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Maintaining health is a desirable benefit of the diet. From Gen Z, through the Millennials, Boomers and Gen X, innovation in NPD in food is targeting health outcomes - to stay in the competition. This presentation will take a lightning insight into the new psychobiotic paradigm. How EU Regulation creates legal uncertainty with a direct negative impact on product innovation, food in fact, but medicine in law. Introduce the Bowels and Brains TM research project.

Adri Bester MSc RSCi RFAM RFoodSM MIFST

Senior Food Technologist| Enterprise Lead for the School of Applied
Sciences

Lead Academic LAFIC

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Health.....

"State of complete physical, mental, and social well being, and not merely the absence of disease or infirmity." WHO

Consumers health priorities vary

Boomers 72-54

GenX 54-38

Millennials 38-23

GenZ 23-13

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LONDON AGRI-FOOD INNOVATION CLINIC



Expertise

LAFIC brings with it significant knowledge of the food industry through its access to LSBU academics as well as a vast network of professional consultants and strategic partners. This, when tailored to each participant, is expected to give them the tools to grow their business and reach their potential.



Support

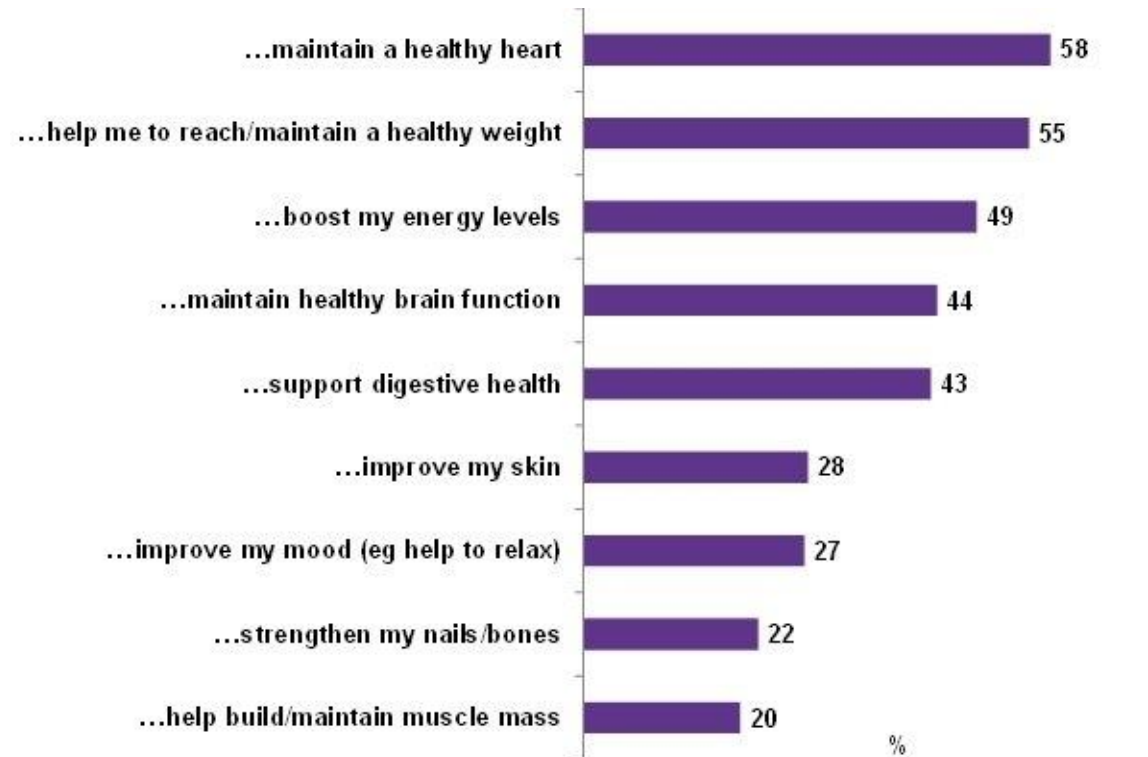
Each participant will receive an initial one to one consultation with LAFIC staff to better understand their business needs. From this we can develop a customised program which can include, innovation workshops, consultancy, product development & testing, focussed networking and business promotion.



Facilities

LSBU is home to the National Bakery School and the London Food Centre, as such has a variety of facilities including industry standard facilities, food sensory analysis room, food technology laboratory, 3D printer and high pressure equipment for food processing to name a few. LAFIC participants will have access to these facilities to support applied research, product development and testing.

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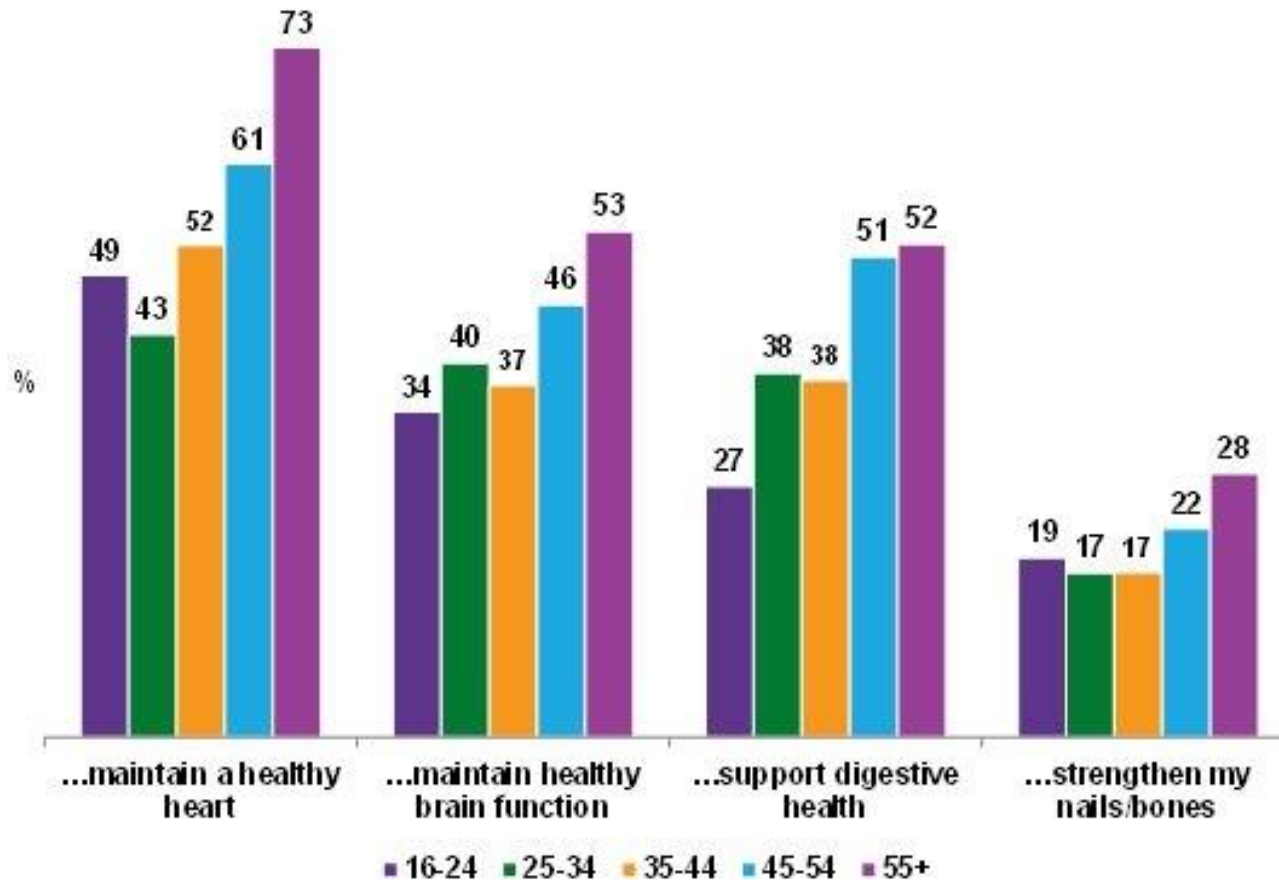
Benefits consumers would ideally like from their diet, November 2017

"I would ideally like my diet to...? Please select up to 5."

Base: 2,000 internet users aged 16+

MINTEL

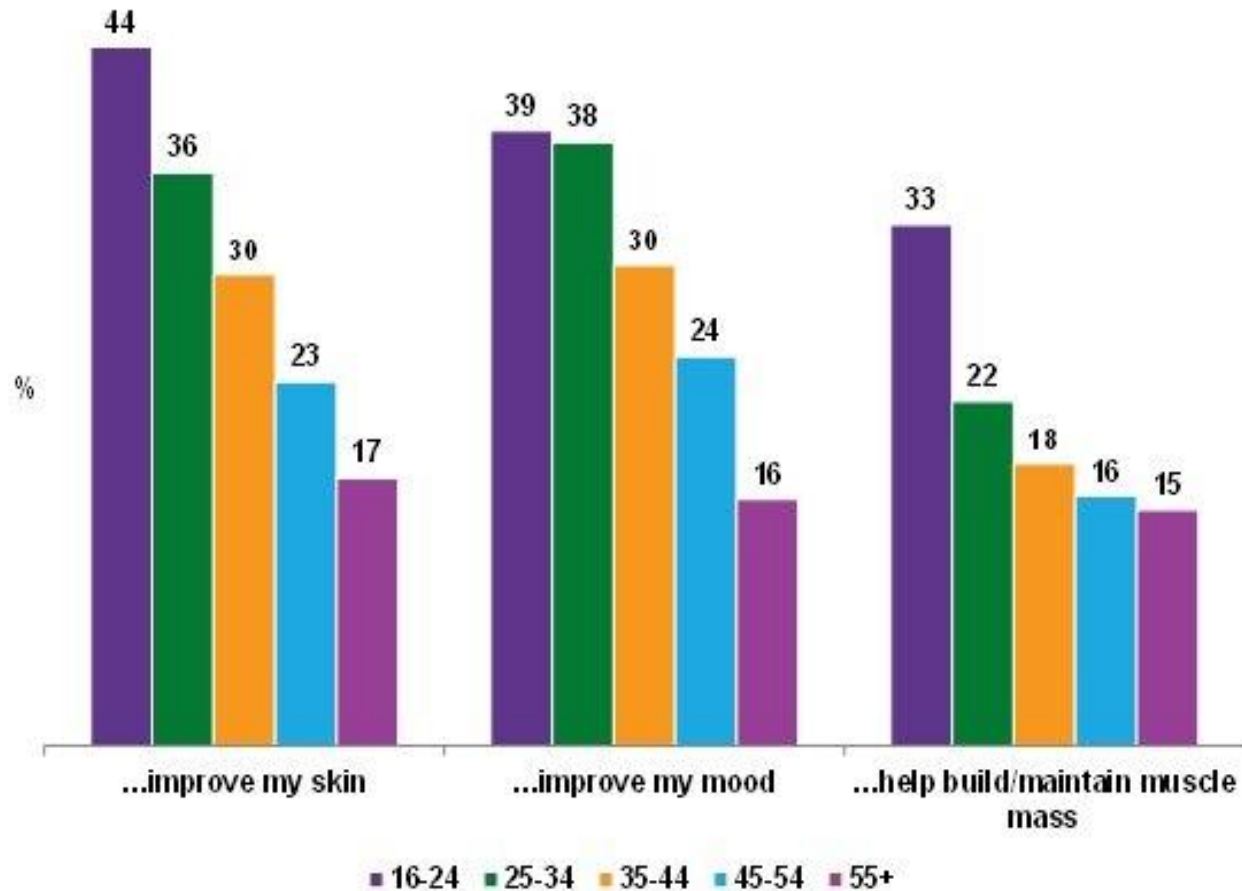
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Selected benefits consumers would ideally like from their diet, by age, November 2017

Base: 2,000 internet users aged 16+ MINTEL

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MICROBIOTA FOR HEALTH

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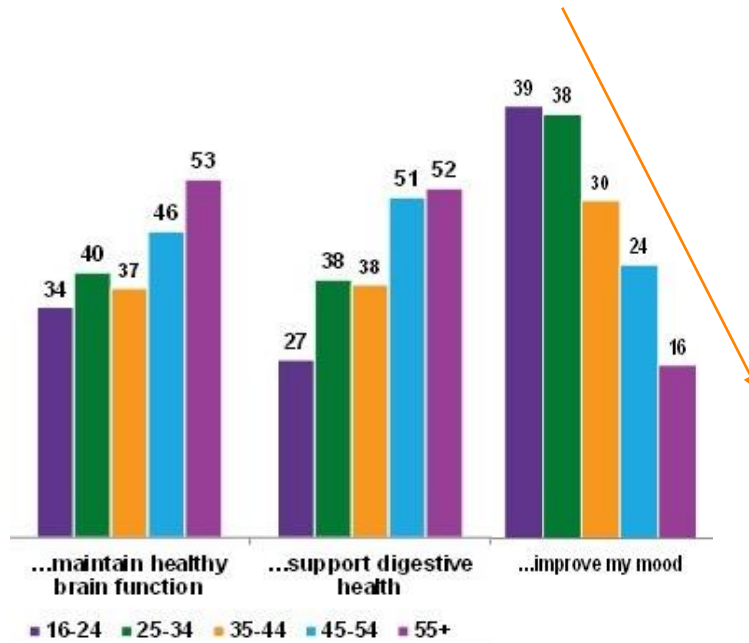


https://www.janellesmithnutrition.com/uploads/3/1/4/9/31498261/gut-brain-axis_orig.png

PSYCHOBOTICS



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NPD Strategy to target consumer?

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Do we get happier as we get older?
Does mood not matter in old age?
Are the Boomers more resilient?
Are they all on 'happy' pills?
Is it a generation thing brought on by society?
Decreased optimism and repressive coping!



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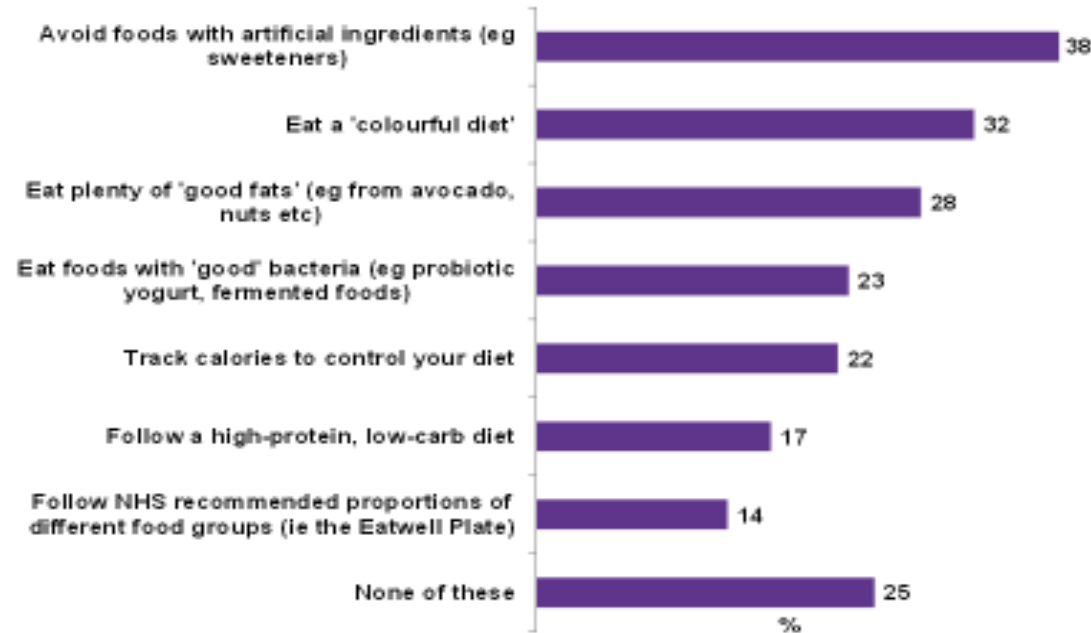
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Healthy Eating Behaviours

HEALTHY EATING BEHAVIOURS, NOVEMBER 2017

"Which of the following do you do as part of your diet? Please select all that apply."



Base: 2,000 internet users aged 16+

Source: Lightspeed/Mintel



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Good bacteria hold widespread appeal...

The importance of gut health to overall health and wellbeing is attracting growing attention from the media, helping to raise awareness of the benefits of actively looking after this aspect of health through diet.

The Guardian, November 2017 : **“Is your gut microbiome the key to health and happiness?”**suggests “the vast ecosystem of organisms that lives in our digestive systems might be as complex and influential as our genes in everything from mental health to athleticism and obesity”

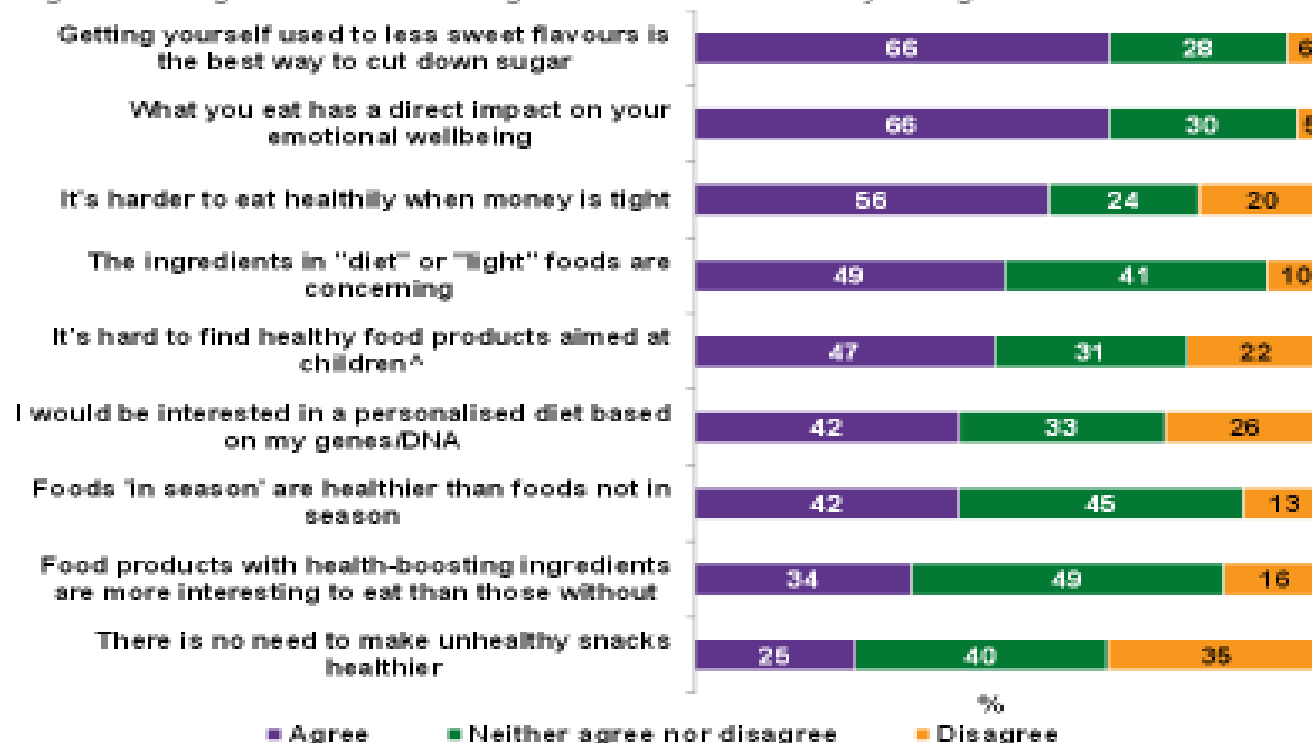
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Attitudes towards Healthy Eating

ATTITUDES TOWARDS HEALTHY EATING, NOVEMBER 2017

"Do you agree or disagree with the following statements about healthy eating?"



[^] shown to 590 internet users aged 16+ who are parents

Base: 2,000 internet users aged 16+

Source: Lightspeed/Mintel

MINTEL

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...driving more innovation in this area

The growing interest in supporting digestive health has helped to drive something of a renaissance of fermented foods as a provider of “good bacteria”. The profile of fermented foods such as kombucha, kefir, sauerkraut and kimchi has significantly risen recently, even sourdough bread.

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Consumers want authenticity and nutrition that comes from a traditional fermentation process and they are seeking out fermented foods and beverages – yoghurts, kefir, kombucha, sauerkraut and kimchi – for improved digestion. They want foods with inherent functionality and not ‘lab-created’ functionality.

The global fermented food category and beverages market is projected to grow at a CAGR of 7% through 2022 – supporting a renaissance of reinterpretation of the traditional food preservation technique.

Lumina Intelligence 2018

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Some brands make virtue of the fact they don't add 'lab-grown' probiotics to their fermented foods and beverages.

WE MAKE IT LIKE THEY USED TO

Our products are fermented and never cooked. The result, great taste and helpful bacteria and nutrients.



LEARN ABOUT OUR PROCESS

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With brain health and function improvement high on the agenda..... this considerable demand is not matched by widespread availability of products with claims linking to cognitive health, signalling a missed opportunity to reap the rewards of the strengthening research.

Less than 1% of food products launched in 2017 carried claims centring on the brain or nervous system, with many of these in the baby food category. These claims are underutilised and warrant a lot more attention, and should be made a prominent part of more food products' healthy proposition. Mintel, 2018

Psychobiotics a new paradigm in treating and preventing dementia.

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Psychobiotics: Probiotics for Your Mind - Hyperbiotics

<https://www.hyperbiotics.com>. A new phrase is exploding on the scientific and psychiatric scenes—**psychobiotics**: microbes in the human body that have a beneficial effect on our mental state.

Psychobiotics: Use the Gut-Brain Connection for Mental Health | Be ...

<https://bebrainfit.com/psychobiotics-gut-brain-connection-mental-health> **Psychobiotics** are intestinal bacteria with proven mental health benefits.

The Best Probiotics for Mood: Enhancing the Gut-Brain Connection ...

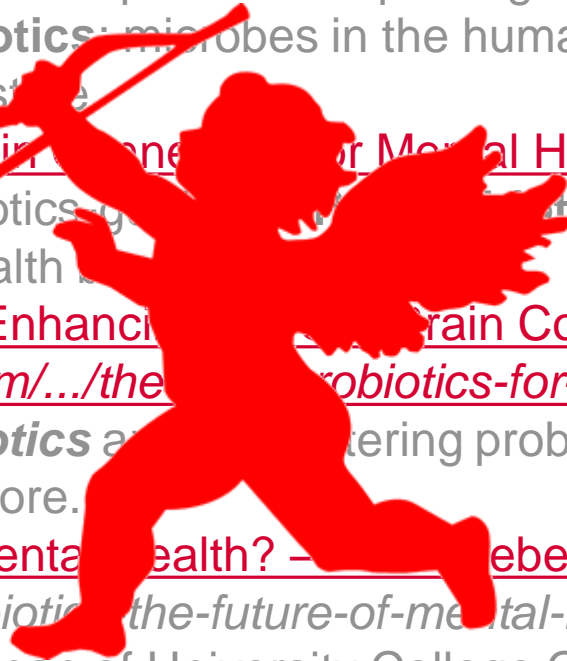
<https://universityhealthnews.com/.../the-best-probiotics-for-mood-enhancing-the-gut-brain-connection>

gut-b 20 Jun 2018 - **Psychobiotics** are a new category of probiotics that can boost mood, decrease anxiety, and more.

Psychobiotics, The Future of Mental Health? – Ted Dinan, MFT ...

<https://medium.com/.../psychobiotics-the-future-of-mental-health-a86b7f35376e>

14 Feb 2018 - Professor Ted Dinan of University College Cork in Ireland, one of the pioneers in the field, introduced the term **psychobiotics** in 2012 to ...



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lovingfoods.co.uk/blogs/loving-foods-blog/tagged/microbiome



The Gut-Brain Axis: Mental Health and the Gut Microbiome.

May 30, 2018



This is a tale of two brains. Did you know that it's not only your mouth and gut that are connected, your brain gets in on the action too. This is known as the gut-brain axis, and it has a significant impact on your mood and behaviour. Discover how

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CUCUMBER GUT LOVE

The refreshing cucumber bouquet in this brine is the perfect probiotic pick me up

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The IPA states Europe has been one of the largest and the most innovative probiotics markets in the world.

Probiotic yoghurt and fermented milk have lost more than €1 billion in projected sales during the period 2009-2017. The NHCR has created a high level of uncertainty regarding the use of the term ‘probiotics’ in the EU market. During the same period, double digit growth in probiotic sales has been recorded elsewhere in the world (+138.5% in North America, +49% in Latin America, +74.9% in Asia Pacific). (<http://ipaeurope.org/market.php>) *Accessed 21/06/2018.*



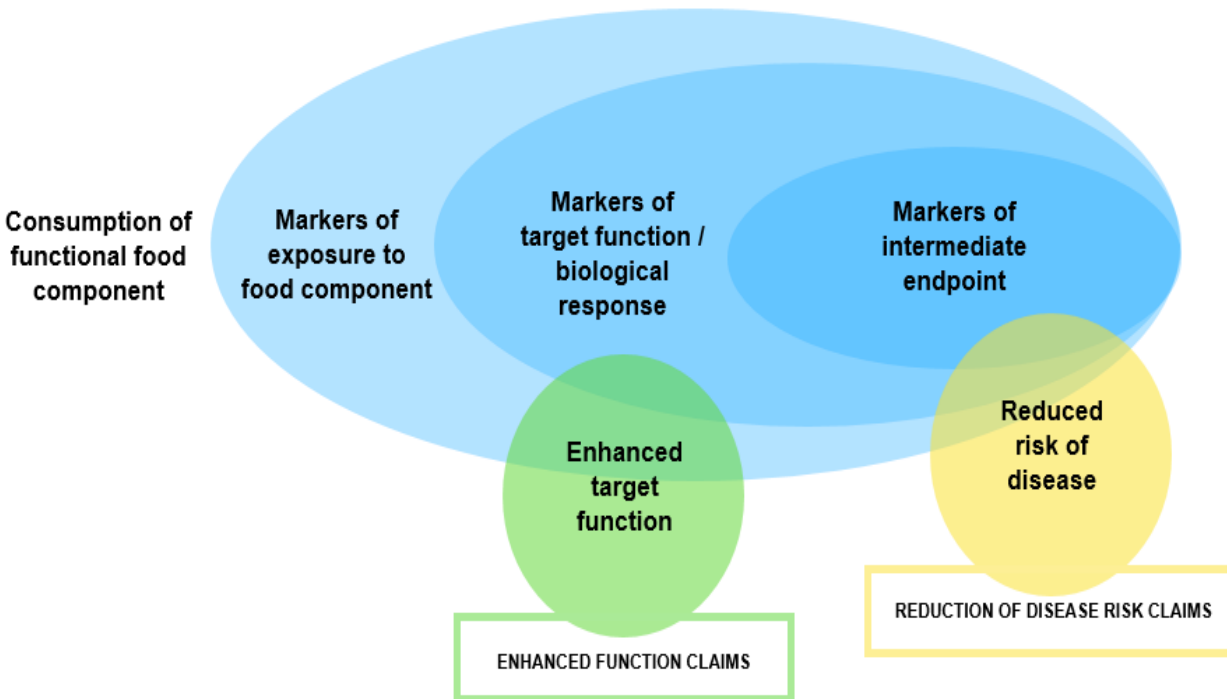
With the requirement that the selection of probiotic (1) should be matched with the clinical indication (1) , where does that leave traditional fermented foods? People predominantly prefer consuming a whole food rather than a supplement (Toribio-Mateas, 2018). Brands that are most likely to be considered healthy tend to make health a strong part of their proposition, rather than it being a by-product of what they do (Mintel, 2018). What healthy message is available to the manufacturers of fermented products, where their probiotics complies with the FAO/WHO definition (2001)*, yet are not single strains, but groups of micro-organisms?

****Live microorganisms that, when administered in adequate amounts, confer a health benefit on the host.***

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BOWELS and BRAINS™



the consumption of traditional fermented foods (a) increases an individual's microbiota diversity, and (b) confer a health benefit to the host by improving cognitive performance and baseline mood.....

PASSCLAIM

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Integrated multi-omics of the gut microbiome: assessing the beneficial effects of fermented foods to human health

Adri Bester¹, Katya Mileva², Nadia Gaoua², Miguel Toribio-Mateas³

1 Food Nutrition and Health Research Group, School of Applied Science, London South Bank University;

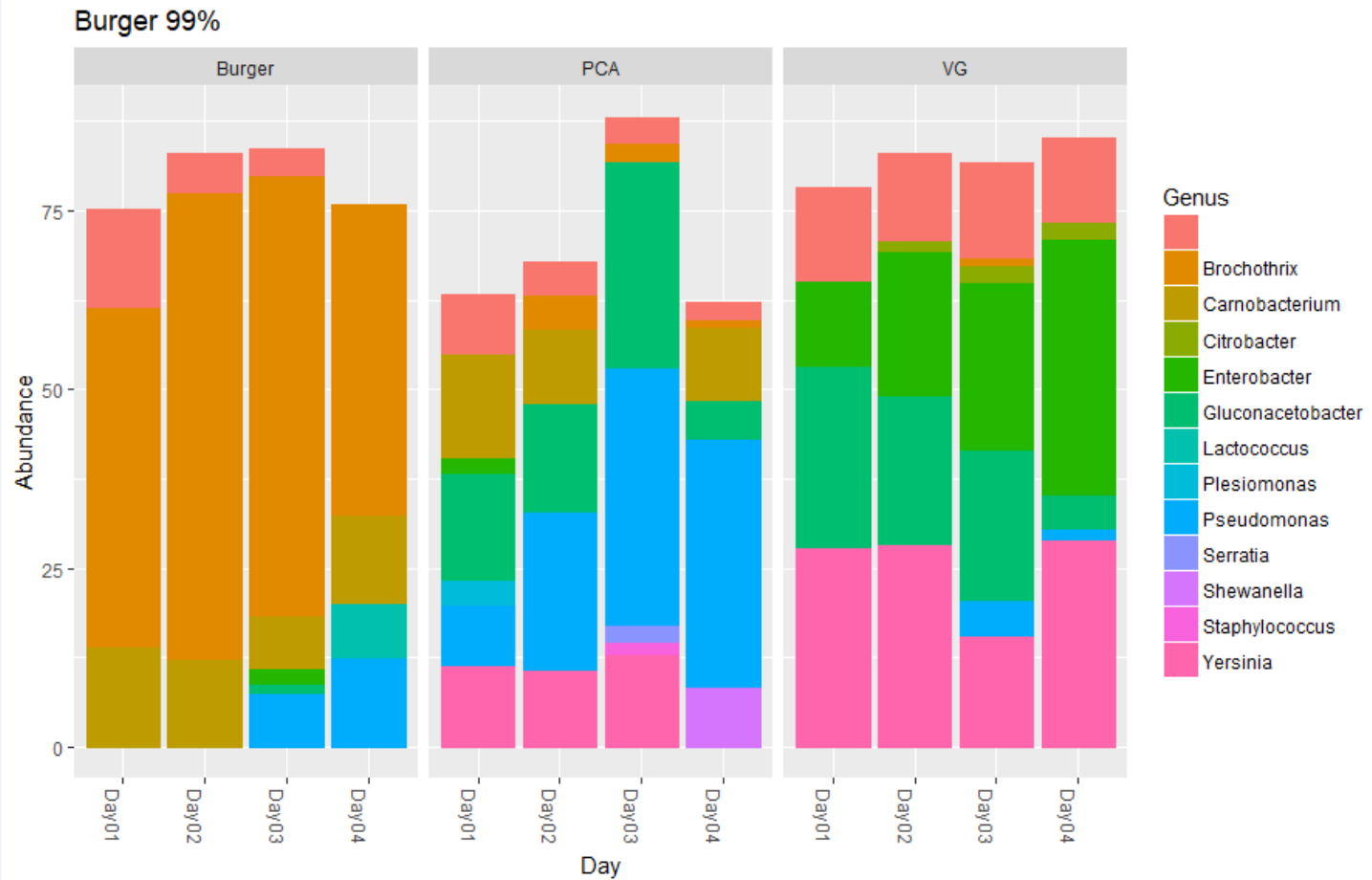
2 Sport and Exercise Science Research Centre, School of Applied Science, London South Bank University; 3 School of Health and Education, Middlesex University.

Hypothesis: *Regular consumption of unpasteurised fermented foods will improve gastrointestinal health biomarkers, host-microbe interaction, and cognitive function*

Methodology: We propose a multi-omics approach, providing more evidence for biological mechanisms, best suited to the complex nature of fermented foods. Omics data will be correlated with validated methods for participant-reported outcomes, and psychometric data.

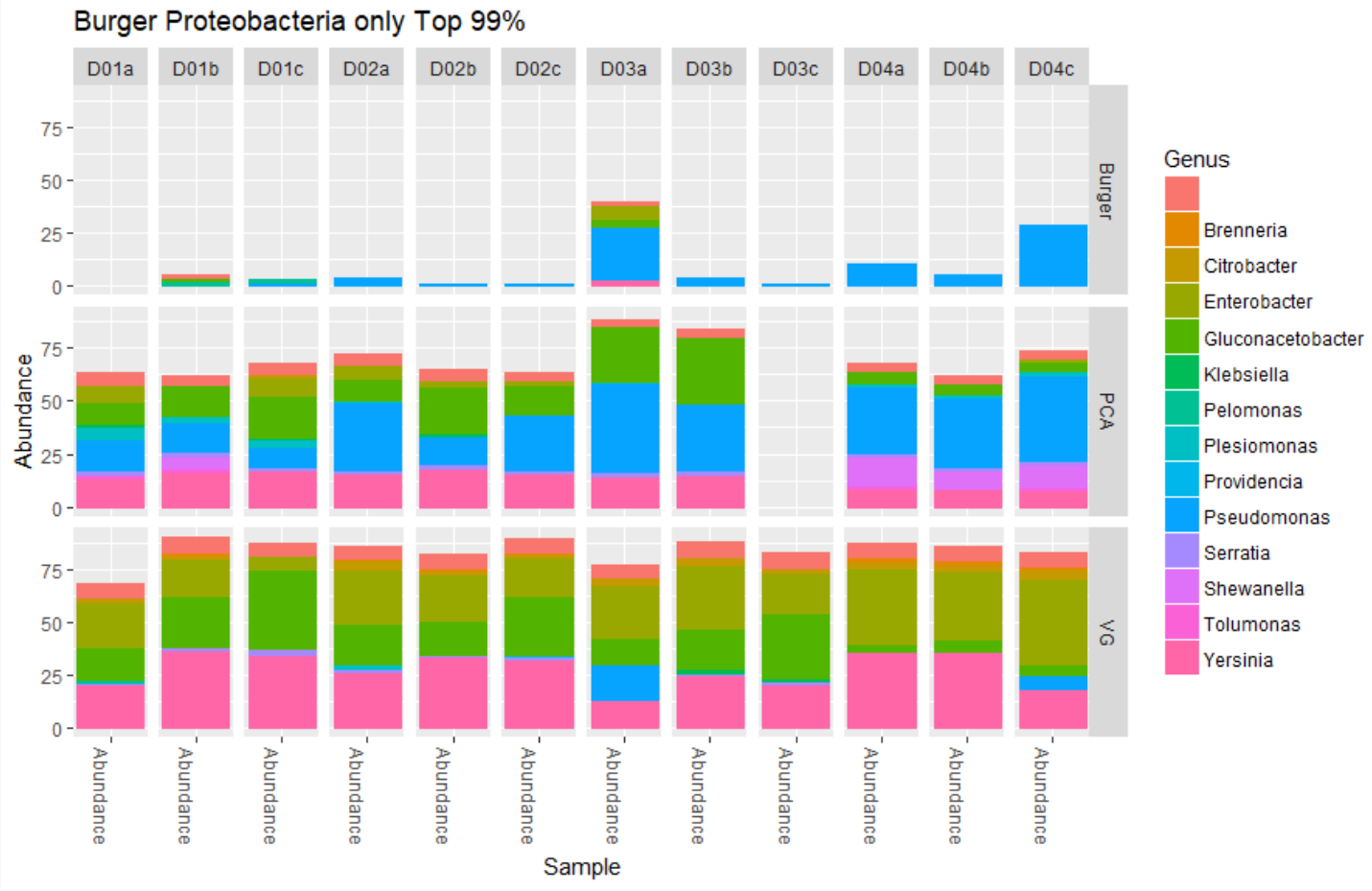
Foodomics and the host-microbiota-exposome interplay

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FOODOMICS





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