

Press Release

Microbes Matter – APC Public Forum on Gut Bacteria in Health and Disease

Would you like to learn more about 100 trillion bacteria living in your gut and how they impact your health? If so, the Alimentary Pharmabiotic Centre (APC) invites you to a Public Forum in UCC on 27th May for World Digestive Health Day.

You will learn all about the role of gut bacteria in irritable bowel syndrome, inflammatory bowel disease, regulating weight gain, behaviour and stress as well as the impact of exercise.

Our knowledge of the microbial communities that inhabit the human gut has grown exponentially over the last few years. Scientists at the Science Foundation Ireland-funded Alimentary Pharmabiotic Centre in Cork has been at the forefront of many of these fascinating developments.

The human gut provides a home and nutrition to a wide variety of bacteria (our microbiota) which play key roles in digestion, metabolism and immune function and which significantly influence our health within and beyond the gastrointestinal tract. Modern lifestyle, including diet, influences our gut bacterial populations. Gut bacteria have also been linked with a number of disorders, including irritable bowel syndrome, inflammatory bowel disease (Crohn's disease and ulcerative colitis), immune mediated diseases such as coeliac disease and allergies and metabolic diseases such as diabetes and obesity.

The forum will be chaired by Professor Paud O'Regan, Consultant Gastroenterologist at South Tipperary General Hospital in Clonmel. The speakers include:

- Dr Paul Cotter, Principal investigator at the Alimentary Pharmabiotic Centre and Moorepark Food Research Centre, will speak about our gut microbiota and how they are affected by exercise
- Dr Carthage Moran, Specialist Registrar in Gastroenterology at Cork University Hospital & Alimentary Pharmabiotic Centre, will speak about the role of gut bacteria in gastrointestinal health and disease, including inflammatory bowel disease and irritable bowel syndrome
- Dr Susan Joyce, Senior Research Scientist and Group Leader, Alimentary Pharmabiotic Centre, will speak about how gut bacteria regulate weight gain and serum cholesterol levels. Her research with Dr Cormac Gahan has shown that by specifically increasing levels of a bacterial protein called bile salt hydrolase, serum cholesterol levels and weight gain in mice are reduced.
- Dr Gerard Clarke, Alimentary Pharmabiotic Centre and Department of Psychiatry, UCC will highlight the important role that gut bacteria play in the 2-way communication between the gut and the brain. Alterations in the composition and stability of the gut microbiota have been reported in Irritable Bowel Syndrome. Recent evidence suggests that they might also control the way we behave and how we handle stress. This has important implications for brain-gut axis disorders such as IBS and also opens up the possibility of developing microbial-based treatment strategies for brain disorders.

The event takes place in Lecture Theatre G05, Western Gateway Building, University College Cork, Western Road, Cork from 7.00-8.30pm. All are welcome and admission is free.

The World Gastroenterology Organisation (WGO; www.gastroenterology.org) has designated 29th May each year as World Digestive Health Day. This year the WGO seeks to raise awareness of our gut microbiota to gastroenterologists and the public. In addition to the Public Forum, the Alimentary Pharmabiotic Centre has recorded a video on the gut microbiota as part of this campaign.

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For further information please contact Dr Catherine Buckley, Communications and Outreach Manager, Alimentary Pharmabiotic Centre, UCC. Tel: 021 4903362; 086 8554744; email c.buckley@ucc.ie

About the APC: The Alimentary Pharmabiotic Centre, <http://apc.ucc.ie> is a national centre for food and medicine funded by government and industry through Science Foundation Ireland's Research Centres' programme. The APC spans across UCC, Teagasc (Ireland's Agriculture & Food Development Authority) and Cork Institute of Technology. APC's research explores how bacteria in the human gut impact on population health, leading to the development of future foods and medicines.

Dr Susan Joyce's research is just published in the leading international journal Proceedings of the National Academy of Sciences USA Joyce, S.A., McSharry, J., Casey, P.G., Kinsella, M., Murphy, E.F., Shanahan, F., Hill, C. and Gahan, C.G.M. (2014) "Regulation of host weight gain and lipid metabolism by bacterial bile acid modification in the gut" www.pnas.org/cgi/doi/10.1073/pnas.1323599111