



GUTOLUTION

Empowering Healthspans Beyond 120 Years

Transforming Gut Health for Longevity



A Microbiome Biotechnology Company Committed to Promoting Longevity and Extending Healthspans

OVERVIEW



VISION

LONGEVITY

Eradicates Chronic Illness for Good
Empower Healthy Lifespan beyond 120 years

SPECIALIZING IN

At-home Diagnostics



Precision Nutrition



Microbiome Medicine



POWERED BY

**Translational
Microbiology**



**Next-generation
Sequencing**



**Artificial
Intelligence**



Rising Awareness of Gut Health Issues



- CHOICE Magazine
- Price Comparison Tools
- Advocacy
- Consumer Education
- Shopping Guide
- Consumer Protection
- Complaints & Services
- Resource Centre
- About Us

[Login](#) [Register](#) | [Contact Us](#) | [Facebook](#) [Instagram](#) [YouTube](#) [Weibo](#) | [繁](#) [簡](#) | [Search](#) The University of Hong Kong (HKU)

HKU discovers gut microbiota and its metabolites as key factors for exercise efficacy in the prevention of diabetes



Home > Resource Centre > Press Releases >

Take Probiotics with Caution as Some Efficacy Unproven 25 Samples Not Clearly Labelled Introduce Regulation to Protect Consumer Health

South China Morning Post

Hong Kong study identifies certain bacteria as risk factor for stomach cancer

Researchers from CUHK faculty of medicine discover a certain type of bacteria is pathogen of gastric cancer, as it can kill stomach cells

Hong Kong Business

[CUHK identifies gut microbiome markers for autism spectrum disorder](#)

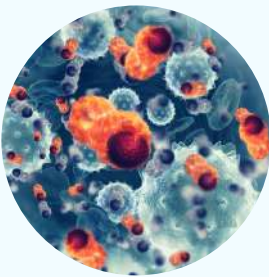
Researchers discovered alterations in gut microbes across archaea, bacteria, fungi, and viruses.

12 Jul 2024



30%

of causes of fatal diseases relate to the gut microbiome



Cancers



Diabetes



Dementia

And more ...

45%

of working adults in hong kong suffer from chronic diseases



IBS



Obesity



Eczema

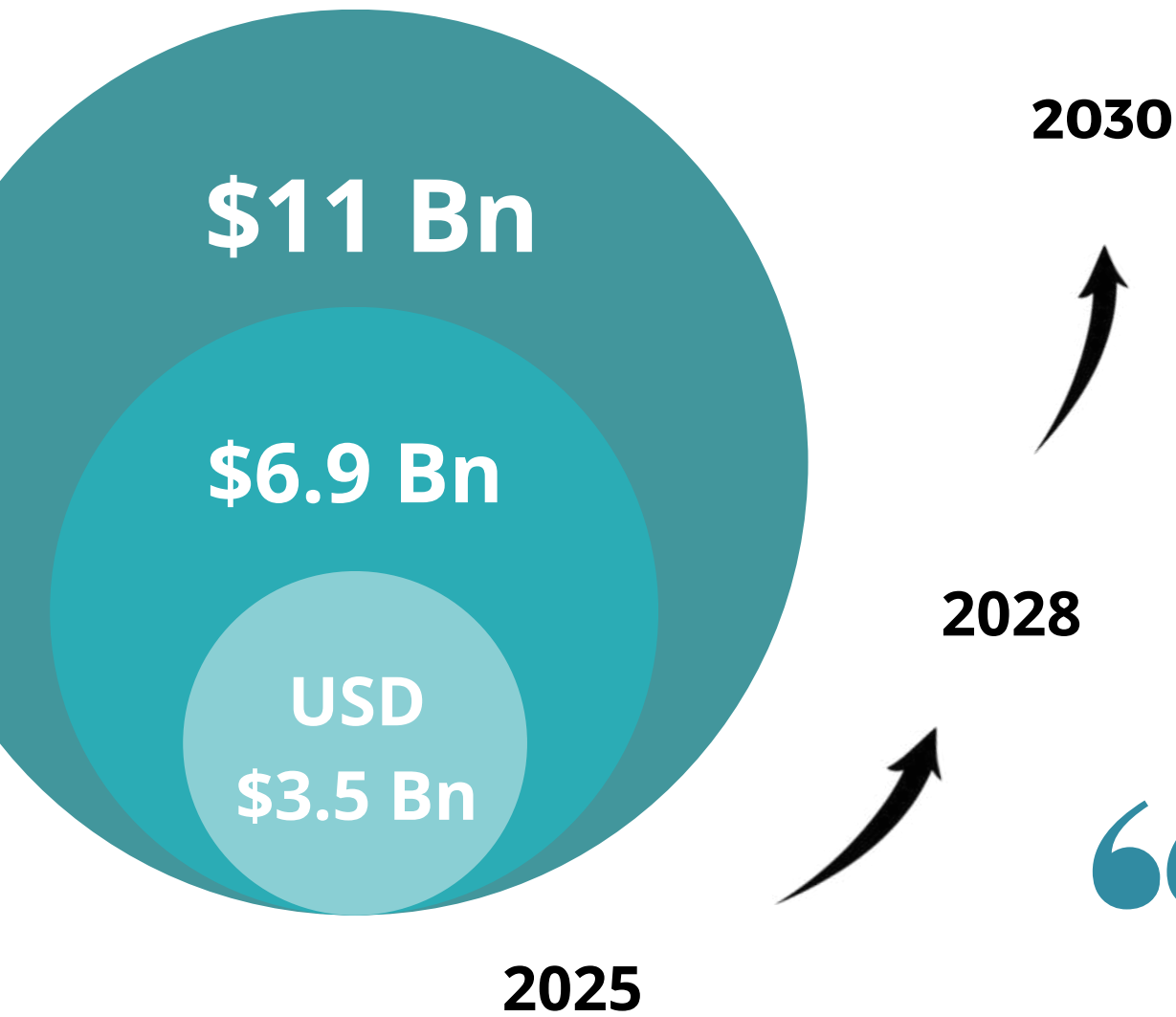
And more ...

EXISTING PROBLEM & MARKET OPPORTUNITY


GLOBAL MICROBIOME MARKET

Market Size
by 2030:
USD 11Bn


CAGR
until 2030
+25%



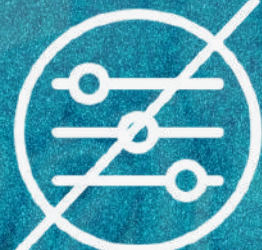
Currently, consumers mainly rely on 'one-size-fits-all' **probiotics**



Low Efficiency
Cannot target each individual's unique gut conditions



Untestable
Cannot monitor the actual effects on the body after use



Non adjustable
Cannot change over time to the most suitable formula for the moment.

“Everyone has a unique and constantly changing gut microbiota”

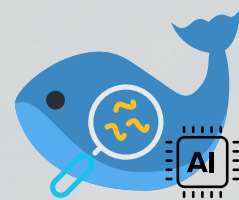
Core Product - GUTolution Microbiome Test Pro

Combines:



NGS Bioinformatics

+



GUTTY A.I. Analysis



Add on available:
Personalized Probiotics



Modelling the "Golden Standard" of each person's unique microbiome:
(1) Personalized (2) No-trial-and-error (3) Low-cost

PRODUCT DISTINCTIVENESS

The only end-to-end NGS gut microbiome testing in Hong Kong



1



Non-invasive
At-home Sampling Kit

2



NGS Lab Testing

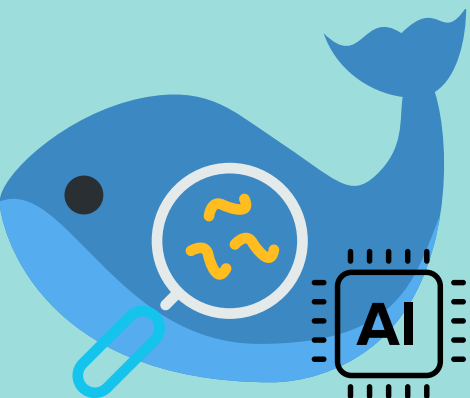
3

Reference

Prediction	Health	CRC
Health	5275	28
CRC	9	535

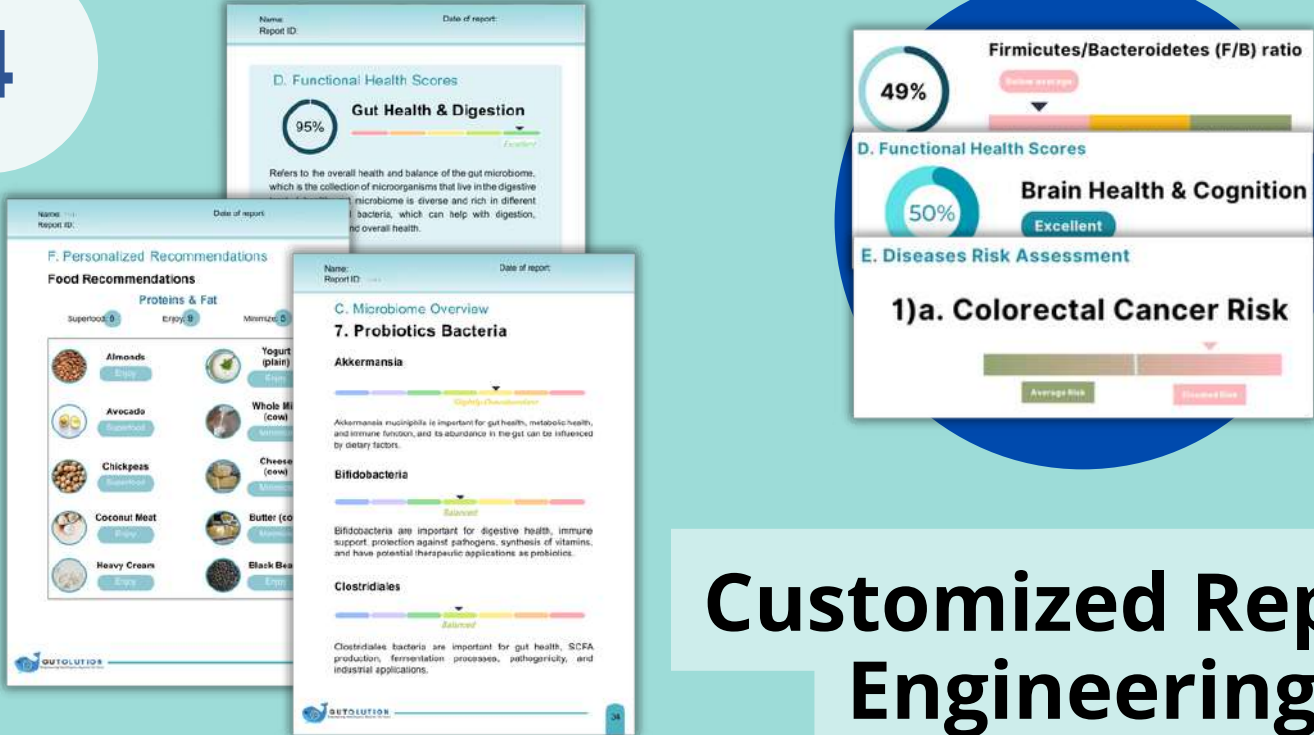
Accuracy: 99.37%

Sensitivity: 95.02%



Machine Learning AI
Bioinformatics Analysis

4



Customized Report
Engineering

Technology - Next-Generation Sequencing laboratory

The second company in Hong Kong with a Next-Generation Sequencing laboratory (located in Hong Kong Science Park), designed according to the American Accreditation Service (IAS) according to the ISO 15189 standard



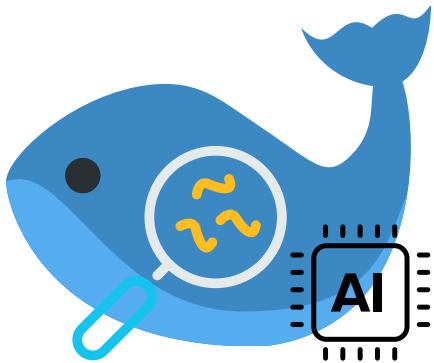
Optimising the DNA extraction process with the QIAcube Connect system

ISO Standard Quality Inspection



Illumina NextSeq 500
Next Generation Sequencing

Technology - Artificial Intelligence



GUTTY* - GUTOLUTION'S AI

*PATENT PENDING TECHNOLOGY

Testing Sensitivity up to 95%

Reference		
Prediction	Health	CRC
Health	5275	28
CRC	9	535
Accuracy: 99.37%		
Sensitivity: 95.02%		

Diseases Risk
Assessment Model

	Method	RMSE	MAE
1	Lasso Regression	15.85590	12.673030
2	Ridge Regression	15.02933	13.199160
3	XGboost	10.68835	7.994981
4	lightGBM	11.02273	8.422291
5	VAE	12.32340	10.034520

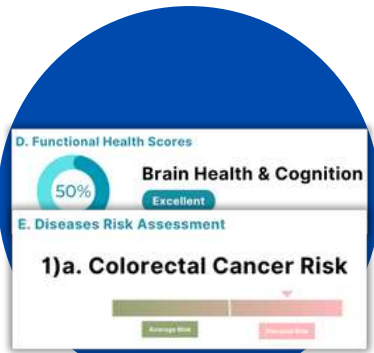
Microbiome Aging
Clock Model

CRC	IBD	Importance
Prevotella copri	Bacteroides thetaiotaomicron	0.752320466
Faecalibacterium prausnitzii	Bacteroides fragilis	0.160519392
Bacteroides uniformis	Eubacterium sp. 3_1_31	0.022262403
Bacteroides coprocola	Ruminococcus lactaris	0.01543726
	Lachnospiraceae bacterium 4	0.006478821
	[Eubacterium] hallii	0.004557857
	Barnesiella intestinihominis	0.004527065

A signature of *Prevotella copri* and *Faecalibacterium prausnitzii* depletion, and a link with bacterial *glutamate* degradation in the Kenyan colorectal cancer patients

Sarah Ouyang,^{1,2} * Amir Elkholy,^{3,4} * * Jagadeesh Babu,⁵ * Michael Behring,⁶ * Prachi Bapat,⁷ * Gauri Agarwal,⁸ * Hyung-Gook Kim,⁹ * Nefertiti El-Nikhely,¹⁰ * Pamela Akinyi,¹¹ * James Owu,¹² * Faruq Alag,¹³ * Mohammed Abdalla,¹⁴ * Anwar Michael,¹⁵ * Mohamed Farouk,¹⁶ * Lori Brand-Ballman,¹⁷ * * Mona Fouad,¹⁸ * * Mansoor Saleh,¹⁹ * Chittabalu Guha,²⁰ * Upinder Mann,²¹ * * and Volker Arnt²²

Biomarker
Discovery Model



App-based Report
in iOS & Android

Bioinformatics

+

Machine Learning

Software Engineering

*GBM, RF, LDA, Neural Network Algorithms

AI Modelling of the "Golden Standard" of each person's unique microbiome:

(1) Personalized (2) No-trial-and-error (3) Low-cost

TECHNOLOGY - CLINICAL RESEARCH

Research partnership with top 1% scientist aiming for IF >20 Publication & FDA Listing

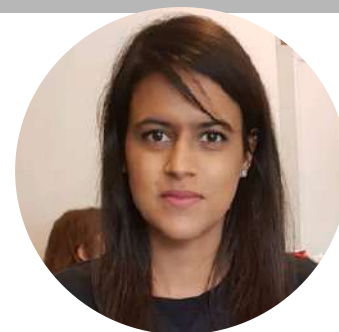
1 Two co-researches with three clinical professors of HKU

2 clinical trials focused on the **effectiveness of GUTolution's new solutions** on high-impact diseases

1 | MASLD

2 | IBS

- **Phase I - Clinical Efficacy Testing**
- **Phase II - Research Publication (IF > 20)**
- **Phase III - Patent Application + FDA Listing**



Gurindar Vinner

Head of Scientific Research,
GUTolution

PhD, Chemical Engineering
MSc, Microbiology & Immunology

2 Securing Government Research Funding

HKD 10 millions

π 創新科技署
Innovation and Technology Commission

Project Sum supported
Government Funding Scheme



**HKU
Med**

LKS Faculty of Medicine
The University of Hong Kong
香港大學李嘉誠醫學院

**Three
Clinical Professord from HKU**

as Principal Investigators of the R&D Projects

TRACTIONS & MILESTONES

FOUND IN Q1 2023

and our **1st Product** launch **within 8 months**, since then:



>200%
Sales
Q2Q Growth



>30%
Repurchase
Rate



>80%
Customer
Satisfaction



>HKD 3.5M
Investments
& Grants



>HKD 4.5M
Projected
Annual Sales



Recent Awards



2024 CAHK STAR Awards
Best HealthTech



No.2 of Hong Kong's startups among all industry in 2024 by the leading experts and business leaders in the region!

HKMA Global
Innovative Rising Star
Gold Award



etnet Health Partnership Awards 2024
Outstanding AI Gut Microbiome
Solution



Media Coverage

HEADLINE DAILY



疫情令大眾更關注腸道健康，透過微生態分析提供精準營養（precision nutrition）服務的香港生物科技初創公司GUTolution，使用先進人工智能引擎分析人體腸道微生態，配合微生態專家及註冊營養師，為客戶提供個人化營養建議。

HEALTHCARE ASIA



GUTolution's AI-powered tech drives personalised solutions for gut health

The biotech's algorithm aids in customised recommendations by determining disease risks via one's gut profile.



Health Concept



LEADING PARTNERS AROUND THE GLOBE



*Only key clients and strategic partners are shown above.



JOIN US!

To uncover the secrets of our gut
microbiomes

Please reach out to Gabriel at
gabriel@gutolution.com

A Microbiome Biotechnology Company Committed to Promoting Longevity and Extending Healthspans