

In the news

FROM AACR 2017

In April 2017, ~21,500 international delegates attended the American Association for Cancer Research (AACR) annual meeting in Washington D.C., USA. Following a well-attended opening ceremony, the AACR Team Science Award was presented to the 'International Liquid Biopsy Initiative Team' for their pioneering work on the application of cancer mutations for liquid biopsy. This work facilitated the development of new technologies such as Cologuard (Exact Sciences) — an FDA-approved commercial test for colorectal cancer (CRC) screening.

The tripartite relationship between the gut microbiota, diet and cancer was prominent. Scott Bultman presented data to implicate the fibre–microbiota–butyrate axis in mediating tumour suppression in models of CRC through epigenetic modulation, and suggested probiotics or prebiotics as alternatives to histone deacetylase (HDAC) inhibitors. The microbiota–cancer link was also prevalent in a large plenary session, in which the effect of the gut microbiota on response to immunotherapy was discussed; strategies to modulate the microbiota might enhance efficacy of these agents.

The epidemiological links between the gut microbiota, diet and CRC were also highlighted by Andrew Chan; a prudent dietary pattern (rich in fruit, vegetables and whole grains) is associated with a reduced risk of *Fusobacterium nucleatum*-positive CRC in longitudinal studies. The concept that dietary changes can modulate the gut microbiota, and therefore CRC risk, was also illustrated by Stephen O'Keefe; a switch from a Western diet to a traditional African diet in African Americans reduced markers of intestinal proliferation and inflammation. Finally, Christian Jobin outlined the intricate mechanisms of how the gut microbiota triggers CRC; chronic intestinal inflammation provides a niche for carcinogenic microbes — "...it's an inside job".

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