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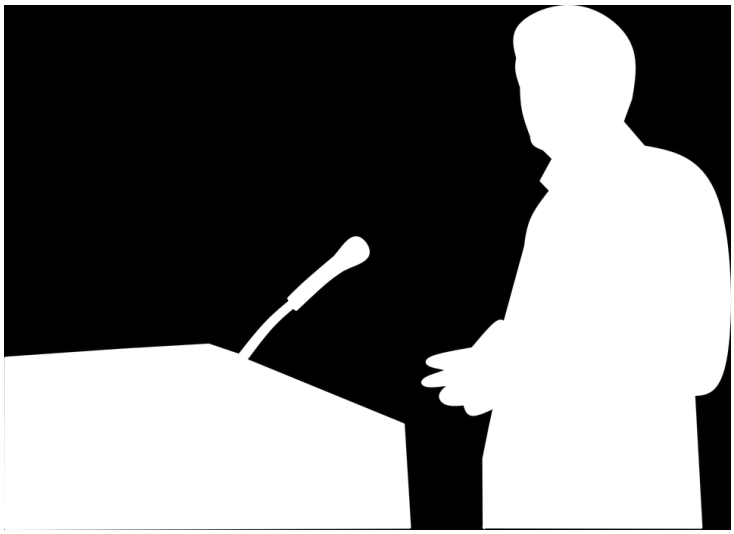
ASIA EDITION

Getting a good gut feeling - Vitafoods Asia 2018

07 August 2018 | News

Dr Nagarajan and his fellow scientists are pursuing three avenues of research. He will also deliver a talk, titled "Focusing on Precision Nutrition for Shaping the Gut Microbiome", about his research and goals at the Vitafoods Asia 2018 Conference.



Singapore – In the near future, doctors may be able to diagnose and treat patients' physical and mental health problems by analysing and adjusting the bacteria in their gut.

The human body's digestive system contains an ecosystem of bacteria, yeasts, fungi, viruses and protozoans that weigh up to 2 kg altogether and perform vital functions such as breaking down food and toxins, manufacturing vitamins and training the immune system to keep the body healthy.

Over the past decade, research has also shown that anomalies in this ecosystem, called the gut microbiome, could be linked to post-traumatic stress disorder, higher levels of stress, anxiety and fearfulness and other mental health issues.

The importance of the gut microbiome on human wellness is why Dr Niranjan Nagarajan, an associate director and senior group leader in the Singapore Agency for Science, Technology and Research's Genome Institute of Singapore, is spearheading work to better understand its development and changes.

At this year's Vitafoods Asia 2018 conference, which will take place on Sept 11 and 12 at Singapore's Marina Bay Sands Expo and Convention Centre, Dr Nagarajan will deliver a talk, titled "Focusing on Precision Nutrition for Shaping the Gut Microbiome", about his research and goals.

To realise this system, Dr Nagarajan and his fellow scientists are pursuing three avenues of research. The first involves studying gut microbiome and diet data compiled by the American Gut Project, a global citizen science initiative founded by scientists in the United States.

"Although the data is publicly available, it's just data, so we've been working on new methods to analyse it properly to give us

what we want," said Dr Nagarajan. "From the analysis, we can then come up with predictions, for instance that 'Food A will affect the abundance of Microbiome Component B', and conduct experiments to test them."

He added that he and his colleagues have analysed the gut microbiome data of about 1,500 people so far, of which about 800 had provided information about their diet.

Beyond this work, the team is also studying different types of food to find out what bacteria grows and feeds on them. "Not everything that we consume will get to our gut because we have a digestive system that kills most bacteria, but this research will give us some idea about what could be in your gut if you eat certain types of food," Dr Nagarajan explained.

Alongside the conference, at the Vitafoods Asia exhibition, speakers at the Global Health Theatre will discuss the impact of the modern lifestyle on nutrition and diseases, and how food fortification is addressing these issues, will be discussed by industry experts. Other topics include responsible nutrition, importance of fortification & fortified foods, impact on the glycaemic index, as well as the packaging of nutraceuticals into functional foods. At Vitafoods Asia exhibition, companies from 17 countries, including those in Asia, Europe and the Americas will be exhibiting their key ingredients, such as enzymes, probiotics, pre-biotics and other ingredients that supplement gut health.