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ASX Release

Anatara Investor Update

Highlights:

- **Anatara on track for the 2017 launch of its lead product, Detach™**
- **Focus remains on livestock applications for Detach™, while strategically moving focus to human "gut" related disorders**
- **Human market is lucrative with unmet medical need**

BRISBANE, 22nd November 2016: Anatara Lifesciences (ASX: ANR) is pleased to release its updated investor presentation.

The Company remains well positioned for the launch of Detach™, its non-antibiotic treatment for gastrointestinal disease. Initially focused on pigs, launch is expected in 2017 and follows the Anatara's application in October to the Australian Pesticides and Veterinary Medicines Authority (APVMA) for approval to sell and market Detach™.

Chairman and CEO, Dr Mel Bridges commented, "With our APVMA submission complete, while the team will continue to focus on livestock applications, our focus will increasingly turn to applications for human health – particularly gut health and gastrointestinal disorders. There is significant opportunity for Anatara in this area," Dr Bridges added.

With around four billion episodes of diarrhoea in the world annually, this represents a serious area of unmet medical need and one which Anatara can potentially address using its core technology. Diarrhoea is the second cause of death in children under 5 years of age and the leading cause of malnutrition.

Anatara's Chief Scientific Officer, Dr Tracey Mynott said, "The anti-secretory and anti-inflammatory action of Detach™ actives open the way to treat human gastrointestinal conditions such as Irritable Bowel Syndrome, Inflammatory Bowel Disease and Traveller's Diarrhoea. These are significant areas of unmet medical need that are not addressed by current products," Dr Mynott added.

Anatara will keep the market updated as it moves through the APVMA approval process and development of the Company's human program.

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About Anatara Lifesciences

Anatara Lifesciences (ASX: ANR) is developing therapeutics for gastrointestinal diseases in production animals and humans. Its lead product Detach™ is a natural plant based product that will help address global concerns around the overuse of antibiotics in production animals that is contributing to the rise of so-called "super bugs" that make infectious diseases harder to treat. The Anatara team has a strong track record in biological science as well as building and growing international biotech companies. Please see www.anataralifesciences.com for further background.

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Investor Update

November 2016

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Key Financial Details

ASX Code	Market Capitalisation	Share Price[1]
ANR	**$54.4 million**	**$1.10**
Current Cash[2]	Ordinary Shares	Share Price
$13.8 million	49,413,236	up 162% since IPO

1. As at 14 November 2016
2. Appendix 4E - 30 June 2016

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ANR Share Price Chart

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Oral therapeutics for gastrointestinal disease in livestock and humans

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Detach™

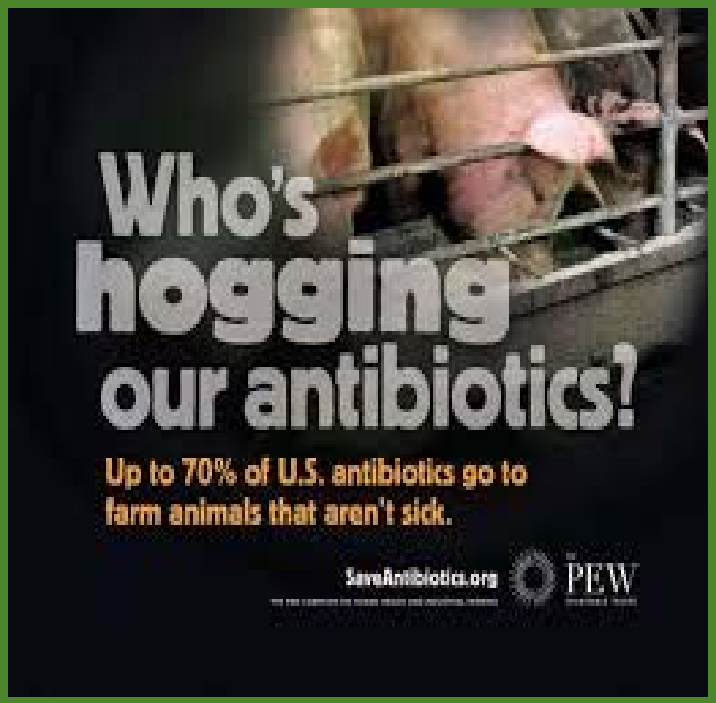
- Natural, safe, non-antibiotic therapeutic that prevents and treats gastrointestinal diseases, including diarrhoea
- Meets the need to reduce the use of antibiotics in animal production
- Unlike antibiotics, Detach™ will not contribute to antimicrobial resistance

Need to combat antimicrobial resistance

resistance to antibiotics ***'….the greatest and most urgent global risk'***
General Assembly of the United Nations 2016

Antibiotic resistance driven by the overuse of antibiotics

- 10 million: the number of people who will die every year due to AMR by 2050
- $100 trillion, the estimated total GDP that will be lost globally by 2050 if AMR isn't tackled



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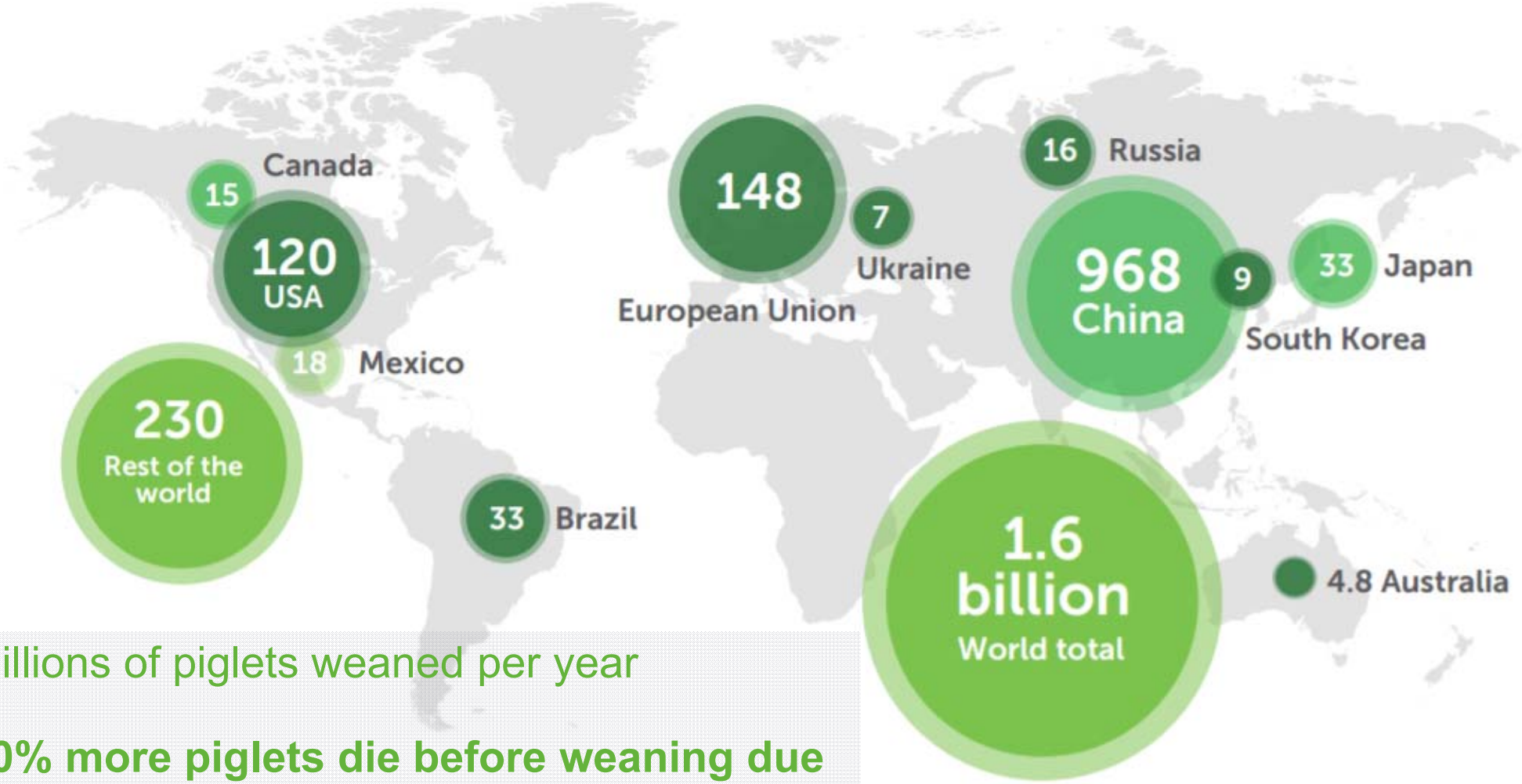
Lead Indication – Pigs

Diarrhoea affects hundreds of millions of piglets born each year



Millions of piglets weaned per year

20% more piglets die before weaning due to health issues

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Market Opportunity is clear

- Detach™ addresses a **major need** – the livestock industry need effective alternatives to antibiotics to prevent diarrhoea
- Governments are banning antibiotics for growth promotion and restricting prophylactic use in animal production
- Global animal antibiotic market valued at ~ $4.6 billion in 2014[1]. Production animals 70%. Pigs lead by market share of 25%.
- Pork is #1 consumed meat in the world
- Global demand for meat is rising. More than 85% more meat needed by 2030[2].
- Consumers want their meat to be safe
- Retailers are pledging to offer '*antibiotic free*' meat

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[1]BCC Research
[2]Evans, 2009. The Feeding of the Nine Billion Global Food Security for the 21st Century

FY16 – Key Achievements

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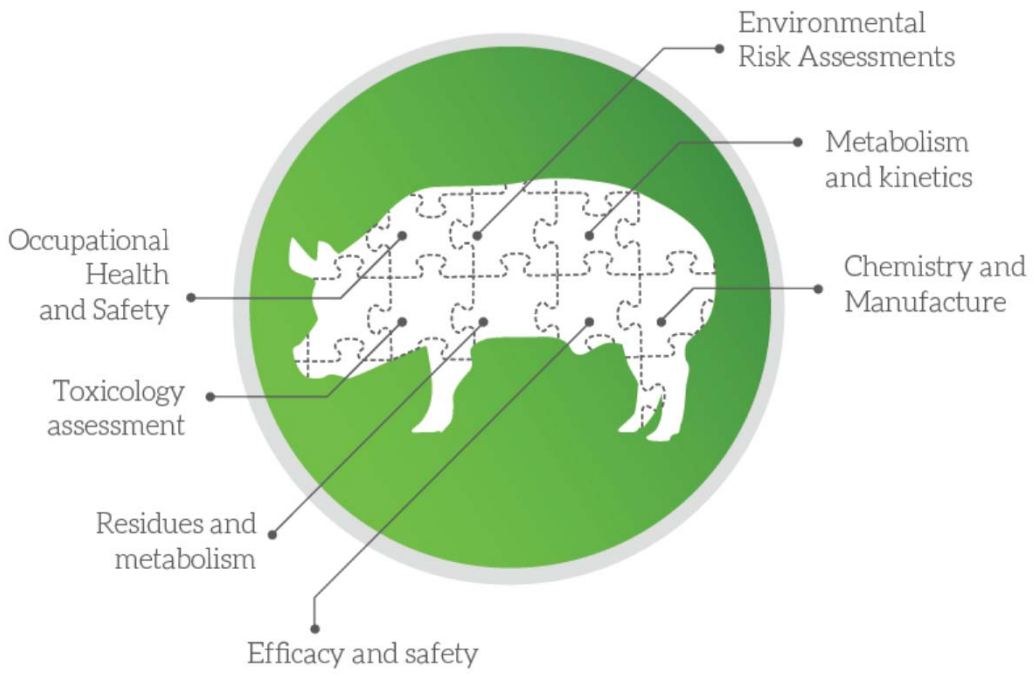
Milestone
Partnering Zoetis have exclusive worldwide right (excl. AU/NZ) to evaluate Detach™ for veterinary use in livestock
Animal safety trials Detach™ proven safe in piglets even when administered at 5x and more frequent than the recommended dose
Submission of dossier to APVMA Anatara's application for registration of Detach was lodged with the APVMA (post reporting period).



Detach™
Poised for swift market entry
Commercially validated, supported by demand

- A clear path to market: Launch in 2017
  - Proven efficacy on commercial pig farms (therapeutic claims)
  - Proven safety (active ingredient is GRAS)
  - Manufacturing complete at commercial scale and global supply confirmed
- Introduction of Detach™ is supported by industry, government, retailer & consumer demand
- Detach™ will be supplied in Australia via pre-existing distribution channels (Australian pork industry is heavily consolidated)
- Focus now is on planning market Launch

Current 50 kg scale
(≈500,000 doses)

1,000 kg capacity
(≈8,500,000 doses)

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Human Applications

There are 4 billion episodes of diarrhoea in the world annually.

Diarrhoea is the second cause of death in children under 5 years, and the leading cause of malnutrition.

Anatara technology – for humans

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Anti-secretory and anti-inflammatory action of Detach™ actives to treat human gastrointestinal conditions, such as:

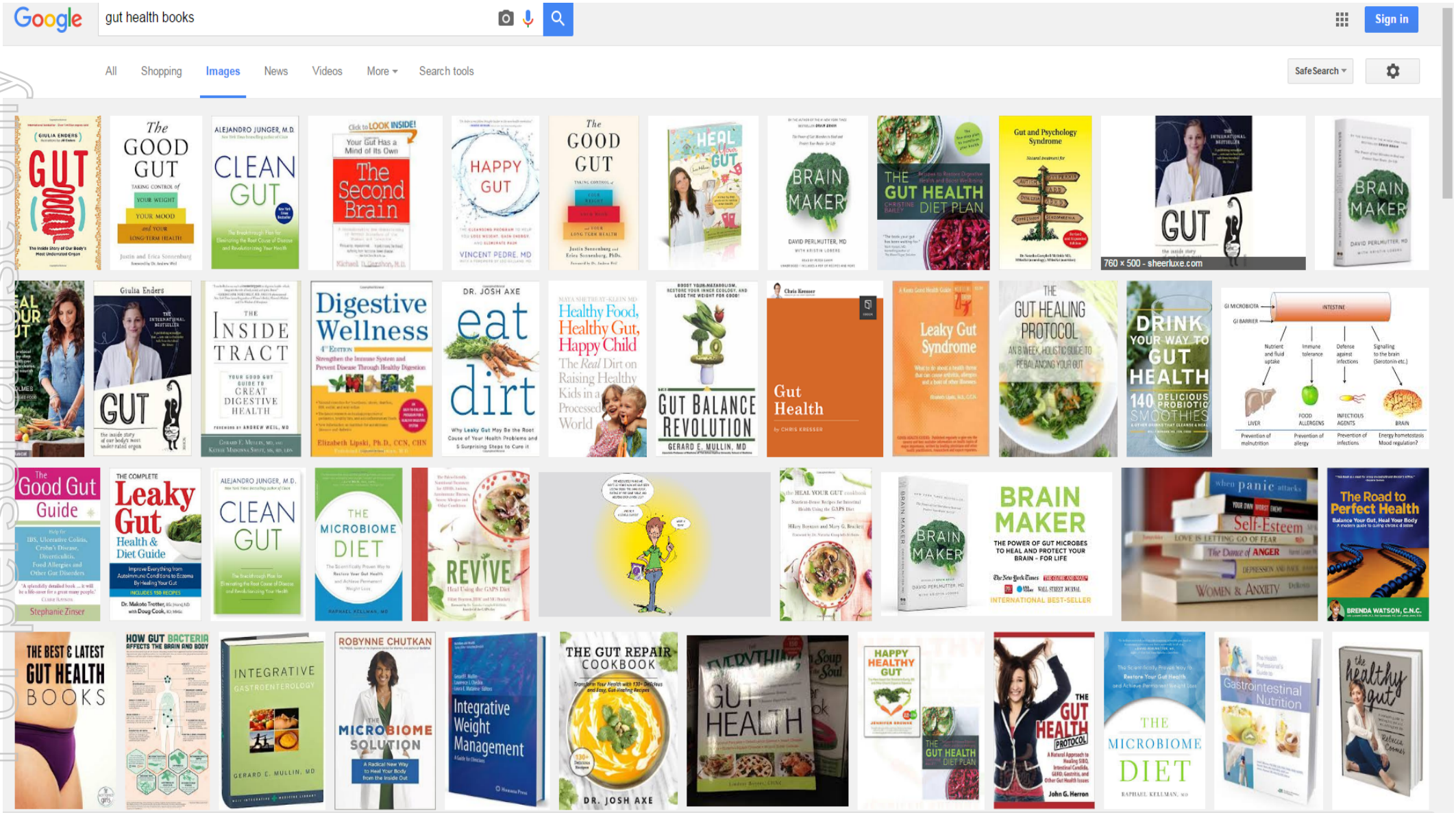
- Irritable bowel syndrome
- Inflammatory bowel disease and
- Traveller's diarrhoea

Significant unmet need not addressed by current products

Wide consumer knowledge

- Google "gut health books"

Google ‘GUT Health Books’



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Human GI disorders/disease -Large patient populations

1.4 million people suffering in USA

2.3 million people suffering in EU / Australia

Inflammatory Bowel Disease is a global issue

10-15 %

Percentage of population with Irritable Bowel Syndrome

Traveller's diarrhoea

50 million

travellers at risk per year.
Rising to 100 million by 2020.

TD is a threat to military efficiency and preventative treatment is a priority for the US Army

Developing countries

#2 cause of death in under 5's
(1.3 million kids per year.)

United States of America

~ 211-375m episodes of diarrhoea p.a.
116m people use anti-diarrhoea medication (31%).

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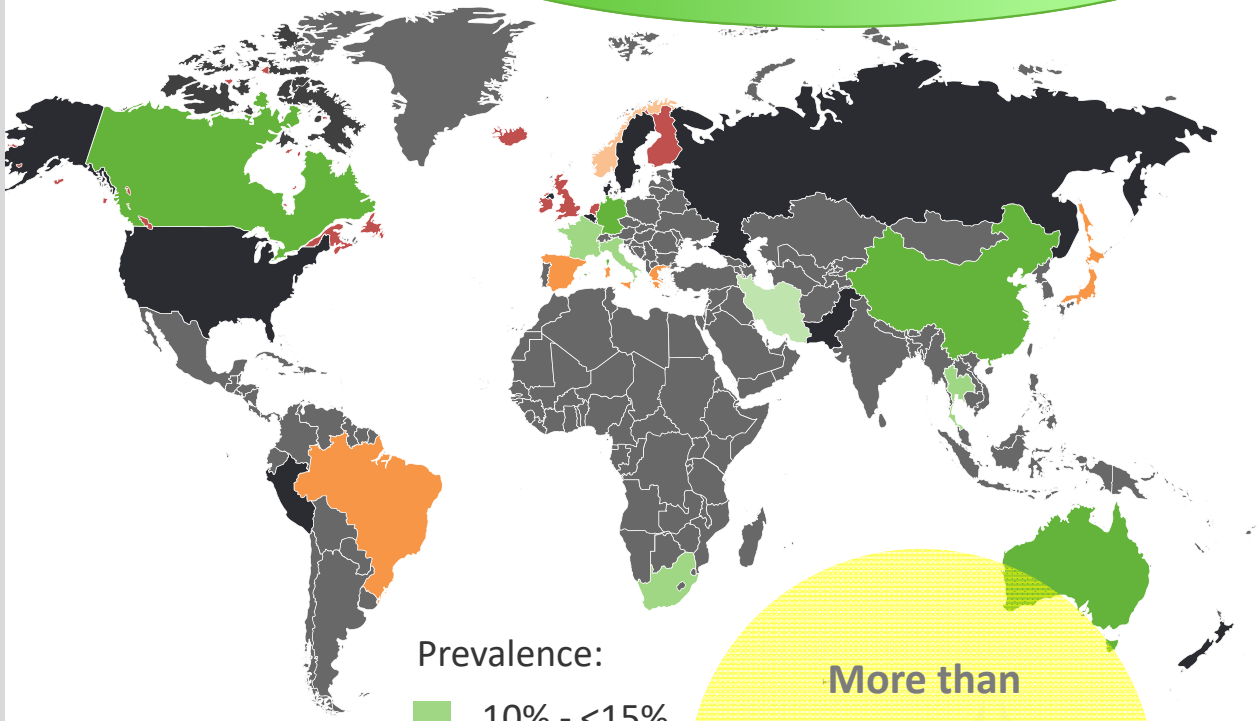
Irritable Bowel Syndrome

- ***The most commonly diagnosed gastrointestinal condition and a significant health care burden***
- Is a functional disorder. Incomplete knowledge of pathology, therefore treatment is symptom management
- Problem is diverse, including abdominal pain, bloating and alternating constipation and diarrhoea
- Patients have a poor quality of life and utilise the healthcare system more than other patients
- Prevalence varies globally. Affects 20% of USA population

Market size
>$1-2 billion



More than
100 million
Sufferers globally

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[2]Frost and Sullivan, 2012. Analysis of GI Disorders and Pharmaceuticals Global Data: IBS - Global Drug Forcast and Market Analysis to 2023

IBS Current Therapies

Estimated average annual cost of therapy is $3,882

- Symptom-based treatments, as no detectable cause
  - Anti-spasmodics for pain - Buscopan (Boehringer Sohn, CH) is the brand leader globally - 39% of the market
  - Fibre, bulking agents and anti-diarrhoeals (eg. Loperamide & diphenoxylate HCl-atropine), for diarrhoea
  - Charcoal resins, antiflatulents, and other agents for bloating, distension, and flatulence
  - Lotronex (alosetron hydrochloride), 5-HT3 (serotonin) antagonist
  - Probiotics
  - Anti-depressants
- 50% of IBS patients turn to herbal preparations

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[2]Frost and Sullivan, 2012. Analysis of GI Disorders and Pharmaceuticals
Quigley et al., 2009. World Gastroenterology Organisation Global Guideline

Inflammatory Bowel Disease

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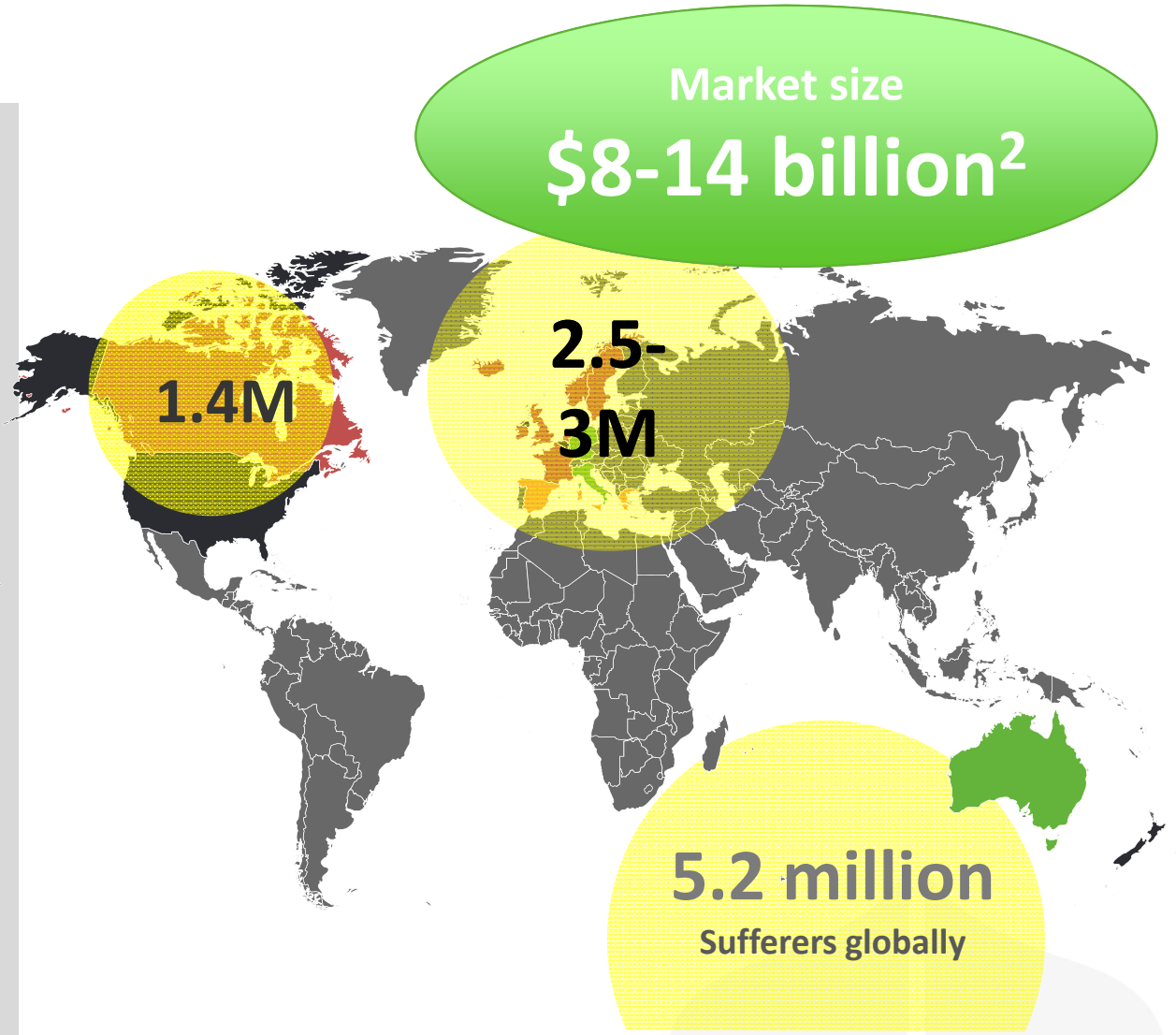
- Two forms, Ulcerative Colitis and Crohn's disease
- Patients experience abdominal pain and cramping, bloating, blood and mucus in the stool, loss of appetite and persistent diarrhoea
- No cure
- Treatment involves suppressing inflammation with the goal of inducing and maintaining remission.
- A recent study[1] has also implicated overuse of antibiotics in the development in paediatric IBD.



[1] Pediatrics. 2012 Sep 24
[2] BCC Research: Therapies and Biomarkers for Inflammatory Bowel Disease 2014

IBD Current Therapies[1]

Average annual cost per patient is $5,066 to $18,963

5-ASA (5-aminosalicylic acid) > $2 billion/year (USA)

eg. Azulfidine (Pfizer)
Average annual cost of therapy is $321/patient (less than $1 per tablet[2])
Side effects and resistance is common

Corticosteroids > US$3.6 billion/year[2] eg. Prednisone

Average annual cost of therapy is $855/patient
Effective for acute attacks
Not suitable for long term use because of side effects

Biologicals (anti-TNF mAb's) > $25 billion[2]

eg. Remicade (Janssen, USA – Merck) ($7.8 billion), Humira (Abbvie) ($7.9 billion)
Average annual cost of therapy is $21,000. Tysabri (USA $54,808 per patient per year)
Expensive. Governments (EU) don't want to pay for expensive biologics
Require injection
All have significant side effects. FDA Black Box warnings

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[1]Frost and Sullivan, 2012. Analysis of GI Disorders and Pharmaceuticals
[2]BCC Research: Therapies and Biomarkers for Inflammatory Bowel Disease 2014

Anatara - Human GI Product Opportunity

IBS and IBD are distinct diseases, but have common symptoms

Increasing overlap in the treatment of IBD and IBS[1].

A significant opportunity exists for compounds that can be administered orally, with a similar or better therapeutic effect, ***and low side effect profile*** to existing IBS and IBD treatments

Anatara have the potential to provide such treatments – have a significant safety profile

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[1]Am J Gastroenterol 2012; 107:1474–1482

Detach™ - leverage Pigs to People

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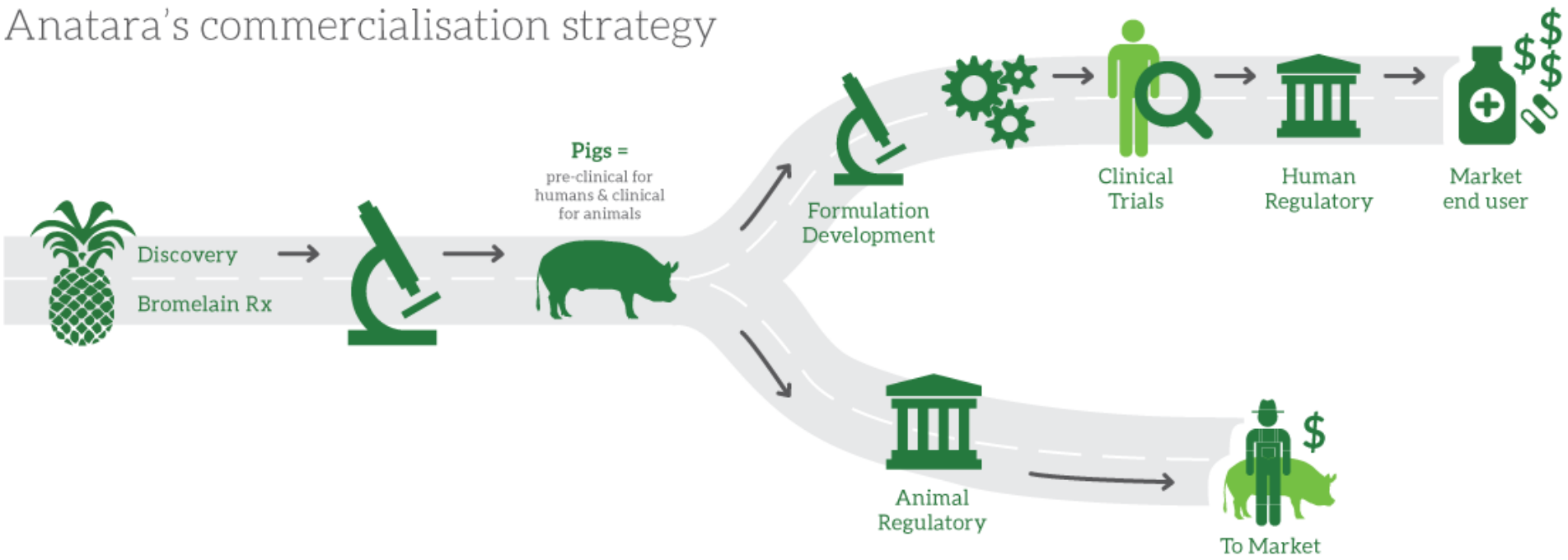

Detach™ - From Pigs to People

- Same mechanism of action for treatment of disease in pigs and humans
- Pre-clinical program for animals complete therefore development for humans de-risked
- Clinic ready (CMC, Toxicology, Pharmacology well developed)
- Ready to Partner/Develop

Detach™ for Humans – well advanced

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Status

- Mode of action clearly understood, based on decades of research
- Pre-clinical efficacy database is very strong due to leverage of Detach™ data from pig studies
- Proof of concept in several animal models
- Confirmed efficacy in rabbit models with human diarrhoea pathogens
- Proof of concept in mouse model of inflammatory bowel disease
- Margin of safety studies (1x, 3x and 5x dose) in piglets completed (TAS study)
- Human Safety studies (Phase I) in healthy volunteers completed
  - 28 day treatment was very well tolerated

Market Opportunity: Human GI disorders/disease

- Substantial patient population with unmet need despite availability of numerous therapies
- GI disorders are highly symptomatic and the most common reason why people seek medical treatment[1,2]
- GI disorders are associated with significant quality-of-life issues because of pain and abnormal bowel habits
- Huge need for effective therapies that are safe enough for chronic use
- Huge need for products that prevent disease or relapse
- Major Pharma have significant interest in GI therapeutic area

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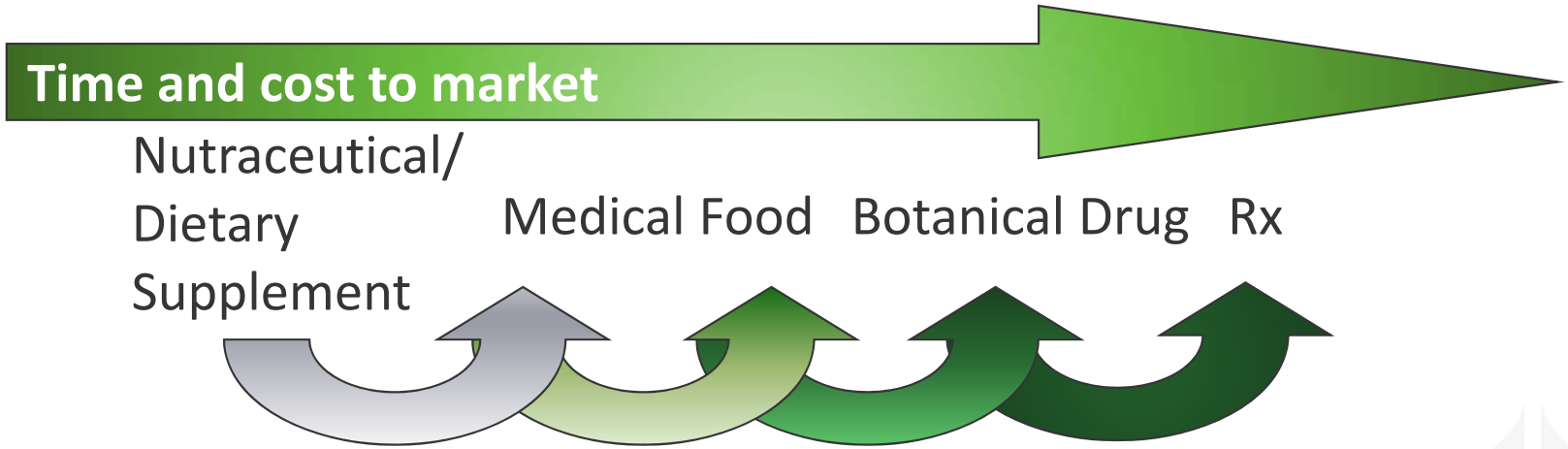
[1]J Clin Gastroenterol.1999 Dec;29(4):339-43
[2]Am J Manag Care. 2001 Jul;7(8 Suppl):S246-51

Development Options

Anatara compounds are from a natural source, so there are several development options.

1. Pharmaceutical Development (Single molecular entity)
2. Over the Counter (OTC) - Natural Health Products, Complementary Medicine, Medical Foods, Botanical Drugs (Proprietary Extracts)



Strategic decision to move forward with OTC products first – offers fastest route to market.

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Consumers Want Natural Products

- Concern about adverse effects of conventional drugs with suboptimal efficacy
- 50% of IBS patients and 21% of IBD patients use OTC products to do everything possible to control their disease
- Patients perceive natural products offer a gentler way of managing chronic conditions
- People increasingly worried about their health take prevention of illness into their own hands
- Major Pharma have consumer health businesses or a focus on “wellness“ - Large focus on plant botanicals
- Natural products work - By 1990, approximately 80% of drugs were either natural products (or analogs inspired by them).
  - Eg. Antibiotics (e.g., penicillin, tetracycline, erythromycin)
  - Anti-malarials (e.g., quinine, artemisinin)
  - Lipid control agents (e.g., lovastatin and analogs)
  - Anti-cancer drugs (e.g., taxol, doxorubicin)

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Thank you

Anatara's naturally derived compounds offer a safe but effective alternative to antibiotics for gastrointestinal diseases and the Company is uniquely positioned to fulfil a currently unmet need in the huge, global animal health market.

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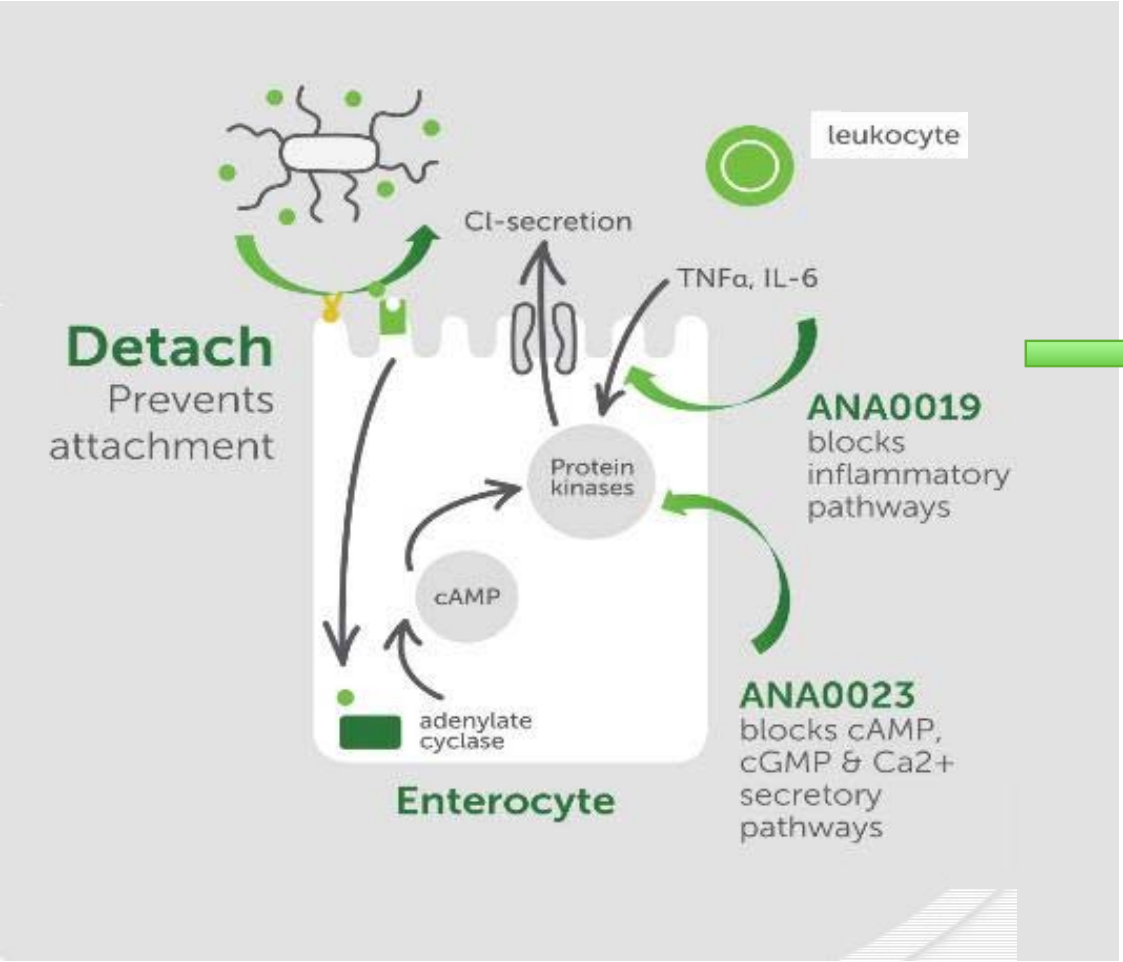
Detach™ Mode of action

Detach™ does not target the pathogen
Detach™ acts on the underlying cause of diarrhoea



Anti-inflammatory opportunities

1. Chandler and Mynott. 1998. *Gut* 43:196-202
2. Mynott, et al., 1996. *Gut* 38:28-32
3. Mynott, et al. 1997. *Gastroenterol.* 113:175-184
4. Mynott et al. 1999. *J. Immunol.* 163:2568-2575

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Intellectual Property

- PCT application filed (August 2015)
- Second PCT application filed (August 2016)
- Solid patent strategy in place for further patents to be filed in major territories
- Claims cover the Detach™ formulation, as well as use of the active ingredient and composition of matter for the active components within Bromelain-Rx
- Bromelain-Rx is not the same as common bromelain
- Detach™ formulation has superior efficacy to bromelain or bromelain-Rx alone

IP wall of China

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