## **EDITORIAL**



## **Nutrition and the gastrointestinal tract**

Alastair Forbes and Isabel Correia

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In this year's issue, we again have a high-calibre collection of topical reviews. Gracie and Ford (pp. xxx-xxx) commence with an assessment of the role of symbiotics (i.e. probiotics and prebiotics given together) in patients with irritable bowel syndrome. They first review the many randomized trials of probiotics and the significant and persistent reductions in symptoms that (on balance) these yield – that may persist after the end of treatment. Pain, bloating and flatulence are all better than with placebo with a range of different regimens. However, although symbiotics appear promising, their current conclusion is that the evidence for superiority over probiotics alone is lacking.

Jin and Vos (pp. xxx-xxx) then consider the pathophysiology of nonalcoholic fatty liver disease and specifically the role of fructose. Their synthesis of the literature includes the conclusion that unregulated lipogenesis is key to nonalcoholic fatty liver disease, linked to generalized increases in visceral adiposity - in turn probably secondary to changes in the intestinal microbiota. Dietary fructose seems an important determinant of these phenomena, and early-in-life exposure appears of most significance. Although dogmatic advice is not justified, continuing to argue for limitation of dietary fructose seems wise.

Barrett *et al.* (pp. xxx–xxx) consider the immune response in patients on artificial nutrition in the current context wherein we aim for enteral nutrition whenever possible – thus recognizing that patients who need parenteral nutrition are then an especially high-risk group. They conclude from AO3 a wide consideration of animal and human data that the intestinal epithelial barrier is significantly compromised and to a clinically relevant extent in patients on exclusive parenteral nutrition. They encourage targeted new work to exploit the

mechanisms that have now been unearthed, such that future parenteral nutrition could be used with fewer adverse immunological consequences.

Plank and Russell (pp. xxx-xxx) look at nutrition in liver transplantation incorporating new data from patients with concomitant morbid obesity. It is of course clear that obesity is a perioperative risk factor but we lack proof that pretransplant weight loss would change this. The main issue here is probably the sarcopenic element, and weight loss without muscle preservation (or growth) would be unlikely to help. As obese patients are being transplanted, better data are clearly needed to guide optimal nutritional strategies.

After a comprehensive review on the state of the art on gluten sensitivity in the absence of coeliac disease by David Sanders (pp. xxx-xxx), the issue finishes with a intriguing article by Murphy et al. (pp. xxx-xxx) in which they consider the evidence that chronic disease is made more likely by changes in the gut microbiota driven by a high-fat diet. Although dysbiosis is present and linked to obesity, on present evidence, this falls short of a direct causal relationship.

We feel confident that readers will find plenty to provoke thought and hopefully to stimulate research in the many loci where data are sparse or inconclusive.

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#### **Conflicts of interest**

There are no conflicts of interest.

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