PLUGANDPLAY

NOVEMBER 19-21 2024

SILICON VALLEY SUMMIT

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Food & Beverage Expo:
VENTURING INTO Microbiome

SV SUMMIT

PLUG AND PLAY

SV SUMMIT



OPENING REMARKS

Robert Grey

Director, Sustainable Future Pod

Plug and Play Tech Center

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AGENDA

Opening Remarks
Keynote: Pendulum CEO
Startup Pitches: Part 1
Microbiome Panel
Startup Pitches: Part 2
Trends Presentation
Closing Remarks
Asahi Shuzo & Dassai Blue Announcement

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PROGRAM FOCUS AREAS

AI Platforms: Product Development + Consumer Insights



Novel, Natural Sweeteners and/or Colors



Clinically Verified Ingredients



Exploring New Routes to Market



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BATCH 16 STARTUPS

CITRINE INFORMATICS

ai palette

COMMERCE.AI

Oobli

bonumose®

REDLEAF™ BIOLOGICS



export manager AI powered by entrii

swish brand experiences

Canomiks

brightseed®

Peekage

ZeroIN™

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UPCOMING EVENTS

NOV 19-21	November Summit
JAN-MAY	Ecosystem Roundtables
APRIL 2	Flagship Event
JUNE	June Summit

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THANK YOU TO OUR PARTNERS

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S&S Lab

SIMPLE planet.

Ki Tua Fund

Better Foods

tridon

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SEOULFULLY



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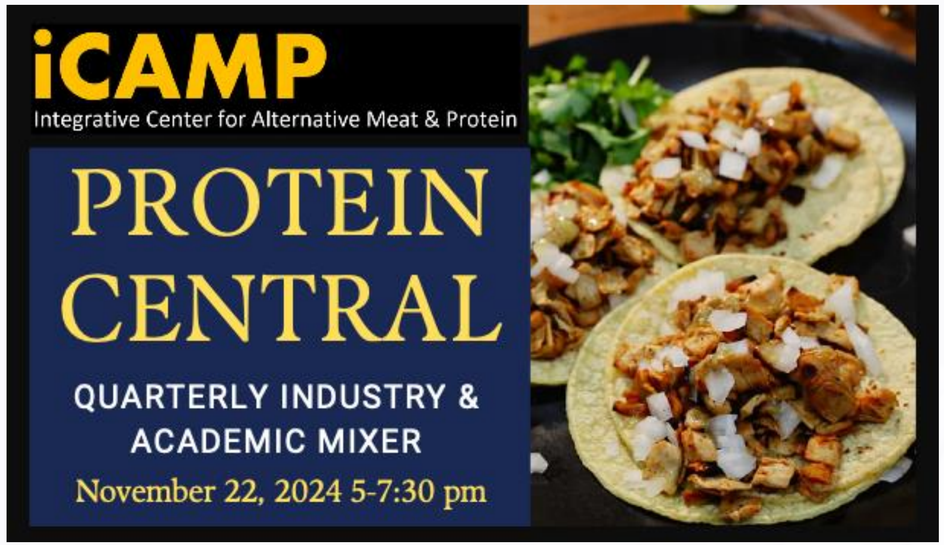
UC DAVIS iCAMP

November 22, 5:00 – 7:30pm

Explore groundbreaking research in fungal based food innovations

RSVP here



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KEYNOTE SPEAKER

Colleen Cutcliffe

Co-founder & CEO

Pendulum

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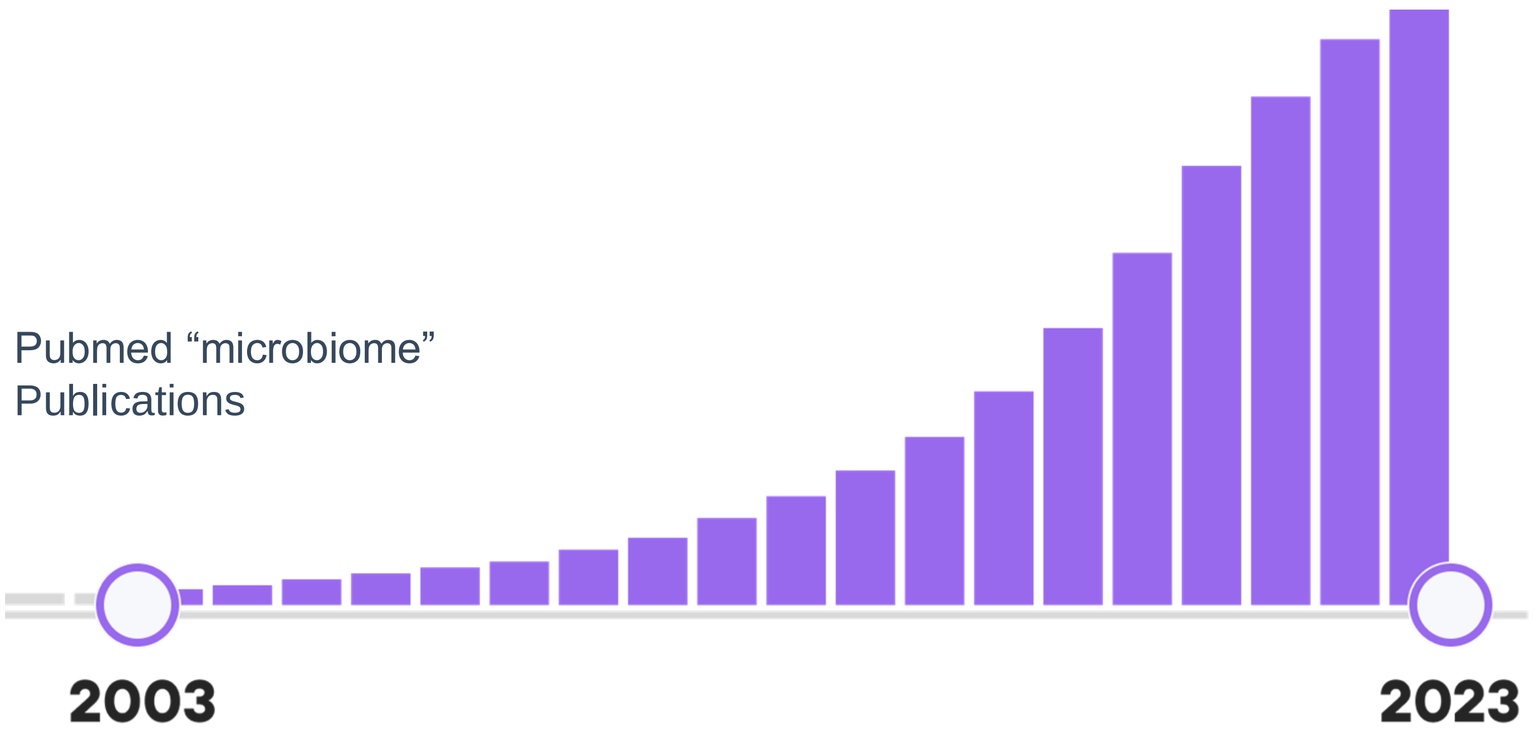
Microbiome Technology

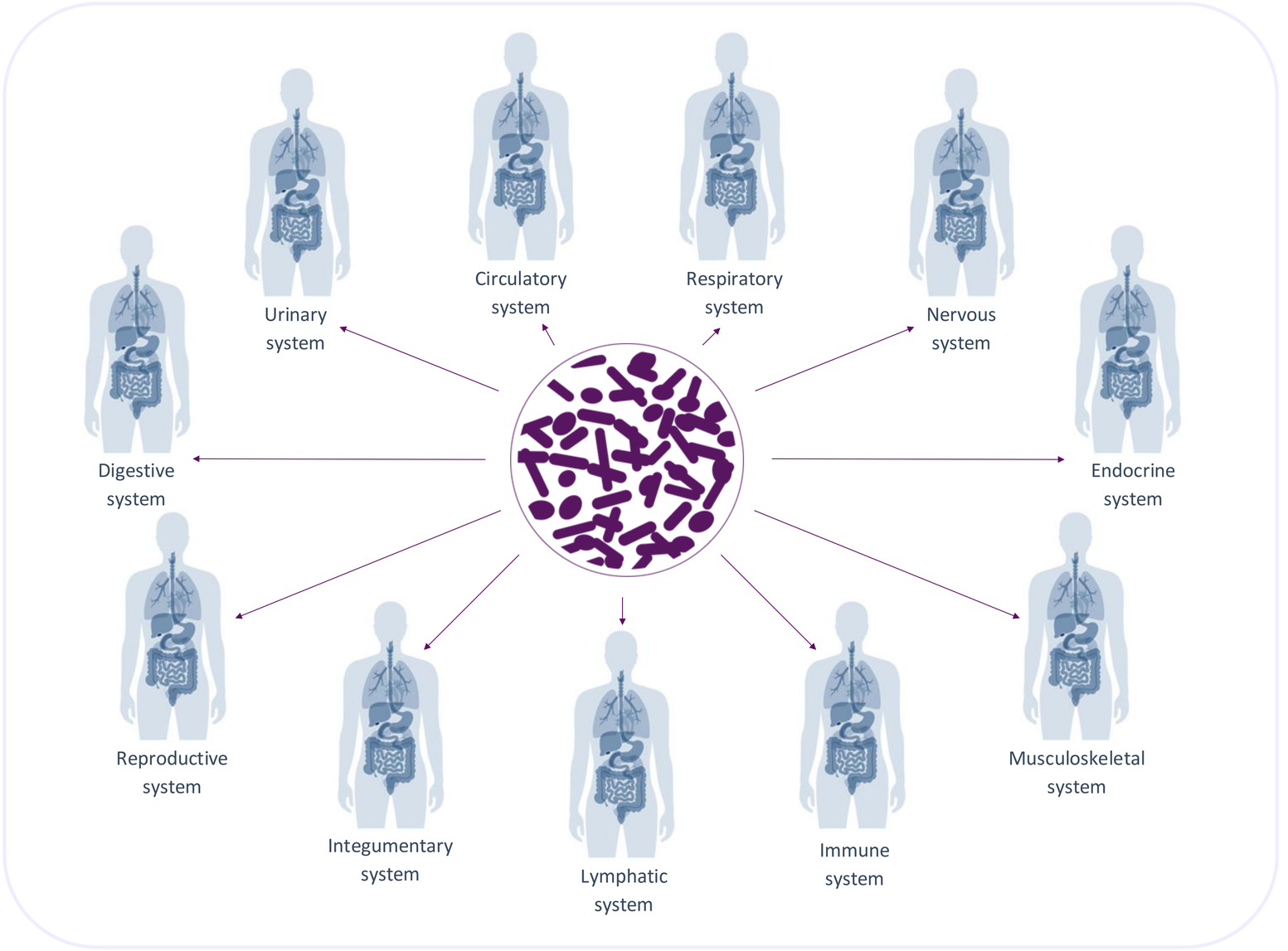
Bringing next-generation strains to the market

Colleen Cutcliffe, Ph.D.
Co-Founder, Chief Executive Officer
Pendulum Therapeutics

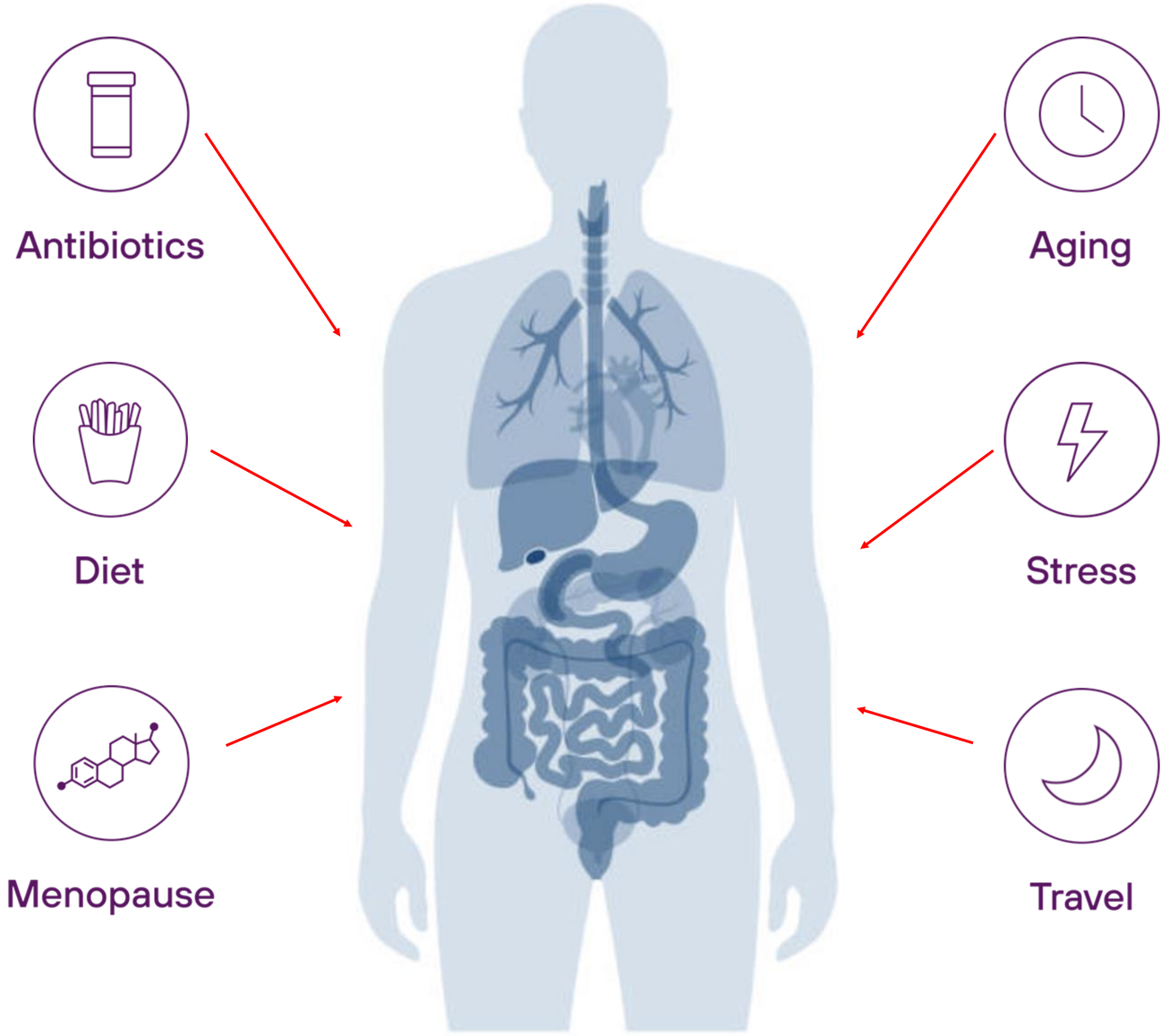
The Boom in Microbiome Research



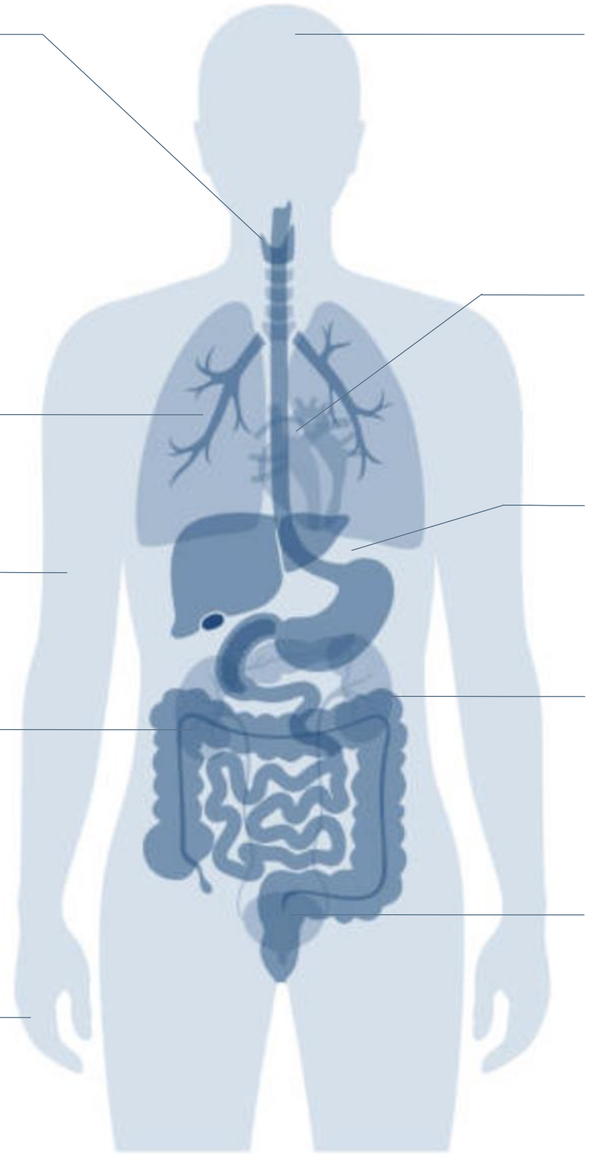
11 Organ Systems Tied Through Microbiome



Throughout life, our microbiome is under constant attack



This leads to a wide breadth of diseases



Esophagitis, Barrett's esophagus and esophageal adenocarcinoma

Asthma, Allergies

Atopic dermatitis

Metabolic syndrome and obesity

Rheumatoid arthritis

Autism
Parkinson's

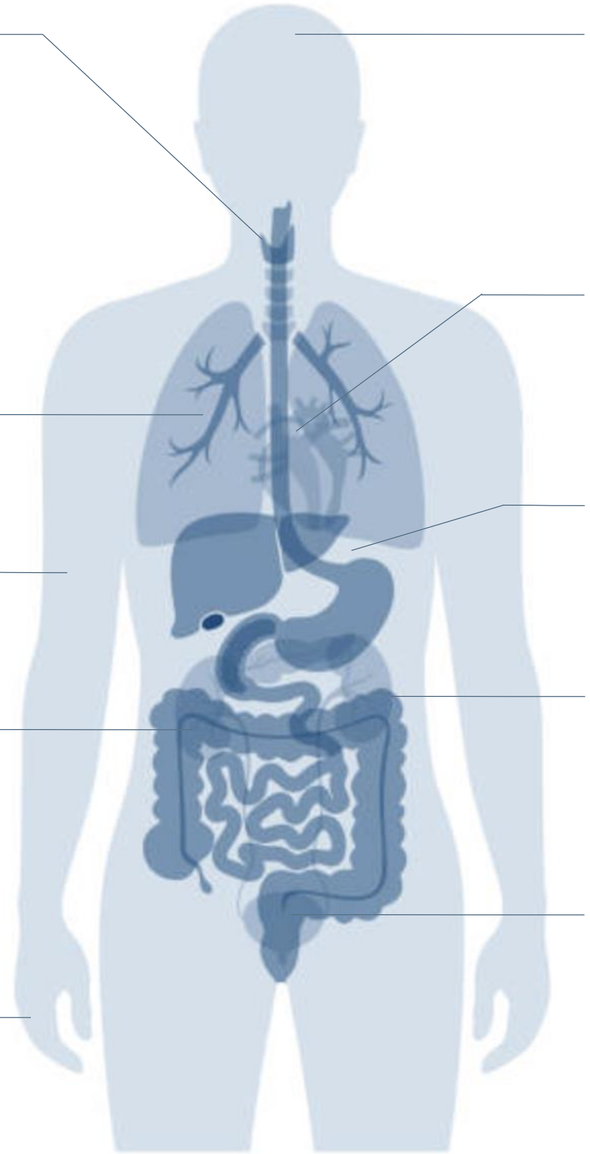
Hypertension and cardiovascular disease

Kidney stone formation

Inflammatory bowel disease

Colorectal cancer

This leads to a wide breadth of diseases



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Rheumatoid arthritis

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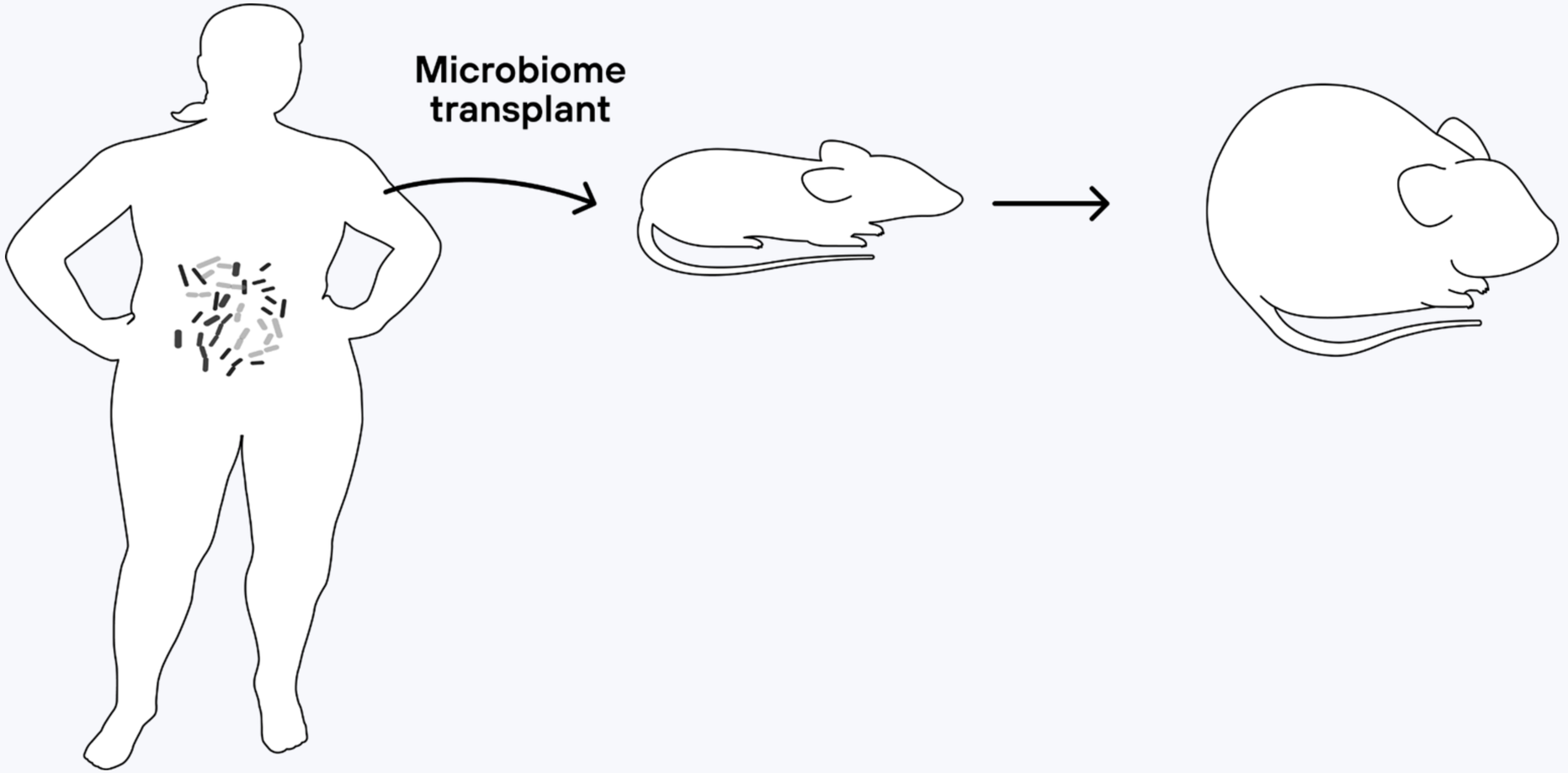
Inflammatory bowel disease

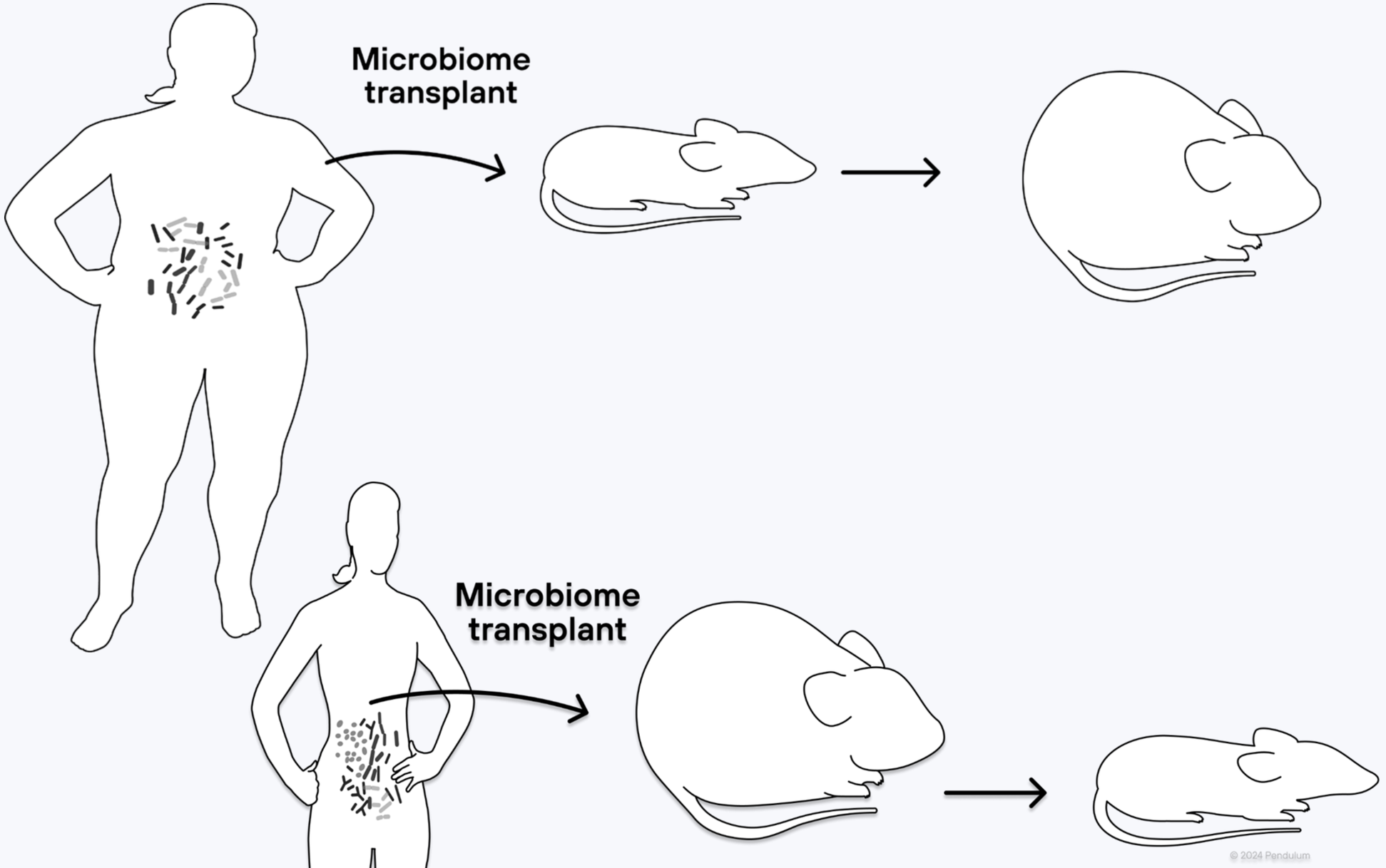
Colorectal cancer

The good news

We can change our microbiomes and improve our health…



Ridaura VK, et al., 2013



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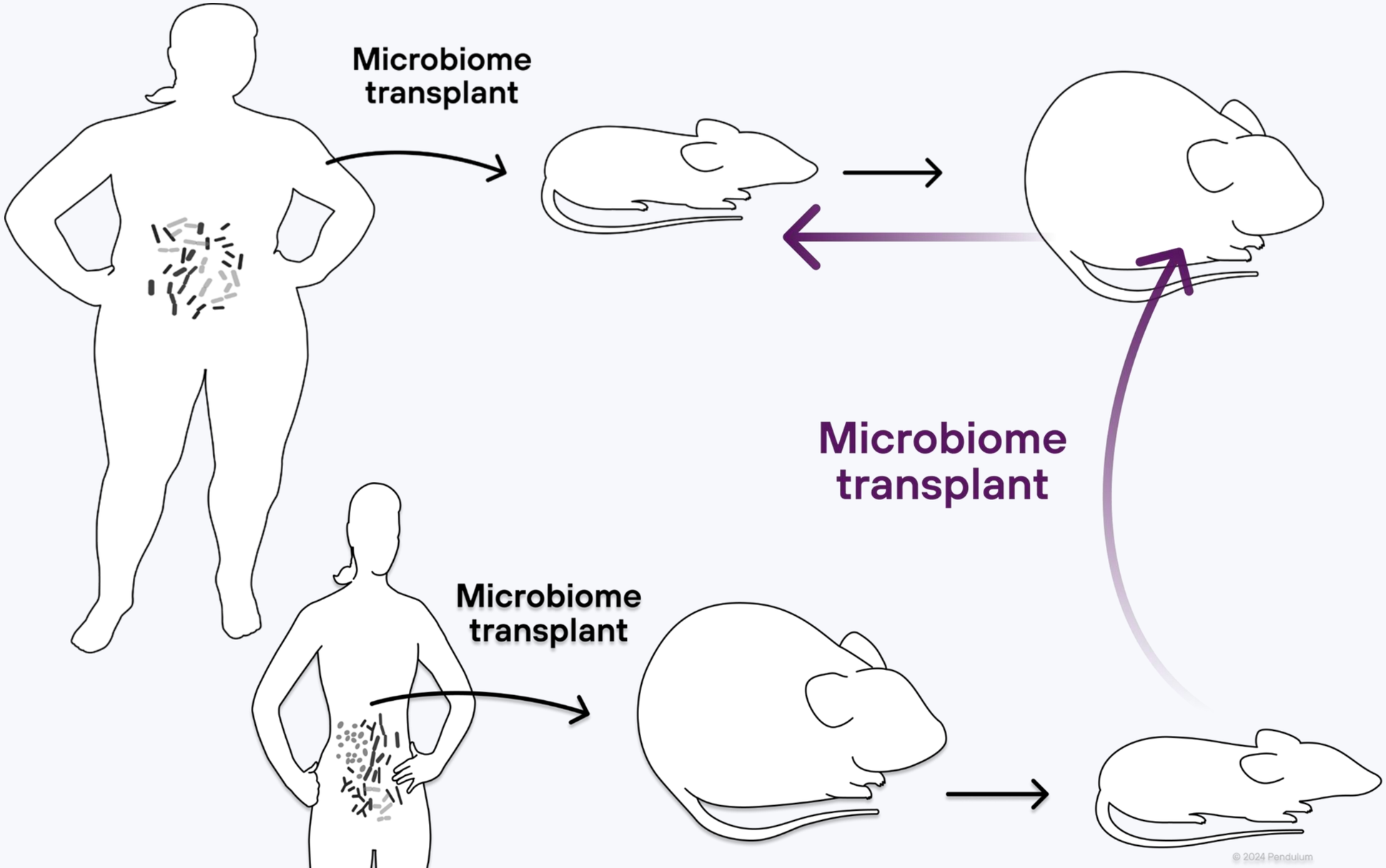
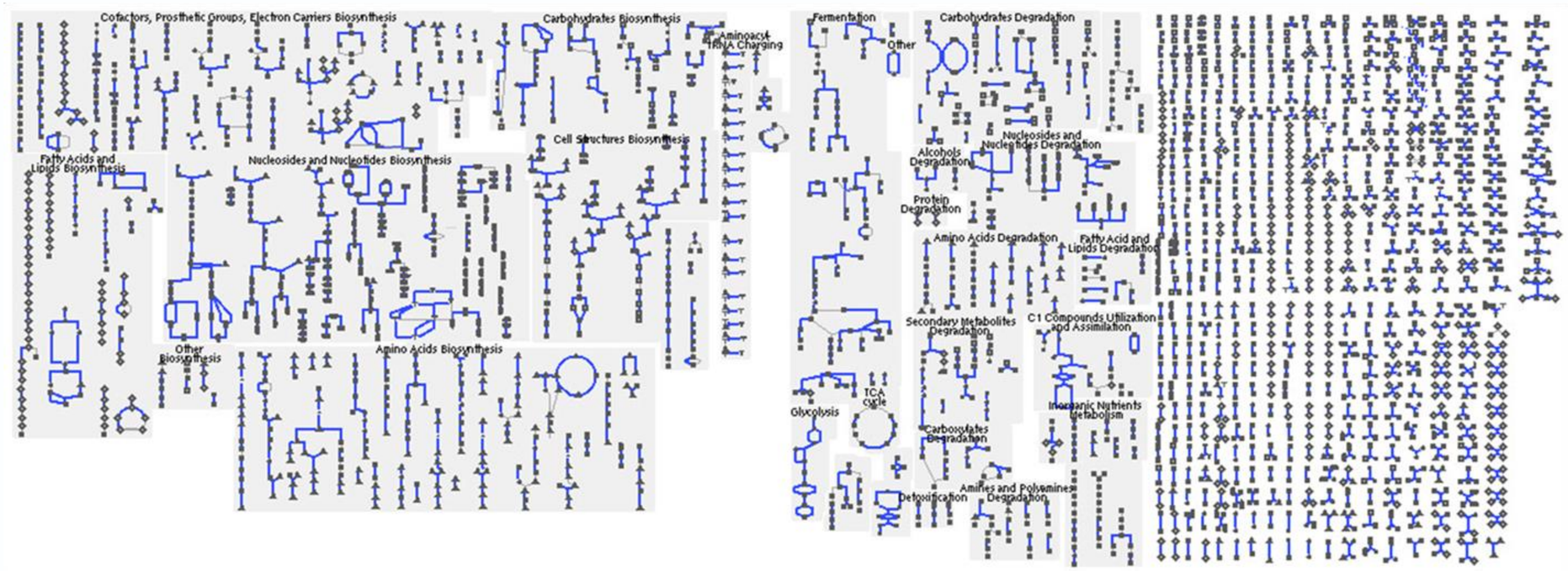


Ridaura VK, et al., 2013

Metabolic Mapping Enables Discovery



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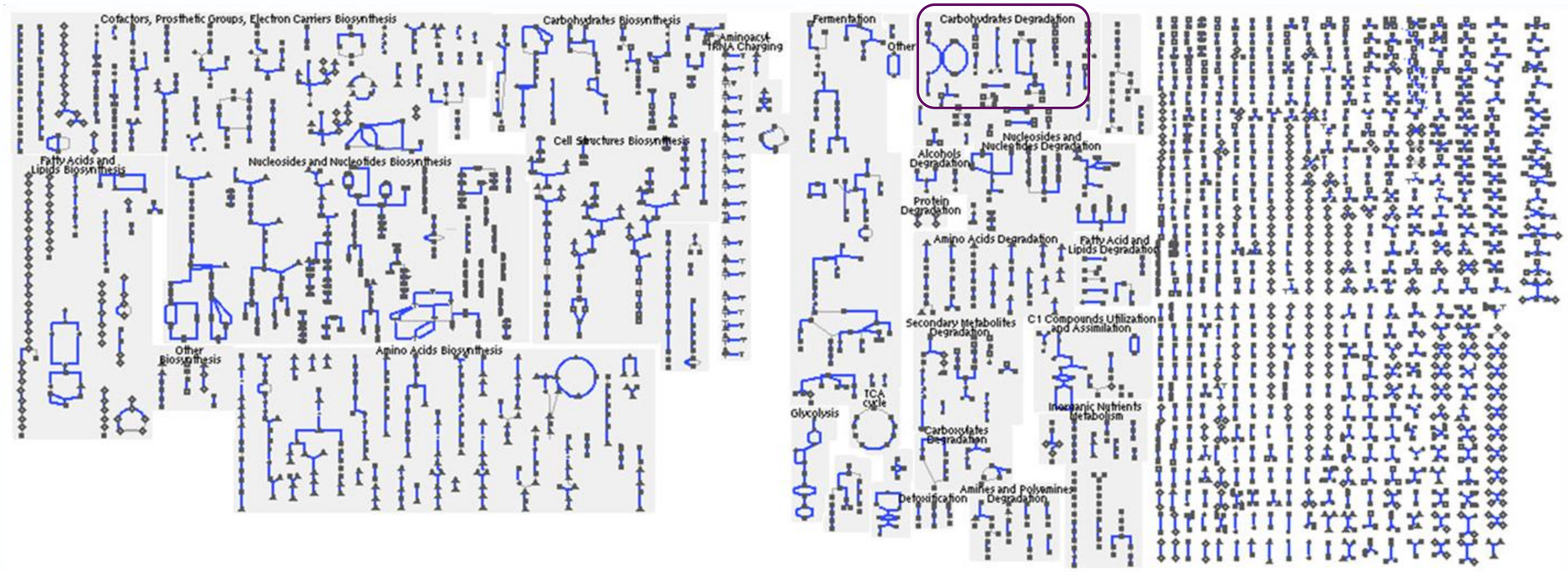

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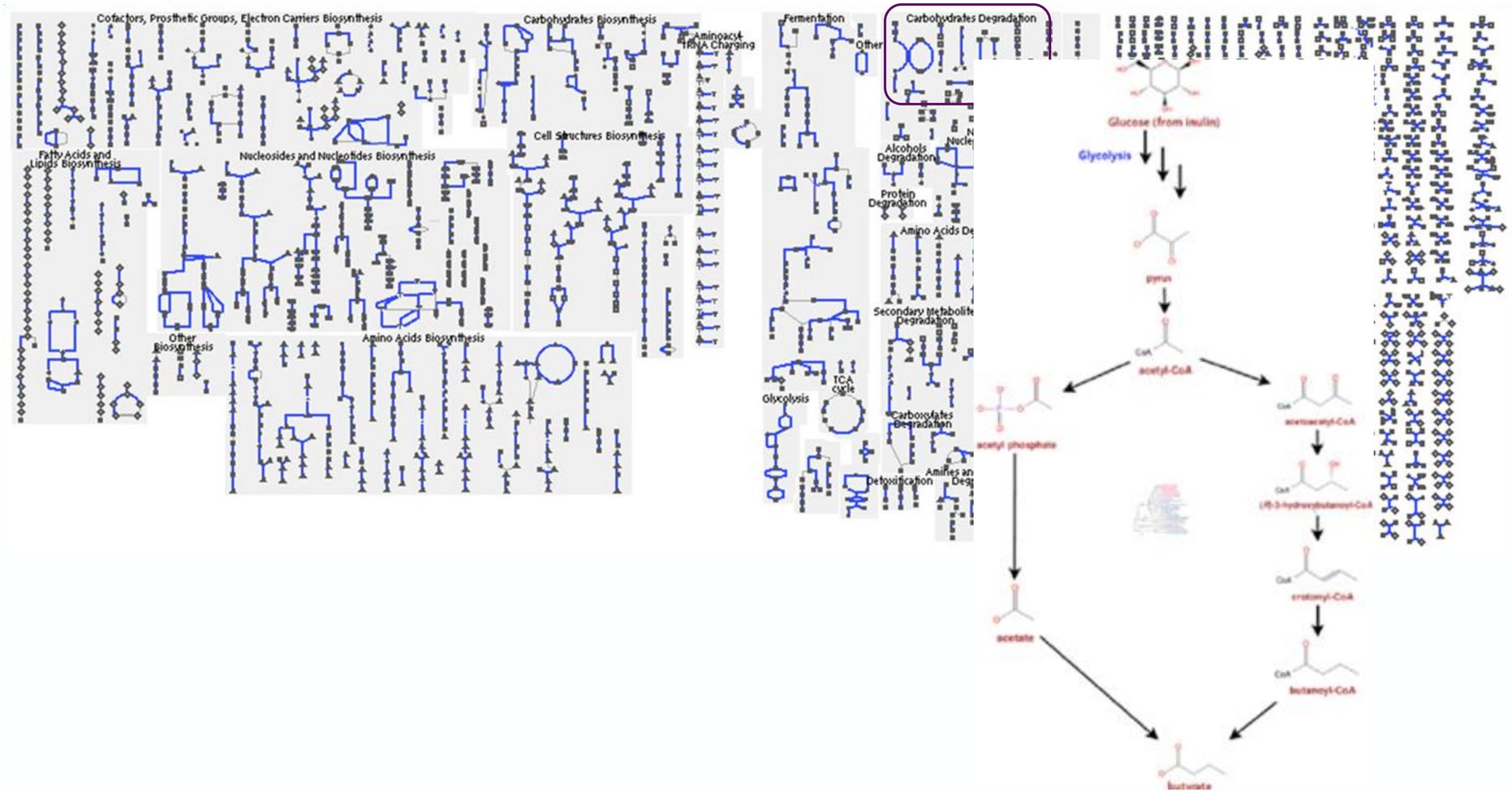

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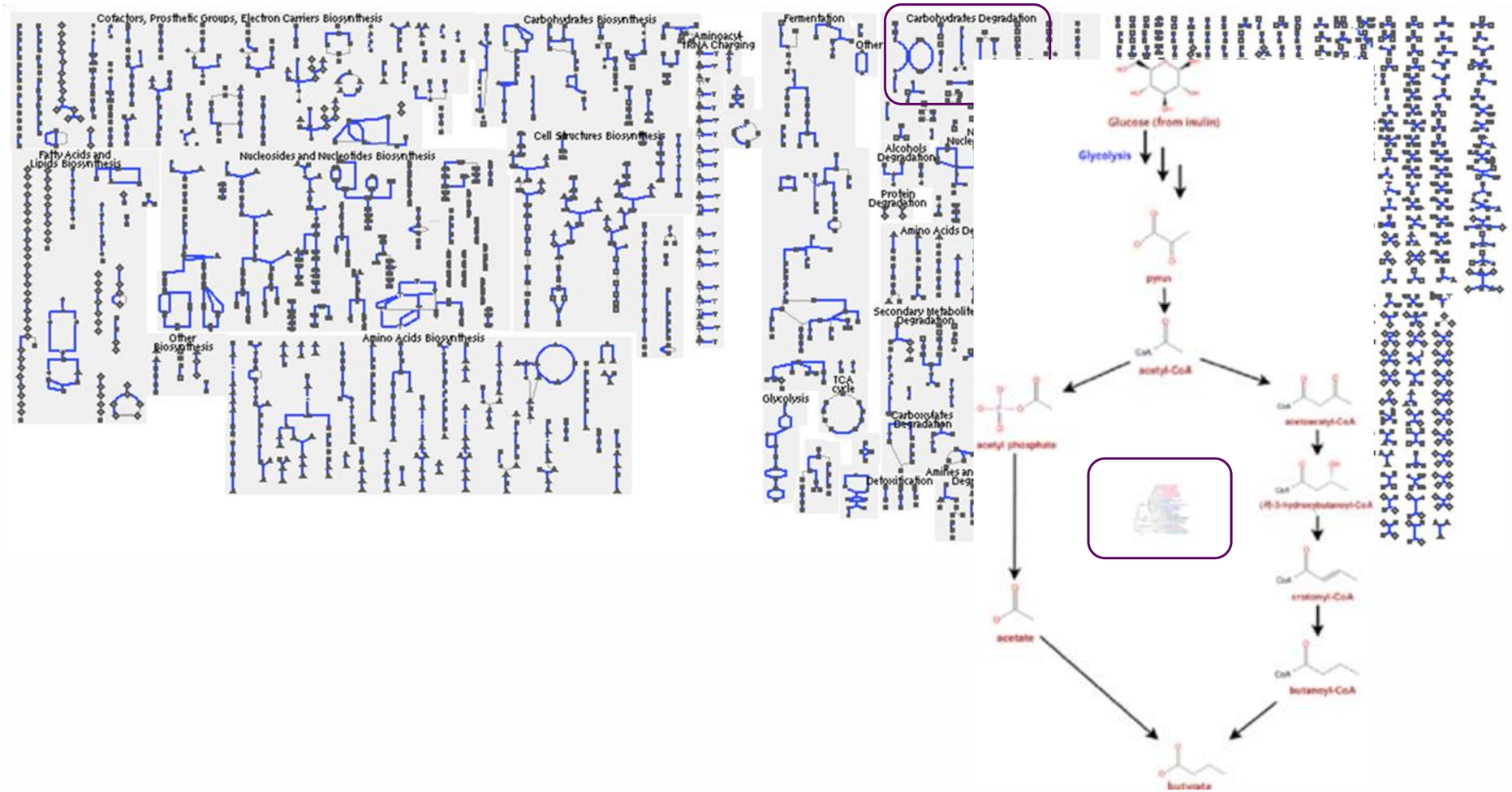

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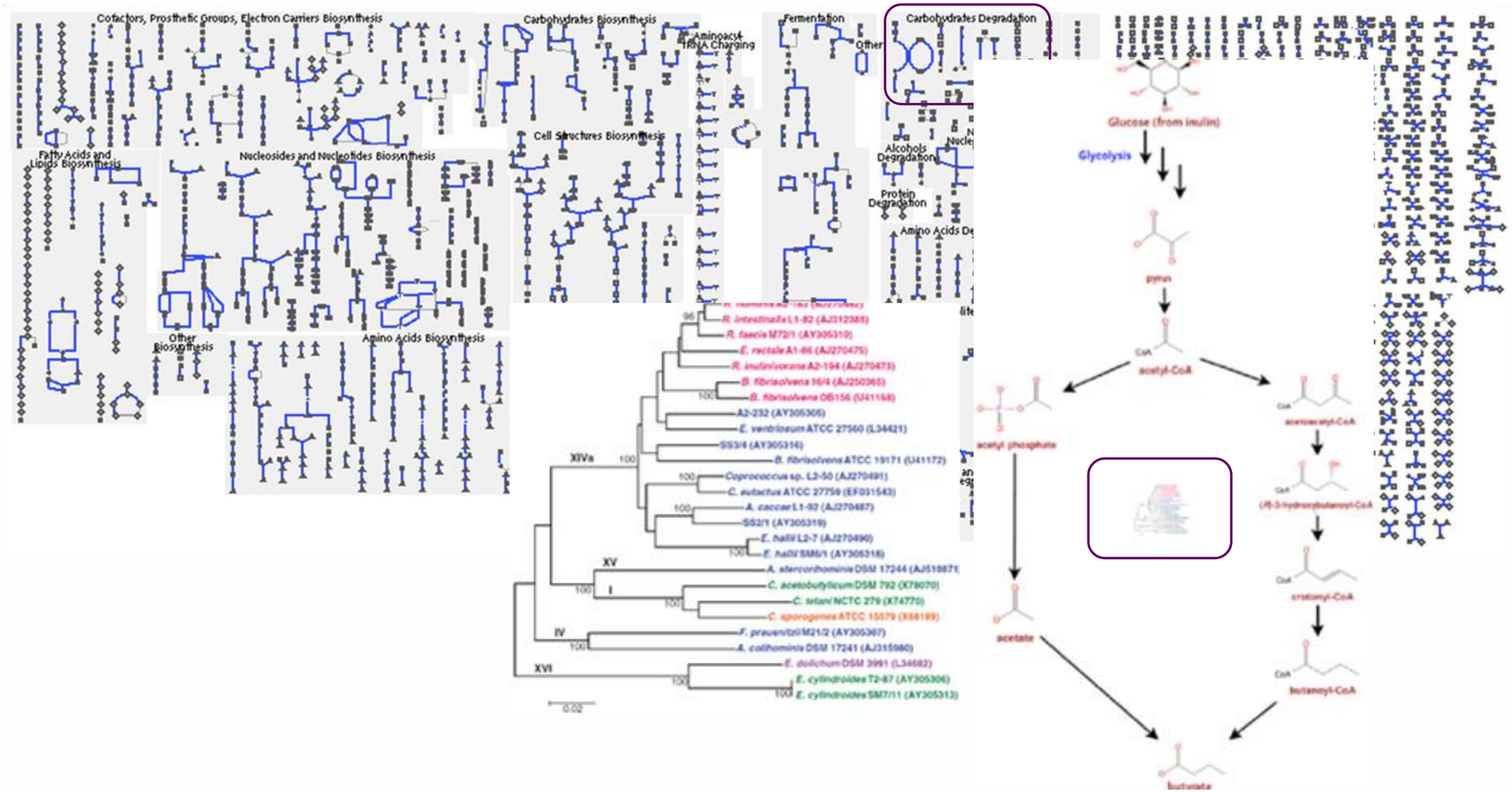

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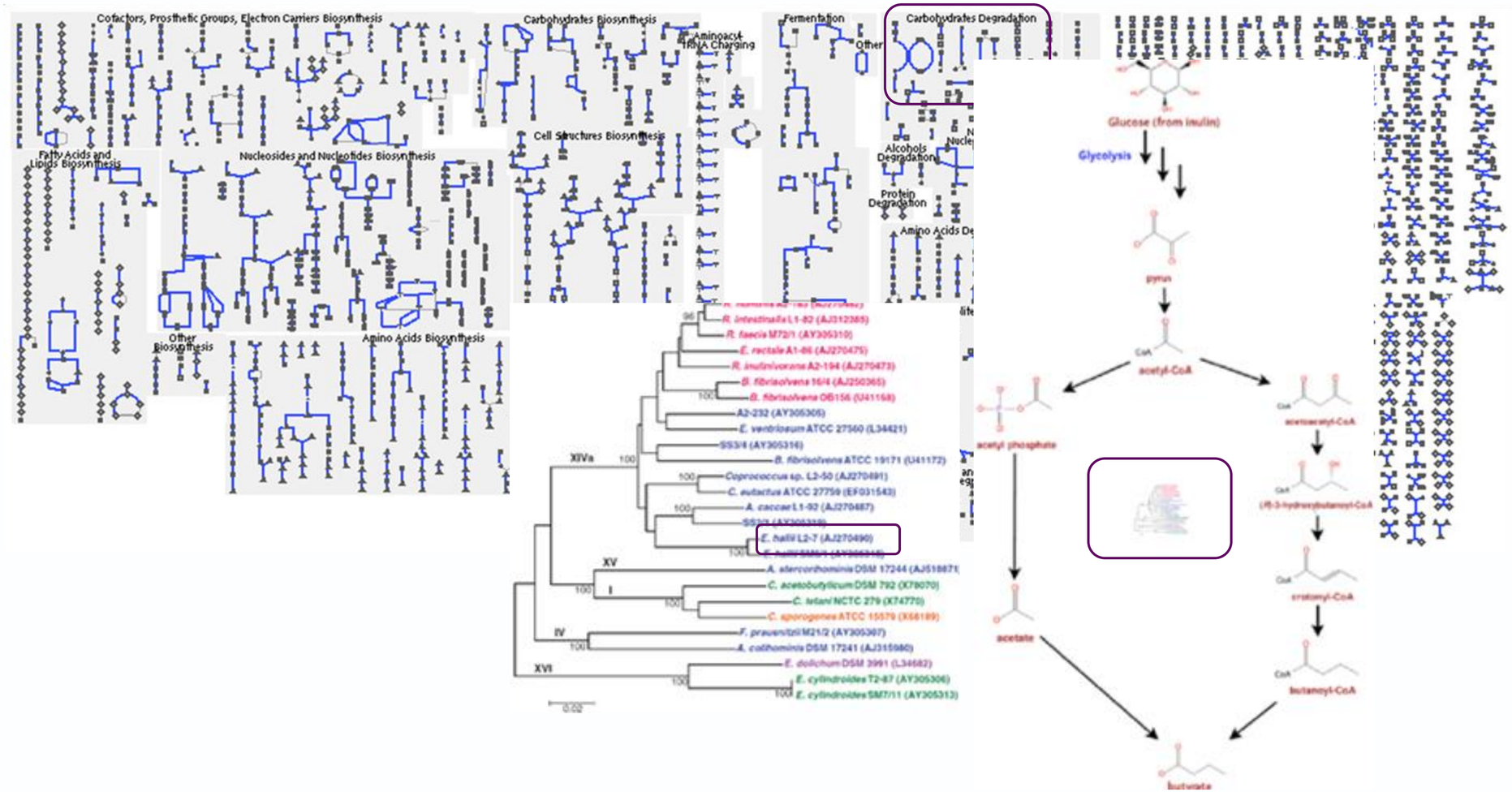

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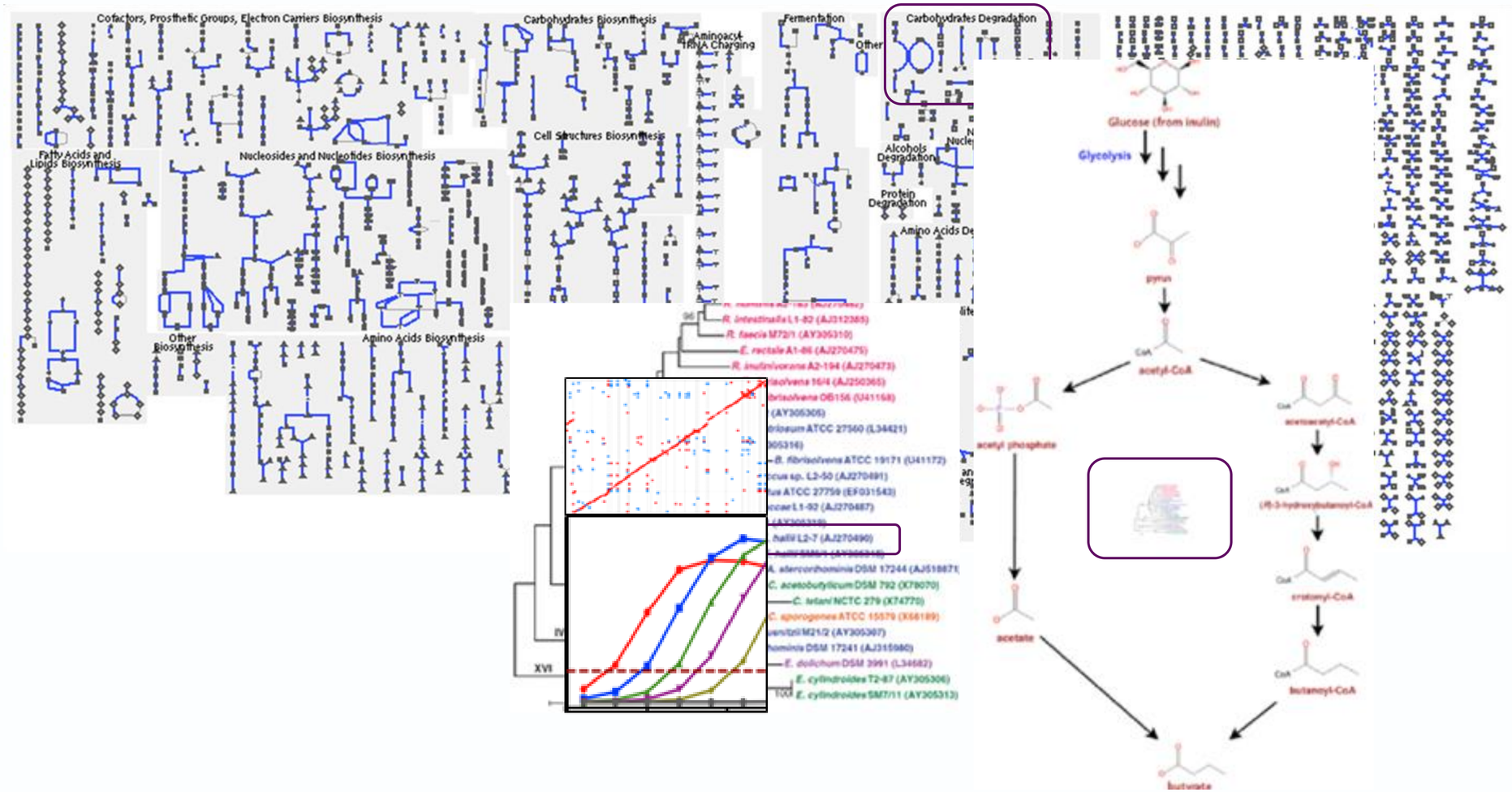
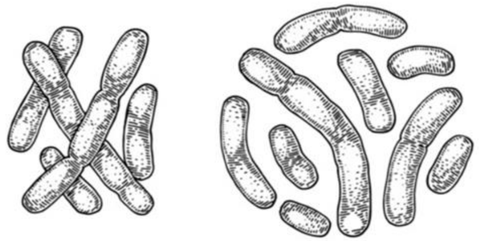
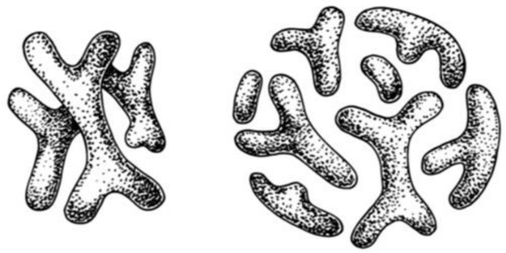


Discovery of Next-Generation Probiotics



Lactobacillus



Bifidobacterium



Akkermansia muciniphila



Clostridium butyricum

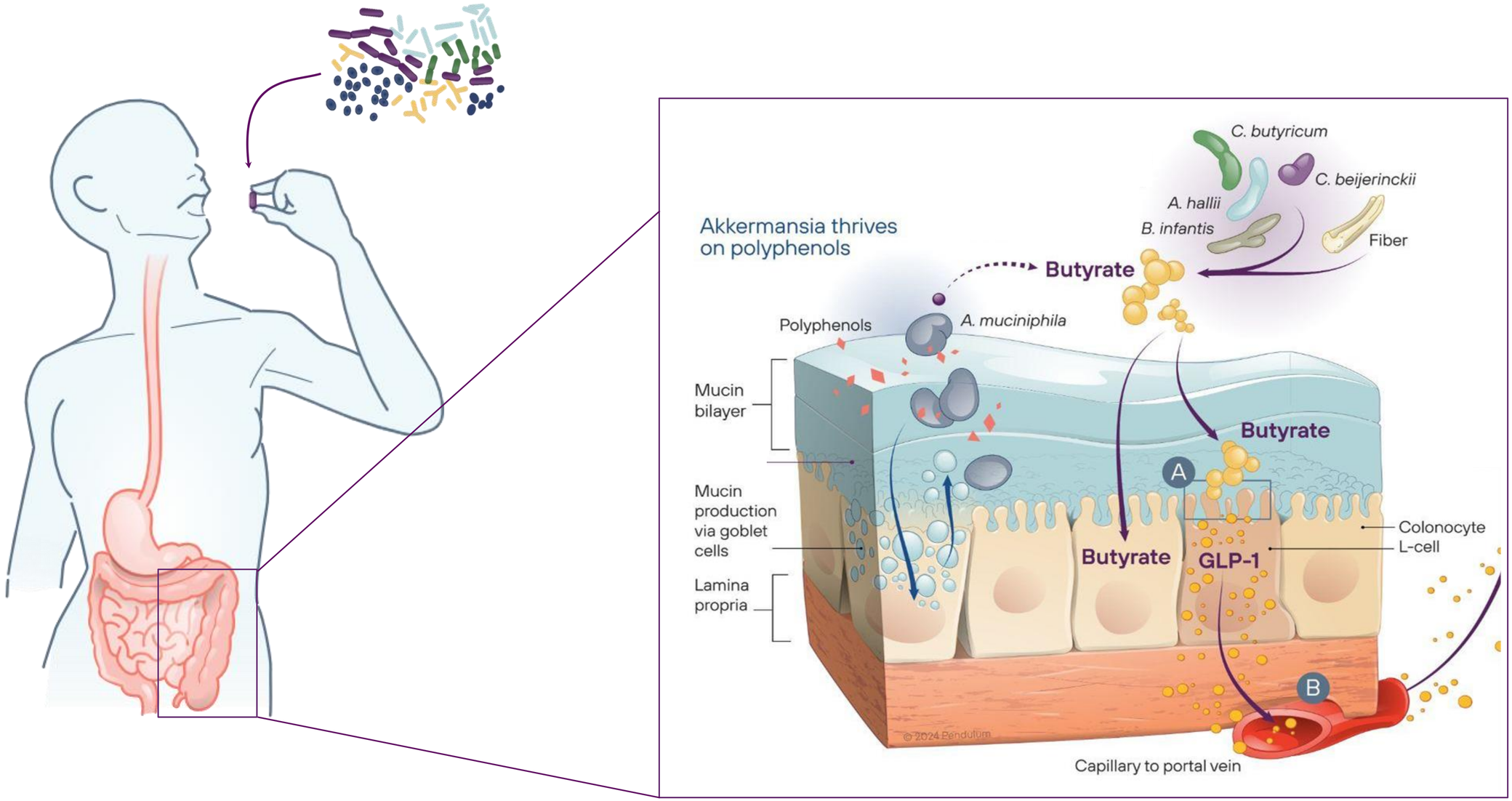


Clostridium beijerinickii

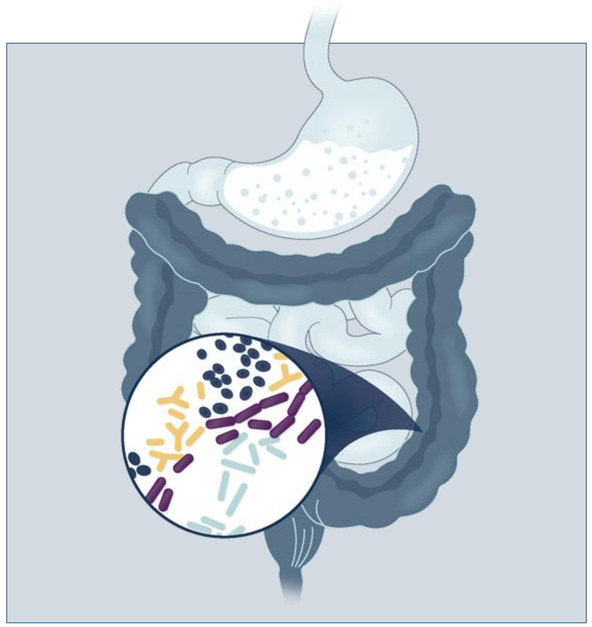


Anaerobutyricum halli

Hypothesized Mechanism of Action

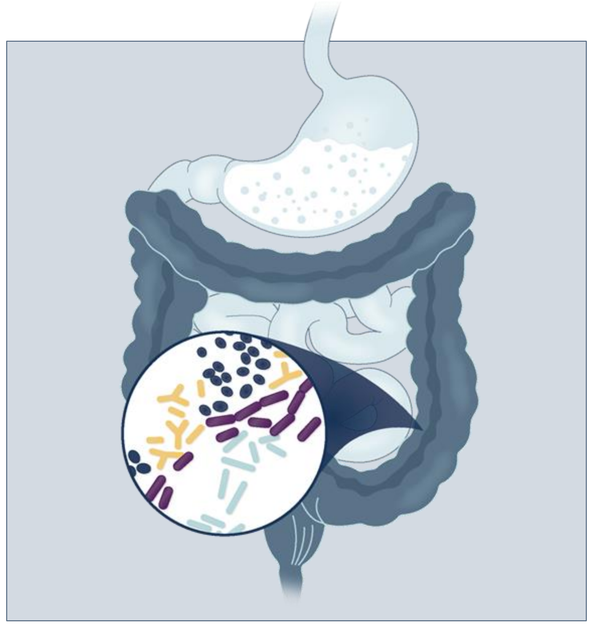


Anaerobic Strains

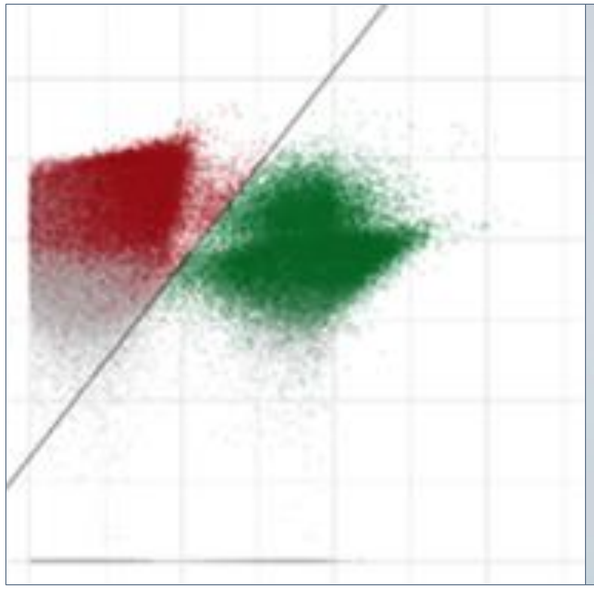


Gut microbiome
Strict anaerobes

Anaerobic Strains



Gut microbiome
Strict anaerobes



AFU
(active fluorescent units)



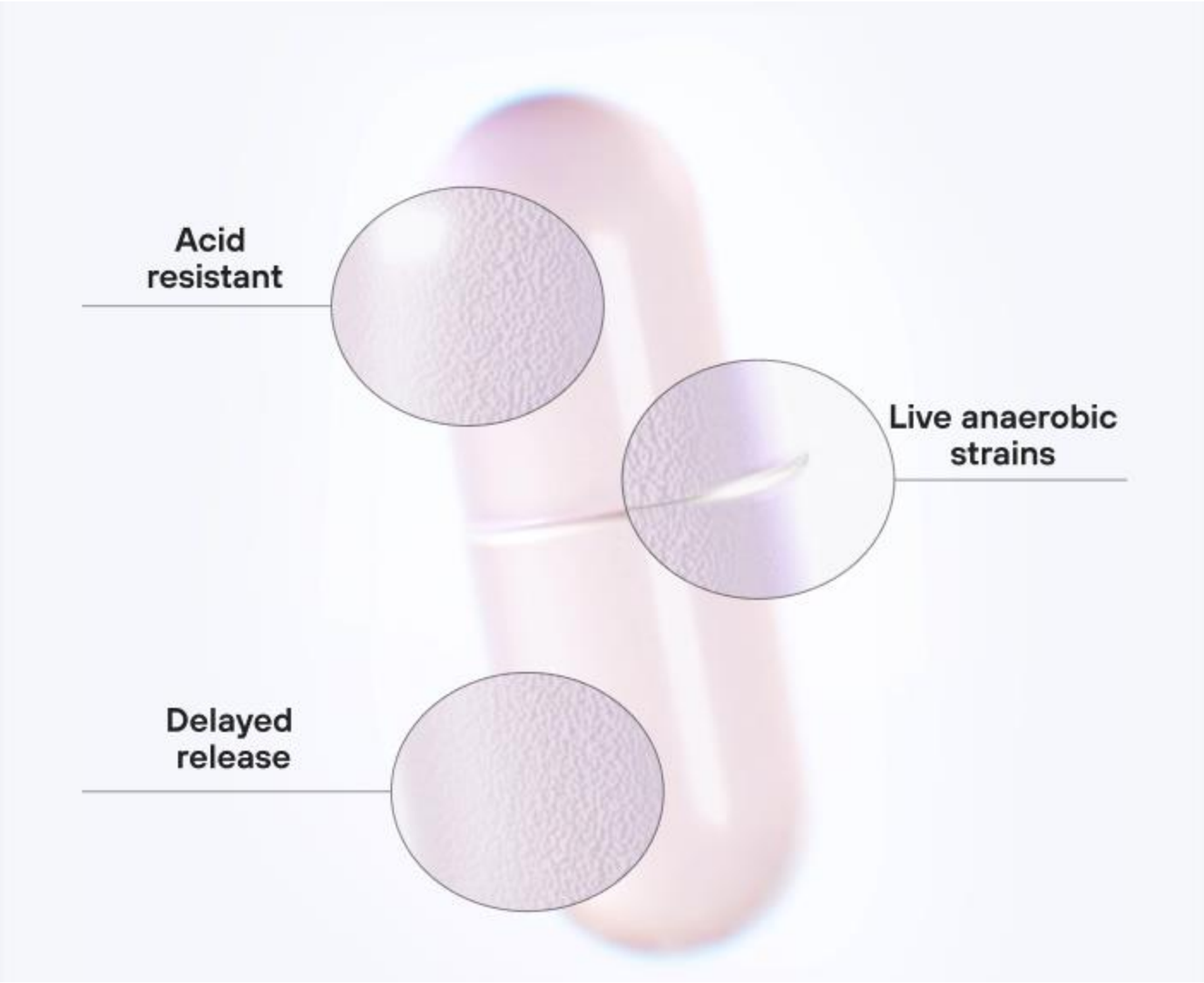
CFU
(colony forming units)

Manufacturing Innovation





Delivering Live Bacteria



Clinical trial

12-week, balanced, parallel-arm, double-blind, placebo-controlled trial in type 2 diabetes

- Arms:
  - Placebo (excipients only)
  - WBF-010 (butyrate-producing)
  - WBF-011 (WBF-010 + *Akkermansia* + *A. halli*)
- Population:
  - 76 subjects across six study sites (intent-to-treat analysis)
  - 58 subjects analyzed (per protocol analysis)
- Key primary and secondary outcome measurements at week 12:
  - Safety and tolerability
  - Area under three-hour glucose curves (ΔAUC) after meal Tolerance test (MTT)
  - Hemoglobin A1c (HbA1c)
  - C-reactive protein (CRP)



Open access Original research

BMJ Open Diabetes Research & Care

Improvements to postprandial glucose control in subjects with type 2 diabetes: a multicenter, double blind, randomized placebo-controlled trial of a novel probiotic formulation

Fanny Perraudeau, Paul McMurdie, James Bullard, Andrew Cheng, Colleen Cutcliffe, Achal Deo, John Eid, Jessica Gines, Mohan Iyer, Nicholas Justice, Wesley T Loo, Madeleine Nemchek, Marcus Schicklberger, Michael Souza, Brendon Stoneburner, Surabhi Tyagi, Orville Kolterman

To cite: Perraudeau F, McMurdie P, Bullard J, *et al*. Improvements to postprandial glucose control in subjects with type 2 diabetes: a multicenter, double blind, randomized placebo-controlled trial of a novel probiotic formulation. *BMJ Open Diab Res Care* 2020;**8**:e001319. doi:10.1136/bmjdrc-2020-001319

► Additional material is published online only. To view please visit the journal online (http://dx.doi.org/10.1136/bmjdrc-2020-001319).

FP and PM are joint first authors.

Received 28 February 2020
Revised 24 April 2020
Accepted 18 May 2020

Check for updates

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Pendulum Therapeutics, Inc, San Francisco, California, USA

Correspondence to
Dr Orville Kolterman; orville.kolterman@pendulum.co

ABSTRACT

Introduction A growing body of evidence suggests that specific, naturally occurring gut bacteria are under-represented in the intestinal tracts of subjects with type 2 diabetes (T2D) and that their functions, like gut barrier stability and butyrate production, are important to glucose and insulin homeostasis. The objective of this study was to test the hypothesis that enteral exposure to microbes with these proposed functions can safely improve clinical measures of glycemic control and thereby play a role in the overall dietary management of diabetes.

Research design and methods We evaluated whether a probiotic comprised of these anaerobic bacteria would enhance dietary management by (1) manufacturing two novel probiotic formulations containing three (WBF-010) or five (WBF-011) distinct strains in a Current Good Manufacturing Practice (cGMP) facility, (2) establishing consistent live-cell concentrations, (3) confirming safety at target concentrations dispensed in both animal and human studies and (4) conducting a 12-week parallel, double-blind, placebo-controlled, proof-of-concept study in which subjects previously diagnosed with T2D (n=76) were randomly assigned to a two times a day regimen of placebo, WBF-010 or WBF-011.

Results No safety or tolerability issues were observed. Compared with the placebo group, subjects administered WBF-011 (which contains inulin, *Akkermansia muciniphila, Clostridium beijerinckii, Clostridium butyricum, Bifidobacterium infantis* and *Anaerobutyricum hallii*) significantly improved in the primary outcome, glucose total area under the curve (AUC): −36.1 mg/dL/180 min, p=0.0500 and also improved in secondary outcomes, glycated hemoglobin (A1c): −0.6, glucose incremental-AUC: −28.6 mg/dL/180 min.

Conclusions To our knowledge, this is the first randomized controlled trial to administer four of the five strains to human subjects with T2D. This proof-of-concept study (clinical trial number NCT03893422) shows that the intervention was safe and well tolerated and that supplementation with WBF-011 improves postprandial glucose control. The limited sample size and intersubject variability justifies future studies designed to confirm and expand on these observations.

Significance of this study

What is already known about this subject?

- Previous trials testing the efficacy of probiotics have used commercially available species that are not known to be absent or decreased in type 2 diabetes.
- Type 2 diabetes has been associated with abnormalities of the gut microbiome, particularly decreases in abundance of *Akkermansia muciniphila* and microbes involved in the conversion of dietary fiber to butyrate and other short-chain fatty acids.
- An increase in the abundance of butyrate producers and *Akkermansia muciniphila* induced by metformin treatment has been proposed as a supporting mechanism for the efficacy of this critical antidiabetic drug.

What are the new findings?

- Subjects with type 2 diabetes, currently using metformin, improved glucose control relative to placebo after 12-week administration of a novel probiotic formulation containing both butyrate producing bacteria and *Akkermansia muciniphila*.
- Improvement was observed via standard clinical measures for both short-term (meal-tolerance test glucose area under the curve) and long-term (A1c) glucose control, in a subject cohort that was stable on first-line treatment, predominantly metformin.
- No major probiotic supplementation-related side effects were observed.

INTRODUCTION

Diabetes is the seventh leading cause of death in the USA and in 2017 accounted for an estimated $327 billion in direct costs and lost productivity.[1 2] Over 20 million individuals are currently diagnosed with type 2 diabetes (T2D), some 90% of total diabetes diagnoses.[3] While genetic factors affect susceptibility,[4] it

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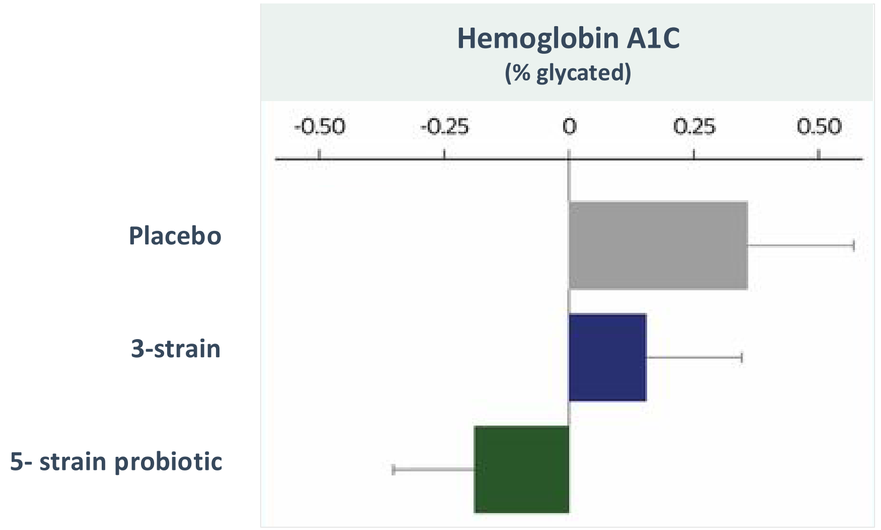
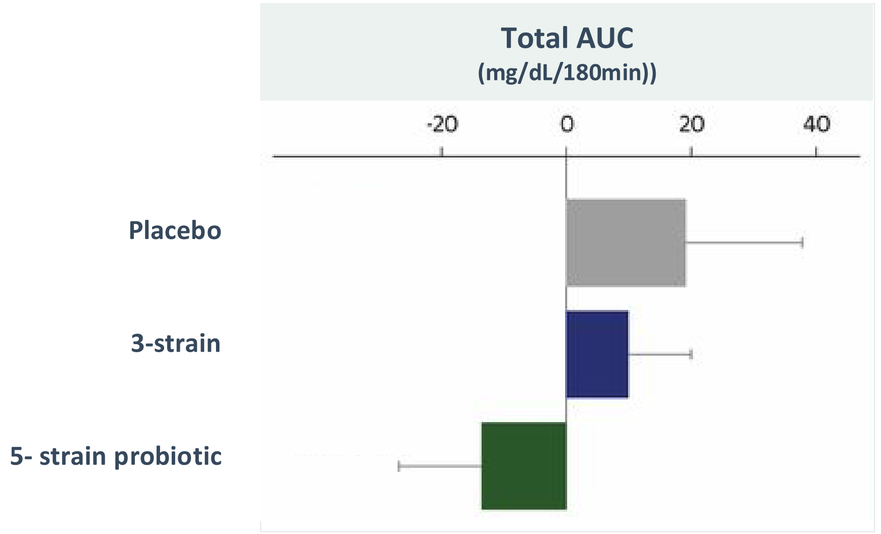
First and Only Microbiome Intervention for Diabetes

Results

- Lower postprandial glucose spikes by 33%
- Lower A1C by 0.6
- Safe and well-tolerated in study participants





First and Only Microbiome Intervention for Diabetes

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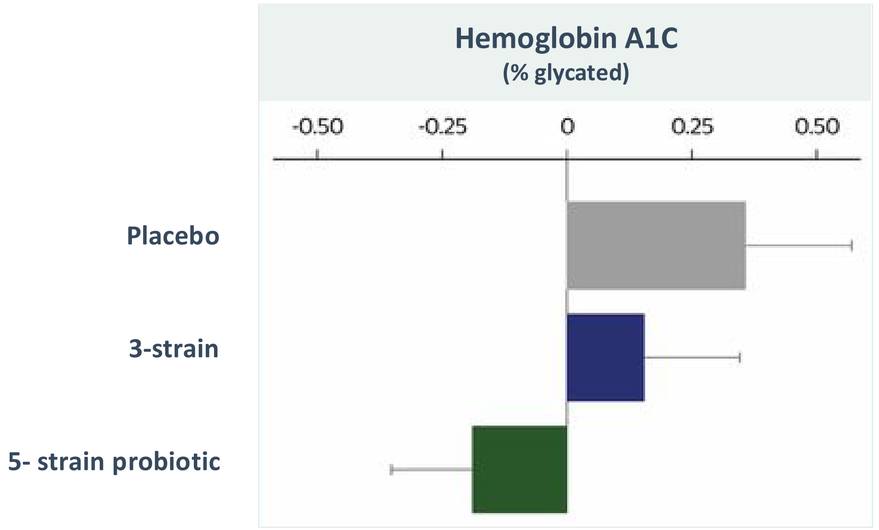
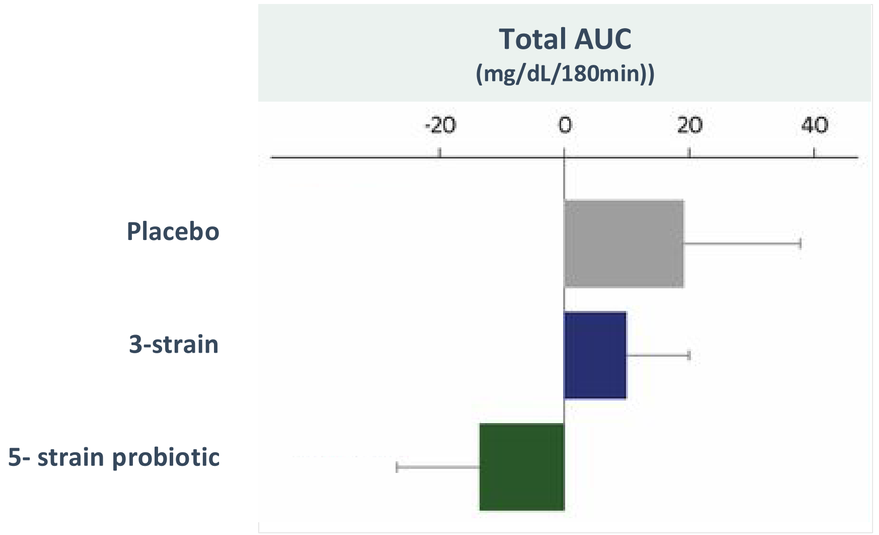
	Pendulum Glucose Control	*Metformin*	*GLP-1*	*Insulin*
A1C reduction	-0.6%	-0.7-1.2%	-0.7-1.6%	-0.7-1.0%
AUC reduction	-33%	-20%	-50%	-32%
Side Effects	None known	GI distress Lactic Acidosis	Pancreatitis Injection site reaction Nausea	Hypoglycemia Lipoatrophy ↑ CV risk Weight gain







A1C REDUCTION [1]

-0.6

POST PRANDIAL GLUCOSE SPIKE REDUCTION [2]

-32.5%

Glucose Control clinical efficacy

We conducted a double-blind, placebo-controlled nutrition study that demonstrated:

- Glucose Control's safety
- Glucose Control has a significant statistical and clinical impact on A1C and post-meal blood-glucose spikes

Clinical trial included participants taking metformin, compared to placebo. 1. Regarding the decreased A1C level, there was a reduction in mean A1C compared to placebo. 2. Regarding the Post Prandial Glucose Spike Reduction, the observed reduction in glucose AUC would be expected to increase the time spent within the healthy glucose range (TIR70-180) during continuous glucose monitoring. Increases in TIR70-180 strongly correlate to both reductions in A1C and reduction in risk for complications in T2D patients (see details here).



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★★★★★

Interesting Akkermansia first results

Lab work after three months of taking Akl

A1c drop from 7.2 to 6.9
Blood glucose dropped from 140 to 117
Weight dropped from 166 to 155 lbs

★★★★★

Surprisingly effective

After 3 months, A1c dropped by 0.3 and average glucose from 110 to 101, confirmed by Freestyle Libre3 and labs. No change in other variables. No adverse effects. Recently discovered my internist at Palo Alto VA also has found it beneficial. Wish price was less to allow wider access.
Alan Brauer, M.D.



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A1C REDUCTION

Glucose Control

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"I've tried other probiotics since I was 19 years old and nothing really moved my needle like this product moved my needle."

HALLE BERRY



★★★★★

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★★★

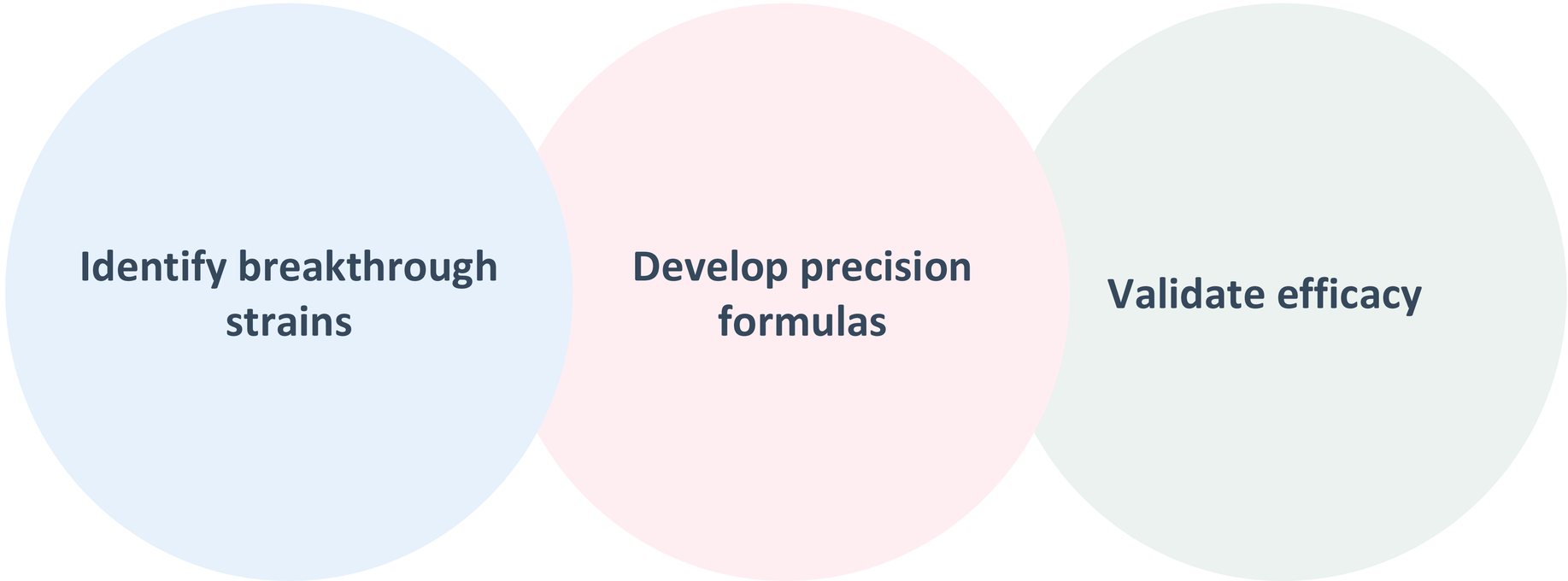
Interestir

Lab work

A1c drop
Blood glu
Weight dr



Path to Bring Next-Generation Microbiome Interventions to Market



Thank you

PLUGANDPLAY

STARTUP PRESENTATION

Oobli

Oobli

Meet Oobli Sweet Proteins, a groundbreaking better-for-you sweetener that's different from everything else.

Fall 2024

Oobli

Sweet tooth, meet sweet protein.

Oobli.com

Partner Introduction Deck
2024

Everyone loves sweets. But we eat too much of them.

50+

forms of sugar across our modern diets

Top 10

crop that's most harmful to the planet

42%

Americans have diabetes or prediabetes

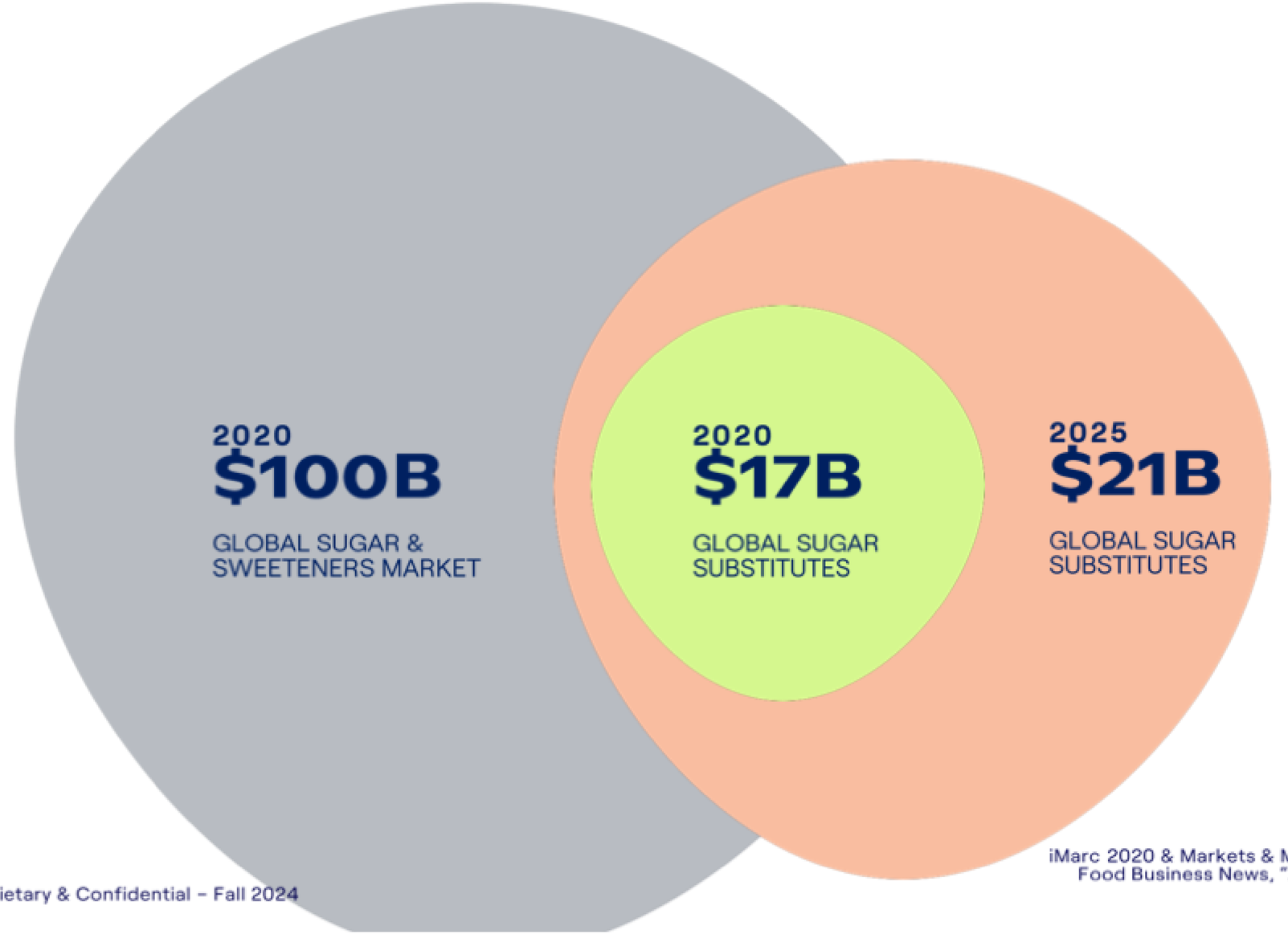
120M+

of Americans are obese; up 3x worldwide from '75



[1]USNWR, "The Pandemic Worsened the US Obesity Pandemic," 9/15/21; MedAlertHelp 6/4/21 & WHO 2021; ADA, "The Costs of Diabetes," 3/22/18; AMA "One-third of Adult Patients have Pre-diabetes," 6/28/21; WWF "Sugar & the Environment," 2017..

Consumers are desperately seeking solutions.



+72%

OF U.S. CONSUMERS SAID THEY'RE LIMITING OR AVOIDING SUGAR

iMarc 2020 & Markets & Markets Sugar Substitutes Market, Dec 2020; Food Business News, "Zero-sugar Innovation the Upswing," 6/23/21.

Yet sugar alternatives continue to fall short.



BAD TASTE



TOO EXPENSIVE



BAD YOUR BODY & THE PLANET

Meet Oobli.
A company getting sweets right.

We are a foodtech company.

Now toss out everything you know about fermentation platforms & meet sweet proteins.



1,000x
sugar potency
=
unmatched
platform profitability

Oobli[€] Proprietary & Confidential - Fall 2024

A little sweet protein goes a very long way

73g
SUGAR





VS





.073g
SWEET PROTEIN

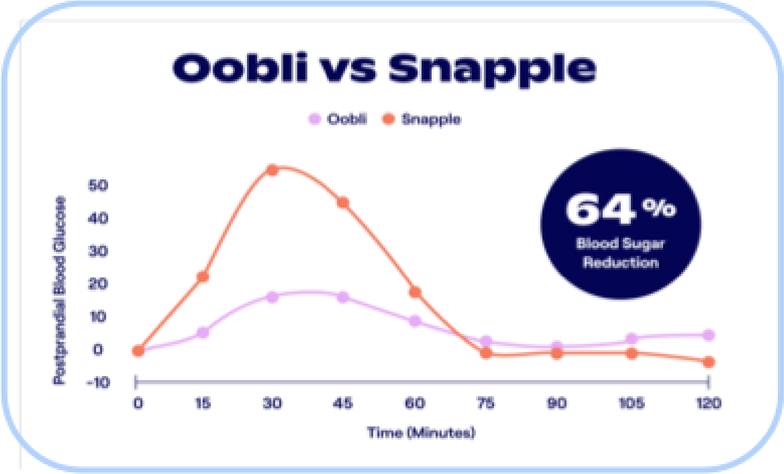
1g Sweet Protein = 1,000g sugar
(1,000x)

Fermenting sweet proteins to replace sugar = a triple win

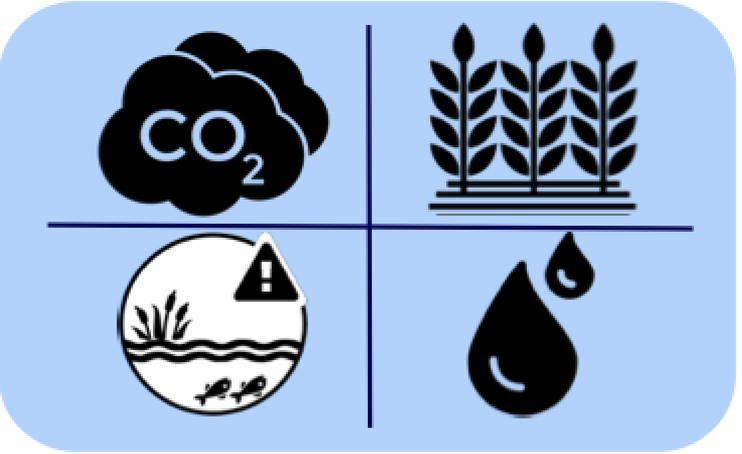
DELICIOUS PRODUCTS



HEALTH GAME-CHANGER



BIG CLIMATE IMPACT



Craveable, affordable & healthy has been elusive until now

Proteins = macronutrients

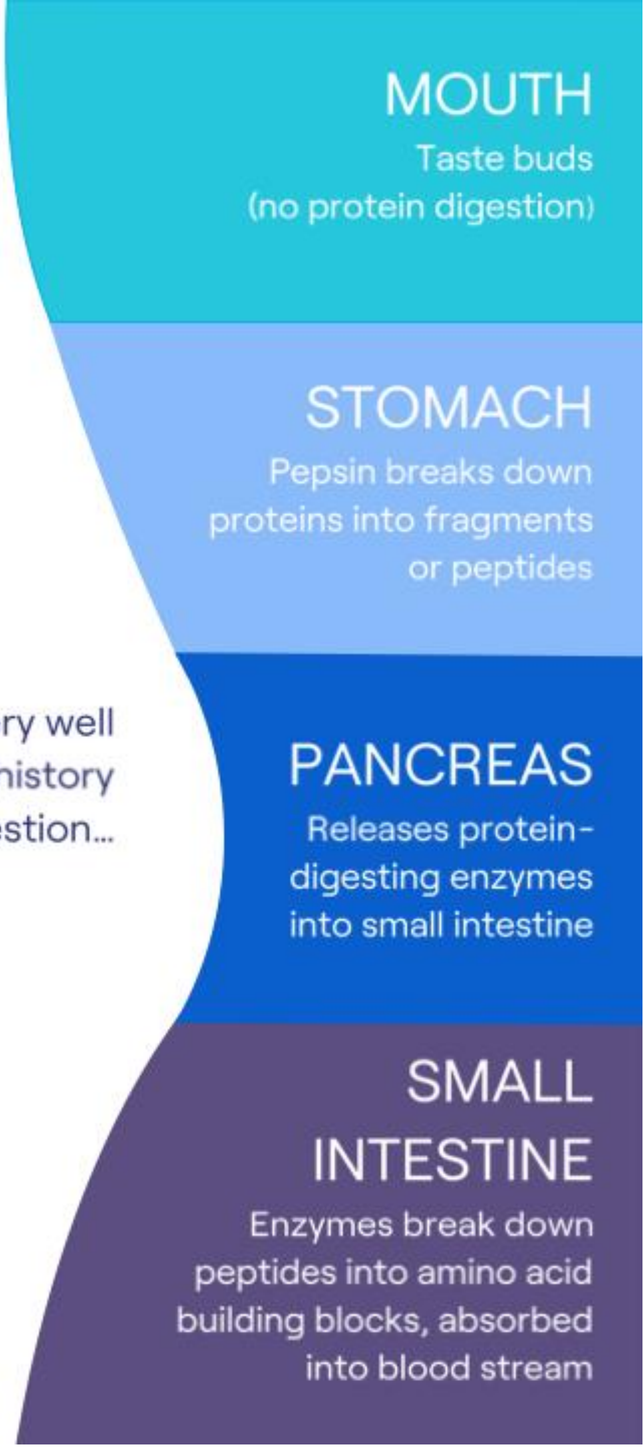
Sugar & sugar alternatives = micronutrients / small molecules

	SWEET PLANT PROTEINS **Oobli**	SUGARS **(Sugar cane, corn processing)**	NATURAL SWEETENERS **(stevia, monk fruit)**	ARTIFICIAL SWEETENERS **(aspartame, sucralose)**	RARE SUGARS **(allulose, tagatose)**	SUGAR ALCOHOLS **(erythritol, xylitol, sorbitol)**
Sweetness	✓	✓	✓	✓	✓	✓
Low calorie	✓	✗	✓	✓	✓	✓
No bad after taste	✓	✓	✗	✗	✓	✗
No glycemic effects	✓	✗	✗	✗	⟷	✗
No microbiome effects	✓	✗	✗	✗	⟷	✗
No side effects	✓	✗	✗	✗	✗	✗

Proteins vs. carbs are a health game-changer

- NO GLYCEMIC IMPACT
- LOW TO NO CALORIES
- NO NEGATIVE GUT ISSUES

There is a very well established, health history in protein digestion...



Board/Advisory/Ambassadors:
Scientific, food/CPG & consumer

Scientific Advisory Board



DR. FRANCINE KAUFMAN,
SAB MEMBER

Pediatric Endocrinologist | Director of Comprehensive Childhood Diabetes Center | Head of Center for Endocrinology, Diabetes and Metabolism at Children's Hospital LA | USC Professor

(USC, Childhood Diabetes Center, Children's Hospital LA)



DR. CHRIS DAMMAN,
SAB MEMBER

Gastroenterologist | UW Professor | Former Gates Foundation Microbiome, Functional Food, & Gut Health Lead | CMO & CSO | Scientific Advisory Board Member

(UofW, Gates Ventures, Super Gut, Pfizer)



DR. GEOFF DUYK,
BOARD MEMBER + SAB

PhD & MD | Serial Founder | Investor | Managing Partner | AAAS Fellow | Harvard Professor

(Foggy Notions, Circularis Partners, TPG, Exelixis, Millennium, Moffitt Cancer Center)

Growth Advisors



CALVIN HARRIS,
CHEF ADVISORY

Chef, product development, entrepreneur

(Carlson Restaurants, Burger King, Johnny Rockets, The Biggest Loser)



HEATHER GOODWIN,
SALES ADVISORY

Sales leadership, sales, marketing & customer analytics

(Oatley, Kite Hill, Cliff Bar Co & 7th Generation)



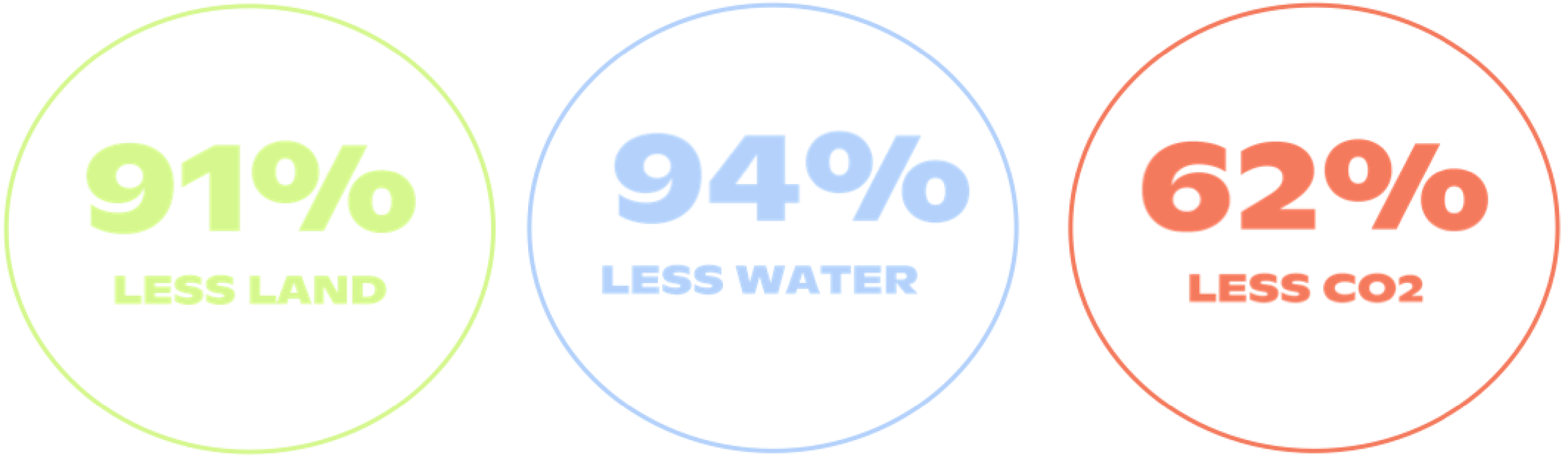
HEATHER MALENSHEK,
BOARD MEMBER + SAB

Brand strategy, leadership, creative

(BBDO, Land O'Lakes, Harley-Davidson, Doyle Dane Bernbach)

Climate impact for every bite of sugar replaced

Replacing sugar consumption with equivalent sweet protein sweetness/serving delivers:



(EXAMPLE) CO2 Impact

Ton of CO_2 equivalents/ton of sugar = (Sugar cane: 932 t CO_2e, Sugar beet: 516 t CO_2e & Sweet protein: 197 t CO_2e) **X**
180M tons of worldwide sugar consumption (80% cane, 20% beet) **=**
117M metric tons reduced if sweet proteins replaces all sugar consumption

**Anthesis Oobli LCA vs. Sugar & Stevia, Oct 2023. Assumes sweetness potency = 1000x & 5g/L titer.*

5+ GRAS proteins & growing, broad food applications

Beverages

Lemonade
Iced Teas
Sodas
Mocktails
Protein Water
Sports Drinks
& more

Dairy

Milk (Flavored)
Yogurt
Creamer
Plant-based Milk
& more

Confectionary

Chocolate
Gummies
& more

Baked Goods

Cakes
Bars
Cookies
Breads
& more

Frozen

Popsicles
Sorbet
Ice Cream
Plant-based Ice Cream
& more

Sauces

Ketchup
BBQ Sauce
& more

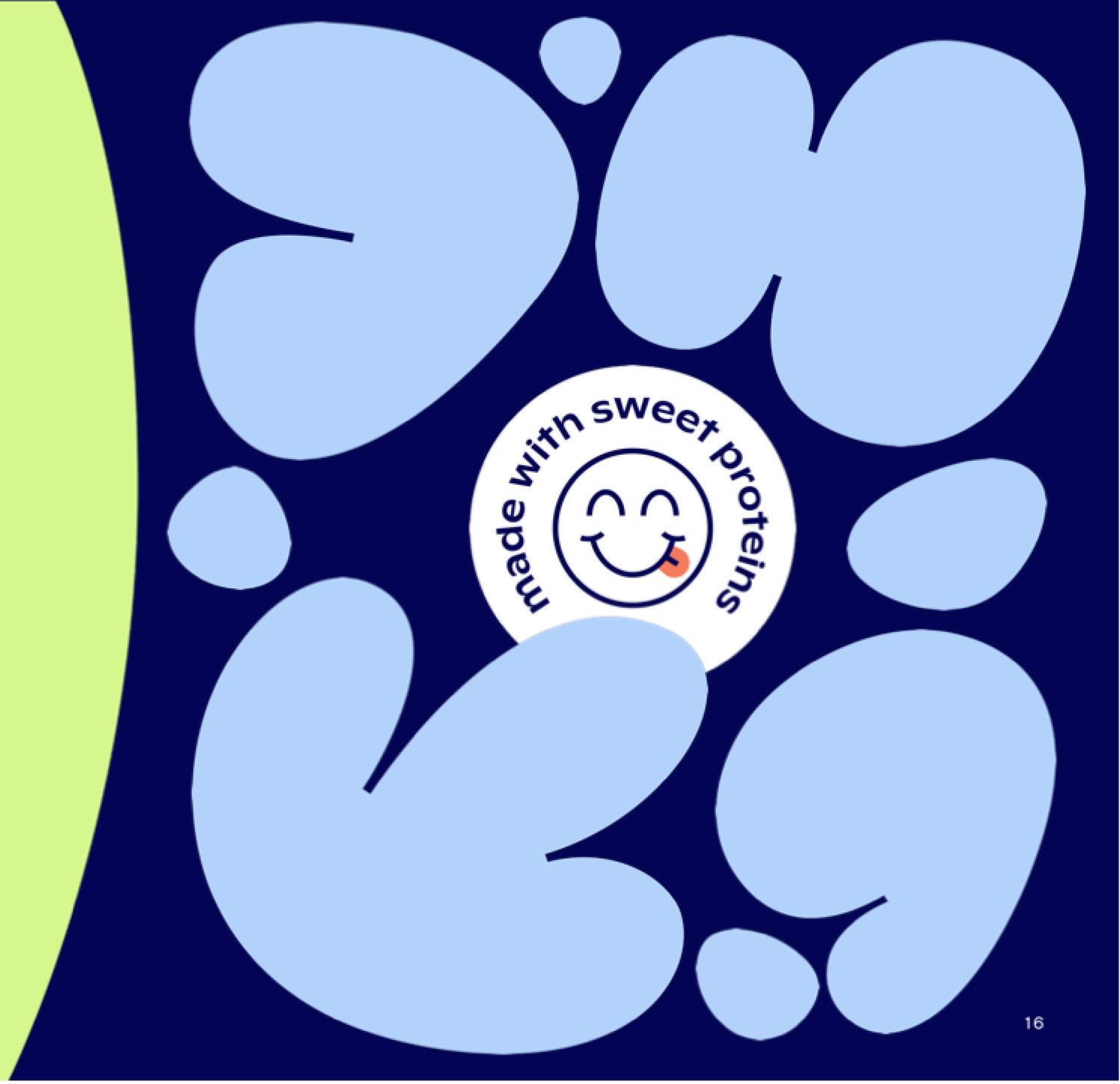
US FDA No Questions Letter plus 4 Self-GRAS proteins & 1 FEMA GRAS protein.

Reasons to partner with us

- Sweet proteins are a fantastic way to solve our **sugar problem**
- Sweet proteins' **1000x potency** delivers unbeatable business efficiency across **unit economics, healthcare & climate**
- We solve the elusive **taste** problem of alt sugars, particularly with **proprietary blends that reinforce IP moat**
- We are **commercial stage** with partnerships launched & selling...
- We are **asset-light** & don't need large investments to scale
- Replacing sugar is a **massive, important opportunity**

Ali Wing
CEO
ali.wing@oobli.com

Jason Ryder
CTO, Founder
Jason.ryder@oobli.com



PLUG AND PLAY

STARTUP PRESENTATION

HelloBiome

HelloBiome

A microbiome testing platform that merges state-of-the-art next-generation sequencing with patent-pending AI-powered technology.

#PNPTCSiliconValley

Join us at **pnptc.com**



THE AI-POWERED MICROBIOME PLATFORM

HelloBiome™

REINVENTING THE FUTURE OF BEAUTY & CONSUMER HEALTH

PROBIOTA PIONEERS 2024 WINNER

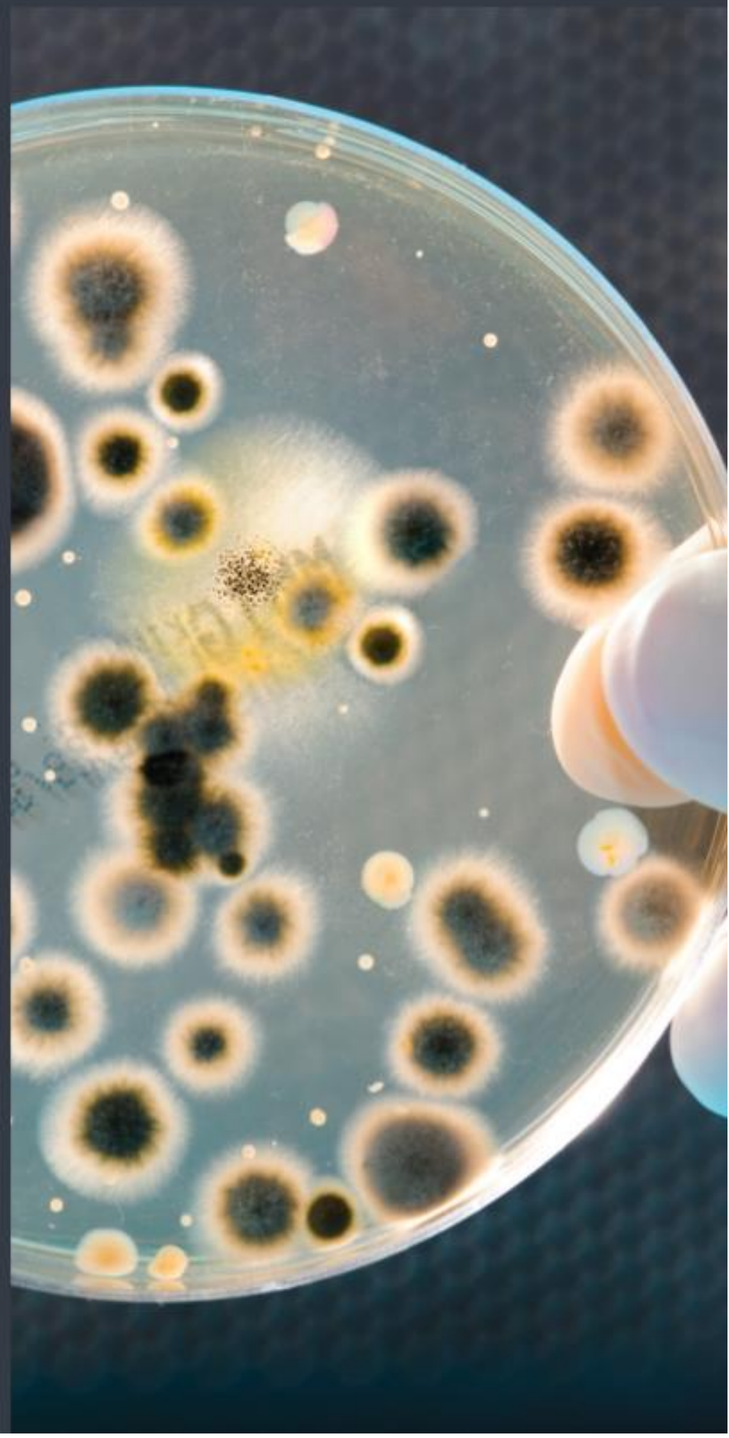
ifscc 33rd Congress 2023 BASIC RESEARCH FINALIST

Beauty Independent WWD CNN Cosmetics &Toiletries BOF Forbes

WE ARE MORE BACTERIAL THAN WE ARE HUMAN

39 TRILLION > **30** TRILLION

Bacterial Cells Human Cells





NURTURING A HEALTHIER FUTURE, TOGETHER

At HelloBiome, we believe that the microbiome is the future of consumer health and should be the foundation for all products that come into contact with our bodies, ensuring the utmost in safety and effectiveness.

THE TECHNICAL OBSOLESCENCE IN THE INDUSTRY

MARKET CHALLENGES



DAMAGING PRODUCTS

A saturated market with an absence of effective solutions. Products that harm our microbiome and lack personalization.



RISE OF SKIN CONDITIONS

Rising skin issues like dryness, premature aging, and pathologies. 7 out of 10 women battle skin sensitivities

TECHNICAL HURDLES



DATA COLLECTION

Siloed data collection efforts and high costs for new data model based on microbiome insights. Lack of diversity in clinical cohorts.



SLOW INNOVATION

Lengthy innovation processes delay new launches. The use of non-representative in vitro models does not accurately forecast product performance.



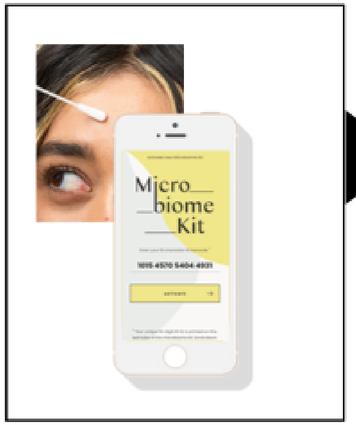
OUR SOLUTION: AI-POWERED MICROBIOME PLATFORM

Our mission is to empower the beauty & consumer health industry by democratizing microbiome data and transforming insights through our AI model into innovations leading to a more personalized and healthier future for all.

L'ORÉAL · Unilever · BEEKMAN 1802 · K18 · NUTRAFOL · REVISION SKINCARE · ONE SKIN · fur · TRUE BOTANICALS · COCOFLOSS

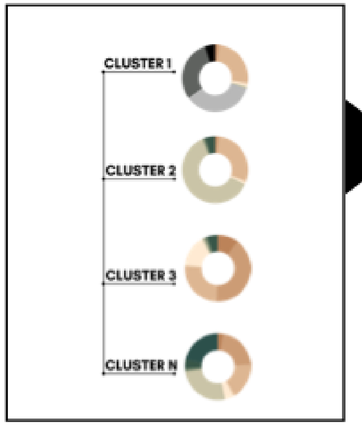
OUR SOLUTION: AI-POWERED MICROBIOME PLATFORM

TRANSFORMING MICROBIOME DATA INTO INNOVATIONS



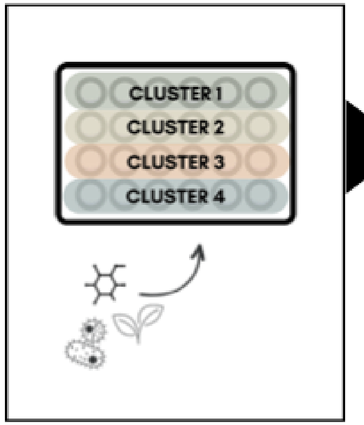
HELLOBIOME HUB™

Tech-enabled microbiome data collection to generate proprietary database.



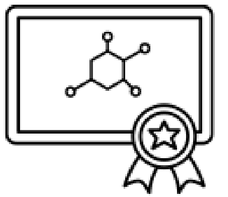
AI PROFILING

Dynoamic AI profiling through data segmentation.
AI built on Hellobiome's exclusive data.



PREDICTA BIOME™

Translating, updating and scaling insights through our in vitro model to foster innovation.



MARKET LAUNCH

Launching effective ingredients, formulations, and predictive tools, driving innovation to market.



ROI EXPANSION

Increasing investment returns by driving sustainable growth and market penetration.

APPLICATIONS

Starting with the skin and expanding across the full canvas of the body, we specialize in enhancing the microbiome of every surface. Our technology adapts to the unique needs from head to toe, personalizing health and beauty, and paving the way for innovative care in every curve and angle of the human form.



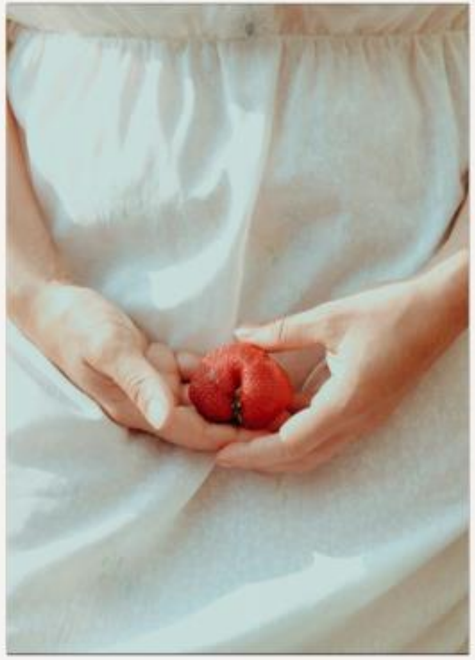
SKINCARE
$147 B Global Market



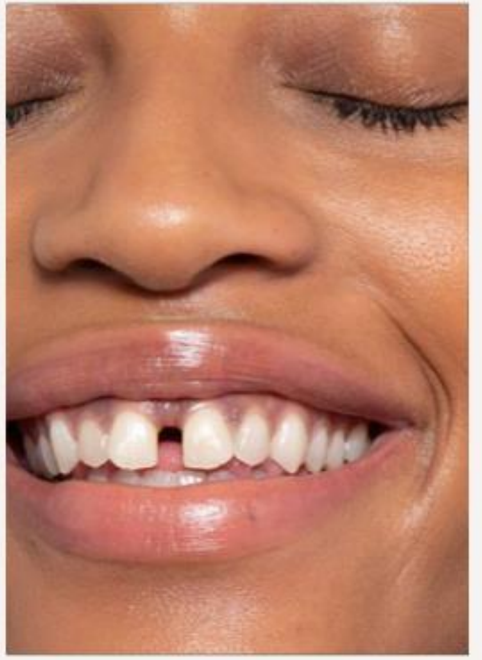
SCALP & HAIR CARE
$80 B Global Market



BODY CARE
$27 B Global Market



INTIMATE CARE
$40 B Global Market

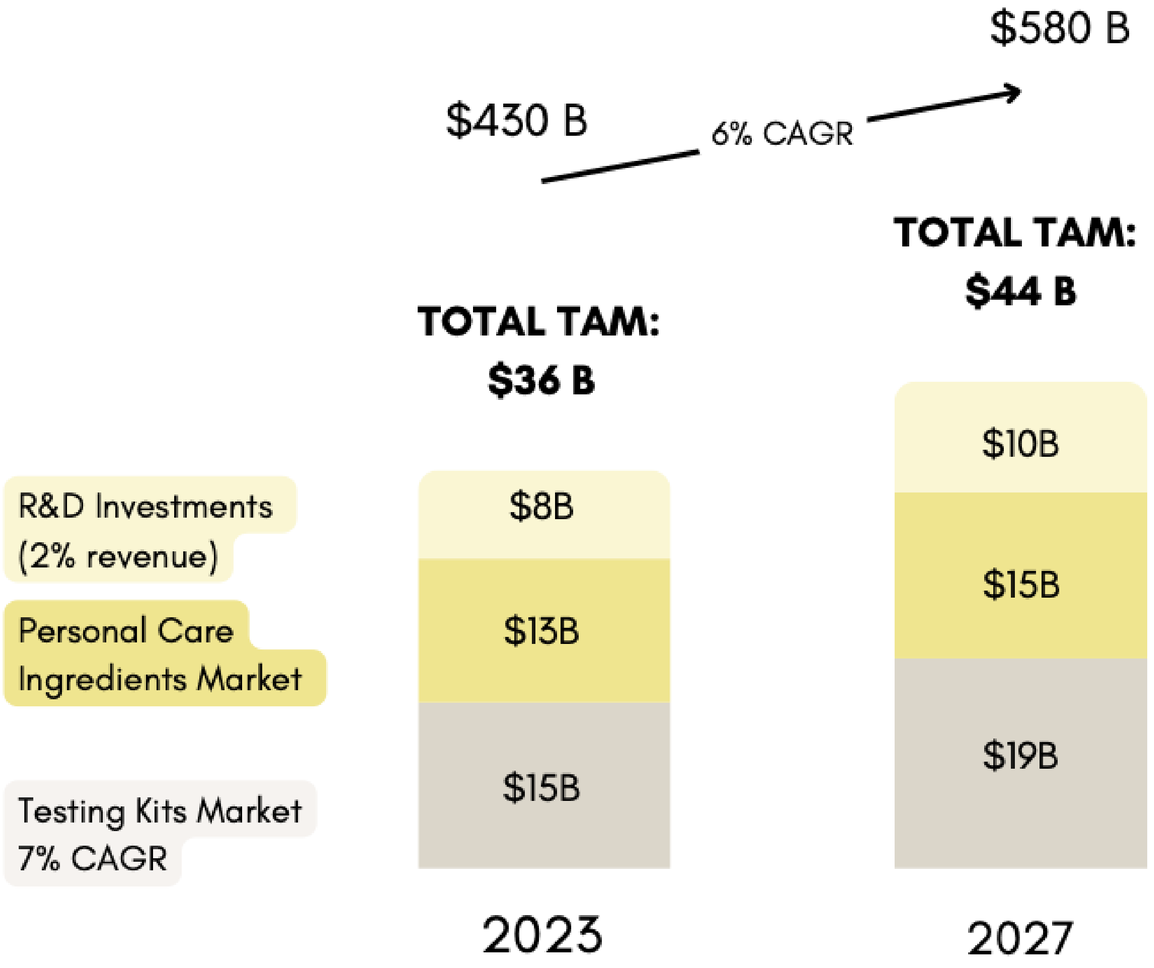


ORAL CARE
$34 B Global Market

MARKET OPPORTUNITY

Human Microbiome Market:
CAGR of 31%
from 2023 to 2029

BEAUTY & PERSONAL CARE MARKET:



McKinsey & Company
Market & Market
Global Market Insights

BUSINESS MODEL

2020-2022

B2C BRAND
Skincare & Test kit



2022-2026

B2B: LICENSE & ROYALTY BASED MODEL

CLINICAL STUDIES | TEST PLATFORM | PRODUCT DEVELOPMENT | DATA LICENSING | INGREDIENT LICENSING

SERVICE/LICENSE FEE - ROYALTIES - SUBSCRIPTION
HelloBiome retain **data ownership** for AI Model

2027 +
SAAS/
MANAGE SERVICE PLATFORM
Discovery & Licensing

Industry	Beauty / Personal Care / Consumer Health
Buying personas	Clinical / Regulatory / R&D / Marketing
Target	Consumer Brands / Consumer Corporations / Ingredients Manufacturers / CRO / Contract Manufacturers
Sales cycle	3 months
Value proposition	**Cheaper / Faster / Data Accuracy** **-20% +40% +80%**

HelloBiome™
CURRENT TRACTION

2024 TRACTION:

- **$1M Deal executed**
- **100% Growth**
- **62.5% Repeat Rate**
- **100% Client Satisfaction**

2020-2022

B2C BRAND
Skincare & Test kit

2022-2024

***HELLOBIOME HUB* CLINICALS & CLUSTERING**
Tech Enabled Clinical Data Collection Services & Licensing



credo BEAUTY

FACE HAUS

CORPORATIONS

Unilever

TAKASAGO

LUCAS MEYER COSMETICS by Clariant

CONFIDENTIAL

CONFIDENTIAL

CONFIDENTIAL

MEDIUM SIZE

K18

BEEKMAN 1802

TRUE BOTANICALS

NUTRAFOL

CONFIDENTIAL

SILVATEAM

CONFIDENTIAL

INDIE BRANDS /STARTUPS

CORA

CAPSULENT

Freaks of Nature™

CONFIDENTIAL

ONE SKIN

COCOFLOSS

krème

UZIMA HAIR IS LIFE

fur

CONFIDENTIAL

filterbaby

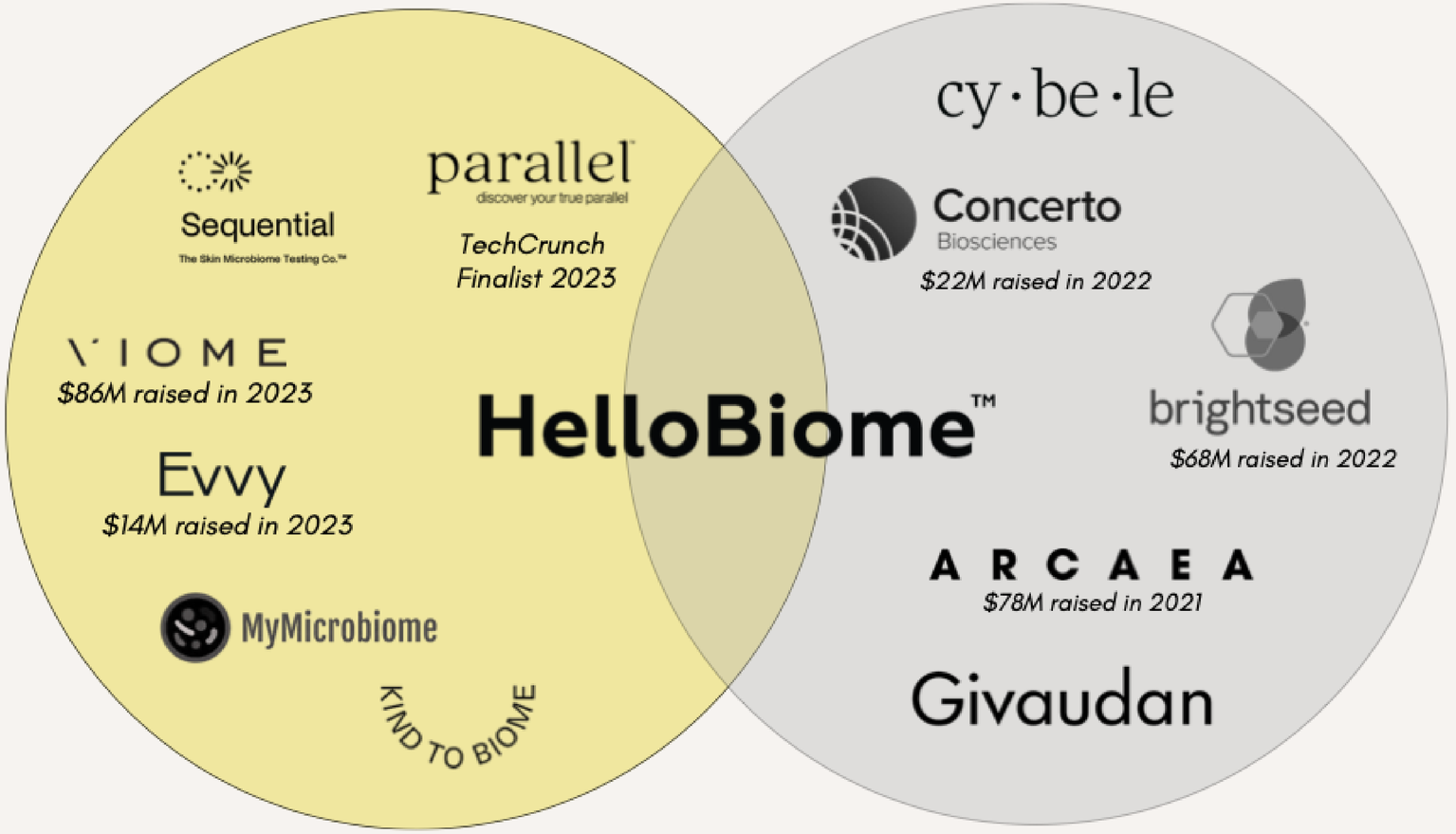
OUR COMPETITION: A DYNAMIC MARKET

M&A (2022-23)

Lactobio → L'ORÉAL

s-biomedic → Beiersdorf

gallinée → SHISEIDO



MICROBIOME DATA & SERVICES PLATFORMS

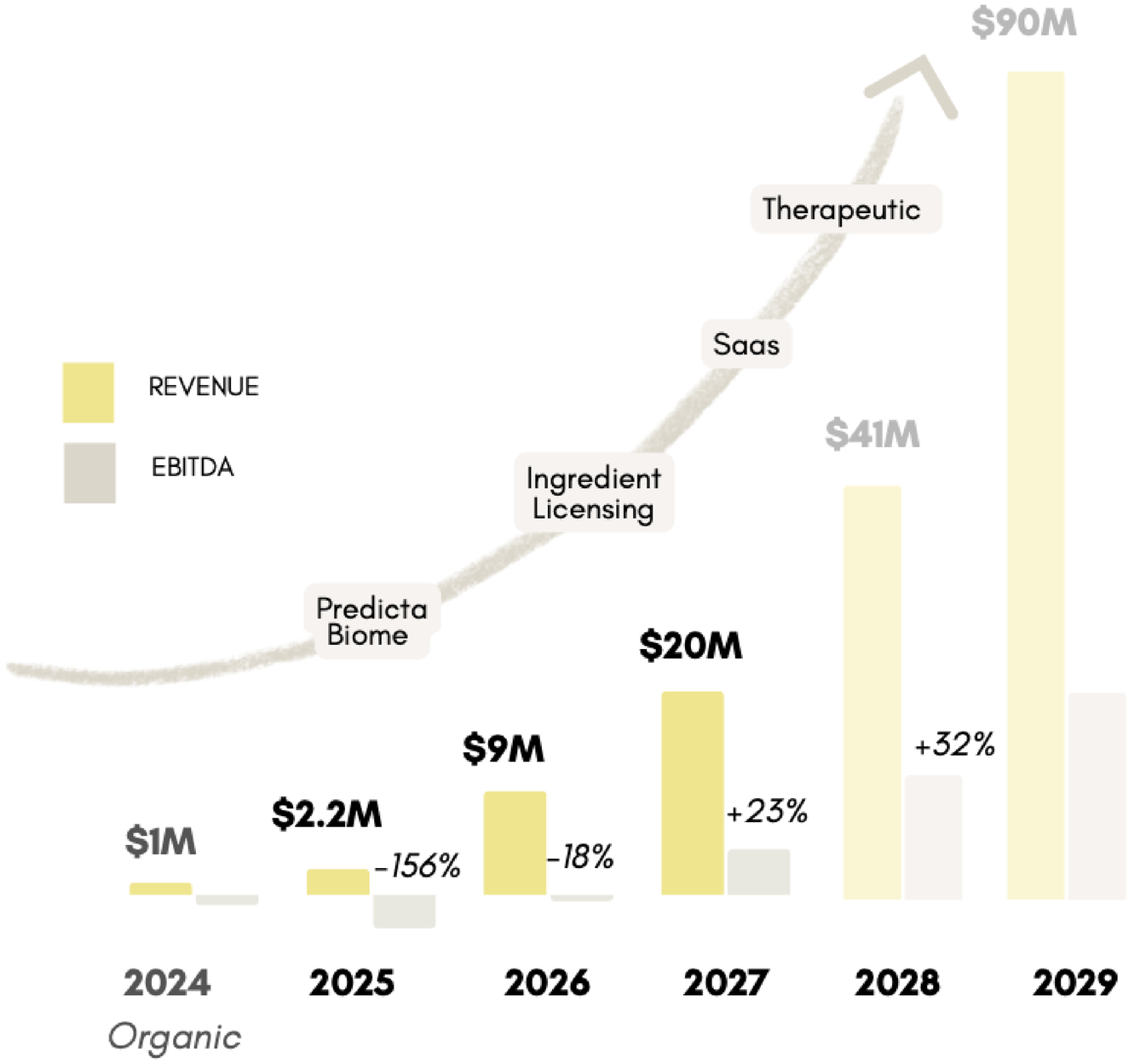
MICROBIOME INGREDIENT PLATFORMS

FINANCIAL PLAN

	2025	2026	2027
Revenue $	2.2M	9.3M	19.6M
Gross profit	60%	72%	82%
EBITDA	-156%	-18%	+23%
FTE	28	43	56

- We already have > $1.4 M in the pipeline for 2024 before receiving investment.
- 2025 represents the 12-month period following the receipt of new investment funds.

2023 & 2024 REVENUE & PIPELINE AVAILABLE WITH NDA



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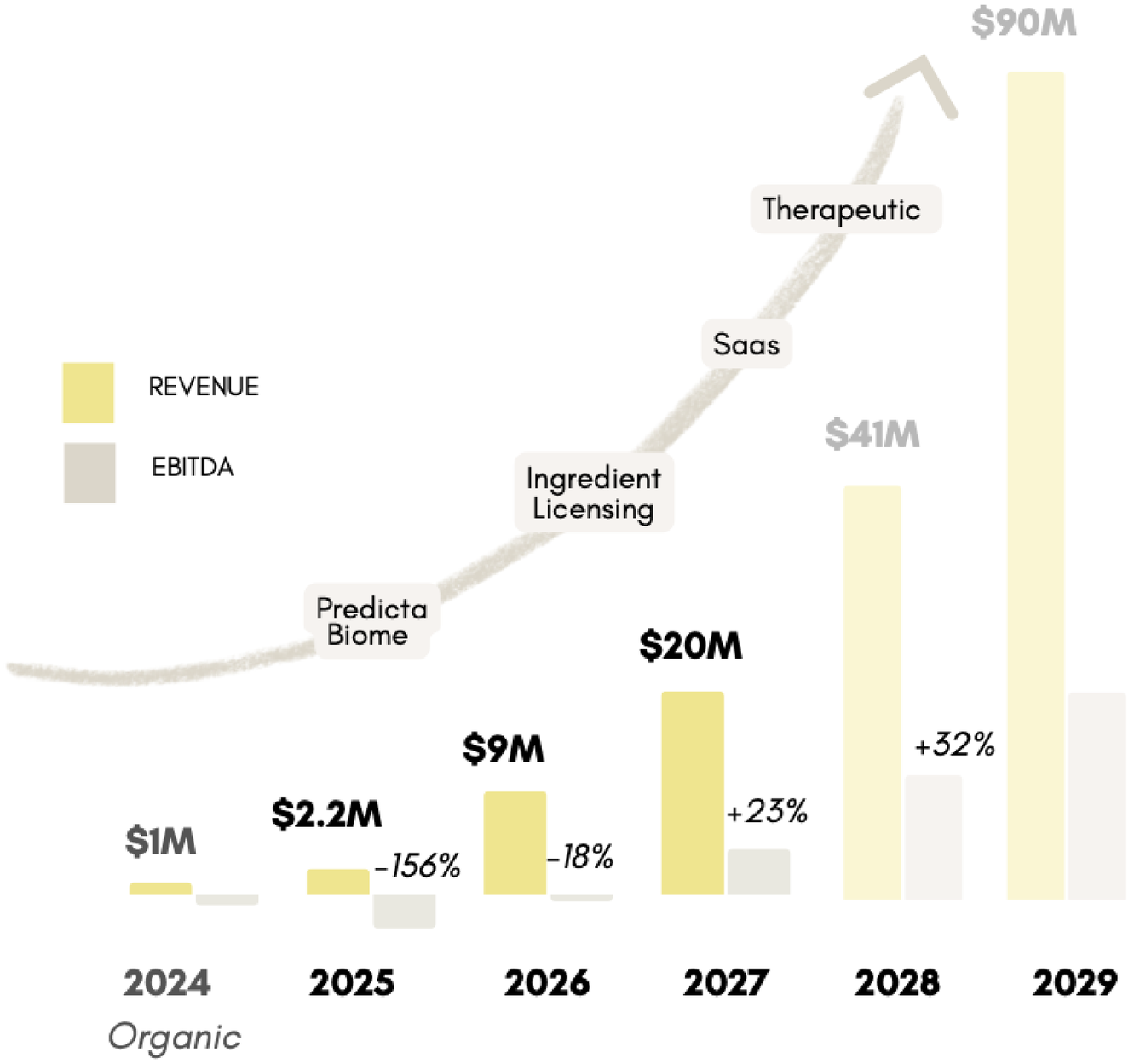
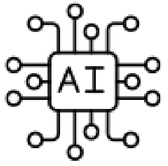


USE OF FUNDS

We are raising: **$7M in Tranches**

- **$3M in 2024**: Initial scale-up for Predicta Biome launch & talent acquisition
- **$4M in 2025**: Expansion of operations, further scaling, and strategic marketing activities

AI MODELS &
IP MANAGEMENT



LAUNCH PREDICTABIOME



AUTOMATE &
RECRUIT THE TALENTS TO
START SCALING



DEVELOP MARKETING
ACTIVITIES



Existing Investors: FAB, IgniteXL, Sekhmet, Rocher FO, Founders Future, Press Reset, Ikigai & Angels

Funds raise to date: **$2.5M**

GUEST SPEAKERS AT:

WWD CEO SUMMIT
BEAUTY
MIAMI

BOF
NAPA

MICROBIOME CONNECT
SEOUL

PROBIOTA AMERICAS
SLC

IFSCC
BRAZIL



PLUG AND PLAY

STARTUP PRESENTATION

Nurish'd

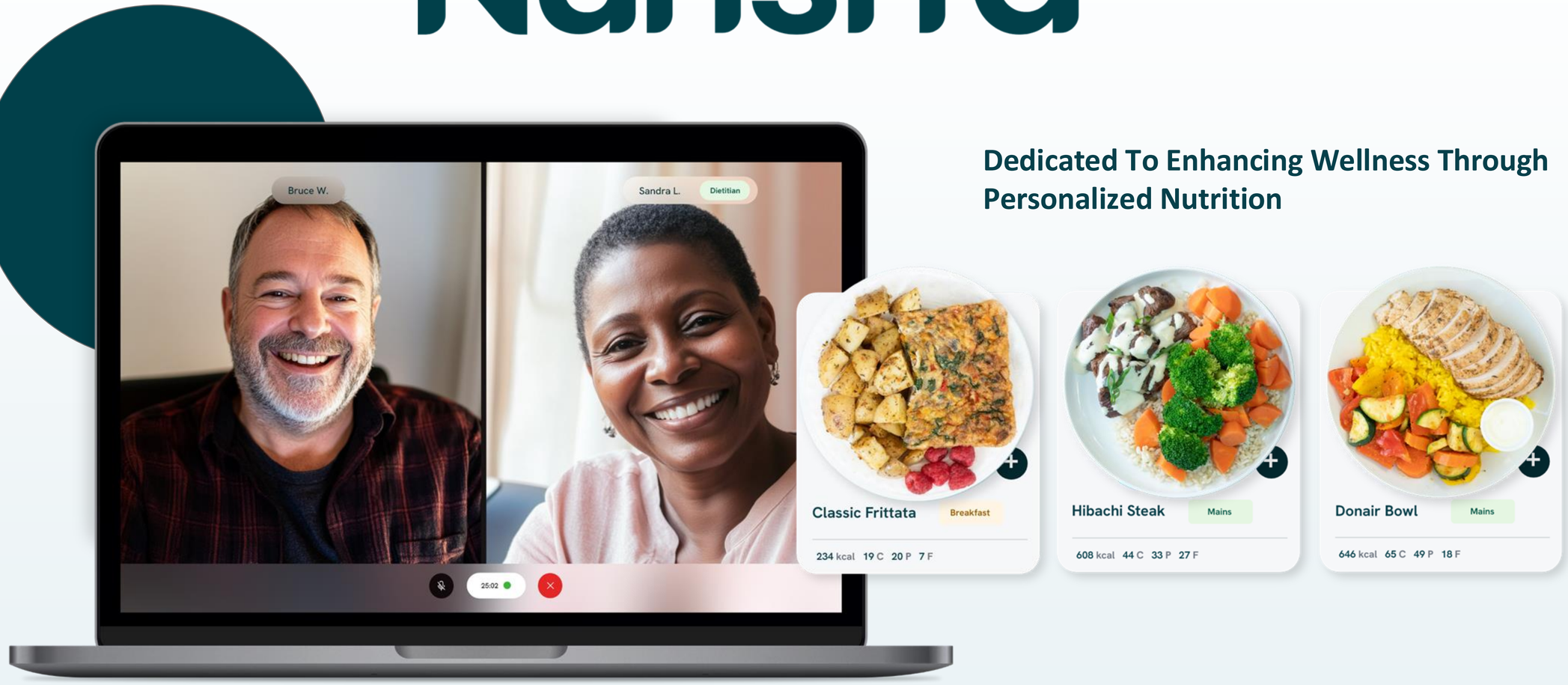
Nurish'd

Providing food as medicine solutions to insurance payors.

#PNPTCSiliconValley

Join us at pnptc.com

Nurishd



Dedicated To Enhancing Wellness Through Personalized Nutrition

THE PROBLEM

Healthcare and insurance systems neglect the importance of nutrition in the prevention and management of diet-related chronic illnesses

75% of healthcare spending is directed toward preventable, diet-related diseases

Nurishd

TARGET MARKET

INSURANCE COMPANIES WHO INSURE

Individuals with diet-related chronic conditions (e.g., diabetes, heart disease, obesity)



Nurishd



OUR SOLUTION

Comprehensive Care Platform that Administers Food-as-Medicine Programs

Personalized Nutrition Experience

- **Medical Nutrition Therapy (MNT)**
- **Microbiome Testing**
- **Medically Tailored Meals**

COMPETITION

	AI Guided Nutrition	Medically Tailored Meal Programs	Access to Registered Practitioners	Insurance Covered Meal Programs
Nurishd	✓	✓	✓	✓
DietitianLIVE			✓	
bitewell	✓			
Healthrageous		✓	✓	✓
foodsmart		✓	✓	
Fay			✓	
Culina Health			✓	

Nurishd

BARRIERS TO ENTRY



Proprietary AI

Personalized nutrition focusing on microbiome and gut health



Healthcare Partnerships

Established relationships with insurers and healthcare providers



Regulatory Standards

Compliance with health standards, meal tailoring protocols, and insurance billing requirements

PROJECTED GROWTH

Current

BETA TESTING

Stage 1.

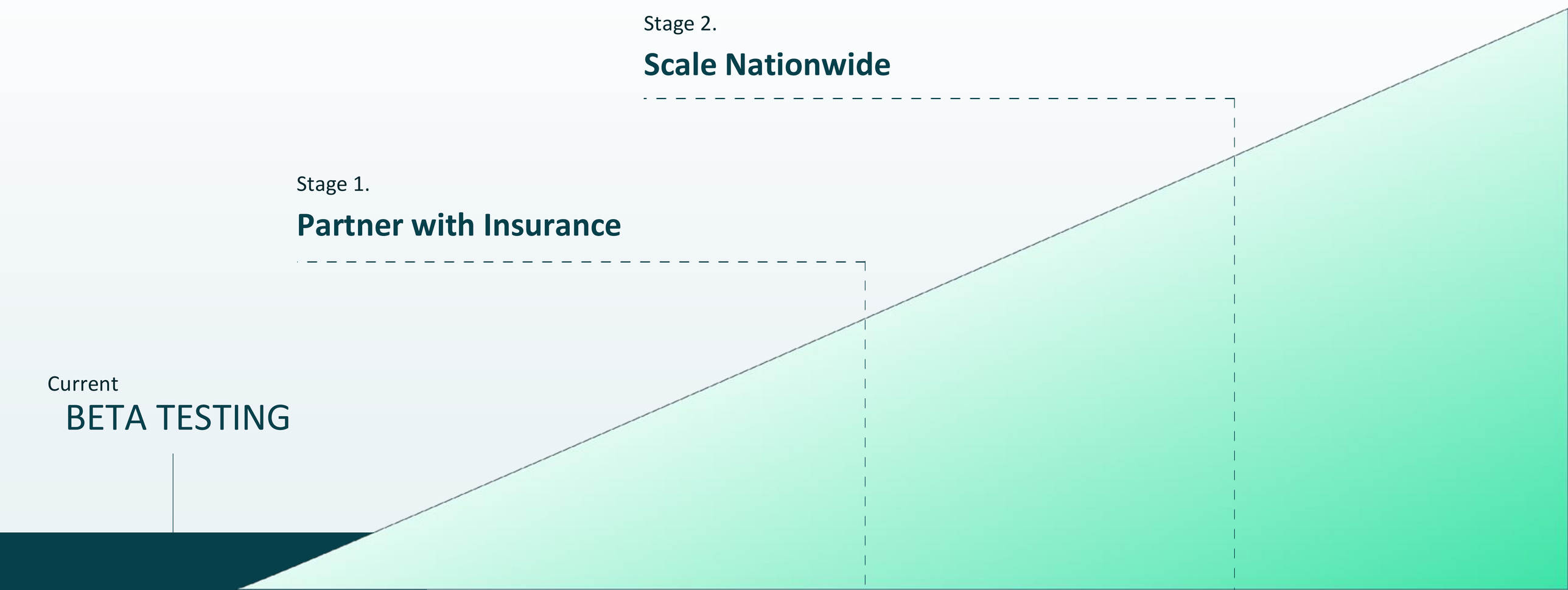
Partner with Insurance

Stage 2.

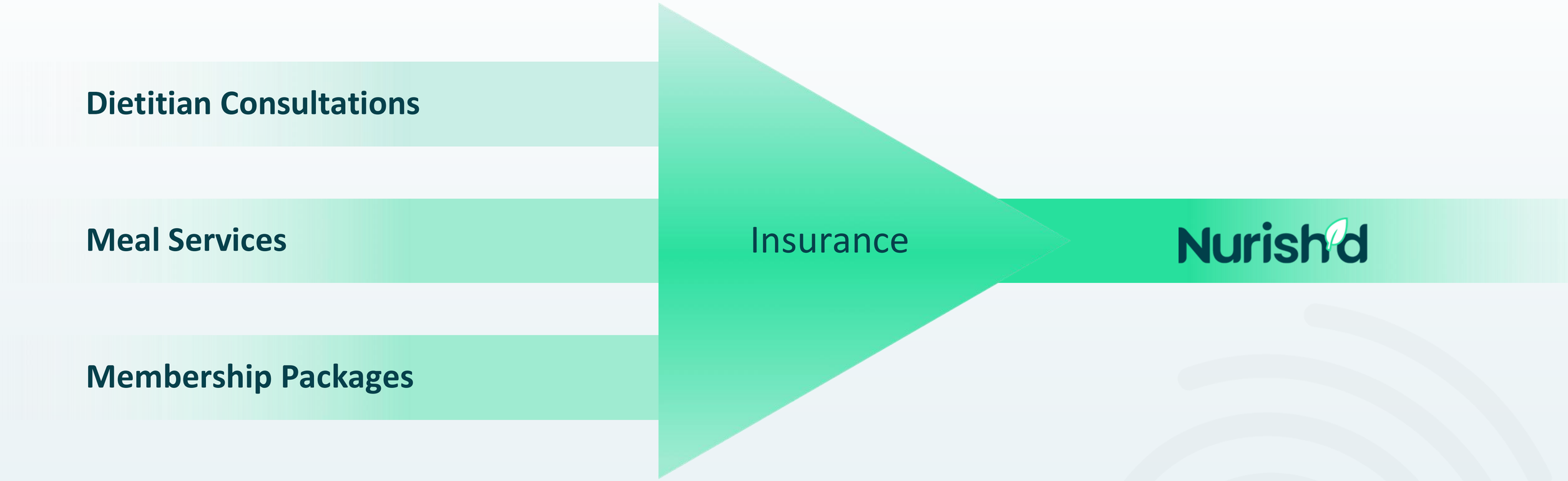
Scale Nationwide

Stage 3.

Refine AI/ML Models



REVENUE FLOW



FOUNDING TEAM



Sam Hale
CEO



Grace Clark
COO



Joel Raymann, MS
AI/ML



Rachel Kronemann, RD
Head of Nutrition

Repeat founders that scaled Nutrimeals to ~$1M ARR.

Launched Nurish'd, the SaaS-enabled health and wellness marketplace, prioritizing food-as-medicine.

HUAWEI

UNIVERSITY OF WATERLOO

BASTYR UNIVERSITY

Advisors: Tom Spolentini, Frank Sur, David Barber, Connor DiSefano

Nurish'd

PARTNERSHIP OPPORTUNITIES



Healthcare Networks



Corporate Wellness Channels



Insurance Providers

Nurishd



Nurishd

GET IN TOUCH

Contact Information

Phone Number
403-922-3271

Email Address
sam@nurishd.io

Websites
www.nurishd.io (info)
www.nurishd.store (platform)

PLUGANDPLAY

SV SUMMIT

MICROBIOME PANEL



MODERATOR

Alex Davisson

Sr. Ventures Associate

Plug and Play Tech Center



Angela Marcobal

Director, Product Development

One Bio Inc.



Dr. David Mills

Distinguished Professor

UC Davis, Dept. of Food Science



Dr. Amine Zorgani

Founder & CEO

SwipeBiome

PLUG AND PLAY

STARTUP PRESENTATION



Propion

First in class nutraceuticals with breakthrough potential for the longevity market.



PROPION™ AKA How to Slow Time

2024

Extending Your Healthy Years, Starting Now.

Who we are and why it matters



Nicholas Tubach
CoFounder & CEO



Dr. Daniel Winer
CoFounder & Scientific Director



Dr. Amine Zorgani
Board Director and Scientific Advisor



Dr. Bill Andrews
Board Director and Scientific Advisor

“Much of this is new research and constitutes a fundamental discovery on how we could change aging and divert multiple disease pathologies.”

- **Dr. Daniel Winer**

Pioneer in 3 fields of immunology

AWARDS
Top 10 Breakthroughs of the Decade (2005-2015
Amgen Early Investor Award
Canada Research Chair

REVIEWER
Nature Metabolism
Nature Medicine
Cell Host and Microbe

Propion Inc. Co-Founder and Scientific Director

Propion BLEND™ is our go to market, flagship product

Completely novel nutritional science in smoothie powder form

Effects:

Gut regeneration
Liver regeneration
Neuroprotective
Cardioprotective
Better sleep

1







Many opportunities to expand based the molecular science.



The existing longevity supplement market does not reflect Propion's™ Potential

Resveratrol, Lion's Mane, NMN, Glutathione, And more...

How Society Responds to a Real Anti-Aging Product

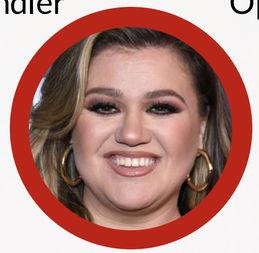
Propion products will be more like Ozempic and Aspirin and less like your average supplement.

Celebrities taking Ozempic


Chelsea Handler


Oprah Winfrey


Tracy Morgan


Kelly Clarkson


Elon Musk

Fundraising & Strategic Partners

Allocate 40% equity to a 36-month rolling syndicate with no cap on member count.

Goal: Create a pool of 50-100 strategic investors that will champion the company and provide $10m-$20m

Disadvantage: Gives away a lot of founders' equity early on

Advantage: Creates a network of strategic investors that has enough horsepower to quickly create billions in value for Propion

Credibility now leads to the Oprah effect.

Credible Brand:
Undeniable Data
Key Opinion Leads

Credible Stakeholders:
Strategic Investors

We are Here!

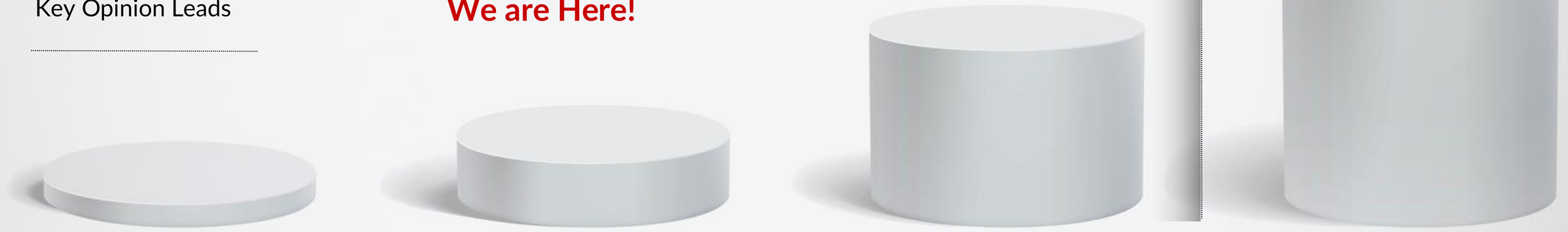
Credible Partners:
Doctors: Smart and Committed

Celebrities: We have advisors who advise family offices of the world's top celebrities

Licensing and Distribution: Enabling scaled growth

10 MILLION MONTHLY USERS

Due to Oprah Effect



PROPION™ AKA How to Slow Time 2024

Join us

CEO Contact:
nicholas@propion.com
510-847-1462



PLUG AND PLAY

STARTUP PRESENTATION

Jona

Combines gut microbiome testing + AI-Powered analysis to provide personalized food, diet, and lifestyle recommendations.

JONA

A world in which microbiome testing is more common than bloodwork

Pitch Deck | 2024



Every aspect of health is linked to the gut microbiome

Brain

Parkinson's | Alzheimer's | Brain Fog | Depression | Anxiety | Stress

Cardio

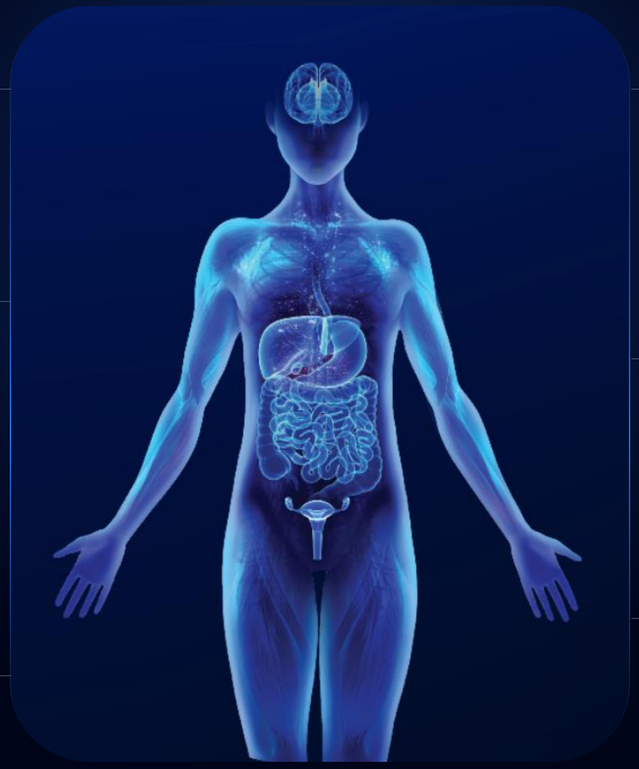
Hypertension | Heart Disease

Gastrointestinal

Gas | Celiac | Crohn's Disease | Bloating | Ulcerative Colitis | Irritable Bowel Syndrome | Constipation

Metabolic

Fatty Liver | Diabetes | Obesity | Sleep Apnea | Metabolic Syndrome



Autoimmune

Multiple Sclerosis | Lupus | Asthma | Rheumatoid Arthritis

Skin

Acne | Psoriasis | Rosacea | Eczema | Chronic Hives

Performance

Joint Pain | Fatigue | Endurance | Insomnia

JONA

Wu, G., Chen, Y., Zhang, L., and Zhang, H. "Effects of Dietary Polyphenols on Gut Microbiota and Their Potential Implications for Health: A Review."

JONA

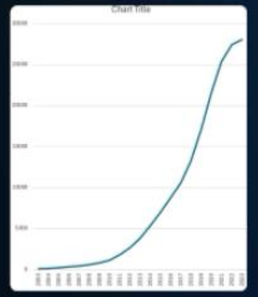

Fae

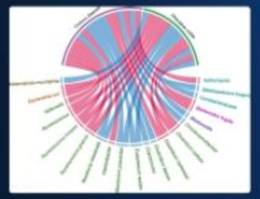
25000

1000

2000

2024





"Do probiotics mitigate GI-induced inflammation and perceived fatigue in athletes? A systematic review"

R.P. Kearns, J.S.G. Dooley, M. Matthews and A.M. McNeilly

Ulster University, School of Life and Health Sciences, Sport and Exercise Sciences Research Institute, Ulster University, Newtownabbey, Antrim, UK

Small Intestinal Bacterial Overgrowth: Clinical Features and Therapeutic Management

Rao, Satish S. C. MD, PhD[1]; Bhagatwala, Jigar MBBS, MPH[1]

Human gut microbiota changes reveal the progression of glucose intolerance

Xiuying Zhang [1], Dongqian Shen, Zhiwei Fang, Zhuye Jie, Xinmin Qiu, Chunfang Z
Yingli Chen, Linong Ji

Gut–brain axis: how the microbiome influences anxiety and depression

Jane A Foster [1], Karen-Anne McVey Neufeld

Mechanisms and Intervention of Prebiotic Foods in Musculoskeletal Health

Regulation of myocardial ketone body metabolism by the gut microbiota during nutrient deprivation

Peter A Crawford [1], Jan R Crowley, Nandakumar Sambandam, Brian D Muegge, Elizabeth K Costello, Micah Hamady, Rob Knight, Jeffrey I Gordon

REVIEW

Gut microbiota–astrocyte axis: new insights into age-related cognitive decline

Zhang, Lan[1,2,#], Wei, Jingge[3,#], Liu, Xiaz[4,#], Li, Dai[1,2], Peng, Xiaoqi[5], Chen, Fangjian[6*], Cao, Haibing[6*], Lei, Ping[1,6*]

Author information

The causal relationship between gut microbiota and alopecia areata: a Mendelian randomization analysis

Low-FODMAP Diet Improves Irritable Bowel Syndrome Symptoms: A Meta-Analysis

by Emma Altobelli [1,*], Valerio Del Negro [2], Paolo Matteo Angeletti [1] and Giovanni Latella [2]

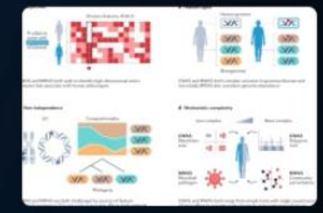
Gut antibiotic resistome during pregnancy associates with the risk of gestational diabetes mellitus: New evidence from a prospective nested case–control study

The Gut Microbiome and Mental Health: Implications for Anxiety- and Trauma-Related Disorders

Authors: Stefanie Malan-Müller, Mireia Vallès-Colomer, Jeroen Raes, Christopher A. Lowry, Soraya Seedat, and Sian M.J. Hemmings

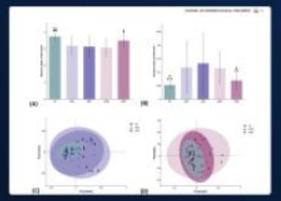
Gastroenterology

Fecal microbiota is associated with extraintestinal manifestations in inflammatory bowel disease



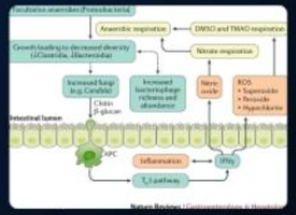
The role of inflammation and the gut microbiome in depression and anxiety

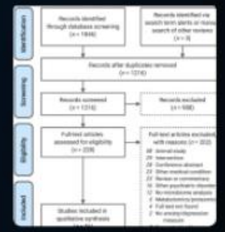
Jason M Pierce [1,2], Karina Alviña [1]



Gastrointestinal pathophysiology during endurance exercise: endocrine, microbiome, and nutritional influences

Invited Review | Published: 15 June 2021





REVIEW

OPEN ACCESS

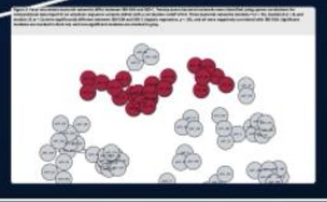
Akkermansia muciniphila: A promising probiotic against inflammation and metabolic disorders

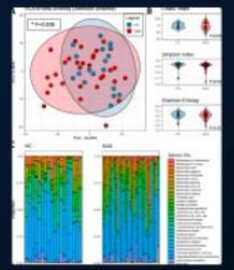
Yanqing Zhao[1,2*], Huijun Yang[2*], Peng Wu[2,3*], Shuguo Yang[2,3], Wenkun Xue[2,3], Biao Xu[1,2], Sirui Zhang[2,3], Bin Tang[2], and Daoxiu Xu[2,3]

Immune-mediated Bowel Disease: Role of Intestinal Parasites and Gut Microbiome

Is the origin of type 1 diabetes in the gut?

Outi Vaarala





Review Article | Published: 14 June 2024

Perspectives on the involvement of the gut microbiota in salt-sensitive hypertension

RESEARCH ARTICLE

OPEN ACCESS

The adjuvant treatment role of ω-3 fatty acids by regulating gut microbiota positively in the acne vulgaris

Yaxin Huang[2*], Fuming Liu[2*], Jindong Lai[2*], Shiyu Jiang[2], Xiaoqi Tan[2], Lingna Chen[2], Yong Xu[2,&,&], Xia Xiong[2] and Yongqiong Deng[2]

Jona is for...



Individuals with health issues

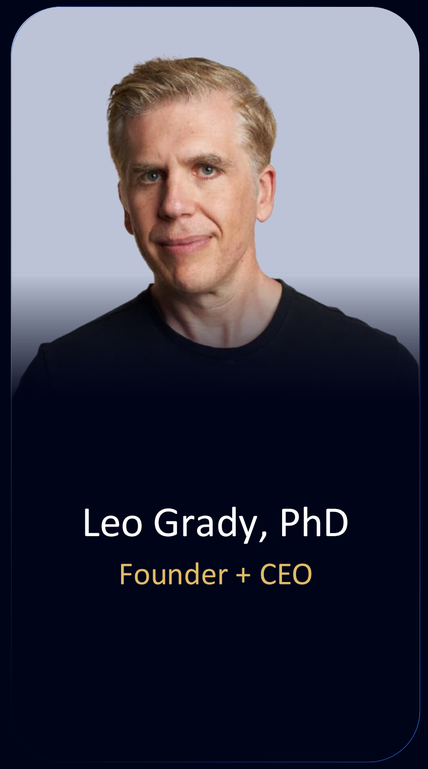
Athletes, biohackers, longevity

Preventative health

Initial GTM – Cash pay, mainly through recurring provider B2B channels and also D2C



Deep experience in AI for health



Leo Grady, PhD
Founder + CEO



Jillian Sue
Head of Product



Jaclyn Kawwas
Head of Business Development



Jonas Schulter, PhD
Chief Scientific Advisor



Audra Walker
UX Designer



Kfir Bar, PhD
AI Lead



Maclay Ramsey
Product Designer



Tyler McEntee
Engineering



Clay Yoo
AI Engineering



Thiago Santos
AI Engineering



Rainey Dunham
Data Integration Specialist



James Kim
Engineering



Larry Kosinki. MD
Chief Medical Officer

Paige · iz.ai · HeartFlow · SIEMENS Healthineers · THIRTY MADISON · Medtronic Engineering the extraordinary · BASIS TECHNOLOGY · Comprendi · 25m health · feals · MENDEL

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Global leader in the Microbiome, AI, Personalized Nutrition and Computational Biology



Willem De Vos, PhD

Early pioneer in Microbiome Research and Translation

AI and data partnerships

Individual's Data Gathering → AI Analysis and Proprietary Data → Partnership Opportunities



Proprietary Microbiome Data

Deep microbiome sequencing including DNA and composition

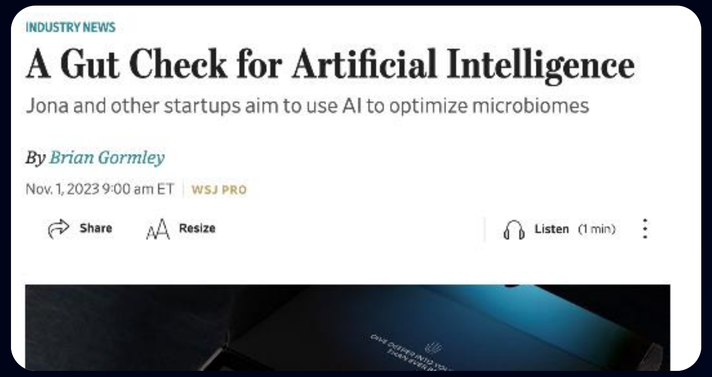
Additional Health data

Demographics, medical history, diet, lifestyle data and more



- New product development, ingredient selection. Ex: How do I design a product for sleep?
- Product testing for effectiveness on Jona population
- Marketing claim development. Ex: Does my product help with gut issues too?
- Facilitate R&D

Jona: Press highlights


INDUSTRY NEWS

A Gut Check for Artificial Intelligence

Jona and other startups aim to use AI to optimize microbiomes

By Brian Gormley

Nov. 1, 2023 9:00 am ET | WSJ PRO

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THE WALL STREET JOURNAL.

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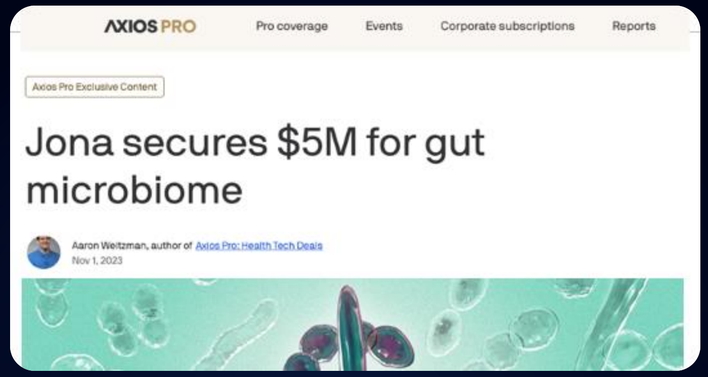
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Axios Pro Exclusive Content

Jona secures $5M for gut microbiome

Aaron Weitzman, author of Axios Pro: Health Tech Deals

Nov 1, 2023

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DIGITAL FEATURES

A.I. is uncovering the secrets of your body's microbiome

August 10, 2023 05:30 AM GMT+5:30 - Updated August 22, 2023 20:38 PM GMT+5:30

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Medtech Insight >> Digital Technologies >> AI

Leo Grady's Jona Hopes To Repair Microbiome Testing's Murky Reputation

01 Nov 2023 • By Barnaby Pickering

After leading Paige to success with the FDA, Grady has turned his attention to the microbiome. He hopes his new company, Jona, will be able to provide detailed insights to doctors, their patients and pharmaceutical players.

MEDTECH INSIGHT
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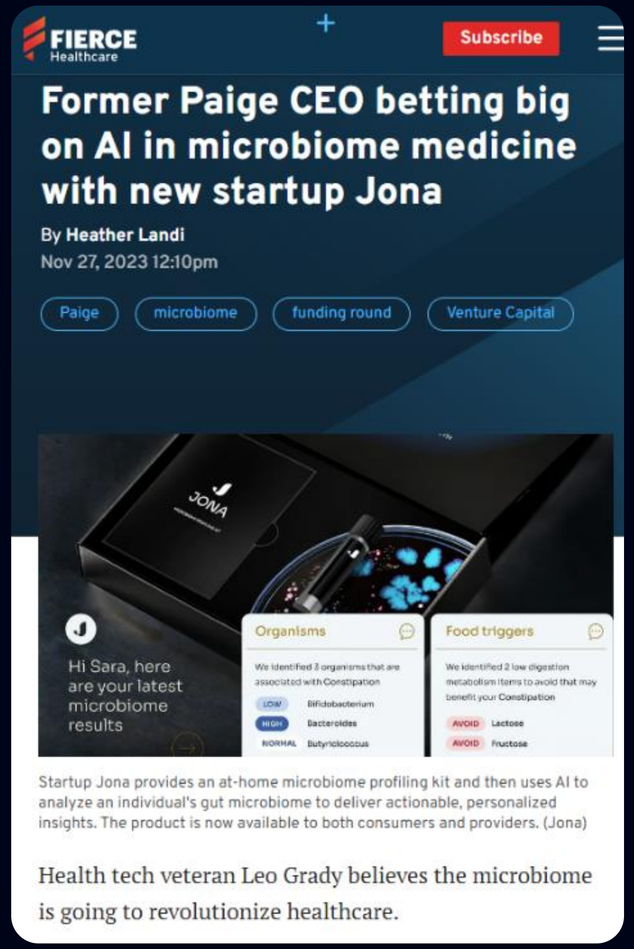

FIERCE Healthcare Subscribe

Former Paige CEO betting big on AI in microbiome medicine with new startup Jona

By Heather Landi

Nov 27, 2023 12:10pm

Paige microbiome funding round Venture Capital

Hi Sara, here are your latest microbiome results

Organisms

We identified 3 organisms that are associated with Constipation

LOW Bifidobacterium

HIGH Bacteroides

NORMAL Butyricicoccus

Food triggers

We identified 2 low digestion metabolism items to avoid that may benefit your Constipation

AVOID Lactose

AVOID Fructose

Startup Jona provides an at-home microbiome profiling kit and then uses AI to analyze an individual's gut microbiome to deliver actionable, personalized insights. The product is now available to both consumers and providers. (Jona)

Health tech veteran Leo Grady believes the microbiome is going to revolutionize healthcare.

FIERCE Healthcare

Click to know more

JONA



Leo Grady, Founder + CEO
leojgrady@jona.health

PLUG AND PLAY

STARTUP PRESENTATION

BetterMeal

AI enabled microbiome solutions within seconds.

#PNPTCSiliconValley

Join us at pnptc.com

Pillar Biome

(formerly BetterMeal AI)

AI-enabled precision nutrition to enhance gut health

Pillar Biome

Problem



There is a deep connection between the food we eat and its impact on our microbiome and overall health, but it's hard to take action.

We have chronic health issues

MILLIONS suffer from chronic health issues that originate in the gut.

Gut test kits are flawed

Home gut tests kits are reliable, but they are expensive, have low completion rates, and it takes a long time to get data back.

Ignorance about nutrition

We don't truly understand how nutrition impacts our microbiome at a cellular level.

PillarBiome

Solution

World's first markers for Gut identified and validated

We've identified biomarkers found in basic blood tests that provide a snapshot of your gut health.

Our novel AI algorithm creates personalized nutritional solutions based off your data.

We leveverage clinically identified compounds in foods to heal your gut.

Solutions to many chronic health issues from mental health to IBS, chronic fatigue & more.

PillarBiome

We investigated food at the molecular level, discovering unique, previously unknown compounds.

We predict compounds from different food sources.

Food’s unique interactions with human microbiomes

Impact at a cellular level

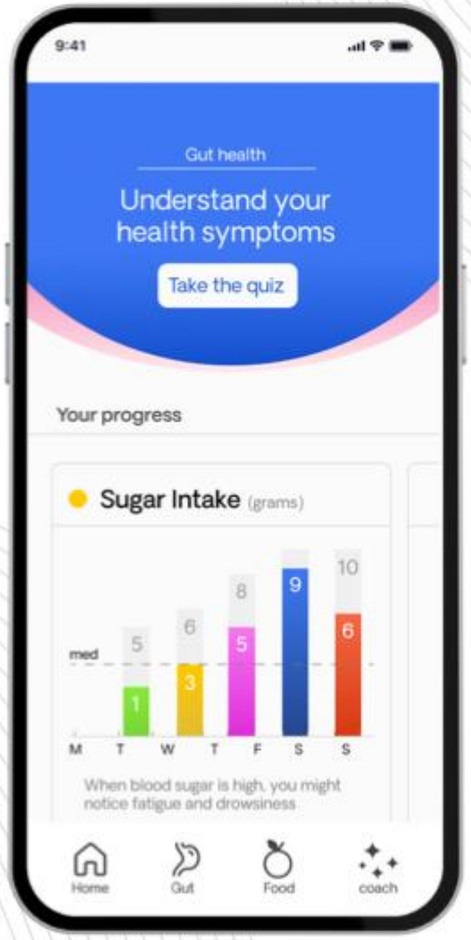
PillarBiome

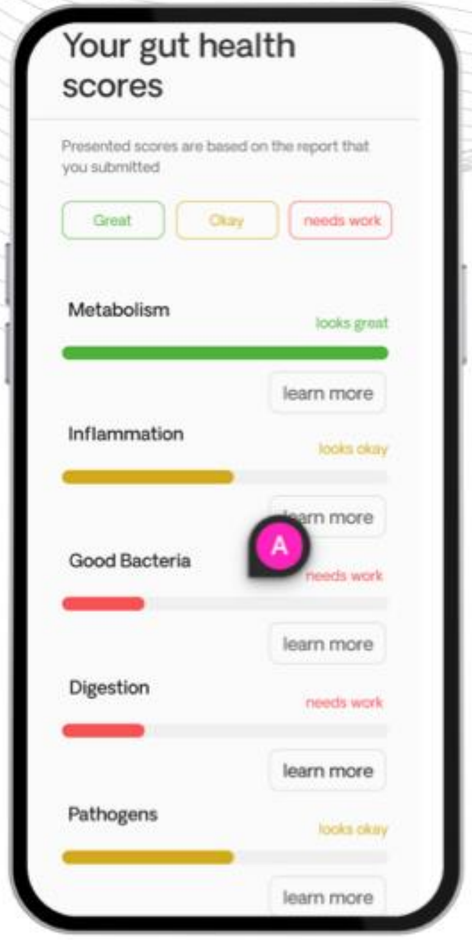
Product

Gut Health decoded within seconds after upload blood tests

Unique pair between Microbiomes & food for effective disease management

24/7 Access to high quality nutritionists







PillarBiome

Meet the Team



SWATHI NAGENDRA

Chief Executive Officer and Founder



DR RAMYA RAM

Chief Medical Officer and Co-Founder



RICHARD JUKNAVORIAN

Chief Technology Officer and Board Member



CHIMA OSUKA

Chief Strategy Officer



GENEVIEVE LEMARCHAL

Board member

PillarBiome

Clinical Study

Study Purpose:

Analyze unique biomarkers from basic tests that detect Gut health. 95% of the data is our own IP. Add IP Slide on Patent Pending, add lifeline logo



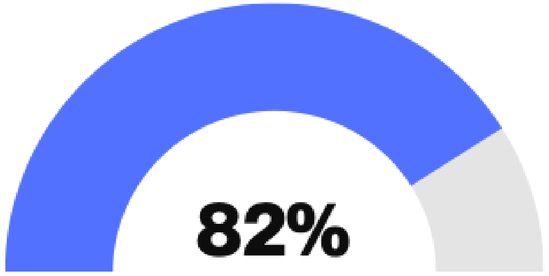
3 years

Approximate Duration of Study



~500K

Participants based on different disease categories



Success rate

82% Success Rate, 58% healed their chronic diseases

PillarBiome

Marketing Channels

Q1-Q2 2025: Expansion

- Leverage the existing user base in India to boost engagement.
- Expand into international markets via current channels.
- Focus on increasing revenue and app installs.

Q3-Q4 2025: U.S. Launch

- Launch PillarBiome in the U.S. market.
- Build strategic B2B partnerships for growth.
- Drive brand awareness and sales.



Whatsapp Marketing



SMS marketing



Content & education



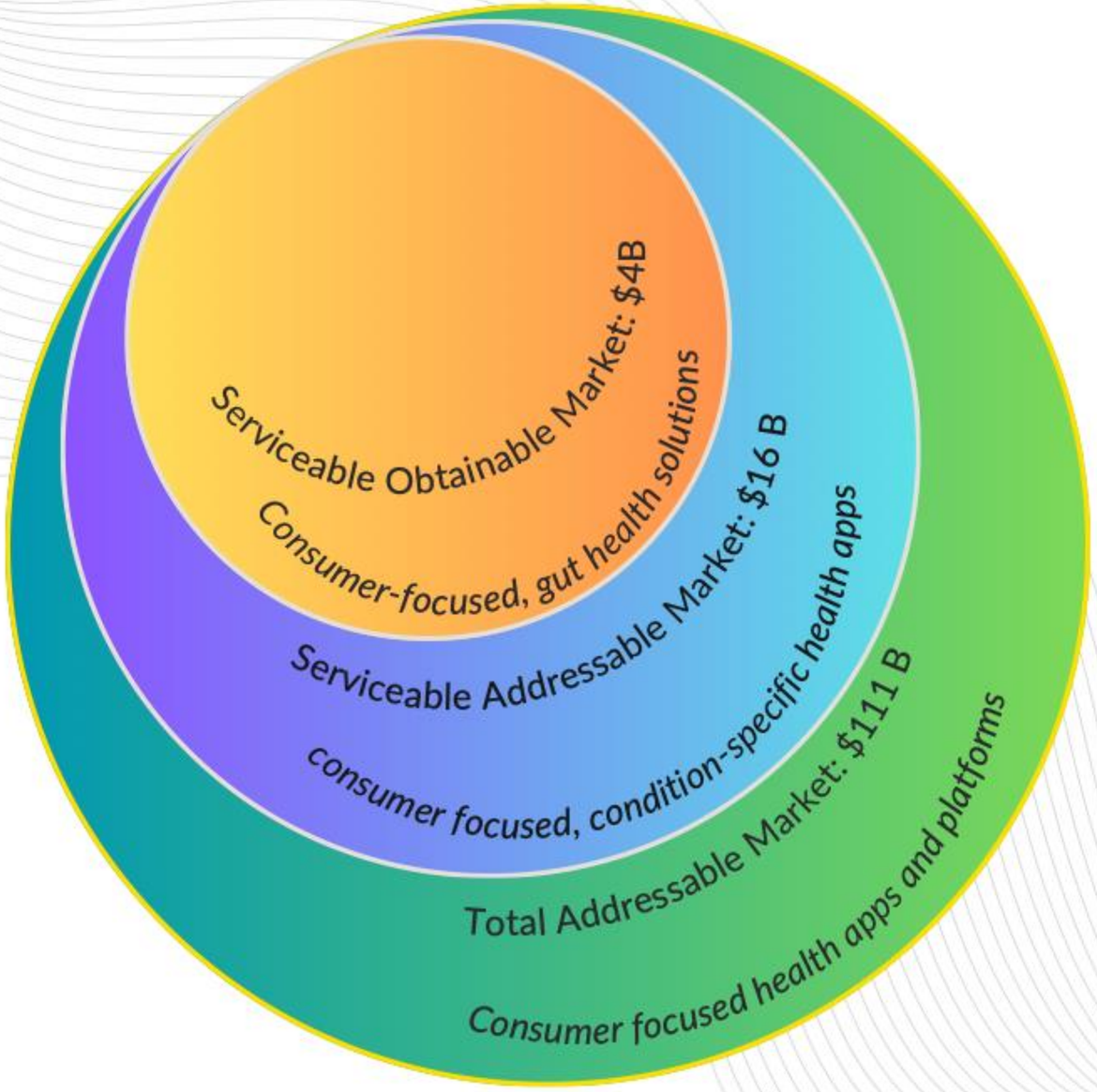
Nutritionists & influencers

PillarBiome

Size of Market

PillarBiome targeting a $4B consumer segment focused on the following chronic conditions:

- Type2 Diabetes
- Thyroid disorders
- Gastrointestinal
- Women's reproductive health



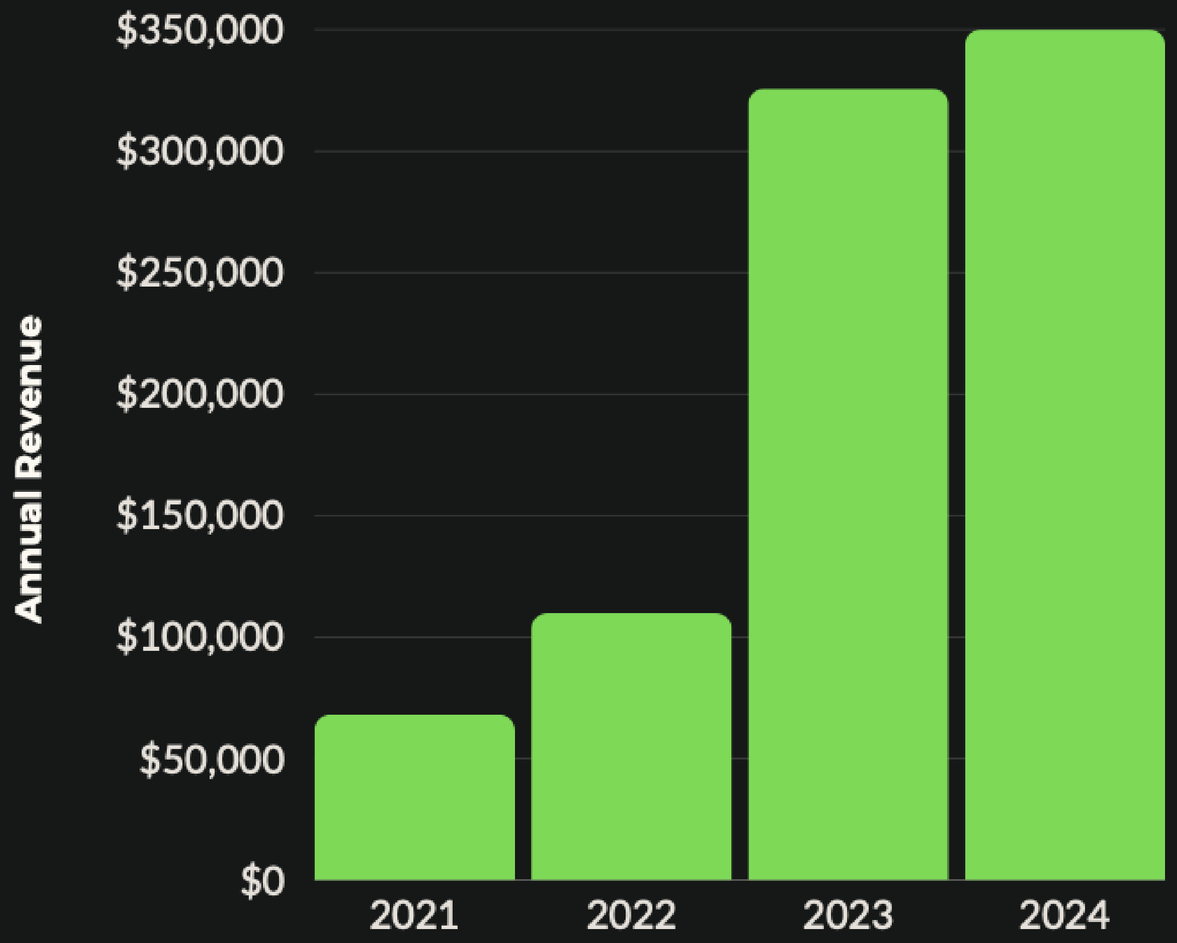
PillarBiome

Revenue Model

	International	U.S.	B2B
Pricing **Features** **Additional Services**	**4.99$/ month** **49.99$/ year** • **Free tier includes** Limited features • Paid tier includes Microbiome analysis results • Product line expansion • 24/7 quality care	**11.99$/ month** **99.99/year** • **Free tier includes** Limited features • Paid tier includes Microbiome analysis results • 24/7 quality care • Product line expansion • Instacart API integration	**Enterprise Partnerships** • **Enterprise partnerships with Revenue sharing**

PillarBiome

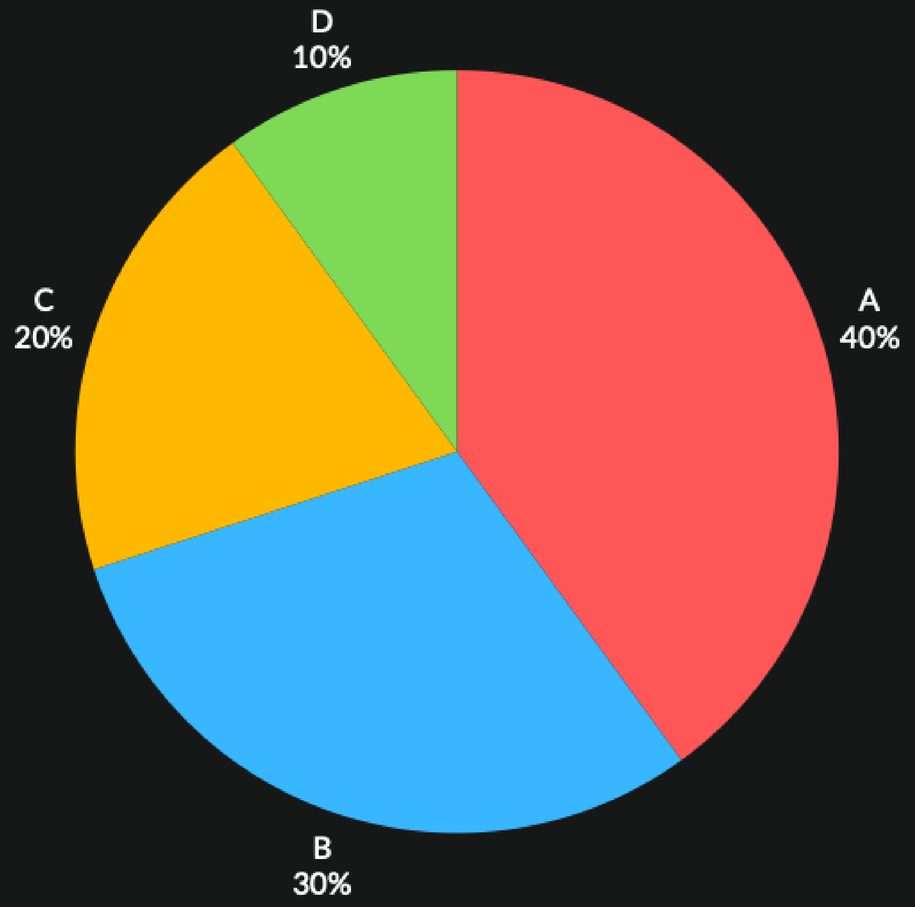
Traction



- 60% of Waitlist conversion since launch
- 65% maintain customer satisfaction ratings
- ~72% customer retention

PillarBiome

Ask



We are looking for $1.5M raise on SAFE note.

- A. 40% Product Development
- B. 30% Marketing and Sales
- C. 20% Infrastructure and Operations
- D. 10 % Expansion and Growth Initiatives

PillarBiome

Thank You!



Swathi Nagendra

CEO and Founder

swathi.arna@bettermeal.ai

PLUGANDPLAY

SV SUMMIT



TRENDS PRESENTATION

Valeria Cobos

Ventures Analyst

Plug and Play Tech Center

#PNPTCSiliconValley

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PLUG AND PLAY
FOOD & BEVERAGE

Microbiome in the Food Industry

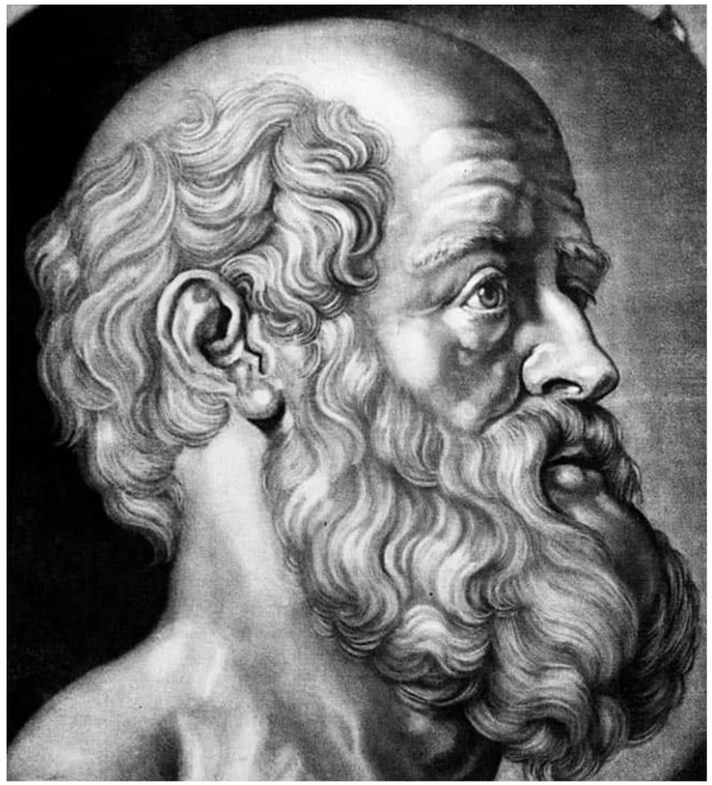


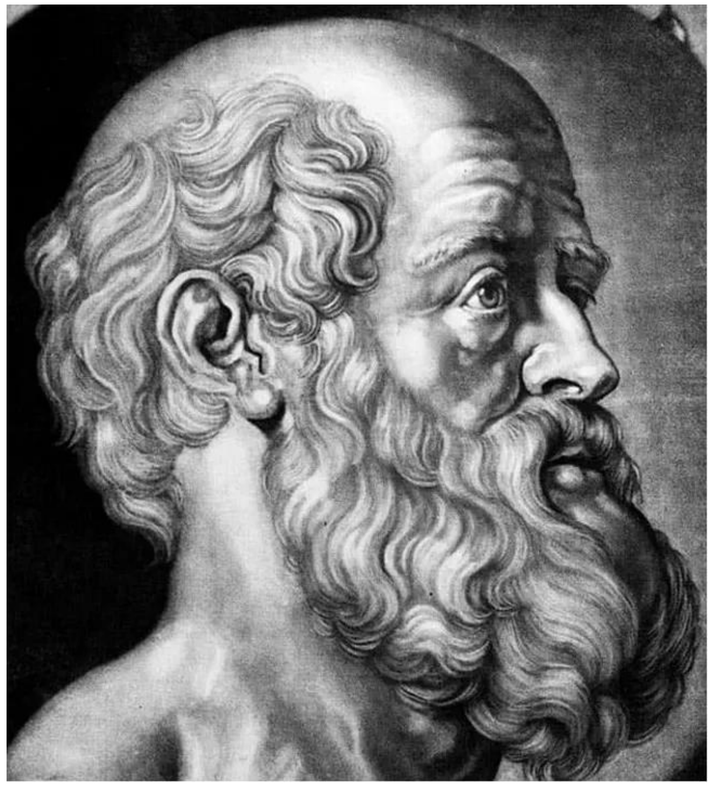
November 2024

Prevalence and Rising Incidence of Health Issues

PLUG AND PLAY FOOD & BEVERAGE

- Metabolic Disorders
- Mental health issues
- Neurodegenerative diseases
- Allergies and Asthma
- Autoimmune Disease





“All disease begins in the…

GUT”

-Hippocrates

Prevalence and Rising Incidence of Health Issues

PLUG AND PLAY FOOD & BEVERAGE

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Sci Rep. 2021; 11: 15009.
Published online 2021 Jul 22. doi: 10.1038/s41598-021-94498-6
PMCID: PMC8298414
PMID: 34294835

Variations in the oral microbiome are associated with depression in young adults

Benjamin Wingfield,[#1,2] Coral Lapsley,[#1] Andrew McDowell,[1] Georgios Miliotis,[1] Margaret McLafferty,[1,3] Siobhan M. O'Neill,[3] Sonya Coleman,[2] T. Martin McGinnity,[2] Anthony J. Bjourson,[1] and Elaine K. Murray[1]

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Variations in the oral microbiome are associated with depression in young adults

Benjamin Wingfield,[#1,2] Co
Siobhan M. O'Neill,[3] Sony

Association of Insulin Resistance and Type 2 Diabetes With Gut Microbial Diversity

A Microbiome-Wide Analysis From Population Studies

Zhangling Chen, MD, PhD[1,2]; Djawad Radjabzadeh, MSc[3]; Lianmin Chen, MSc[4,5,6]; et al

» Author Affiliations | Article Information

JAMA Netw Open. 2021;4(7):e2118811. doi:10.1001/jamanetworkopen.2021.18811

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Association of Insulin Resistance and Type

Popula-

The Gut Microbiome Alterations and Inflammation-Driven Pathogenesis of Alzheimer's Disease—a Critical Review

Open access | Published: 23 June 2018
Volume 56, pages 1841–1851, (2019) Cite this article

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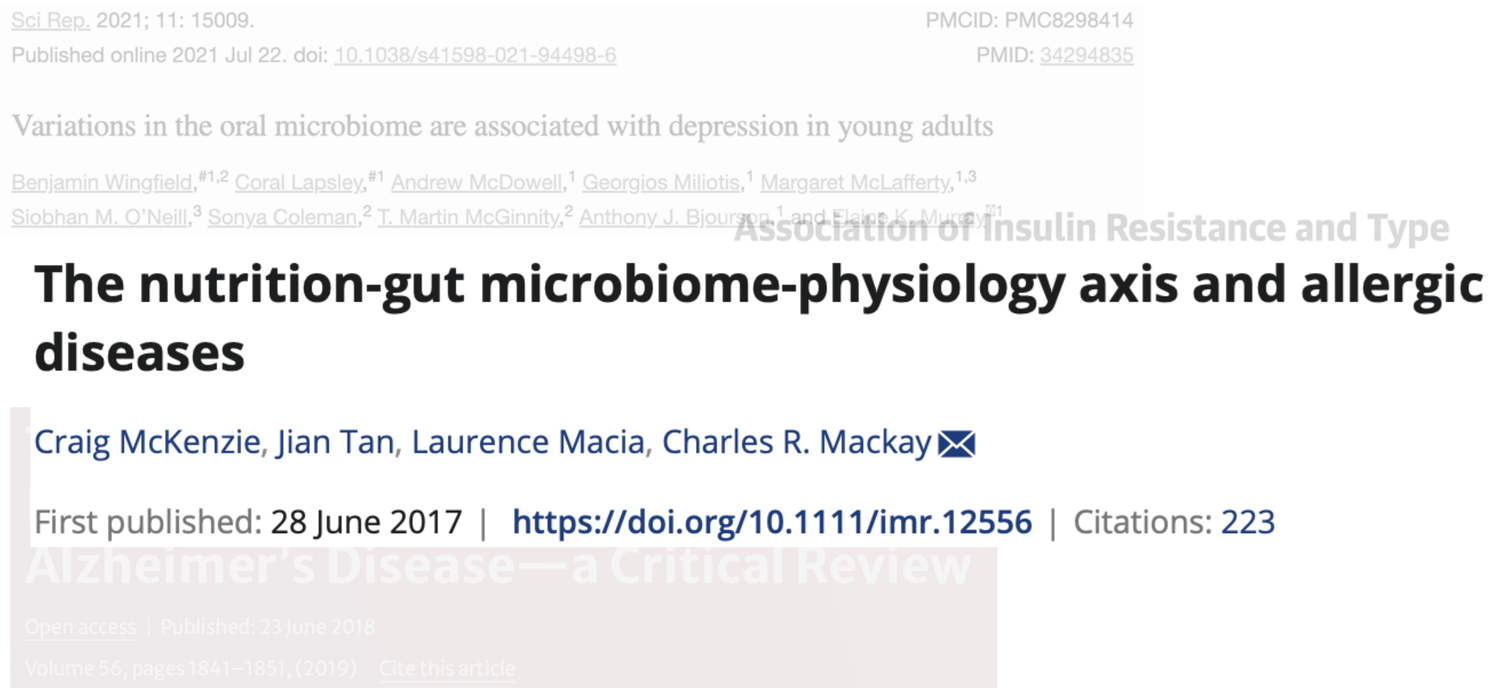

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Association of Insulin Resistance and Type

The nutrition-gut microbiome-physiology axis and allergic diseases

Craig McKenzie, Jian Tan, Laurence Macia, Charles R. Mackay

First published: 28 June 2017 | https://doi.org/10.1111/imr.12556 | Citations: 223

Alzheimer's Disease—a Critical Review

Open access | Published: 23 June 2018

Volume 56, pages 1841–1851, (2019) Cite this article

Prevalence and Rising Incidence of Health Issues

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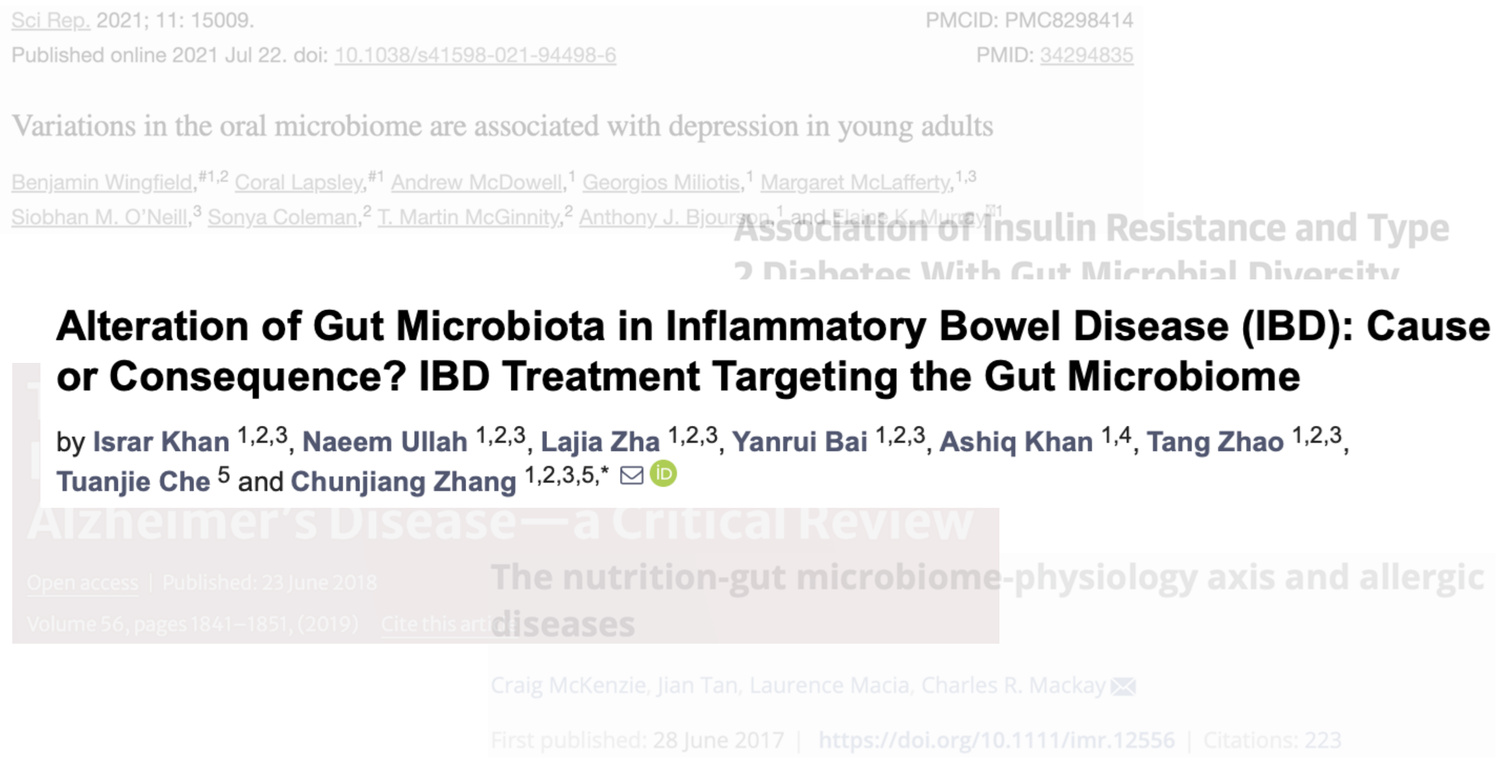

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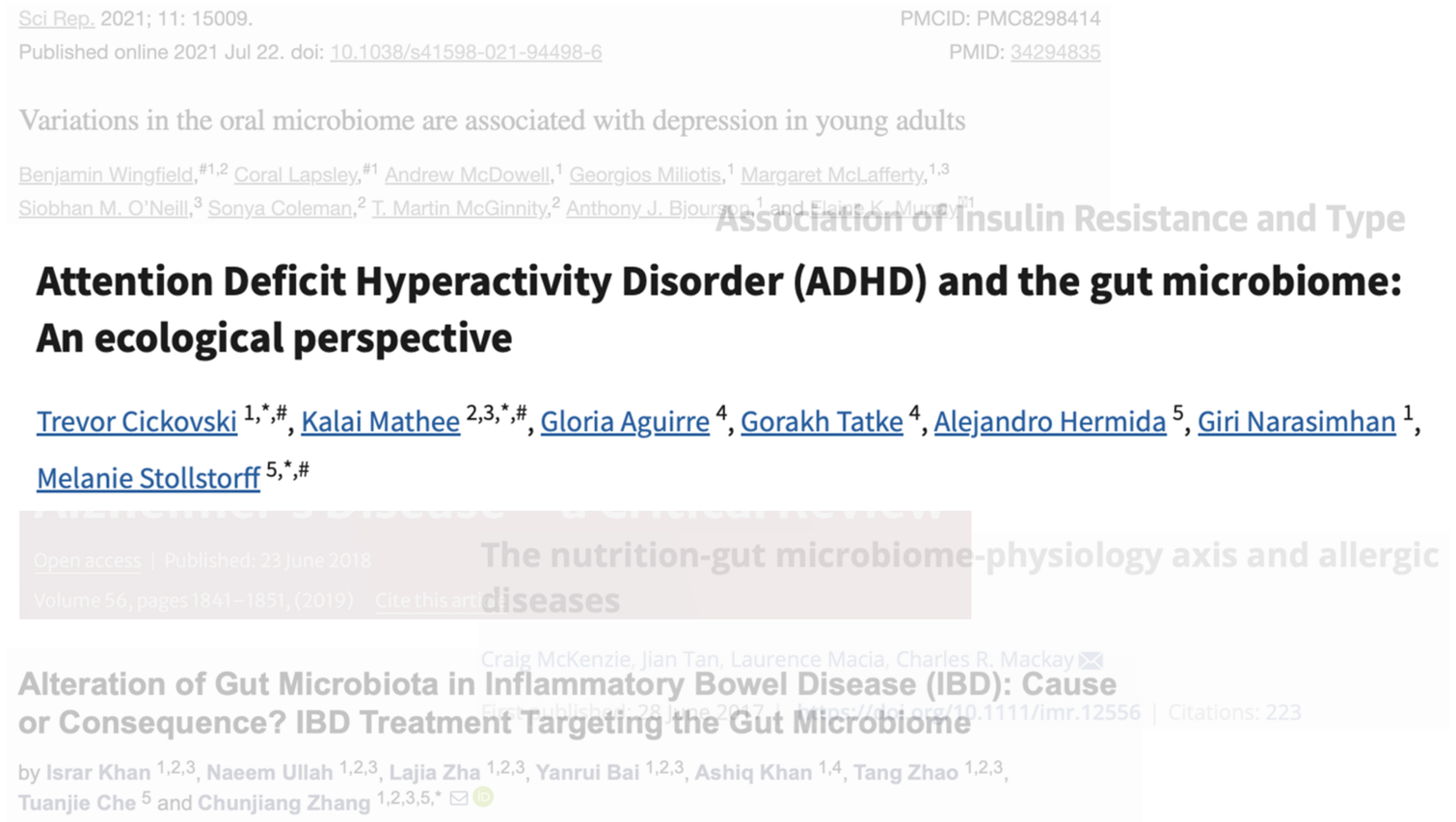

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Benjamin Wingfield,[#1,2] Coral Lapsley,[#1] Andrew McDowell,[1] Georgios Miliotis,[1] Margaret McLafferty,[1,3] Siobhan M. O'Neill,[3] Sonya Coleman,[2] T. Martin McGinnity,[2] Anthony J. Bjourson,[1] and Elaine K. Murray[#1]

Attention Deficit Hyperactivity Disorder (ADHD) and the gut microbiome: An ecological perspective

Trevor Cickovski [1,*,#], Kalai Mathee [2,3,*,#], Gloria Aguirre [4], Gorakh Tatke [4], Alejandro Hermida [5], Giri Narasimhan [1], Melanie Stollstorff [5,*,#]

Open access | Published: 23 June 2018
Volume 56, pages 1841–1851, (2019) Cite this article

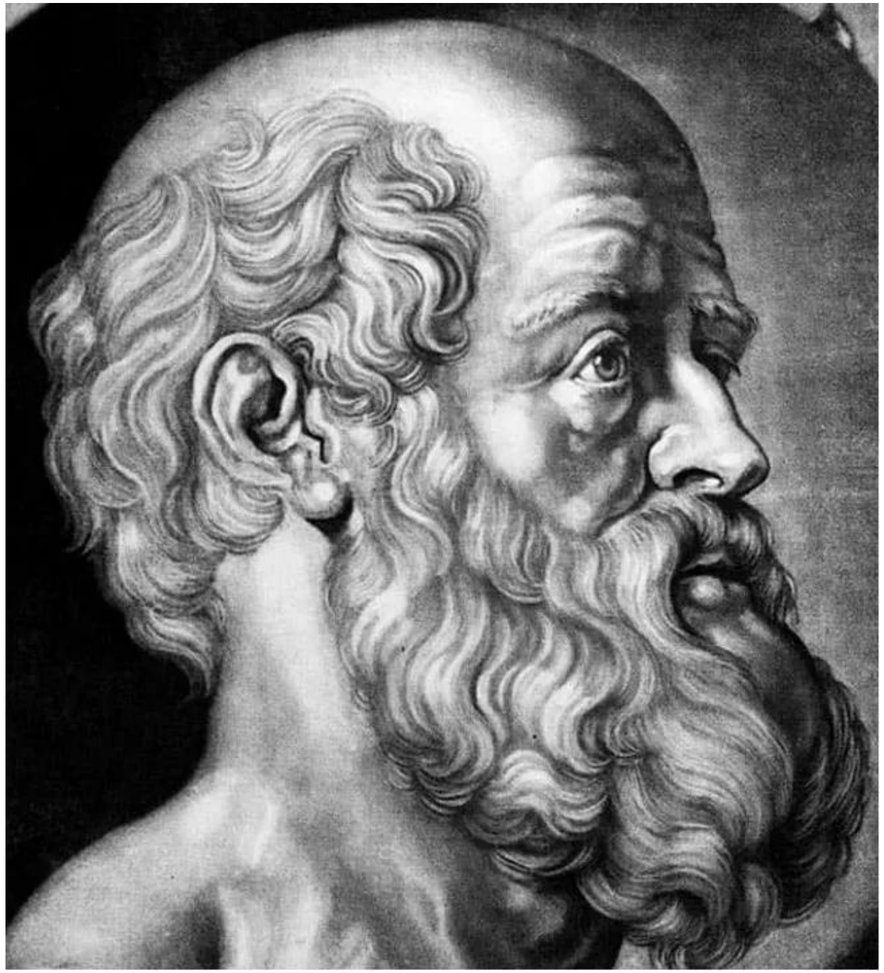
The nutrition-gut microbiome-physiology axis and allergic diseases

Craig McKenzie, Jian Tan, Laurence Macia, Charles R. Mackay

First published: 28 June 2017 | https://doi.org/10.1111/imr.12556 | Citations: 223

Alteration of Gut Microbiota in Inflammatory Bowel Disease (IBD): Cause or Consequence? IBD Treatment Targeting the Gut Microbiome

by Israr Khan [1,2,3], Naeem Ullah [1,2,3], Lajia Zha [1,2,3], Yanrui Bai [1,2,3], Ashiq Khan [1,4], Tang Zhao [1,2,3], Tuanjie Che [5] and Chunjiang Zhang [1,2,3,5,*]

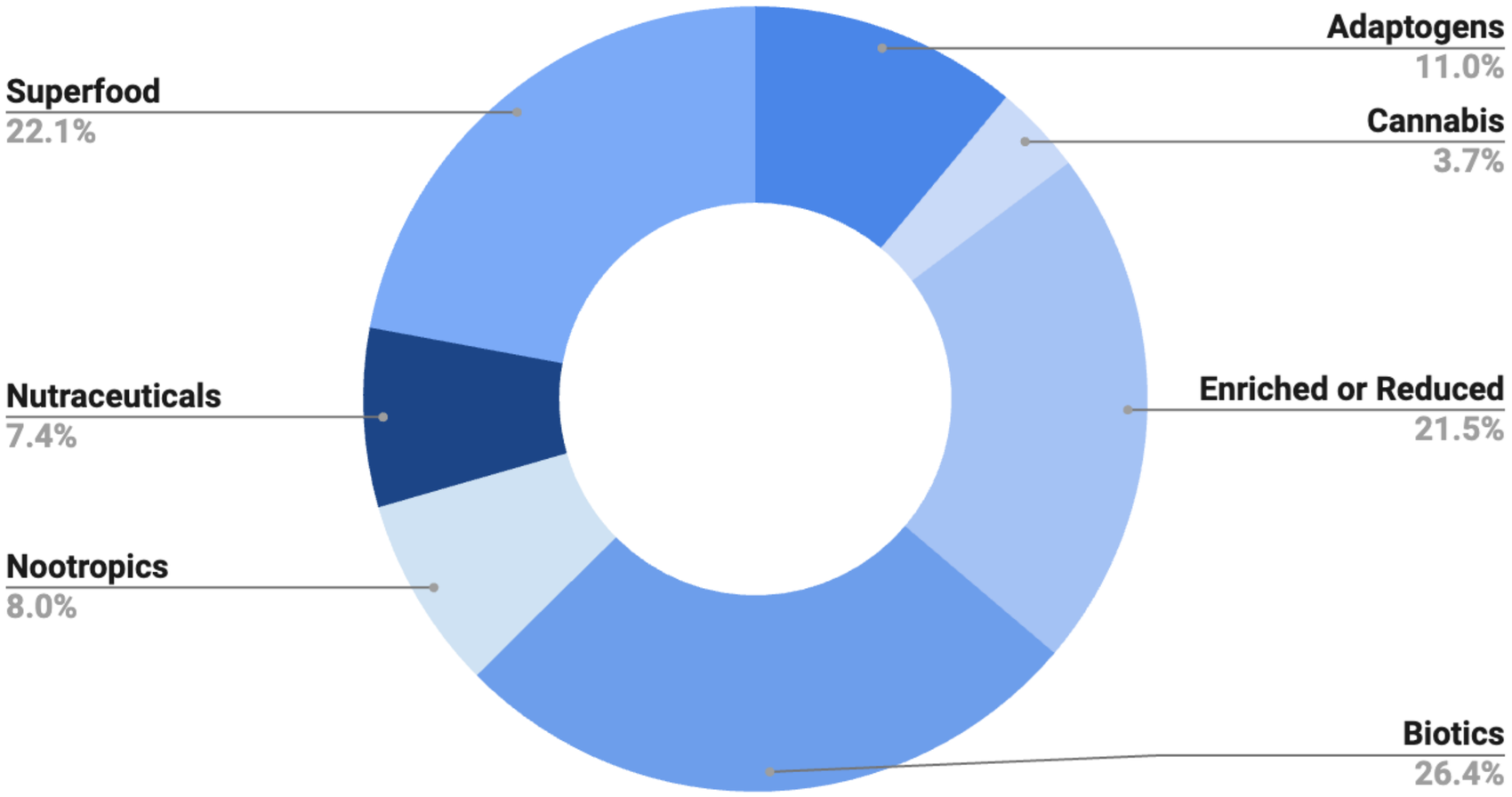


“Let food be thy medicine and medicine be thy food”

- Hippocrates

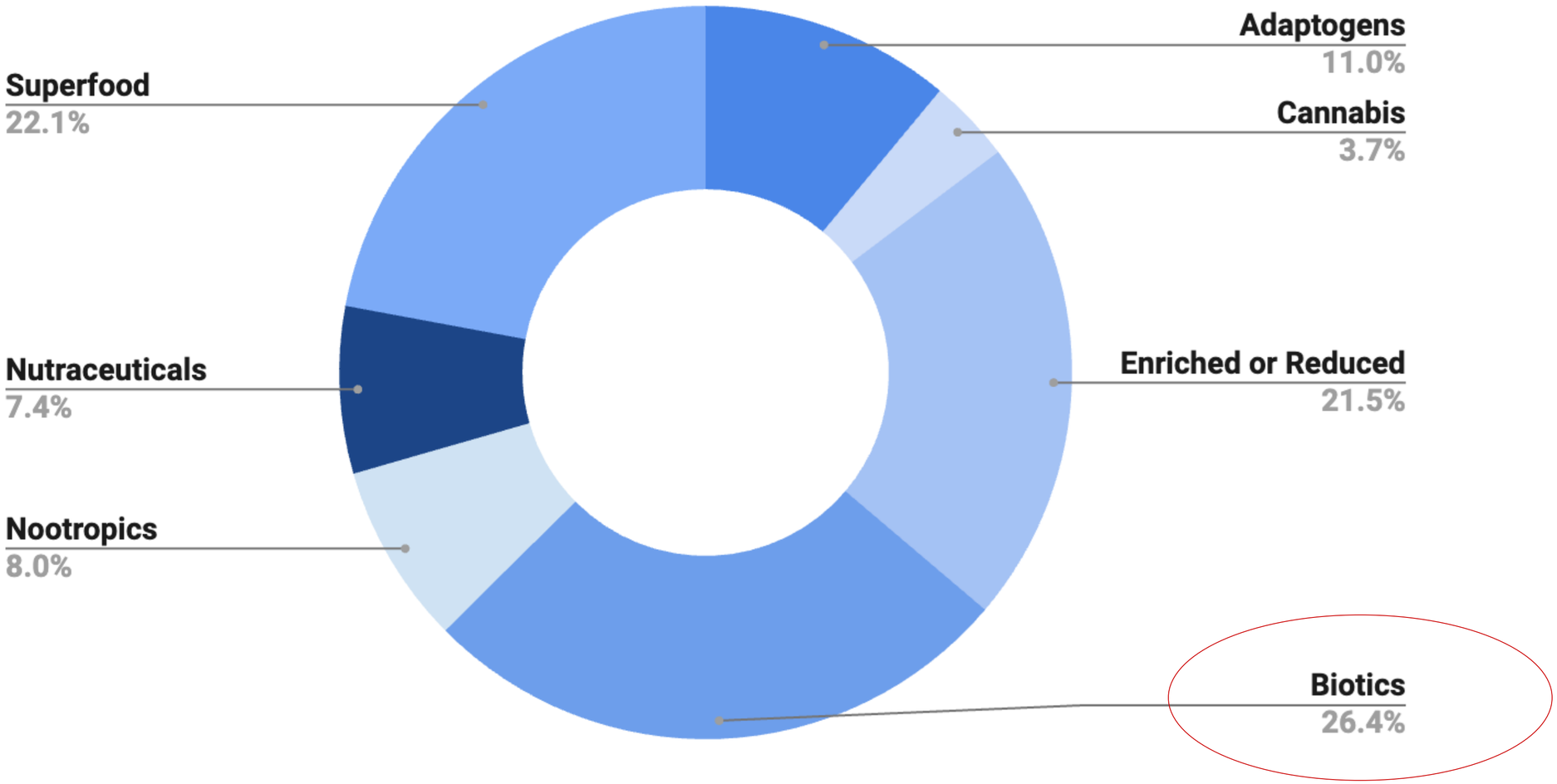
Functional Product Breakdown

PLUG AND PLAY
FOOD & BEVERAGE



Functional Product Breakdown

PLUG AND PLAY
FOOD & BEVERAGE



Total Microbiome-Based Startups per Year

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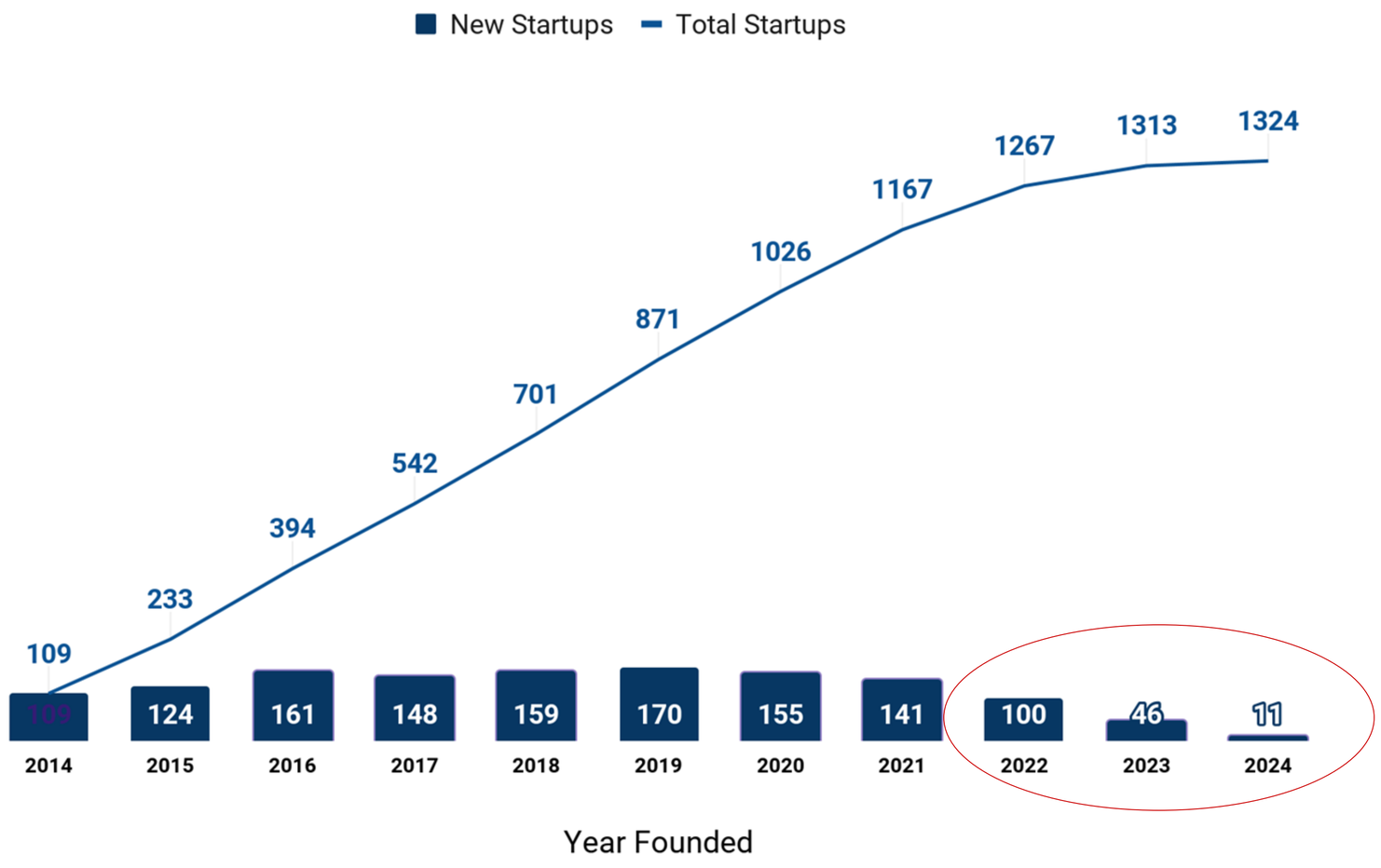

- Growing interest and focus on the microbiome space
- COVID-19 made us rethink our health
- Growing demand in personalized health solutions and proof in product efficacy

Total Capital Raised in Microbiome-Based Startups

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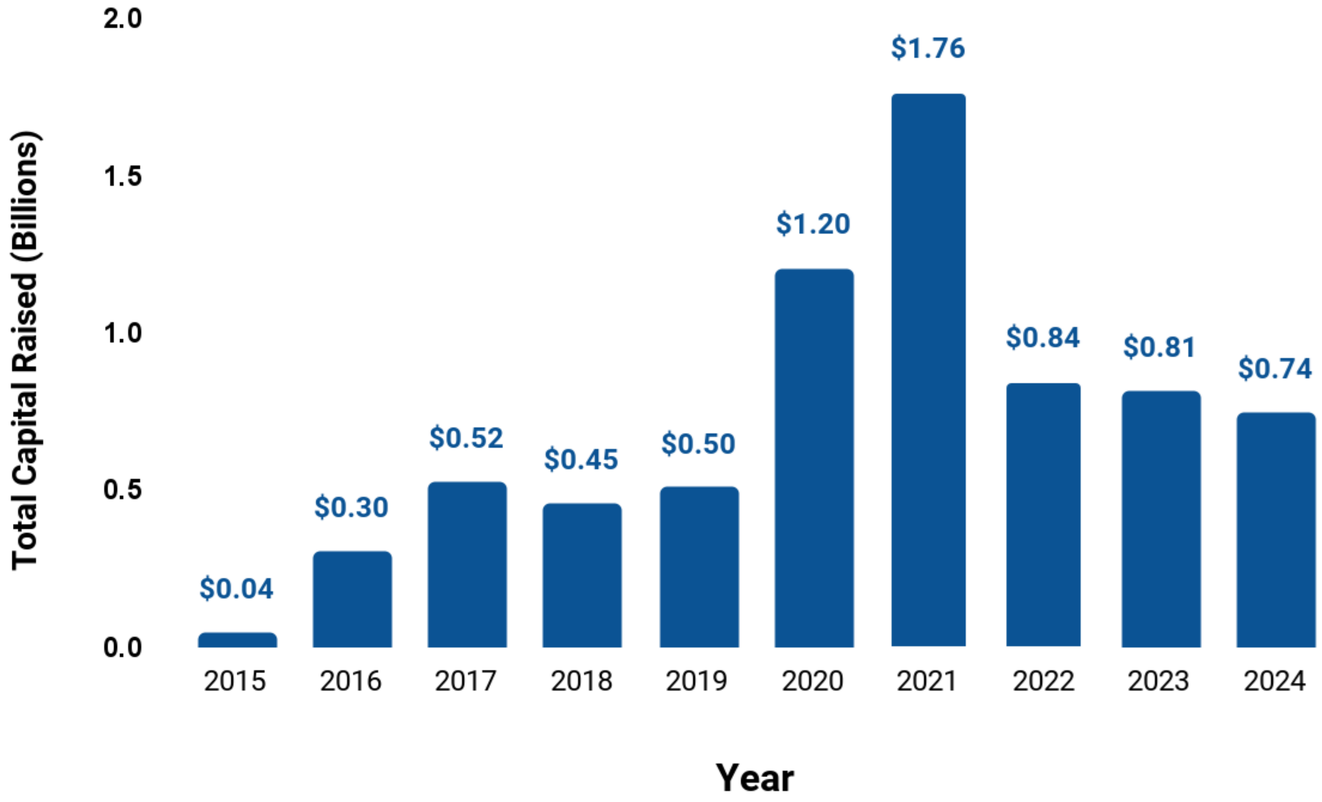

- Capital raised increased between 2015 and 2021
- The microbiome remains a largely unexplored area
- Regulatory hurdles create a long clinical and approval processes

Funding Stage for Clinically Verified Ingredients

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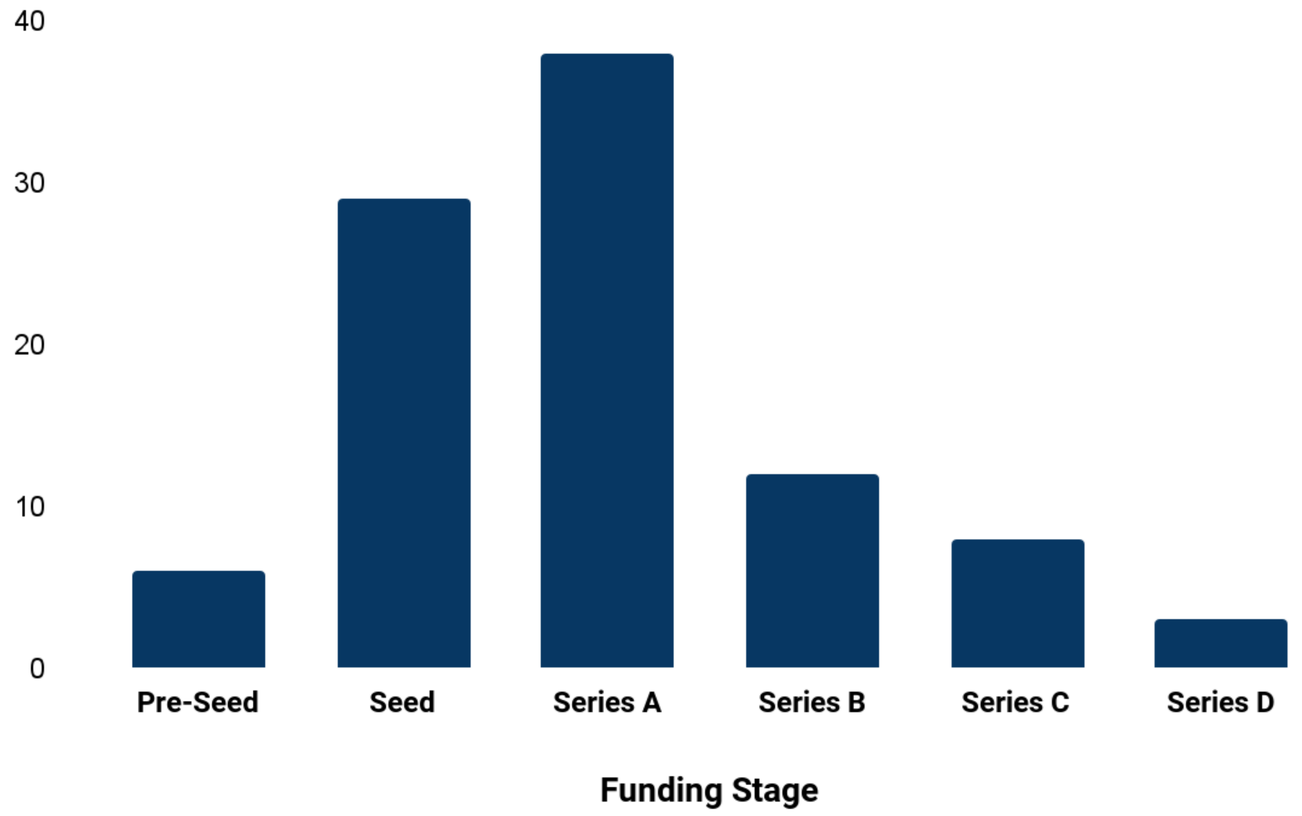
- Pre-seed and seed stages: early proof of concept, preclinical data, prototyping
- Series A - initiate clinical trials and prepare for regulatory approval
- Series B and C dictated by the regulatory environment



Clinically Verified Breakdown

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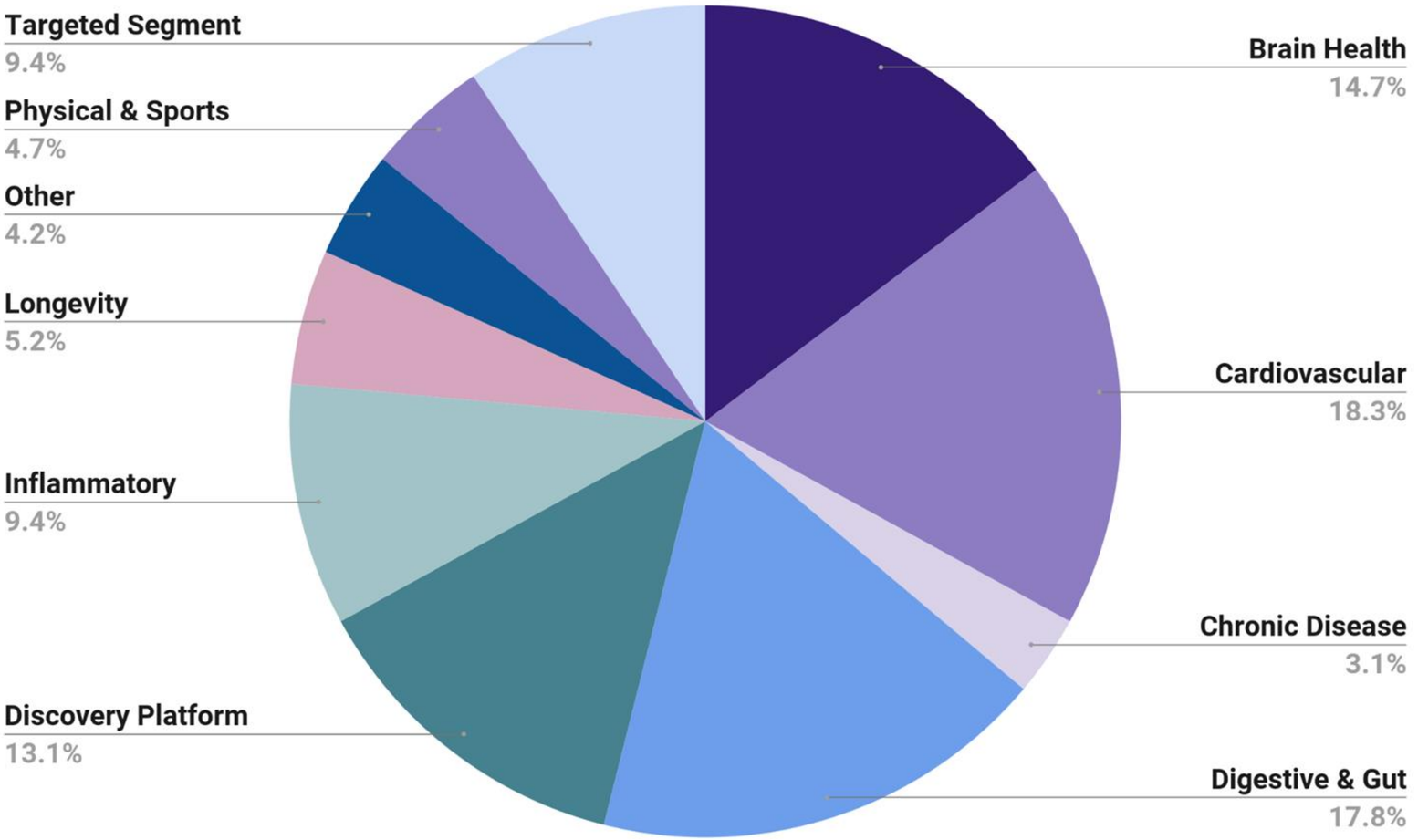

Clinically Verified Breakdown

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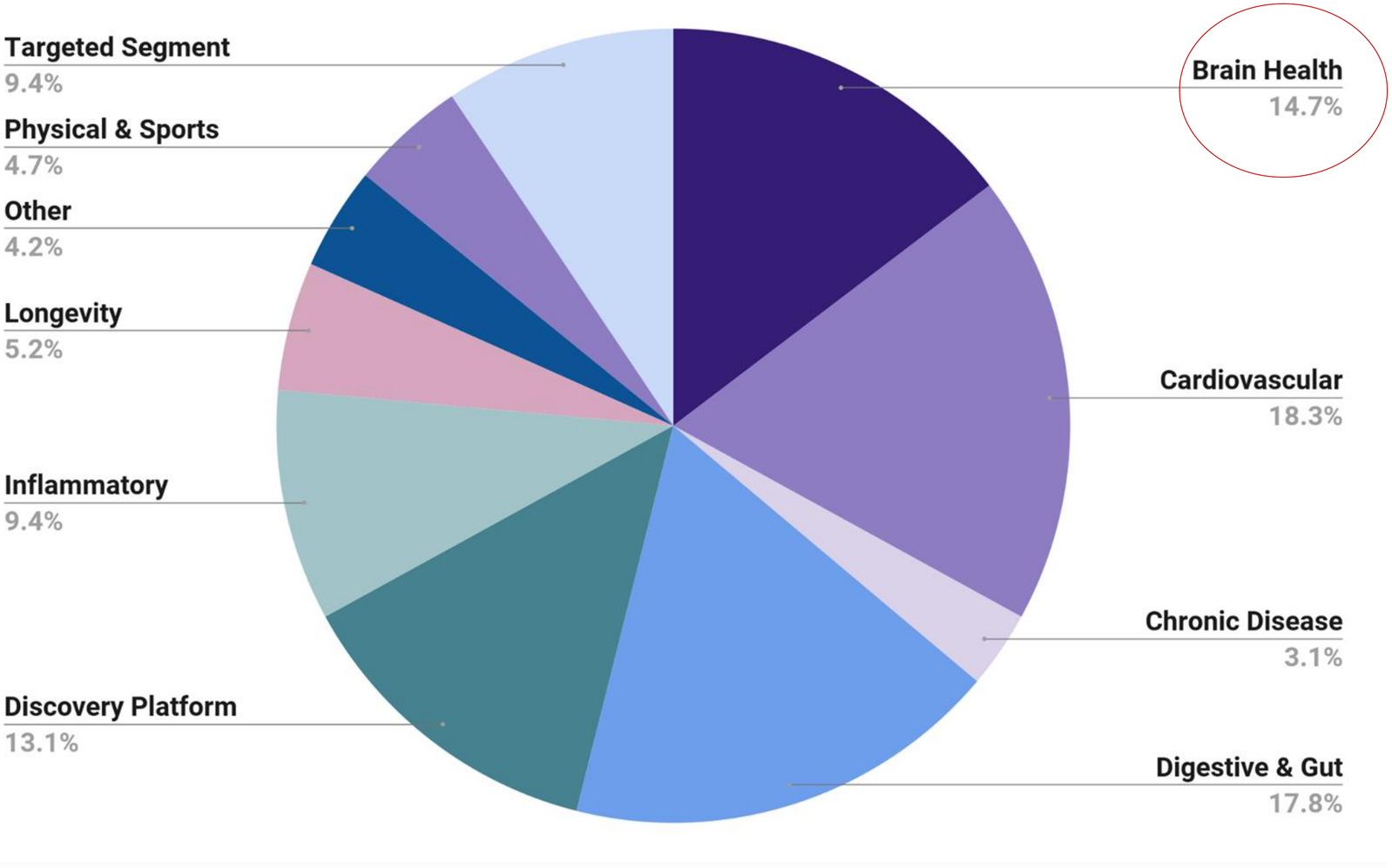
FOOD & BEVERAGE



Clinically Verified Breakdown

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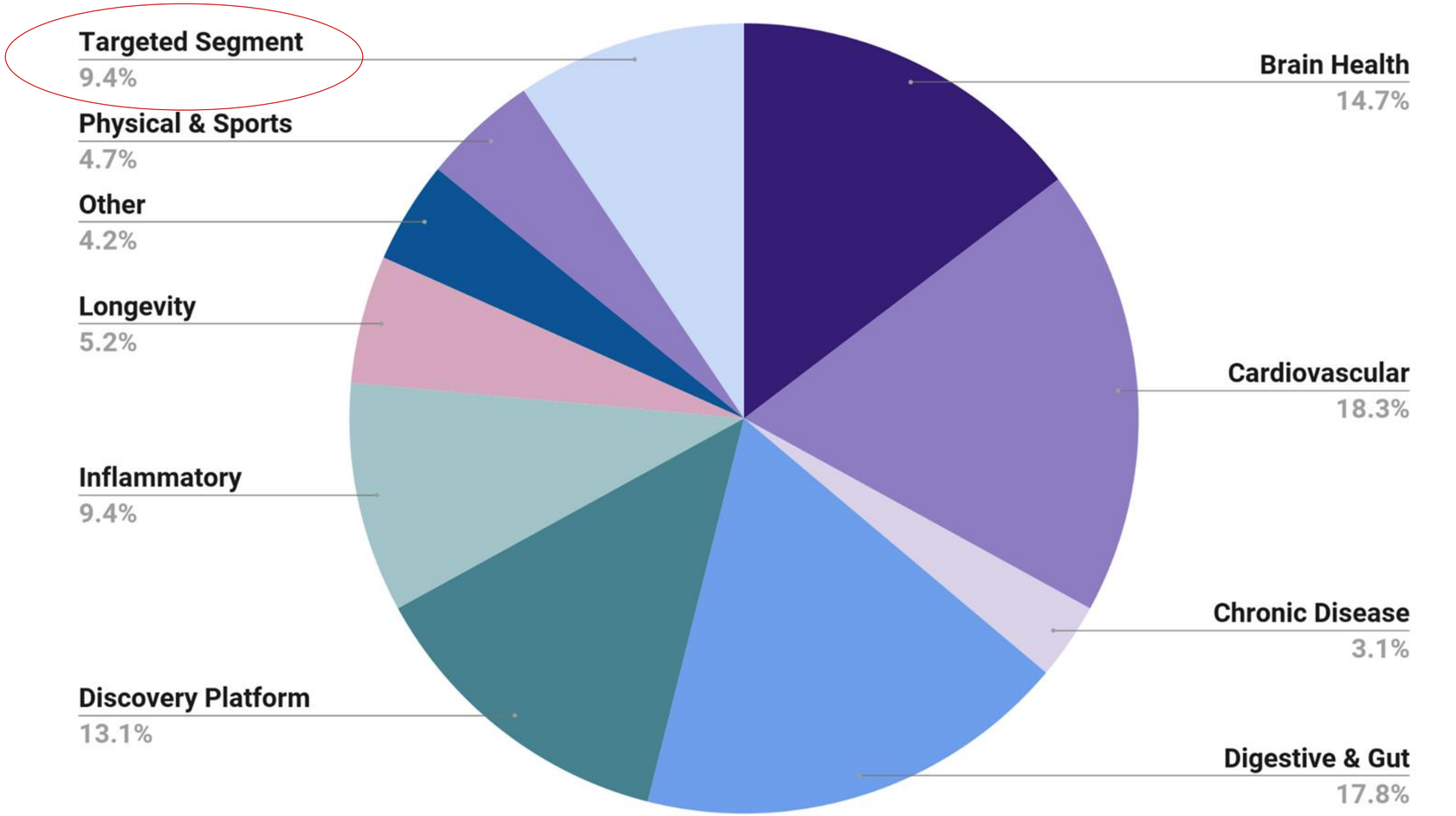
FOOD & BEVERAGE



Clinically Verified Breakdown

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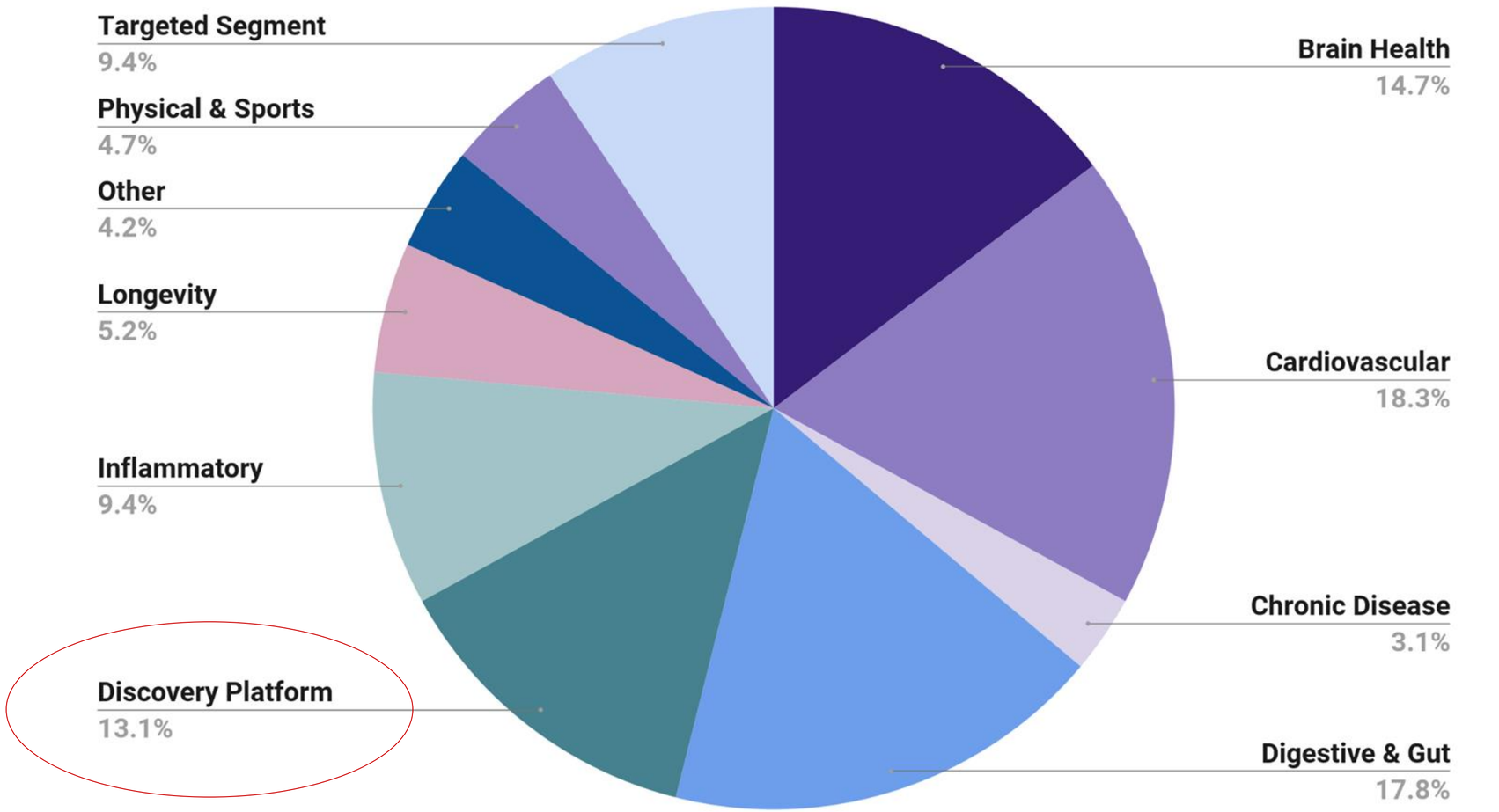

Investment Thesis: Discovery Platforms

PLUG AND PLAY FOOD & BEVERAGE

Opportunities

1. **Drug Discovery/ Clinical verification** *reducing costs, time and minimizing human-risk*
2. **Personalized nutrition** *providing scalable individual insights*
1. **Proprietary AI/ML Databases** *opening the door to partnerships and licensing opportunities.*

Key Attributes

- Scalability
- Regulatory
- Affordability

Startups

Insilico Medicine

SwipeBiome

BIOMESENSE

NURITAS

Persephone

SYNTHETICGESTALT

Holobiome

Investment Thesis: Discovery Platforms

PLUG AND PLAY FOOD & BEVERAGE

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Investment Thesis: Discovery Platforms

PLUG AND PLAY FOOD & BEVERAGE

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1. **Drug Discovery/ Clinical** *verification reducing costs, time and minimizing*
2. **Personalized nutrition** *providing scalable individual insights*
1. **Proprietary AI/ML** *Databases opening the door to partnerships and licensing opportunities.*

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Startups

Insilico Medicine
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BIOMESENSE
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Holobiome

Investment Thesis: Discovery Platforms

PLUG AND PLAY FOOD & BEVERAGE

Opportunities

- **Drug Discovery/ Clinical verification** *reducing costs, time and minimizing human-risks like digital twins*
- **Personalized nutrition** *providing scalable individual insights*
- **Proprietary AI/ML Databases** *opening the door to partnerships and licensing opportunities.*

Key Attributes

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Startups

Insilico Medicine

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BIOMESENSE

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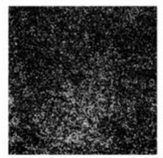

SYNTHETICGESTALT

Holobiome

Exhibit 3

US consumers seek out clinically proven products across most product categories.

US consumer preference for clinically proven efficacy vs organic or natural, by product type,[1]
% of respondents (n = 2,007)

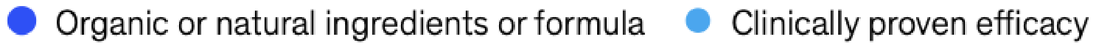

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Exhibit 3

US consumers seek out clinically proven products across most product categories.

US consumer preference fo
% of respondents (n = 2,007)

Organic or natural ingredients

US consumers troubled by untested ingredients in supplements and personal care, finds NSF survey

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Exhibit 3

US consumers seek out clinically proven products across most product categories.

California bans FD&C Red Dye #3 and other additives: Top points for industry

untested ingredients in supplements and personal care, finds NSF survey

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California bans FD&C Red Dye #3 and other additives: Top points for industry

California legislators send governor landmark bill banning six artificial dyes in foods served by public schools

The bill prohibits foods containing synthetic dyes that have been tied to neurobehavioral problems in some children from being served during school hours.

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Preparing for food-dye bans: What CPG brands must know about reformulations ahead of mandates

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Review Article | Open access | Published: 16 September 2021

Role of dietary factors in the prevention and treatment for depression: an umbrella review of meta-analyses of prospective studies

Yujie Xu, Linan Zeng, Kun Zou, Shufang Shan, Xiaoyu Wang, Jingyuan Xiong, Li Zhao, Lingli Zhang ✉ & Guo Cheng ✉

Translational Psychiatry **11**, Article number: 478 (2021) | Cite this article

9245 Accesses | **34** Citations | **41** Altmetric | Metrics

Expert Review | Published: 03 November 2020

Diet and depression: exploring the biological mechanisms of action

Wolfgang Marx ✉, Melissa Lane, Meghan Hockey, Hajara Aslam, Michael Berk, Ken Walder, Alessandra Borsini, Joseph Firth, Carmine M. Pariante, Kirsten Berding, John F. Cryan, Gerard Clarke, Jeffrey M. Craig, Kuan-Pin Su, David Mischoulon, Fernando Gomez-Pinilla, Jane A. Foster, Patrice D. Cani, Sandrine Thuret, Heidi M. Staudacher, Almudena Sánchez-Villegas, Husnain Arshad, Tasnime Akbaraly, Adrienne O'Neil, ... Felice N. Jacka + Show authors

Molecular Psychiatry **26**, 134–150 (2021) | Cite this article

20k Accesses | **305** Citations | **495** Altmetric | Metrics

Review Article | Published: 22 August 2024

Feeding gut microbes to nourish the brain: unravelling the diet–microbiota–gut–brain axis

Elizabeth Schneider, Kenneth J. O'Riordan, Gerard Clarke & John F. Cryan ✉

Nature Metabolism **6**, 1454–1478 (2024) | Cite this article

1550 Accesses | **161** Altmetric | Metrics

Influence of Foods and Nutrition on the Gut Microbiome and Implications for Intestinal Health

Ping Zhang [1]

Editor: Rustam I Aminov[1]

The gut microbiome: linking dietary fiber to inflammatory diseases

Feng Zhang [a b c], Dejun Fan [a b d e], Jian-lin Huang [c] ✉, Tao Zuo [a b e] ✉

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Program Startups

CITRINE INFORMATICS
aipalette
COMMERCE.AI
Oobli
bonumose
Peekage
Canomiks
brightseed
REDLEAF BIOLOGICS
export manager AI
ZeroIN
swish brand experiences

Tech Focus Areas

AI Platforms: Product Development + Consumer Insights

Novel, Natural Sweeteners and/or Colors

Clinically Verified Ingredients

New Routes to Market/ Speed of Trialing Innovation

Thank you!

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CLOSING REMARKS

Valeria Cobos

Ventures Analyst

Plug and Play Tech Center

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Asahi Shuzo & Dassai Blue

Kazuhiro Sakurai

CEO

Asahi Shuzo & Dassai Blue Sake Brewery

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DASSAI

CHOOSING FOR THE BRAND

We only use Yamada-Nishiki Rice

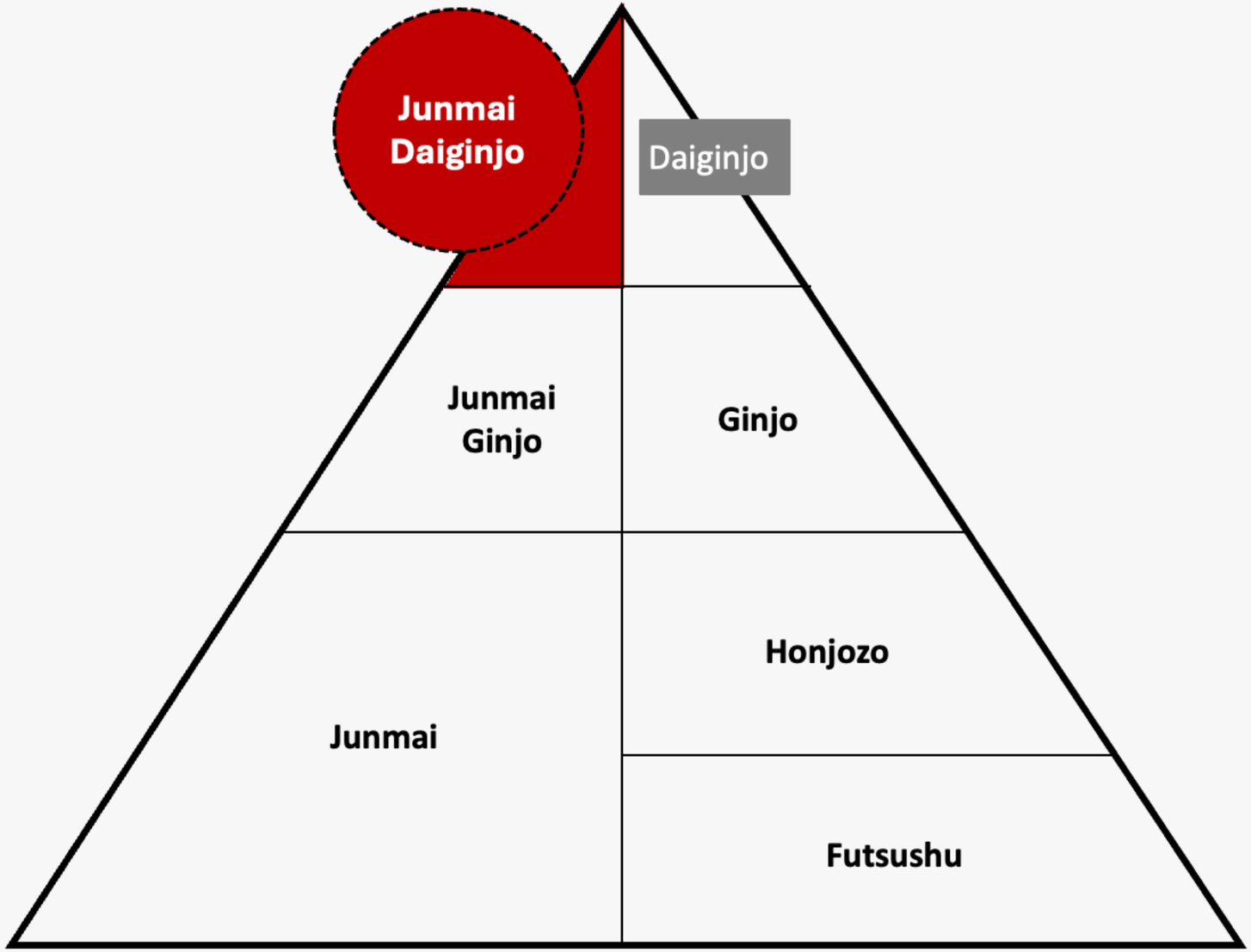
We only make Junmai Daiginjo





Yamada-Nishiki Rice
(King of Sake Rice)

Sake Category



HYBRID BETWEEN CRAFTMANSHIP & CUTTINGEDGE TECHNOLOGY





We have more than 200 brewers, which has the highest number of brewers that one brewery has in the world.

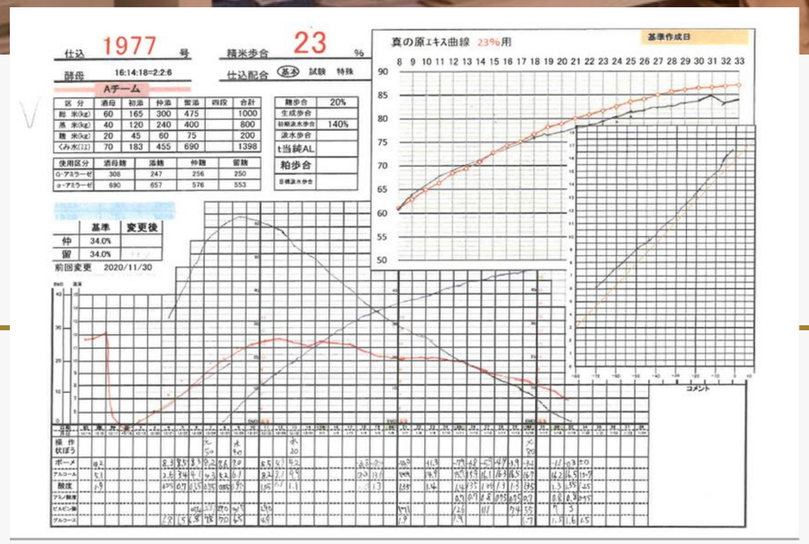











仕込 1977 号
精米歩合 23 %
酵母 16:14:18=2:2:6
仕込配合 基準 試験 特殊
Aチーム
真の原エキス曲線 23%用
基準作成日
基準 変更後
仲 34.0%
留 34.0%
前回変更 2020/11/30



EVOLUTION



3000TIMES/YEAR

We brew sake at a quantity so large that it would take other breweries over 100 years to produce the same amount that we do in a year.

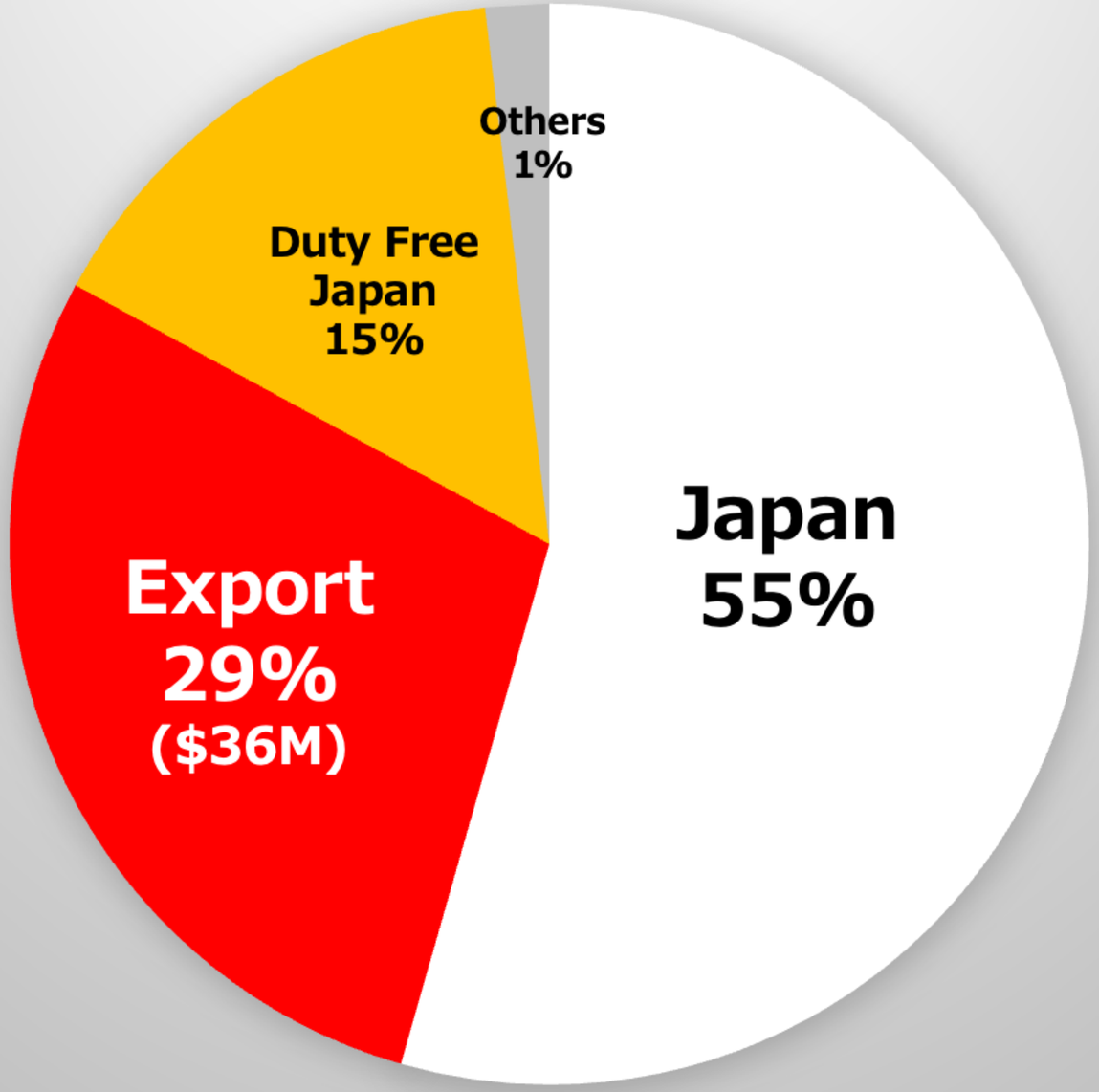




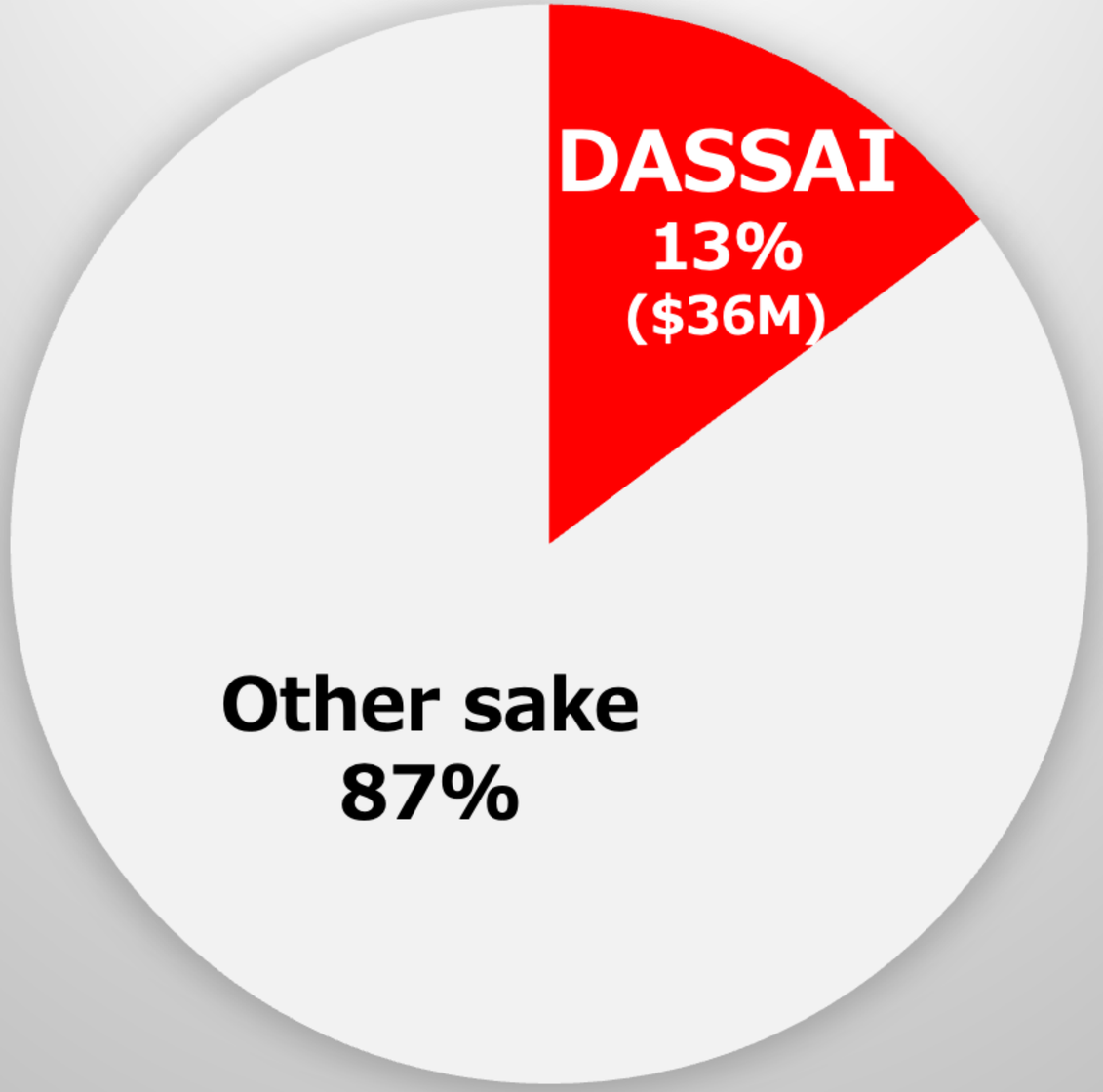
WORLDWIDE



Dassai Sake Sales Category in 2024
¥195M ($125M)



Sake Exports from Japan in 2023
¥411M ($264M)



Reference : Ministry of Finance & Data from Asahi Shuzo

NEW YORK BREWERY

”

Making of Dassai Blue

獺祭 Blue DASSAI BLUE




獺祭
Blue




獺祭
Blue


獺祭
Blue
DASSAI BLUE
Junmai Daiginjo
Yamada Nishiki
Type 50
獺祭
Blue
DASSAI BLUE
Junmai Daiginjo
Yamada Nishiki
Type 23
獺祭
Blue
DASSAI BLUE
Junmai Daiginjo
Yamada Nishiki
Type 35


獺祭
Blue
DASSAI BLUE
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