and these generated data are loaded to the ENBIOSIS software.

3

The ENBIOSIS artificial intelligence algorithm generates food scores for optimal balance.

4

ENBIOSIS analyzes the samples with the power of artificial intelligence algorithm and shares the results within 4 weeks.

ENBIOSIS

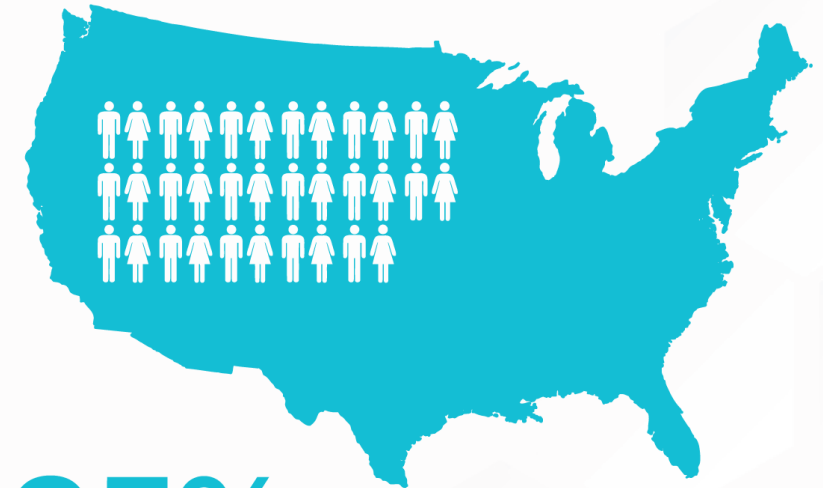# 1- TYPE II DIABETES MANAGEMENT SERVICE

This service will be based on an artificial intelligence algorithm that can predict an individual's blood-sugar response to any given food based on stool sample analysis

Our personalized dietary recommendations help patients control their blood glucose levels

More than 34 million Americans have diabetes (about 1 in 10), and approximately 90-95% of them have type 2 diabetes
The global type 2 diabetes market is set to almost double from $31.2 billion in 2015 to $58.7 billion by 2025

Product State: Clinical Trial
Planned Release Date: 2023Q1

34 Million
Americans

90-95%
Of Them Have Type 2 Diabetes

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2- PROBIOTICS SUGGESTION ENGINE

• We have analyzed most of the commercially available probiotic supplements on the market.

• Whole-Genome sequencing was performed for each probiotic and the functional properties of each were revealed at genetic level.

• We created a machine learning technology that analyzes an individual's microbiome genes at metagenomics level to determine which probiotics will result in the optimal outcome.

What's Needed?

1000 microbiome profiles in the region
Legal consultation
A company that can manufacture probiotics

Future Plan

Personalized probiotics

Product State: Product Development
Planned release date: 2022Q3

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Long-Term Products

We intend to expand our business by introducing
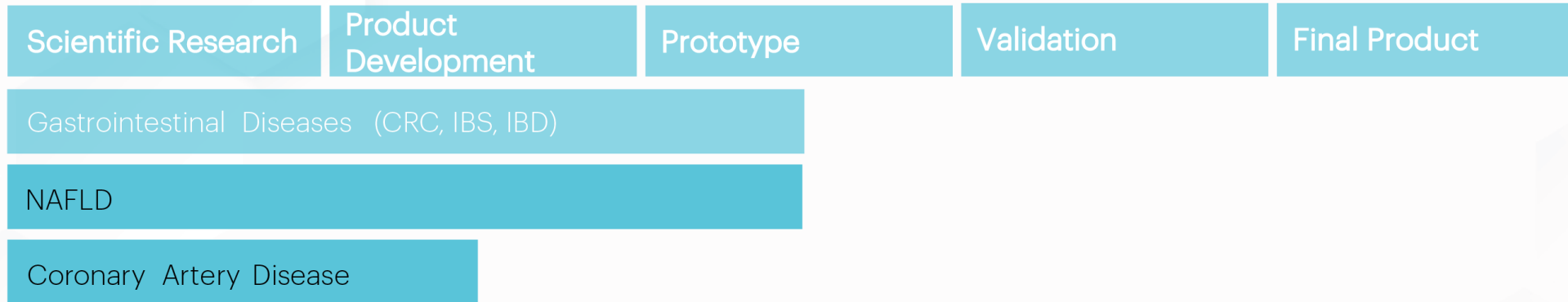new products that will be the result of extensive research

TECHNICAL ROADMAP

Projects	Stage	Vertical	Duration
New generic probiotics	Phase 1	Wellness	Long-term
Diagnos is of gastrointestinal diseases based on gut microbiome	Phase 2-3	Diagnostic	Short-term
Microbiome Medication Efficacy interaction	Phase 1	Theurapatic	Long-term
GMO probiotics	Phase 1	Theurapatic	Long-term

Phase 1: Basic Study, Data Collection, Bioinformatic;
Phase 2: Wet Lab, Algo. Development;
Phase 3: Clinical Study, Certificates;
Phase 4: Sale

1- EARLY DISEASE DIAGNOSIS KITS

• Our microbiome-based liquid-biopsy product family provides non-invasive early disease detection biotech kits and software.

• AI agents discover liquid biopsy biomarkers via data-mining Enbiosis Biobank. Our bioscience team then translates these biomarkers into biotech products.

Scientific Research	Product Development	Prototype	Validation	Final Product

Gastrointestinal Diseases   (CRC, IBS, IBD)

NAFLD

Coronary Artery Disease

Product State: Research (Laboratory Trials, Prototyping)
Planned Release Date: 2023Q1
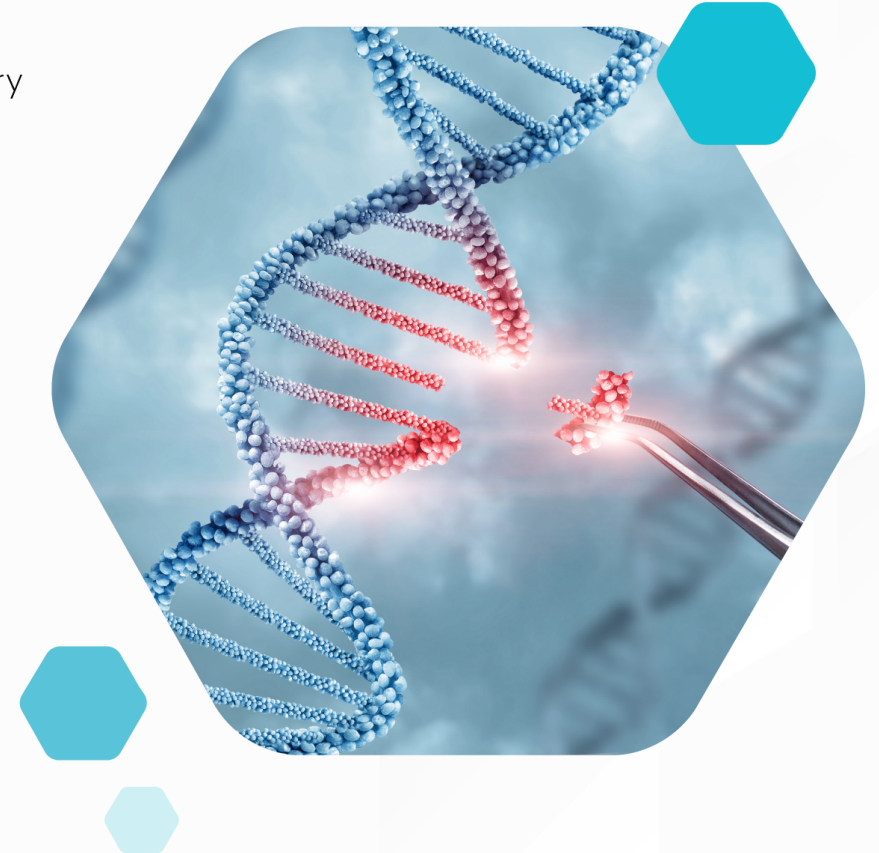
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2- NEW GENERIC PROBIOTICS & GMO PROBIOTICS

We have isolated novel probiotics strains from healthy human microbiome that could be employed as probiotics supplements. Additionally, our biomarker discovery algorithms have mined biosynthetic gene clusters that are strong candidates for promoting human health when integrated into GMO probiotics.

We need to collaborate with synthetic biology talents to engineer GMO probiotics and proceed to industrial-level supplement production.

Groundbreaking products for wellbeing supplements, as well as live biotherapeutics.

Product State: Research (clinical trials)
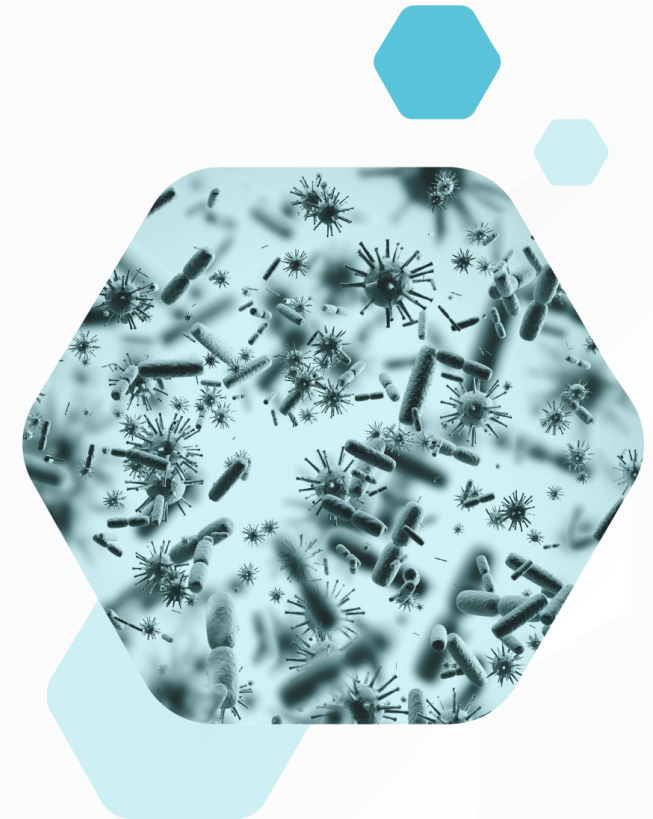Planned Release: 2023+

3- PERSONAL THERAPY SOLUTIONS

By monitoring and modulating the human microbiome, it is now becoming possible to treat a broad spectrum of diseases. There are several complex diseases that are projected to be treated by this paradigm such as autism, obesity, autoimmune diseases, bowel infections, diabetes, cardiovascular disorders, colon cancer, and aging.

Biotherapeutics Technologies

Microbiome pills containing biotherapeutic organisms targeting the related disease mechanisms.

Smart Microbiome Transplant Therapies

We are building one of the world's largest gut microbiome biobanks, supported by a massive network of donors. The AI-backed Donor Match algorithm will be able choose the best donor for a given recipient.

Product State: Research (laboratory trials)
Planned Release Date: 2023+

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THANK YOU!

⬡ Contact for more information:

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