



The place for scientific debate

The Gut Microbiota For Health Newsletter #37

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Dear Friends,

In this edition of the newsletter, you will find something for everyone. For clinicians, we give you the questionnaire that accompanies the e-learning slides we previously posted on our site. For scientists and others, we present a primer on Twitter, with a video on how to create a 'tweetable' abstract for a scientific paper. For everyone, we feature an interview with Dr. Francisco Guarner on the two recent papers in Nature Biotechnology that many in the field have been talking about.

The literature selections this week include a paper on gut microbiota in a family that answers this question (and others): "Do children have gut microbial communities that are more similar to their mother, their father, or both?" We also have a paper on a modified bacteria that may affect obesity, a list of recommendations for probiotic and prebiotic treatments to improve nutritional status, and a study exploring the link between carbohydrates and colon cancer.

As always, don't hesitate to comment or leave feedback on the [website](#)!

The GMFH publishing team

Gut microbiota e-learning 2014: take the questionnaire!

The Gut Microbiota and Health Section of the European Society of Neurogastroenterology and Motility (ESNM) is pleased to provide a first set of e-learning slides on gut microbiota dedicated to gastroenterologists. It contains a selection of scientific information about the human gut microbiota. This e-learning has been developed in cooperation with the World Gastroenterology Organisation (WGO), and it is put online for the World Digestive Health Day because WGO is emphasizing the role of gut microbiota in digestive health for the 2014 year.



This course is splitted into 4 parts : Introduction - Diarrhea - Colonic diseases - Questions from patients.

You can now take the questionnaire at the bottom of the article to test your knowledge.

Comments are welcome.

[Read more](#)

Written by PY. ARNOUX



Dr. Francisco Guarner explains two recent contributions to the field

Two papers were recently published in Nature Biotechnology, both on the topic of finding out the content of gut microbiota samples. The Gut Microbiota for Health website previously covered both selections: The paper authored by Li *et al.* presented an updated collection of reference sequences for new human gut metagenomics studies, with about ten million genes. The work of Nielsen, *et al.* introduced a new method of segregating human gut metagenomics data into biological entities like microbial species, without the need for reference sequences.



Taken together, how will these papers affect the field of gut microbiota research?

Dr. Francisco Guarner agreed to speak with GMFH to put the two new developments into context.

[Read more](#)

Written by K. CAMPBELL



Twitter for scientists

In the field of science communication, questions like these often come up: Whose job is it to share new research? Who can share research most responsibly? Given that conducting research is a completely different skill set from communicating research, should scientists be responsible for both? More and more, there's consensus that in this world of fast communication, scientists can't afford to sit back and wait for science communicators to tap them on the shoulder and ask them to explain their work. Scientists who learn the basics of communicating their own results will end up having more interesting conversations and further enhancing their ideas.



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Written by K. CAMPBELL



Family have a dynamic gut microbiota

Seen on Microbiome
Schloss PD, *et al.* - 2014

A study published in Microbiome journal described the gut microbiota dynamics of a family (Mother, father, four children with one infant). Authors found that there was a specific core microbiota shared by this family conserved over time. Similarities between kids were higher than similarity shared with their parents. The similarity between mother and their kids was not higher than the similarity with their father. Interestingly, whatever the family member, there was up to a three fold change in microbiota diversity within days.

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Written by J. TAP



A modified *E. Coli* strain reduces food intake and obesity in mice

Seen on the Journal of Clinical Investigation
Chen Z, Guo L, *et al.* - 2014

In an article published online on June 24, 2014 in the Journal of Clinical Investigation, Zhongyi Chen and Lili Guo, from the Vanderbilt University, Nashville, Tennessee, USA, showed that the administration of a modified bacteria expressing therapeutic factors in the gut microbiota could reduce food intake and obesity.

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Written by PY. ARNOUX



Recommendations on probiotic and prebiotic treatments to improve nutritional status

Seen on Gut Microbes
Sheridan PQ, *et al.* - 2014

This article is a collaboration of representatives from academia, medicine, and industry who came together at a workshop during the International Scientific Association for Probiotics and Prebiotics (ISAPP) held in Cork, Ireland in October, 2012. The goal of the workshop was to assess evidence on the link between the microbiome and under-nutrition, focusing specifically on probiotic and prebiotic treatments. Participants hoped to answer the question of whether probiotics and prebiotics can improve nutritional status in at-risk groups like children, pregnant women, the elderly, and individuals with with disease-associated malnutrition.

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Written by K. CAMPBELL



Mice gut microbiota metabolism may contribute to polyp formation

Seen on Cell
Belcheva A, *et al.* - 2014

A recent study in Cell showed using mice genetic model that gut microbiota metabolism could be linked with polyp formation. Authors explained that their study supports the carbohydrate-cancer link by showing that a diet reduced in carbohydrates resulted in reduced polyp formation in APCMin/+ MSH2-/- mice. They notably showed that butyrate, a bacterial metabolite, induced aberrant proliferation and transformation of colon epithelial cells in genetic mice model. Treatment with either antibiotics or a low-carbohydrate diet reduced cell proliferation as well as the number of tumors in the small intestines and colons of these mice. However as mice microbial ecology is different compare to human, authors did not found Fusobacterium, which was shown to be link to CRC in humans.

[Read more](#)

Written by J. TAP



The Gut Microbiota For Health Experts Exchange is a medium to share news, innovation and information between experts on the topics of Gut Microbiota for Health.

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