Anatara
LIFESCIENCES

Investor Presentation

ANATARA LIFESCIENCES LTD

DECEMBER 2024

Disclaimer

The information in this presentation does not constitute personal investment advice. The presentation is not intended to be comprehensive or provide all information required by investors to make an informed decision on any investment in Anatara Lifesciences Ltd, ACN 145 239 872 (Company). In preparing this presentation, the Company did not take into account the investment objectives, financial situation and particular needs of any particular investor.

Further advice should be obtained from a professional investment adviser before taking any action on any information dealt with in the presentation. Those acting upon any information without advice do so entirely at their own risk.

Whilst this presentation is based on information from sources which are considered reliable, no representation or warranty, express or implied, is made or given by or on behalf of the Company, any of its directors, or any other person about the accuracy, completeness or fairness of the information or opinions contained in this presentation.

No responsibility or liability is accepted by any of them for that information or those opinions or for any errors, omissions, misstatements (negligent or otherwise) or for any communication written or otherwise, contained or referred to in this presentation.

Neither the Company nor any of its directors, officers, employees, advisers, associated persons or subsidiaries are liable for any direct, indirect or consequential loss or damage suffered by any person as a result of relying upon any statement in this presentation or any document supplied with this presentation, or by any future communications in connection with those documents and all of those losses and damages are expressly disclaimed.

Any opinions expressed reflect the Company’s position at the date of this presentation and are subject to change.

Corporate Snapshot

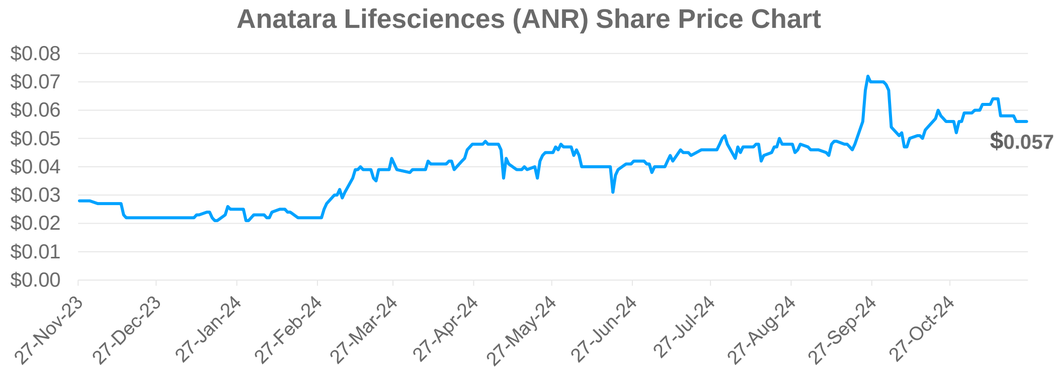
DEVELOPING EVIDENCED-BASED SOLUTIONS FOR GASTROINTESTINAL TRACT HEALTH ISSUES

About Anatara

Anatara Lifesciences Ltd (ASX:ANR) (“Anatara” or “the Company”) is focused on the validation and commercialisation of innovative, evidence-based products for human health with significant unmet needs with a focus on gastrointestinal considerations.

The Company has completed Stage 1 of its pivotal clinical trial for irritable bowel syndrome with the patented GaRP product, with interim results released in Q3CY23.

Additionally, there are a number of other indications for the use of GaRP and Anatara is actively assessing other opportunities in the healthcare space.



ASX Code	ANR
Share Price	$0.057
Shares on Issue	~208m
Market Capitalisation	~$11.9m
Cash (Oct 31 2024)	~$1m + $0.75m placement + $0.5m SPP underway

2 DECEMBER 2024

Investment Highlights

Novel Technology

- Gastrointestinal Reprogramming (GaRP) technology aimed at restoring and maintaining the GIT lining, integrity and homeostasis.

Pivotal Phase II clinical trial – Irritable bowel syndrome

- Primary Endpoint – Efficacy of ‘GaRP’ for irritable bowel syndrome.
- Positive Stage 1 results announced 3Q CY2023.
- Stage 2 actively recruiting with 50 of target 60-100 in trial (as per AGM announcement 14th Nov 2024).
- **Stage 2 (headline results) anticipated Q1 CY2025.**

Significant market opportunities

- Digestive Health Market to be valued at **US$23.4B** in 2030 with a CAGR of **8.1%.**[1]

Significant unmet medical need

- Treatments for IBS/IBD are often not effective in controlling symptoms.
- **Only 15-20% of patients are ‘very satisfied’** with their treatment options.[2]
- GaRP addresses the underlying factors of many GIT disorders, providing multi-faceted symptomatic relief while rejuvenating the tract.

Assessing commercial options for GaRP

- Actively assessing potential commercial partners for GaRP.
- Initiated assessment and processes for GaRP to be registered and ready for commercial manufacturing.
- **GaRP Technology to provide a pipeline of products**
- Potential indications for GaRP include Inflammatory Bowel Disease (IBD), Paediatric indications & Functional Dyspepsia.

Assessing additional corporate opportunities

- Potential to acquire/license innovative assets/programs.
- **Commencing an anti-obesity project** designed to develop an oral medication to assist weight reduction and sustaining weight control in conjunction with other contemporary treatments and approaches.

1. https://www.grandviewresearch.com/industry-analysis/digestive-health-products-market 2. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7212496/

Key Management & Board of Directors

Anatara’s nimble Board and Management structure provides significant experience and flexibility for potential corporate transactions.

HIGHLY EXPERIENCED BOARD & MANAGEMENT

Dr David Brookes
Executive Chair

- 30+ years international experience in the health and biotechnology industries.
- Former Chairman of genomics solutions company, RHS Ltd (ASX: RHS); acquired by PerkinElmer Inc (NYSE:PKI).
- Medical Practitioner, Biotechnology Consultant
- MBBS, FACRRM, FAICD.

John Michailidis
Executive Director

- John is an executive with more than 30 years’ of commercial pharmaceutical experience.
- His career has ranged from global franchise and regional executive leadership roles with F. Hoffman - La Roche to CEO experience with emerging biotechs.
- BSc (Hons) in Genetics from LaTrobe University and exec. business qualifications from Harvard Business School and INSEAD.

Nicholas Haslam
Non-Executive Director

- Nick is a chartered accountant with over 20 years of experience in professional services associated with sport, biotechnology and research.
- His biotechnology experience includes being the CEO of medical device company Plasma Shield, as well as playing a leading role in scaling up KangaTech, an injury prevention business with operations now established internationally.

Gastrointestinal Health

ANATARA HAS ACTIVE PROGRAMS APPROACHING COMMERCIAL OUTCOMES

Gastrointestinal RePrograming (GaRP)

GaRP is a multi-component, multi-coated patented complementary medicine. It is designed to address the underlying factors associated with chronic gastrointestinal conditions such as IBS and IBD, in part by assisting to restore and maintain the integrity of the tract lining and the homeostasis of the microbiome.

						Pre-Clinical			Clinical			
Program	Product	Indication	Trial Population	Delivery	Discovery	In-Vitro	In-Vivo	Proof of Concept	Pivotal	Registration	Commercial Rights
Human	GaRP	Irritable bowel syndrome	Ages 18-65	Oral Minitabs	✓	✓	✓	3Q CY2023	Q1 CY2025	Listed AUSTL Nos pathway	Global

GaRP

ONE PRODUCT, MULTIPLE BENEFITS

Patent Protected

Scientifically designed for the relief and management of background IBS symptoms and the rejuvenation of GIT dynamics

Bromelain – Leading innovator

Anatara has in-house knowledge of Bromelain protease activity and the associated QA required for clinical benefits.

Everyday Option

Designed as an everyday option to manage the causes and relieve symptoms of IBS (pain, cramping, gas, bloating, diarrhoea & constipation).

Effective Relief

Coated components released to the target areas for effective and sustained relief - 2 components release in the small intestine and 3 components have additional coating for delivery in the large intestine (colon).

Natural Components

Combines natural bromelain extract from pineapple stems in a patent pending formulation with other synergistic coated GRAS components. These components have specialist roles when delivered into specific regions of the GIT. ***must be delivered coated to colon/large intestine for MOA (Method of Action)**

GaRP

Bromelain

Reduces pro-inflammatory cytokines & serotonin; promotes healing via mucin genes;reduces attachment some bacteria.

Menthol

Antispasmodic for smooth muscle GITract.

Vitamin D*

Improves mucosal barrier homeostasis and assists microbiome; down-regulation of pro-inflammatory factors.

Threonine*

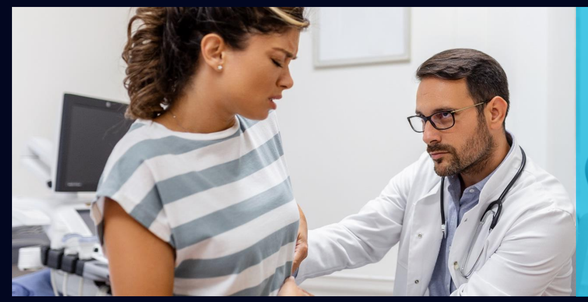
Amino acid that stimulates colonic healing & mucin synthesis.

Butyrate*

Supports colonocytes as a barrier; reduces pro-inflammatory cytokines & restores homeostasis of microbiome.

ANATARA LIFESCIENCES

Snapshot: IBS and IBD



11%

IBS affects 11% of the global population [1]

GASTROINTESTINAL DISORDERS ARE HIGHLY PREVALENT AND POORLY MANAGED

+5 million

IBD affects more than 5 million people globally, with accelerating incidence [2]

Debilitating Symptoms

Patients experience symptoms such as pain, bloating and diarrhoea.

Limited Treatments

Pharmacological options remain limited and often leave patients with poorly controlled symptoms.[3]

Frustrated Patients

45% of IBS-D patients agreed with the statement “I’m willing to try anything to help manage my IBS”.[4]

Patients seek alternative options

Up to 77% of IBS/IBD patients use dietary supplements, complementary & alternative medicines. [5] [6]

Doctors recommend supportive treatments

Health-care practitioners increasingly recommend the use of such supportive treatments. [7]

Iberogast recommended

For example, source of recommended use of Iberogast: Healthcare provider 39.4%. [8]

1. Clinical Gastroenterology and Hepatology 2012: 10, 712-721. 2. Crohn’s and Colitis Australia, 3. Grundmann & Yoon 2010. 4. IBS Global Impact Report 2018 https://badgut.org/wp-content/uploads/IBS-Global-Impact-Report.pdf.

5. Gastroenterology 2017: 152:415-429, 6. World J. Gastroenterol 2014: 346 – 362. 7. Michelfelder, Lee, & Bading 2010 . 8. Yoon, Grundmann, Smith & Mason 2018

IBS in America Survey

USE OF TREATMENTS FOR IRRITABLE BOWEL SYNDROME AND PATIENT SATISFACTION, BASED ON IBS IN AMERICA SURVEY

GaRP

The publication “Highlights the need for further effective IBS treatments”

Significant opportunity for an effective, evidenced based OTC product

Trial Details

Use and satisfaction of various IBS treatments

3,254

IBS sufferers (Rome III criteria)

302

Physicians and gastroenterologists

OTC is Preferred Treatment Method

77%

of individuals with IBS have used OTC treatment for IBS symptoms

15%

of individuals with IBS have used prescription medications

Low Treatment Satisfaction

15%

of IBS-C sufferers were ‘very satisfied’ with OTC treatments

20%

of IBS-D sufferers were ‘very satisfied’ with OTC treatments

Ineffectiveness of Prescription Options

19%

of IBS-C sufferers were very satisfied with an FDA approved medication

11%

of IBS-D sufferers were very satisfied with an FDA approved medication

Source: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7212496/

Active Program – Phase II Clinical Trial

STAGE 2 OF PHASE II CLINICAL TRIAL

Gastrointestinal ReProgramming (GaRP) technology for ‘gut health’

Active pivotal clinical trial – Irritable Bowel Syndrome:

- Primary Endpoint – Efficacy of ‘GaRP’ for irritable bowel syndrome.
- 120-140 patient (inc Stage 1 blinded data), placebo-controlled, dose-escalating pivotal trial.
- Delivered successful Stage 1 results.
- Stage 2 – Headline results anticipated Q1 CY2025.

Safety Profile

- All components GRAS (generally regarded as safe by FDA).

Intellectual Property

- Patent approved in the EU and UK. Other major jurisdictions including the US have patents pending.

Manufacturing

- GMP clinical batches manufactured and released for clinical trial.

Commercialisation via Partnering

- Anatara is in early stage discussions with potential global partners. The Company is experiencing in-bound interest regarding the clinical validation of GaRP.

Pipeline Indications

- Evaluating new indications for the GaRP technologies pipeline – in particular, inflammatory bowel disease, functional dyspepsia and paediatric indications.
- KOLs engaged.

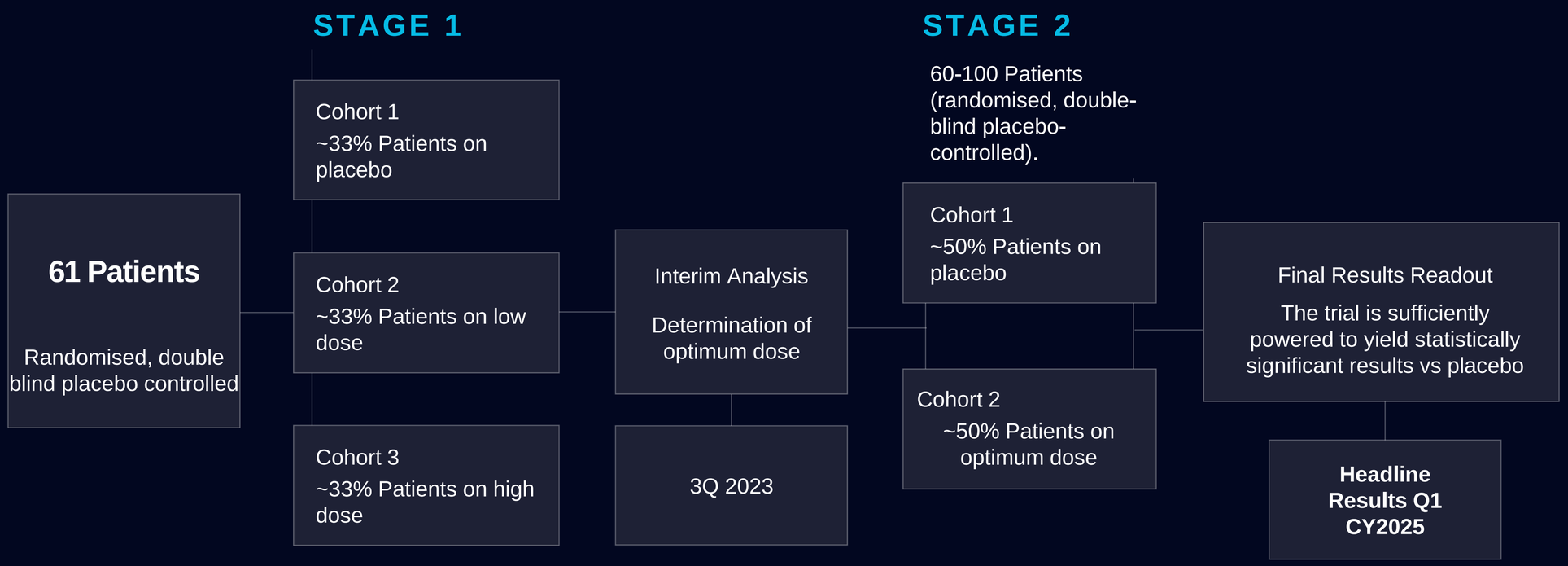
Stage 2 Actively Recruiting

STAGE 2 OF THE PHASE 2 CLINICAL TRIAL PROGRESSING WELL

Gastrointestinal ReProgramming (GaRP) technology for ‘gut health’

Active pivotal clinical trial – Irritable Bowel Syndrome:

- Actively recruiting for Stage 2.
- 50 participants of target 60-100 enrolled.
- Stage 2 – Headline Results Q1 CY2025.



Clinical Trial - Irritable Bowel Syndrome

ROBUST CLINICAL TRIAL TO VALIDATE THE EFFICACY OF GARP

Title

Dose Determination and Efficacy Evaluation of the Gastrointestinal ReProgramming (GaRP) dietary supplement in IBS patients: A Randomized, Double-blind, Placebo controlled virtual clinical trial.

Population

Males and females 18-65 years of age with irritable bowel syndrome (IBS-SSS score of 175-350 and categorised as IBS on ROME IV criteria), two stages with interim analysis between stages with approx. 60 in Stage 1 and 60-100 anticipated in Stage 2.

Key Milestones & Messages

Stage 1 Complete – 3Q CY2023

Stage 2 Completion – Q1 CY2025

Endpoints

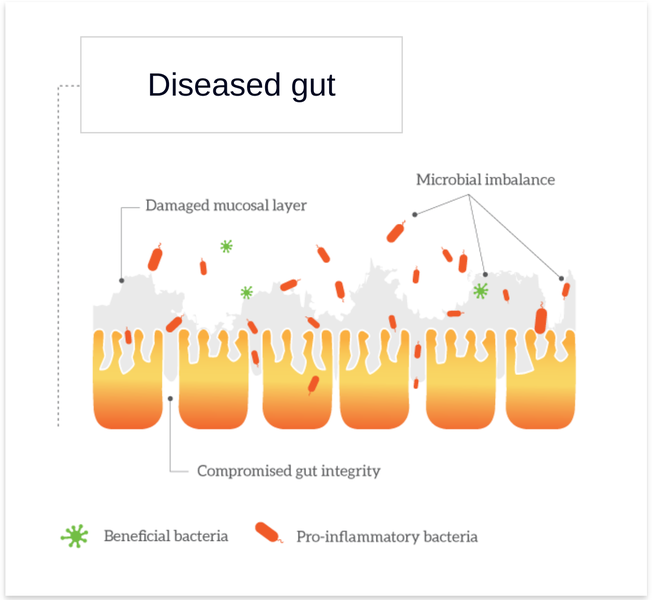
- ✓ No Treatment-Related Adverse Events.
- ✓ Change in IBS-Severity Scoring System between test and placebo groups compared to baseline.
- ✓ Safety markers.
- ✓ Change in IBS quality of life (IBS QoL) points compared to baseline.
- ✓ IBS Adequate Relief (IBS-AR) compared to baseline.
- ✓ Hospital Anxiety and Depression (HAD) Scale comparing to baseline.

Exploratory Endpoints

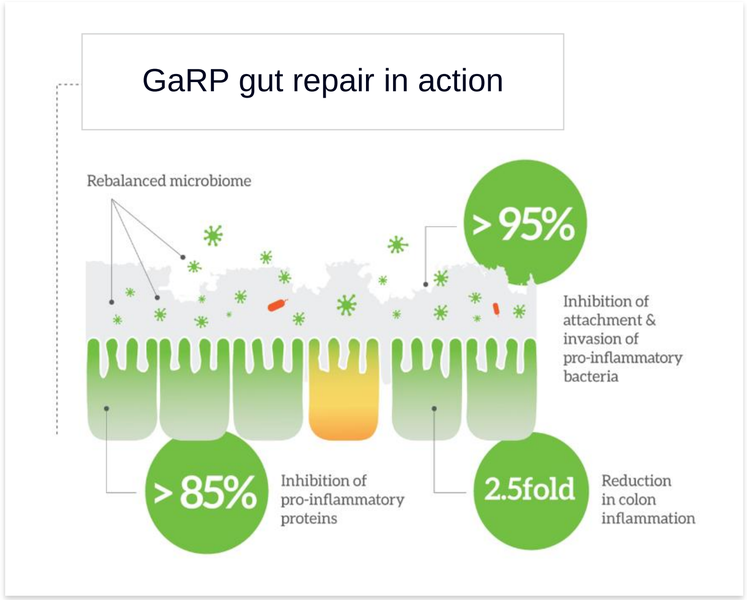
- ✓ Plasma levels of specific inflammatory markers.
- ✓ Use of rescue medication across the study group.
- ✓ Alterations in gut microbiota with respect to diversity, perceived balance and correlation to IBS symptoms including overall wellness.

GaRP - Grounded in scientific evidence

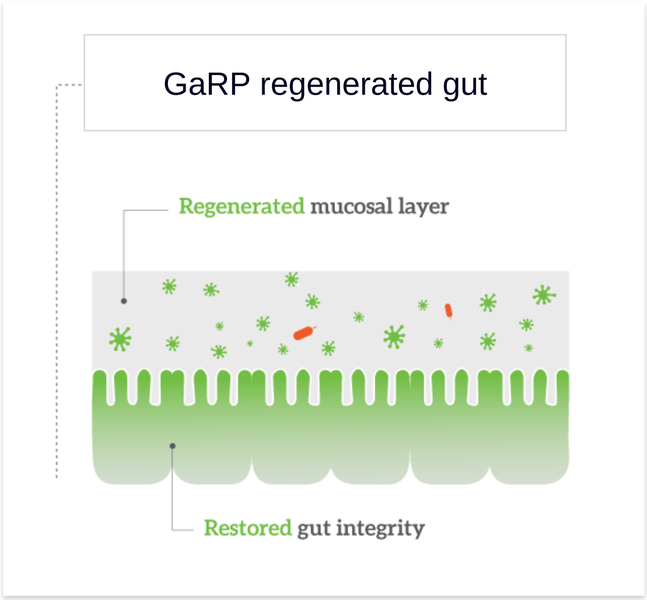
GARP ADDRESSES THE UNDERLYING FACTORS OF GASTROINTESTINAL DISORDERS



Leaky ‘tight junctions’ allow pathogens to enter the body causing harm



Increase in mucin gene expression to promote mucosal healing



Restored ‘tight junctions’ allow the body to resist pathogens and entry of toxins

Stage 1 Clinical Trial Results

DELIVERED POSITIVE PRIMARY ENDPOINTS

Stage 1 IBS Clinical Trial

- **Number of Patients:** Placebo: 20 / Low Dose: 20 / High Dose: 21

Primary Endpoints

- ✓ **Determine optimum Dose:** Low Dose
- ✓ **Safety:** No serious adverse advents
- ✓ **Improvement in Irritable Bowel Severity Scoring System (IBS-SSS)**
  - ✓ **56%** reduction after 8 weeks of treatment
  - ✓ ~**20%** outperformance over placebo

Secondary Endpoints

- ✓ **Improvement in IBS Quality of Life Score:** Low Dose resulted:
  - ✓ A 14.6pt (8/9 week) & 10.2pt (10/11 week) reduction from baseline
  - ✓ A 11.4pt (8/9 week) (P=0.10) & 8.3pt (10/11 week) (P=0.29) reduction versus placebo
  - ✓ **A 10pt+ reduction is considered clinically meaningful**
- ✓ **Improvement in Hospital Anxiety & Depression Score (HADS):** Low Dose Resulted in:
  - ✓ **Total Score:** 4.0pt change from Baseline / 6.0pt Change from Placebo **(P<0.001)**
  - ✓ **Anxiety Score:** 3.0pt Change from Baseline / 3.7pt Change From Placebo **(P<0.001)**
  - ✓ **Depression Score:** 1pt Change from Baseline / 2.1pt Change From Placebo **(P=0.033)**

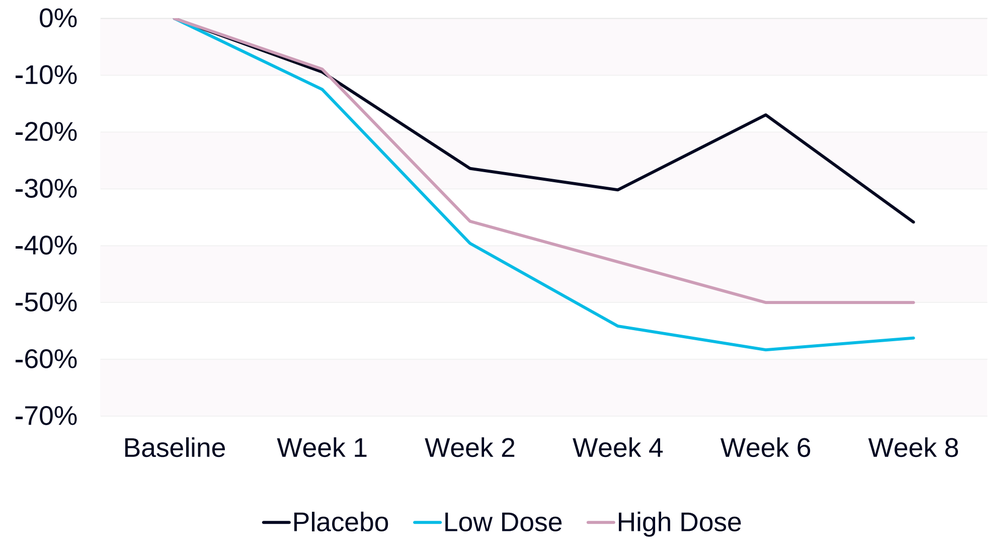
Clinically Meaningfulness & Statistical Significance

- ✓ Stage 1 has delivered clinically meaningful results across all endpoints.
- ✓ As is the case with statistical analysis, increasing the population/patients in the trial (as is proposed for stage 2 of the study) is expected to provide statistically significant P values.

Median IBS-SSS Score – Baseline to week 8

	Placebo	Low Dose	High Dose
	n=20	n=20	n=21
Baseline	265	240	280
Week 1	240	210	255
Week 2	195	145	180
Week 4	185	110	160
Week 6	220	100	140
Week 8	170	105	140
Difference in baseline score to week 6 score	45	140	140
% Change	**-17%**	**-58%**	**-50%**
Difference in baseline score to week 8 score	95	135	140
% Change	**-36%**	**-56%**	**-50%**

Median Reduction in IBS-SSS Score - Placebo vs. Low & High Dose



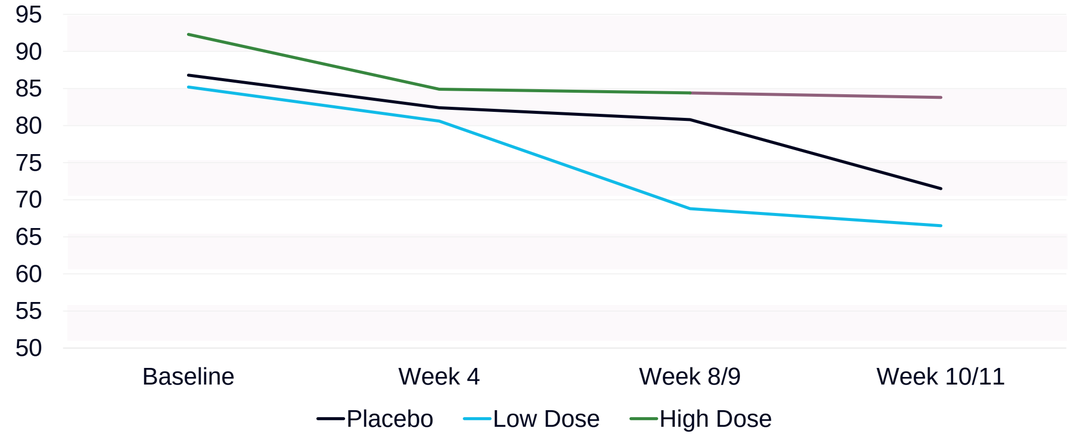
Stage 1
Clinical Trial Results

DELIVERED POSITIVE SECONDARY ENDPOINTS

IBS-Quality of Life Score

	Placebo	Low Dose	High Dose
	N=20	**N=20**	N=20
Baseline	86.8	**85.2**	92.3
Week 4	82.4	**80.6**	84.9
Week 8/9	80.8	**68.8**	84.4
Week 10/11	71.5	**66.5**	83.8
Week 8/9 - Change from Baseline	-3.1	**-14.6**	-11.4
Week 8/9 - Versus Placebo		**-11.4 (P=0.10)**	-6.2
Week 10/11 - Change from Baseline	-6.0	**-10.2**	-14.5
Week 10/11 - Versus Placebo		**-8.3 (P=0.29)**	-8.4

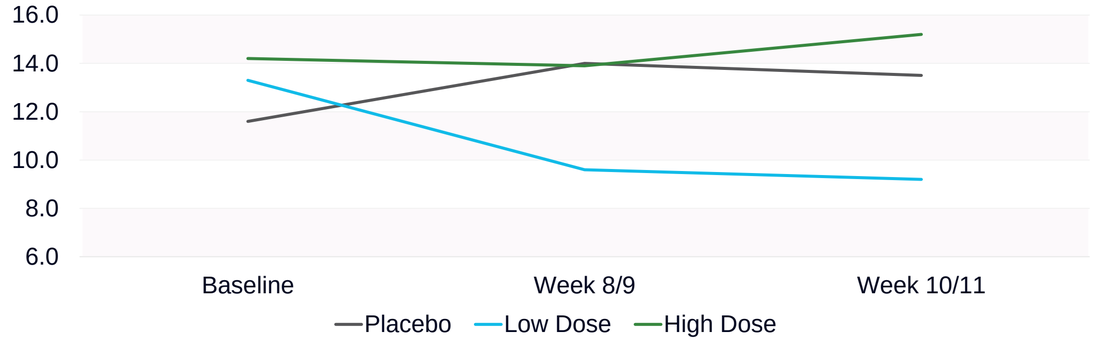
IBS-Quality of Life Score



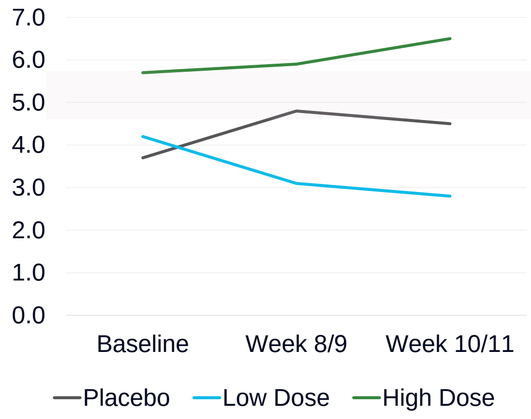
TOTAL SCORE – Hospital Anxiety & Depression Score (HADS)

	Placebo	Low Dose	High Dose
	N=20	**N=20**	N=21
Baseline	11.6	**13.3**	14.2
Week 8/9	14	**9.6**	13.9
Week 10/11	13.5	**9.2**	15.2
Change from Baseline	3.5	-4.0	-0.7
Versus Placebo		**-6.0 (P<0.001)**	-2.4

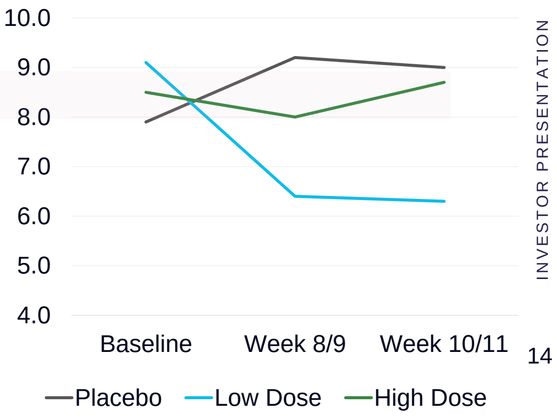
TOTAL SCORE – Hospital Anxiety & Depression Score (HADS)



Depression Score



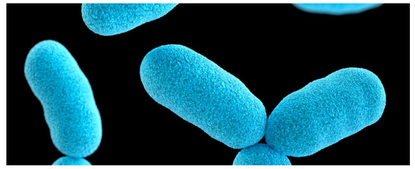
Anxiety Score



Gastrointestinal ReProgramming (GaRP)

A POTENTIAL BREAKTHROUGH FOR GUT HEALTH

Unique knowledge of bromelain's 'fingerprint'



Ingredients are GRAS

Well-characterised proprietary formula

Potential synergistic effects

Gut-Brain Connection

FUNCTION WITHIN FORMULATION AND POTENTIAL IMPACT ON SYMPTOMS

	Quality Evidence Based Support IBS/IBD	Inhibitor of attachment / translocation of harmful bacteria	Restores homeostasis of gut microbiome	Influences metabolites of gut microbiome	Repairs 'leaky gut'		Reduction of diarrhoea		Modulates visceral sensitivity & intestinal motility	Assists immune system, brain health & mood	Safety Cautions
					Reduces gut-wall inflammation	Protection & regeneration of mucosa	Inhibits inflammation & secretory-induced	Serotonin induced (IBS)			
GaRP Formulation	Pre-clinical ++ Pending clinical	✓	✓	✓	✓	✓	✓	✓	✓	✓	Nil :GRAS
Iberogast®	✓	X	X	X	✓	✓	✓	X	✓	X	Warning: liver
Probiotics	Controversial-disputed, inconsistent	✓	✓	✓	✓	X	✓	X	✓	✓	
Buscopan®	✓	X	X	X	X	X	X	X	✓	X	

Focused on developing a clinically validated treatment

MAJOR GUT HEALTH TREATMENTS LACK CLINICAL EVIDENCE

	Explanation	Evidenced Based Claims	Improvement in IBS-SSS /or Rome II/III	Improving Anxiety & Depression	Improving IBS-QOL Quality of Life	Comments/Key Claims
GaRP Formulation	Multi-component complementary medicine	✓	✓	✓	✓	Clinically meaningful improvement in IBS-SSS score[1] and IBS-Quality of life score (powered for statistical significance in Stage 2) Clinically meaningful and statistically significant improvement in Hospital Anxiety & Depression Score (HADS).[2]
Iberogast®	Plant extract formulation	✓	✓	X	X	Improvement in Irritable bowel syndrome symptom scores and abdominal pain scale.[3] **Product has safety issues.**
Align®	Probiotic	✓	X	X	✓	Improvement in abdominal pain, Irritable Bowel Syndrome quality of life and composite assessment of IBS symptom relief.[4]
Swisse Daily Digestive Probiotic	Probiotic	X	X	X	X	No clinically meaningful and statistically significant result for probiotic supplementation against placebo for IBS-SSS.[5]
Buscopan®	Spasmolytic (Antispasmodic)	✓	X	X	X	Improvement in pain scores among IBS patients, does not address full range of IBS symptons.[6]
Blackmores Digestive Aid	Blend of Enzymes and Herbs	X	X	X	X	Support healthy digestion, no evidence-based claims.[7]
Bromeyal	Enzyme complex (Bromelain)	X	X	X	X	Shown to modulate inflammatory markers in human cells in-vitro, no evidence/claims regarding.[8]

1. GaRP https://anr2.irmau.com/site/pdf/42bf9b7d-fb30-498c-a6a9-6a94a491bf80/Anatara-IBS-trial-positive-secondary-endpoint-data-analysis.pdf
2. GaRP https://anr2.irmau.com/site/pdf/0ae28335-e574-47d2-b5d2-26d26228cc6f/ANR-announces-Positive-Results-from-Stage-1-of-IBS-trial.pdf
3. Iberogast https://doi.org/10.1111/j.1365-2036.2004.01859.x
4. Align https://pubmed.ncbi.nlm.nih.gov/16863564/
5. Swisse https://doi.org/10.3390/jcm12144838
6. Buscopan https://pubmed.ncbi.nlm.nih.gov/19337628
7. Blackmores Anatara's research did not identify any direct/clinical claims.
8. Bromeyal https://doi.org/10.1177/20587384211034686

Market Opportunity

THE GUT HEALTH MARKET IS SIGNIFICANT, LACKING EFFECTIVE, EVIDENCE-BASED SOLUTIONS

Digestive Health Market to be valued at **US$23.4B in 2030**

Growth rate of 8.1% to be sustained by:

High prevalence of disease - Obesity, digestive disorders, and lifestyle-related diseases are likely to boost the demand for digestive health products globally.

Poor solutions - There is no clear solution to gut health, resulting in consumers trying a vast array of option.

Strong thematic - Growing demand for fortifying and nutritional food additives is one of the major factors driving the market.

Growing awareness regarding:

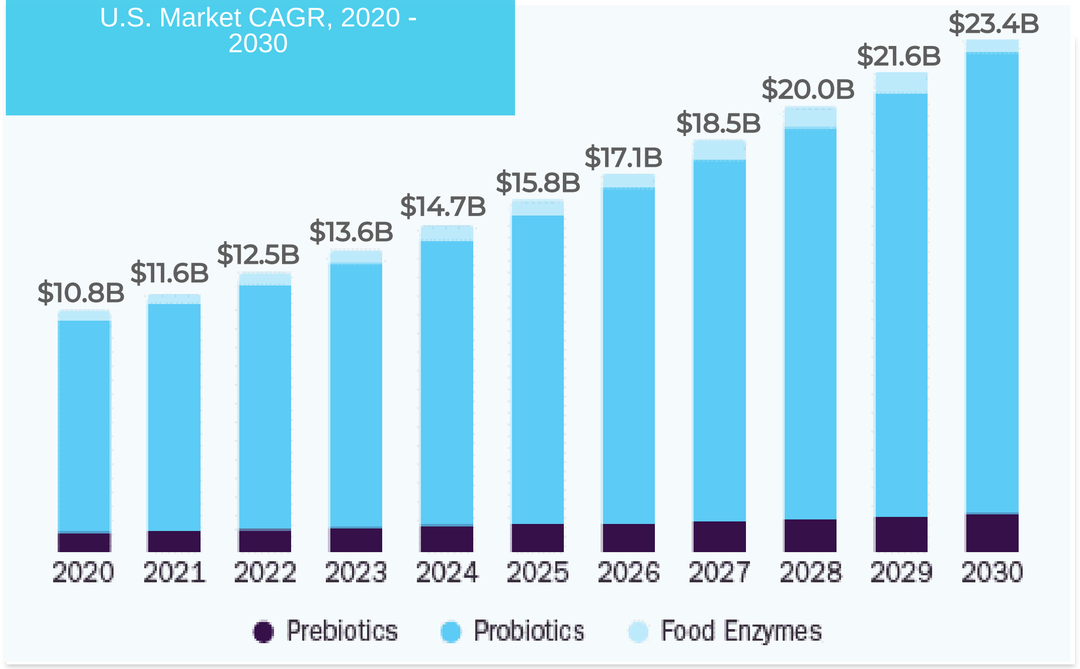
1. Improved health is motivating consumers to pay for better outcomes.
2. Maintaining gut health through a holistic approach to healthy living.
3. Mainstream interest in product with potential to restore and maintain the gut lining & homeostasis of the microbiome.

U.S. Digestive Health Products Market

Size, by ingredient, 2020-2030 (USD Billion)

8.1%

U.S. Market CAGR, 2020 - 2030



Source: https://www.grandviewresearch.com/industry-analysis/digestive-health-products-market

Market Opportunity

THE MARKET IS SIGNIFICANT AND LACKING EFFECTIVE, EVIDENCE-BASED SOLUTIONS

Current Large Market/Market Leaders

Probiotic Supplements	Align®	Global Sales 2020 $172M[1]		Proctor & Gamble Market Capitalisation $598B
Gastrointestinal Supplements	Iberogast®	Germany Sales 2018 €136M[1]		Bayer Market Capitalisation $33B
Digestive Supplements	Buscopan®	Global Sales 2020 €177M[2]		Sanofi Market Capitalisation $192B

1,2,3 Euromonitor International, Passport, Consumer Health 2019, IBS Treatments + select probiotics, Iress Market data and Sanofi FY20 Financials

Gut Health is critical to general wellbeing

Gut Brain Axis & Mental Health

The gut and the brain communicate with each other through a complex network of nerves, hormones, and organic messengers.

A healthy gut can have significant benefits:

- **Improved Mood:** Having a healthy gut can help maintain optimal levels of neurotransmitters (serotonin and dopamine), which can contribute to improved mood.[1]
- **Reduced Anxiety and Depression**: An imbalanced gut microbiome has been linked to an increased risk of anxiety and depression. A healthy gut can help reduce the risk of these mental health conditions.[2]
- **Enhanced Cognitive Function:** A healthy gut with a balanced microbiome can produce various molecules, that can support brain health and cognitive function.[3]
- **Enhanced Nutrient Absorption:** Absorption of essential vitamins and minerals is improved by a healthy gut.[4]

Well-being & immune system interactions

Maintaining gastrointestinal integrity and microbiome homeostasis can help assist autoimmune diseases by minimising dysregulation.[11]

A healthy gut can have other significant general benefits:

- **Weight Management:** Enrichment of bacterial genes and reduced diversity in the gut microbiome has been linked to obesity.[5] [6]
- **Appetite Control:** Microbes in the digestive system produce metabolites that help regulate appetite and body fat stores.[7]
- **Reduced Inflammation and Blood Sugar:** Imbalances in the gut microbial community are associated with increased inflammation and increased blood sugar levels.[8]
- **Improved Nutrient Absorption:** Efficient absorption of essential nutrients, which can help optimize metabolism and energy production.[4]
- **Regulation of Metabolism:** A balanced Microbiota affects the regulation of metabolism which is closely linked to weight management.[9]

1 Appleton J. The Gut-Brain Axis: Influence of Microbiota on Mood and Mental Health. Integrative Medicine 2018; 17(4):28-32.
2 Clapp M, Aurora N, Herrera L, Bhatia M, Wilen E, Wakefield S. Gut Microbiota's Effect on Mental Health: The Gut-Brain Axis. Clinics and Practice. 2017; 7(4):987. https://doi.org/10.4081/cp.2017.987
3 Tooley KL. Effects of the Human Gut Microbiota on Cognitive Performance, Brain Structure and Function: A Narrative Review. Nutrients. 2020; 12(10):3009. https://doi.org/10.3390/nu12103009
4 Krajmalnik-Brown, Rosa et al. "Effects of gut microbes on nutrient absorption and energy regulation." Nutrition in clinical practice : official publication of the American Society for Parenteral and Enteral Nutrition vol. 27,2 (2012): 201-14.7
5 Turnbaugh, P., Ley, R., Mahowald, M. et al. An obesity-associated gut microbiome with increased capacity for energy harvest. Nature 444
6 Le Chatelier, E. et al. Richness of human gut microbiome correlates with metabolic markers. Nature 500, 541–546 (2013).
7 Han, H., Yi, B., Zhong, R. et al. From gut microbiota to host appetite: gut microbiota-derived metabolites as key regulators. Microbiome 9, 162 (2021).
8 Gérard Céline, Vidal Hubert. Impact of Gut Microbiota on Host Glycemic Control. Frontiers in Endocrinology, 10, 2019
9 Oliphant, K., Allen-Vercoe, E. Macronutrient metabolism by the human gut microbiome: major fermentation by-products and their impact on host health. Microbiome 7, 91 (2019).
10 Marco Witkowski, Taylor L. Weeks, Stanley L. Hazen. Gut Microbiota and Cardiovascular Disease. Circulation Research. 2020;127:553–570
11 Shreiner, Andrew Ba; Kao, John Ya; Young, Vincent B.b. The gut microbiome in health and in disease. Current Opinion in Gastroenterology 31(1):p 69-75, January 2015

Licensing discussions & portfolio diversification

PROGRESSING LICENSING DISCUSSIONS WITH GLOBAL CONSUMER HEALTH COMPANIES FOR GARP

GaRP

Stage 2 GaRP trial powered for significance

12

Months

Revenue anticipated within 12 months from licensing

Global Partners

Anatara is experiencing inbound interest from global leaders in the GI field due to the strong evidence based design of the GARP trial. Discussions with global pharma companies are ongoing.

Local Partners

Partnerships with regional leaders in 'gut' health to leverage local knowledge in registration and marketing of consumer health products and their established market position and infrastructure.

Partnership Opportunity

Interim Results

Following the positive Stage 1 results, Anatara has reinitiated its discussions with potential commercial partners.

Partnership Opportunity

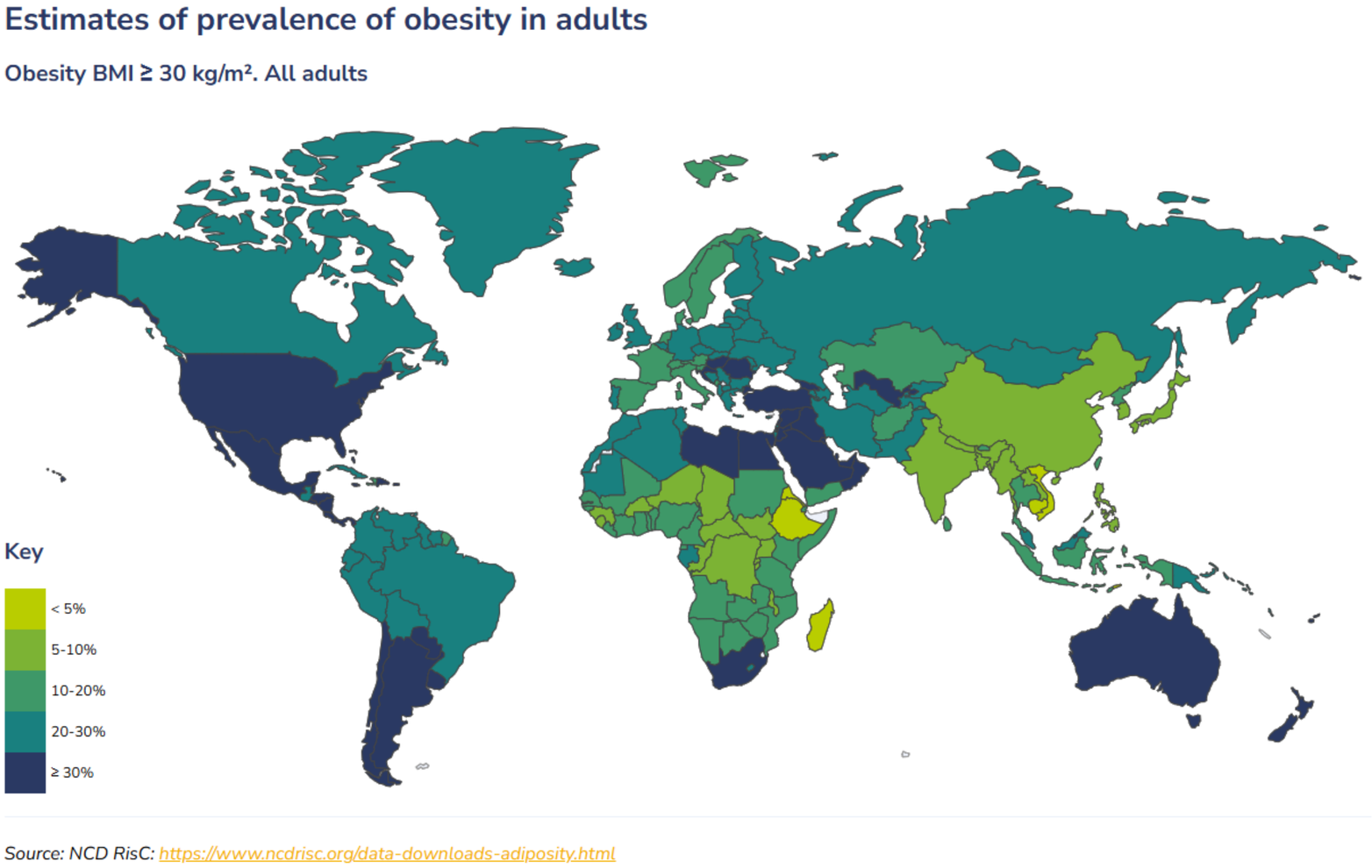
Post Trial

Following the anticipated completion of our IBS human trial in Q1 CY2025, Anatara expects to be in a strong position to announce a commercial partnership.

Pipeline Programs including commencement of anti-obesity project

- Extensions for GaRP’s broad indications for use-trials planned for IBD paediatrics (focus on adjunctive treatment to reduce required immune suppressant dosing) & Functional Dyspepsia (now increasingly recognised as part of the IBS spectrum).
- Commencing a new anti-obesity project designed to develop an oral medication to assist weight reduction and sustaining weight control in conjunction with other contemporary treatments and approaches.
- Obesity (BMI of 30 kg/m2 or greater) is a medical condition of such prevalence that it is described as a new pandemic, with associated significant comorbidities and health risk factors.
- World needs further strategies and treatments to those currently available to manage, control and prevent obesity and rebound weight gain.
- The details of this project remain confidential until such time that we have confirmed Proof of Concept and have security around the know-how and IP involved in the formulations.
- Actively seeking in-licencing opportunities, M&A assets to broaden portfolio.

Obesity is the new pandemic!



Source: NCD RisC: https://www.ncdrisc.org/data-downloads-adiposity.html

Quick Facts

- In North America, more than 1 in 3 adults get the minimum recommended physical activity each week. In Australia this is 1 in 4.
- Countries with high obesity rates correlate with high sugar consumption (>50 kg per person per annum).
- 5.6% of Australians and 10.8% of US adults suffer from diabetes as a co-morbidity of Obesity.

Source: https://data.worldobesity.org/maps/?area=maps

Risks associated with Obesity

1. Increased Mortality Risk
2. Cardiovascular Risks
3. Metabolic Risks
4. Respiratory Risks
5. Cancer Risks
6. Musculoskeletal Risks
7. Reproductive and Endocrine Risks
8. Mental and Psychological Risks
9. Immune and Inflammatory Risks
10. Digestive Risks
11. Neurological Risks
12. Social and Economic Risks
13. Decreased Quality of Life

Co-morbidities associated with Obesity

1. Hypertension
2. Coronary Artery Disease
3. Type 2 Diabetes Mellitus
4. Dyslipidemia
5. Obstructive Sleep Apnea
6. Asthma
7. Non-Alcoholic Fatty Liver Disease
8. Gastroesophageal Reflux Disease
9. Osteoarthritis
10. Low Back Pain
11. Depression
12. Anxiety Disorders
13. Polycystic Ovary Syndrome
14. Infertility
15. Chronic Kidney Disease
16. Cognitive Decline
17. Migraine

Weight management and Anatara's solution

There is a significant opportunity in the market to address a critical gap in the management of long-term weight, including preventing rebound weight gain associated with discontinuing weight loss programmes.

As a pathway to overall health benefits and improved quality of life, Anatara aims to offer a product for sustainable weight management.

Rebound weight gain is sub-optimal and dangerous

- **Cardiovascular Strain** – Rapid weight regain can increase blood pressure, cholesterol levels, and the risk of heart disease and other vascular events.
- **Metabolic Instability** – It may worsen insulin resistance or increase the risk of developing Type 2 diabetes.
- **Hormonal Dysregulation** – Weight loss drugs can supress appetite-regulating hormones and after discontinuing these hormones may rebound leading to increased hunger and heightened risk of overeating.
- **Potential for Long-Term Health Decline** – Regaining weight disproportionately as visceral fat increases the risk of metabolic syndrome and related health issues
- **Nutritional Deficiencies** – Rapid changes in weight can disrupt nutritional balance, leading to deficiencies in overall health.

Negative side effects compounded by weight rebound – The initial negative side effects of obesity are compounded because the physiological, metabolic, and psychological stress of rapid weight regain amplifies the initial health issues.

- The risk of cardiovascular events (such as "heart attack") is increased as rapid weight gain is associated with atherosclerotic plaque instability due to a harmful lipid profile (elevated LDL cholesterol and triglycerides).
- Rapid weight regain increases insulin resistance that worsens glucose metabolism and can accelerate the onset or progression of Type 2 diabetes.
- The constant weight cycling can slow the metabolism down over time, increasing the difficultly to lose weight and increases the risk of regaining weight.
- Fat regain triggers an inflammatory responses in the body, causing inflammation.
- Blood pressure can spike with rebounding weight leading to elevated blood pressure
- The rebound can lead to emotional distress, increased stress and cortisol levels, and a loss of motivation and self-confidence.

Unmet need and extremely large market demand for a safe, easy to use, cost effective weight loss product – Anatara's project aims to develop a product to stimulate the release of endogenous GLP-1. GLP-1 has been demonstrated to be a solution for weight loss. The approach aims to combine the proven efficacy of GLP-1 receptor agonists with improved safety, convenience, and affordability to meet the growing demand for effective obesity treatments.

- The mechanism of action from GLP-1 receptor agonism for weight loss is by reducing appetite, delaying stomach emptying, and promoting satiety. There are other effects, such as improved insulin sensitivity, however current high-dose, short-term GLP-1 treatments are not designed for sustainable, long-term use for weight control after weight loss is achieved.
- Sustained weight reduction management needs a balanced physiological approach.
- An oral product has the potential to provide ease of use, improved compliance and expanded accessibility.

https://www.healthline.com/nutrition/yo-yo-dieting
https://pmc.ncbi.nlm.nih.gov/articles/PMC4147362/
https://pubmed.ncbi.nlm.nih.gov/36974678/
https://www.bbc.com/future/article/20240521-what-happens-when-you-stop-taking-ozempic
https://cardiab.biomedcentral.com/articles/10.1186/s12933-023-01832-5

Weight loss with marketed GLP-1 Products

GLP-1 Analogue	Homology with Native GLP-1	Product Name	Originator	Claimed Body Weight loss
Exenatide	53%	Byetta / Bydureon	AstraZeneca	3.5-5%
Liraglutide	97%	Victoza / Saxenda	Novo Nordisk	5-8%
Dulaglutide	90%	Trulicity	Eli Lilly	2-3%
Semaglutide	94%	Ozempic / Wegovy	Novo Nordisk	10-15%
Tirzepatide	Dual GLP-1 / GIP analogue	Mounjaro / Zepbound	Eli Lilly	15-21%

ANATARA LIFESCIENCES

Obesity and GLP-1 market at a glance

- **Injectables –** Patient discomfort and compliance issues.
- **Supraphysiological concentrations (>10-15 fold) –** GI distress, nausea, vomiting, pancreatitis, depression, gallstones.
- **Higher dose regimen when used as anti-obesity v anti-diabetic –** Dose escalation, high rate of side effects.
- **Economic burden –** Cost effectiveness estimates range up to GBP105,000 per quality adjusted life year (QALY), much higher than acceptable limit of 20,000-30,000 GBP per QALY.
- **No oral therapy approved to enhance endogenous GLP-1 production.**
- UBS estimates global GLP-1 model forecasts **40m people on GLP-1s by 2029, with 44% in the US. This translates into $126bn sales by 2029**, a 2023-2029 sales CAGR of 30%.

Source: Clinical data published and Company websites https://www.ubs.com/global/en/investment-bank/insights-and-data/2024/glp-1-a-medication.html#:~:text=GLP%2D1%20growth%20has%20predominantly,2029%20sales%20CAGR%20of%2030%25.

Anatara
LIFESCIENCES

Contact Us

ANATARA LIFESCIENCES LTD

David Brookes
Executive Chair

+61 0411 712 579
www.anataralifesciences.com

Dirk van Dissel
Corporate Advisor & IR

Candour Advisory
dirk@candouradvisory.com.au

Advisory Board & DSMB members

ANATARA LIFESCIENCES IS SUPPORTED BY A HIGHLY ACCLAIMED ADVISORY BOARD WITH SIGNIFICANT EXPERIENCE IN GASTROINTESTINAL HEALTH.

Advisory Board members are internationally recognised for their expertise in IBS and IBD with experience ranging from preclinical drug development through to translational research and clinical trials.

The role of the Advisory Board is provide advice on Anatara's research and product development programs in gastrointestinal health.

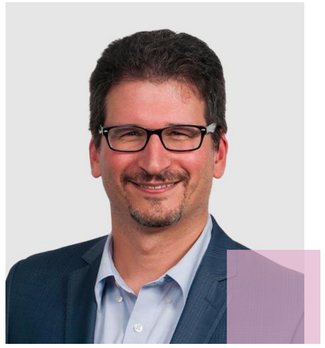
Members include those pictured; noting the Data Safety Monitoring Board (DSMB) members are Professors Gibson and Rolan and Assoc. Prof. Begun.

Dr Tracey Brown

Associate Professor Rebecca Burgell

Professor Simon Keely

Dr Jeremy Rosenbaum



Associate Professor Jakob Begun

Professor Peter Gibson

Professor Paul Rolan

Significant Corporate Interest

GLOBAL TREND OF RESEARCH & DEVELOPMENT IN GASTROINTESTINAL HEALTH

Several examples of investment and/or collaboration by industry leaders in gastrointestinal health

Company #1	Stock Details	Company #2	Stock Details	Rationale of Deal	Agreement	Further Agreement
Nestlé	SWX: NESN MKT CAP: $342B AUD	Enterome	Unlisted	Nestle Health Science partnering with French BioTech Enterome to develop and commercialise immunotherapies for food allergies and IBS.	$67M AUD (Combination of Cash & Equity)	Clinical & Sales Milestone + Royalties on Sales
sanofi	PAR: SAN MKT CAP: $187B AUD	caracare	Unlisted	Collaboration to provide a holistic approach to digestive health through combining the gastrointestinal pharmaceutical knowledge of Sanofi with the digital health capabilities of Cara Care.	Agreement to Collaborate	N/A
AstraZeneca	LSE: AZN MKT CAP: $314B AUD	SERES THERAPEUTICS	NAS: MCRB MKT CAP: $173M AUD	Collaboration of Seres Therapeutics to research microbiome-based approaches to advance understanding of the efficacy of cancer immunotherapy, utilizing the extensive experience of AstraZenneca in oncology treatment.	Agreement to Collaborate	N/A
SONIC HEALTHCARE	ASX: SHL MKT CAP: $13.5B AUD	MICROBA	ASX: MAP MKT CAP: $67M AUD	Sonic Healthcare has completed a strategic investment in Microba to deliver individualised microbiome testing technology through Sonic's existing global pathology network.	$17.8M Strategic Investment for a 20% stake	$7.5M option for further investment
immuron	ASX: IMC MKT CAP: $17.1M AUD	Ateria Health	Unlisted	Immuron has completed a strategic investment in Ateria Health to expand its offering in the "gut health" market through an IBS drug and expanding their distribution.	$2.6M Strategic Investment for a 17.5% stake	$2.55M option for further investment

Data as of 25th November 2024. 1.60 AUD = 1 EUR, 1.72 AUD = 1 CHF, 1.53 AUD = 1 USD, 1.93 AUD = 1 GBP

Corporate/PE/VC Interest

SIGNIFICANT CORPORATE INTEREST IN THE WELLNESS AND GUT HEALTH SECTORS

Corporate Interest in the Wellness space

Acquirer	Stock Details	Target	Stock Details	Rationale of Deal	Agreement
KIRIN	TYO: 2503 MKT CAP: $19.4B AUD	BLACKMORES	ASX:BKL	Japanese brewer Kirin acquired Australian vitamins maker Blackmores to diversify away from their extensive alcohol exposure and expand their wellness offering.	A$1.88B
Biostime	HKG: 1112 MKT CAP: $1.16B AUD	Swisse	Unlisted	BioStime acquired Australian vitamin maker Swisse Wellness to expand their beauty nutrition offering into new markets and expand their portfolio.	A$1.67B

Private Equity/Venture Capital Interest in Gut Health

Acquirer	Target	Rationale of Deal	Agreement
bd-capital	SYMPROVE	Venture Capital & Private Equity firm Bd-Capital acquired Symprove, a company that is focused on delivering live and active bacteria to support the gut microbiome.	Undisclosed Sum
MERITECH CAPITAL PARTNERS SEQUOIA	Pendulum	Pendulum, a developer of medical probiotics addressing the imbalances of the microbiome raised US$54M led by Meritech Capital and supported by Sequoia Capital.	US$54M capital raised for a $111M total venture investment
middleland CAPITAL	BIOHM	Middleland Capital's VTC Ventures led a US$7.5M raise for Biohm Health, a microbiome company with products designed to address the roles of bacteria and fungi in gut health.	US$7.5M capital raise
FIRST BIGHT VENTURES propel VENTURE PARTNERS	Persephone Biosciences	First Bright Ventures & Propel Bio Partners raised US$15M in a seed financing round for Peresphone Biosciences researching therapeutic approaches for the microbiome including infant health and oncology.	US$15M seed round
oyster ventures	ZBIOTICS	Oyster Ventures led a seed round of ZBiotics, a probiotic drink that breaks down the byproduct of alcohol responsible for hangovers for US$2.3M.	US$2.3M seed round

Data as of 25th November 2024. 1 AUD = 0.197HKD, 1 AUD = 101JPY

Peer Comparison

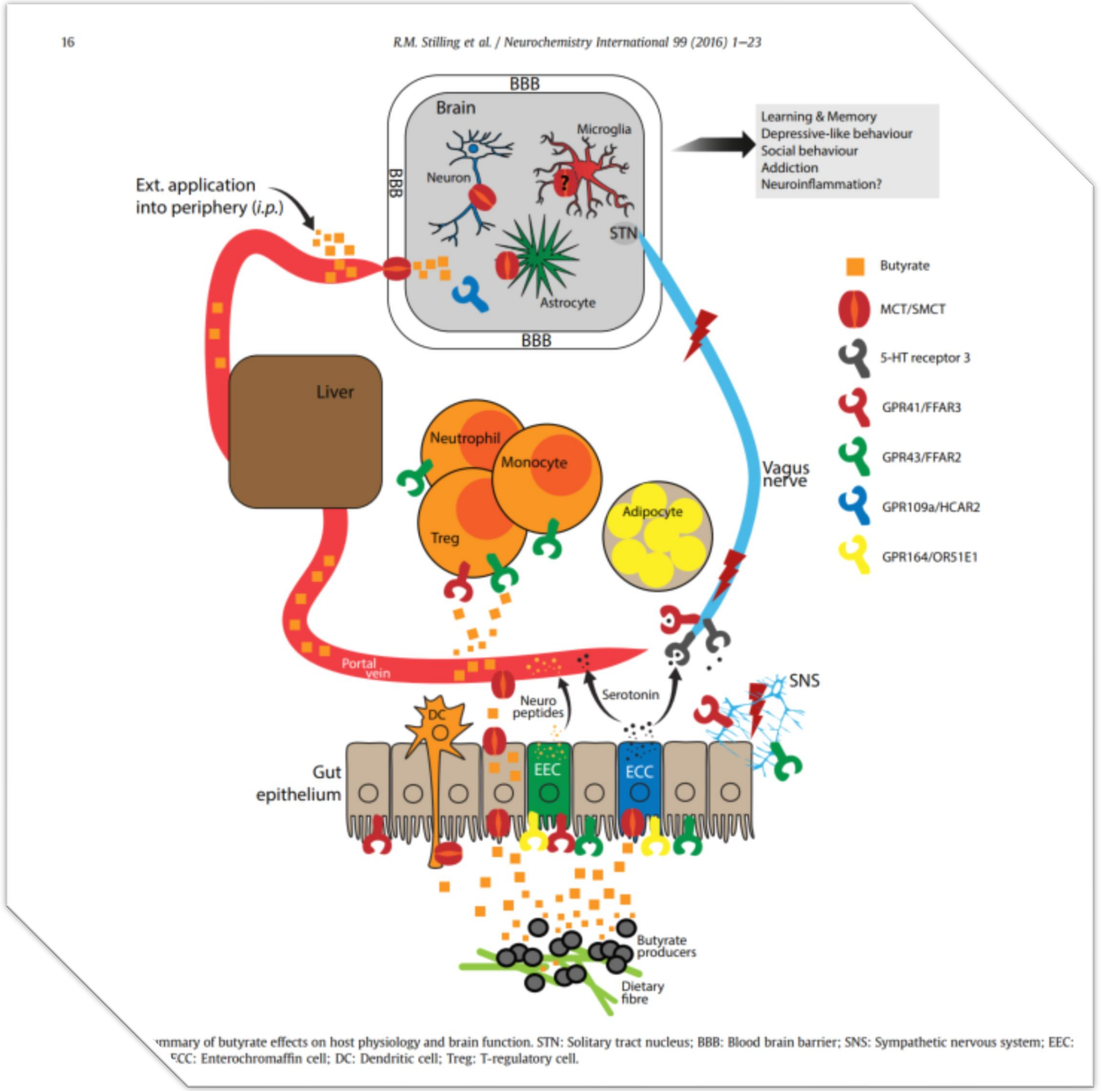
Company	Stock Code	Company Focus	Market Capitalisation*	Share Price*	Cash Receipts (FY24)	Net Operating Cash (FY24)
Anatara Lifesciences	**ANR:ASX**	**Anatara is focused on the validation of gastrointestinal products including the clinical validation of GaRP, aimed at restoring and maintaining gut health**	**$11.6m**	**$0.056**	**Nil**	**($1.45m)**
Nutritional Growth Solutions	NGS:ASX	Nutritional Growth Solutions has developed patented nutritional supplement formulae focusing on the growth development of children	$5.7m	$0.044	$1.25m	($1.3m)
The Calmer Co International	CCO:ASX	Calmer Co (formerly Fiji Kava) is developing and producing natural solutions for relaxation, anxiety and sleep through a range of functional food and beverages	$17.6m	$0.008	$2.5m	($1.6m)
Immuron	IMC:ASX	Immuron produces OTC medication (Travelan & Protectyn) reducing the risk of traveler's diarrhea and gastro-intestinal disorders.	$17.1m	$0.074	$4.9m	($6.9m)
Bixoyne	BXN:ASX	Bioxyne has developed and globally distributes their patented probiotic strain focusing on immunity and gastrointestinal health and a subsidiary focused on medical cannabis.	$26.6m	$0.013	$9.6m	($13.3m)
Microba Life Sciences	MAP:ASX	Microba provides microbiome testing for gastrointestinal diseases and is developing therapeutics in inflammatory bowel disease, cancer Immunotherapy & autoimmune diseases	$74m	$0.165	$12.1m	(-$19.9m)
Vita Life Sciences	VLS:ASX	Vita Life Sciences develops and distributes OTC medicines, as well as complementary and alternative medicines, dietary supplements and health foods	$118m	$2.10	$39.4m (1H24 only)	$4.2m (1H24 only)

Source: Iress 25th November 2024

What is the gut-brain connection?

PATHWAYS BETWEEN THE GUT MICROBIOTA AND THE BRAIN, FEATURING A RANGE OF GUT MOLECULES

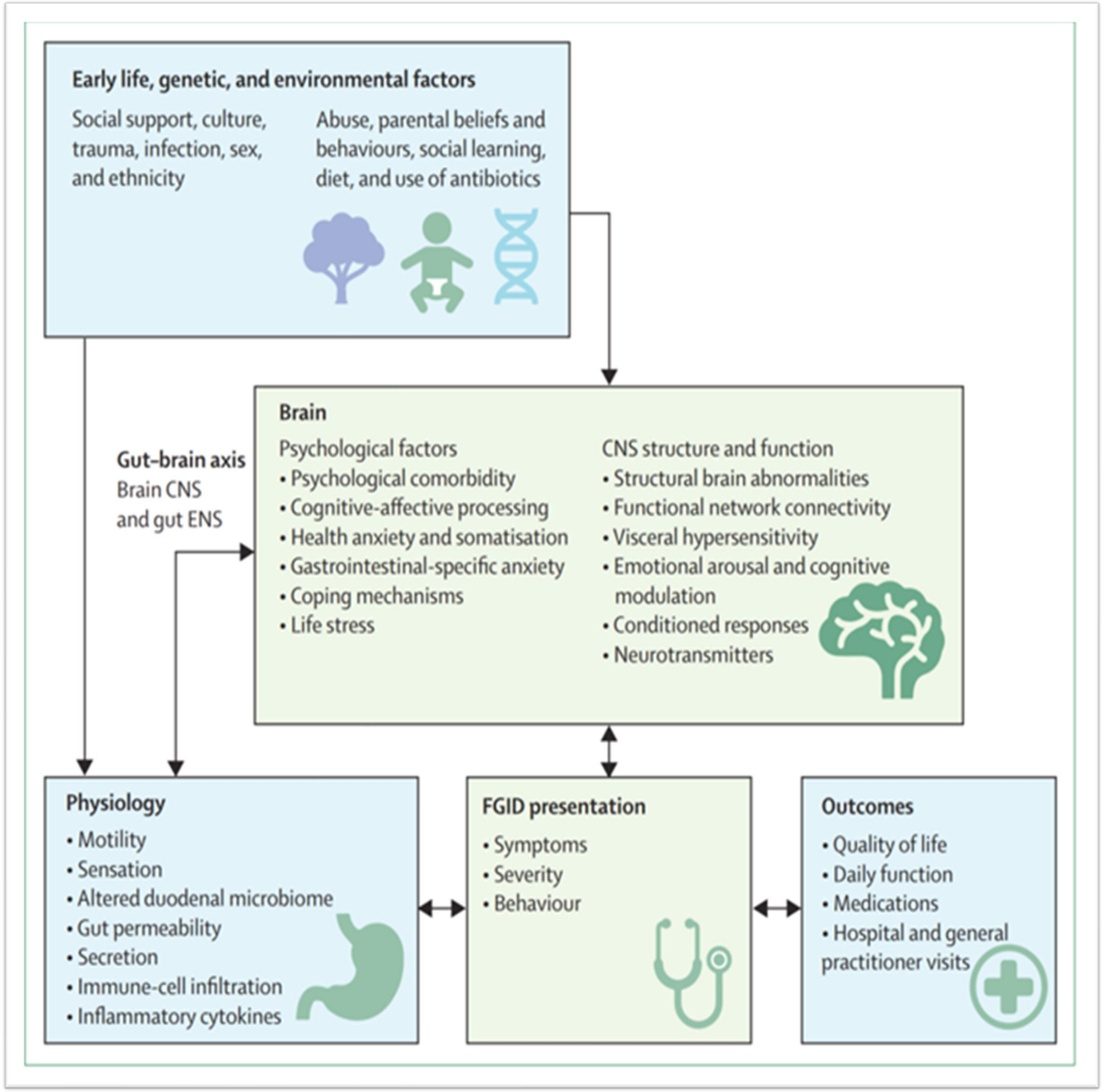
1. The gastrointestinal system offers an integrated interface for regulation of various body functions in health and disease.
2. The lining of the gut, known as the epithelium, is also the first line of defence against pathogens taken up with the diet. Due to the mutualistic nature of the majority of microbes in the gut, the gut epithelium is also the primary interface for host-microbe crosstalk on all levels of interaction.
3. The immune system is trained and regulated by the presence of harmful and beneficial microbes, and products (incl. metabolites).
4. Other than the vagus nerve involvement, any gut-brain interaction needs to cross at least two barriers (i.e. the gut epithelium and the blood brain barrier) and permeability through both of these barriers has been shown to be affected by the microbiome.



[19] Stilling RM, van de Wouw M, Clarke G, Stanton C, Dinan TG, Cryan JF. The neuropharmacology of butyrate: The bread and butter of the microbiota-gut-brain axis? Neurochem Int. 2016 Oct;99:110-132. doi: 10.1016/j.neuint.2016.06.011. Epub 2016 Jun 23. PMID: 27346602.

Pathophysiology

- By definition, no structural abnormalities explain Functional Gastrointestinal Disorders (FGIDs) and, on the basis of the biopsychosocial model developed by Engel 34 and adapted by Drossman,35,36 they are characterised as complex bidirectional dysregulations of gut–brain interaction, via the gut–brain axis, rather than diseases. FGIDs include IBS, dyspepsia, functional bloating etc.
- Visceral hypersensitivity, abnormal gastrointestinal motility, and psychological disturbances have been recognised to contribute to the pathogenesis of FGIDs for decades, but more recently low-grade intestinal inflammation, increased intestinal permeability, immune activation, and disturbances in the microbiome have been identified, challenging the idea that structural changes are absent entirely.37,38
- The biopsychosocial model articulates illness as holistic and multifactorial, and emphasises the existence of an intimate mind–body connection, facilitated by bidirectional communication between the brain and the gut in FGIDs, which is well accepted.34,35,40
- Emerging data challenge the concept that gut– brain pathways act similarly in all patients with FGIDs. Independent epidemiological studies43–45 suggest that in 50% of cases, FGIDs begin with psychological distress, followed later by gastrointestinal symptoms, whereas in the other 50% of cases gut dysfunction occurs first, and psychological distress follows later.



1 Appleton J. The Gut-Brain Axis: Influence of Microbiota on Mood and Mental Health. Integrative Medicine 2018; 17(4):28-32

2 Clapp M, Aurora N, Herrera L, Bhatia M, Wilen E, Wakefield S. Gut Microbiota's Effect on Mental Health: The Gut-Brain Axis. Clinics and Practice. 2017; 7(4):987. https://doi.org/10.4081/cp.2017.987

3 Tooley KL. Effects of the Human Gut Microbiota on Cognitive Performance, Brain Structure and Function: A Narrative Review. Nutrients. 2020; 12(10):3009. https://doi.org/10.3390/nu12103009

4 Krajmalnik-Brown, Rosa et al. "Effects of gut microbes on nutrient absorption and energy regulation" Nutrition in clinical practice : official publication of the American Society for Parenteral and Enteral Nutrition vol. 27,2 (2012): 201-14.7

5 Turnbaugh, P., Ley, R., Mahowald, M. et al. An obesity-associated gut microbiome with increased capacity for energy harvest. Nature 444

6 Le Chatelier, E. et al. Richness of human gut microbiome correlates with metabolic markers. Nature 500, 541–546 (2013).

7 Han, H., Yi, B., Zhong, R. et al. From gut microbiota to host appetite: gut microbiota-derived metabolites as key regulators. Microbiome 9, 162 (2021).

8 Gérard Céline, Vidal Hubert. Impact of Gut Microbiota on Host Glycemic Control. Frontiers in Endocrinology, 10, 2019

9 Oliphant, K., Allen-Vercoe, E. Macronutrient metabolism by the human gut microbiome: major fermentation by-products and their impact on host health. Microbiome 7, 91 (2019).

10 Shreiner, Andrew B.a; Kao, John Y.a; Young, Vincent B.b. The gut microbiome in health and in disease. Current Opinion in Gastroenterology 31(1):p 69-75, January 2015

34. Engel GL. The need for a new medical model: a challenge for biomedicine. Science 1977; 196: 129–36.

35. Van Oudenhove L, Crowell MD, Drossman DA, et al. Biopsychosocial aspects of functional gastrointestinal disorders. Gastroenterology 2016; 150: 1355–67.

36. Drossman DA. Presidential address: gastrointestinal illness and the biopsychosocial model. Psychosom Med 1998; 60: 258–67.

37. Talley NJ, Ford AC. Functional Dyspepsia. N Engl J Med 2015; 373: 1853–63.

38. Ford AC, Lacy BE, Talley NJ. Irritable bowel syndrome. N Engl J Med 2017; 376: 2566–78.

40. Ringel Y, Sperber AD, Drossman DA. Irritable bowel syndrome. Annu Rev Med 2001; 52: 319–38.

41. Mayer EA, Labus J, Aziz Q, et al. Role of brain imaging in disorders of braingut interaction: a Rome Working Team Report. Gut 2019; 68: 1701–15.

43. Jones MP, Tack J, Van Oudenhove L, et al. Mood and anxiety disorders precede development of functional gastrointestinal disorders in patients but not in the population. Clin Gastroenterol Hepatol 2017; 15: 1014–20.

44. Koloski NA, Jones M, Kalantar J, Weltman M, Zaguirre J, Talley NJ. The brain–gut pathway in functional gastrointestinal disorders is bidirectional: a 12year prospective populationbased study. Gut 2012; 61: 1284–90.

45. Koloski NA, Jones M, Talley NJ. Evidence that independent guttobrain and braintogut pathways operate in the irritable bowel syndrome and functional dyspepsia: a 1year population based prospective study. Aliment Pharmacol Ther 2016; 44: 592–600.

Glossary

IBS	Irritable bowel syndrome (IBS) is a condition that affects the colon (also referred to as “large bowel” or “large intestine”). Key symptoms include abdominal pain or discomfort, bloating, and chronic diarrhoea or constipation, or alternating between the two.
IBD	Inflammatory bowel diseases (IBD) are conditions in which the lining of the digestive gastrointestinal tract (GIT) becomes inflamed and damaged. The two common types of inflammatory bowel disease are Ulcerative Colitis and Crohn’s Disease. The most common symptoms of inflammatory bowel disease are: diarrhoea, often including blood &/or mucous, abdominal pain, loss of appetite, tiredness, fever, weight loss.
ANR-pf	Anatara’s proprietary enriched formulation for poultry in water, designed to allow the full delivery of key additives in a quick flexible dosing method on-farm even when stock illness is a concern.
Bromelain	Bromelain is a mixture of proteases extracted from pineapple stems. Specific proteases within Bromelain have wide activities influencing the GIT(Gastrointestinal tract)including anti-attachment, anti-secretory and reduction of pro-inflammatory factors. Collectively, these proteases provide a broad spectrum of activity from reducing the attachment of some diarrhoea-causing organisms to blocking inflammatory and adverse secretory factors.
BONIFF	Anatara’s recently developed in-feed bromelain-based formulation for weaner piglets.
GaRP	Gastrointestinal ReProgramming. Anatara’s GaRP product is a multi-component ,coated complementary medicine that has been designed to address underlying factors associated with chronic gastrointestinal conditions, such as IBS and IBD. This products is designed to assist restoration and maintenance of the GIT lining and the homeostasis of the microbiome.
Leaky Gut Syndrome	“Leaky Gut Syndrome” is a proposed condition associated with increased intestinal permeability that allows harmful substances (e.g toxins, bacteria) into the circulation which triggers adverse health effects through systemic inflammation and immune reactions. It is not considered a medical diagnosis and, while a very relevant consideration, it is not clear if it is a symptom or underlying cause of associated chronic diseases.
GMP	Good Manufacturing Practice. GMP describes a set of principles and procedures that when followed helps ensure that therapeutic goods are of high quality.
GRAS	Generally Recognised as Safe. A GRAS ingredient is an ingredient that has undergone safety evaluations by experts and has been proven not to cause harm when used as intended.