Scientists discover way to stop ulcers caused by aspirin

October 8 2019, by Dr Catherine Buckley

(l-r): Prof Fergus Shanahan, principal investigator at APC Microbiome Ireland; Andrea Doolan, CEO, Atlantia Food Clinical Trials; Dr Martin Buckley, a consultant gastroenterologist at Mercy University Hospital. Credit: University College Cork

A new study carried out in Cork has shown that bifidobacteria, which is commonly found in the guts of newborns but tends to decline as people age, can prevent and heal ulcers caused by the painkiller aspirin.

A first-of-its-kind study, it builds on scientific observations published

earlier this year, which showed that some bifidobacteria produce a protective protein which promotes healing of the intestinal epithelial lining.

Secondly, the new work now provides objective endoscopic (photographic) evidence in human volunteers that aspirin-induced ulcers can be reduced by bifidobacteria.

Finally, the work involved a four-way collaboration among clinicians at the Mercy Hospital in Cork under the direction of Dr. Martin Buckley, investigators at Cork's APC Microbiome Ireland directed by Fergus Shanahan, in collaboration with local Cork company Atlantia Food Clinical Trials and the multinational biosciences company Chr Hansen.

"Although prior studies have described stomach damage from aspirin and non-steroidal anti-inflammatory drugs, this is, to the best of our knowledge, the first trial to record a detailed time-course of aspirin-induced, small-intestinal damage. Even more impressive was the subsequent reversal of the damage by the bifidobacterium that could be added as a natural supplement to the diet of patients on long-term aspirin," said Dr. Martin Buckley.

"This case study is an excellent example of a collaboration between an SFI Research Centre, APC Microbiome Ireland, an innovative Irish SME, Atlantia Food Clinical Trials, multinational biosciences company Chr. Hansen and the Mercy University Hospital" said Prof Fergus Shanahan, Principal Investigator APC Microbiome Ireland. "The four partners collaborated synergistically to deliver a high-quality clinical study, which could not have been carried out by the teams individually."

Atlantia Food Clinical Trials designs and delivers clinical studies for functional ingredients, supplements, pre- and probiotics, medical foods, infant formula and microbiome-based therapeutic sectors. A spin-out of

APC Microbiome Ireland SFI Research Centre at University College Cork, Atlantia has operations in Cork, Ireland and Chicago, U.S..

"Atlantia is one of the world's leading multicentre, multinational trial facilities specialising in food and nutraceutical clinical trials. Our highly trained and experienced teams enable us to conduct and manage complex studies across all health areas for our growing global customer base. To be involved in a clinical programme with Chr. Hansen, that has such a potentially large benefit to people everywhere, is a great testament to the quality of the research Atlantia provided, coupled with the commitment of the Chr. Hansen team," said Andrea Doolan, CEO, Atlantia Food Clinical Trials.

The research is published in *Gastroenterology*, where it also featured on the journal cover.

More information: Brynjulf Mortensen et al. Bifidobacterium breve Bif195 Protects Against Small-Intestinal Damage Caused by Acetylsalicylic Acid in Healthy Volunteers, *Gastroenterology* (2019). DOI: 10.1053/j.gastro.2019.05.008

Provided by University College Cork

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