

*Nature Reviews Gastroenterology & Hepatology* **11**, 74 (2014); published online 21 January 2014;  
 doi:10.1038/nrgastro.2014.3;  
 doi:10.1038/nrgastro.2014.2;  
 doi:10.1038/nrgastro.2014.4;  
 doi:10.1038/nrgastro.2014.5

## IN BRIEF

### PRIMARY BILIARY CIRRHOSIS

#### Incidence and prevalence of PBC is increasing

A population-based study of all patients with primary biliary cirrhosis (PBC) diagnosed from 2000–2008 within a geographically defined area of the Netherlands has found that the incidence and prevalence rates of PBC increased over time ( $P < 0.001$ ). 992 patients with PBC were identified resulting in a mean incidence of 1.1 per 100,000 individuals; prevalence of PBC on 1 January 2008 was 13.2 per 100,000 individuals. PBC was not associated with smoking, age of menarche, age at first pregnancy or number of pregnancies.

**Original article** Boonstra, K. *et al.* Rising incidence and prevalence of primary biliary cirrhosis: a large population-based study. *Liver Int.* doi:10.1111/liv.12434

### GUT MICROBIOTA

#### Butyrate might regulate intestinal immune tolerance to commensal microbiota

The intestinal immune system needs to balance tolerance to commensal bacteria and response to potential pathogens. Now, Chang *et al.* have reported that the microbial metabolite *n*-butyrate, a short-chain fatty acid, is secreted in large amounts by commensal bacteria and renders intestinal macrophages (the most abundant immune cell in the lamina propria) hyporesponsive by downregulating expression of proinflammatory effectors including IL-6 and IL-12.

**Original article** Chang, P. V. *et al.* The microbial metabolite butyrate regulates intestinal macrophage function via histone deacetylase inhibition. *Proc. Natl Acad. Sci. USA* doi:10.1073/pnas.1322269111

### COELIAC DISEASE

#### Noninvasive approach to identify nonresponsive coeliac disease

Patients with nonresponsive coeliac disease (NRCD) have persistent villous atrophy despite adhering to a gluten-free diet. A noninvasive approach to identify these patients has now been reported by Spatola *et al.* Measurement of anti-dGP (deamidated gliadin peptide) IgG antibodies using ELISA led to accurate, noninvasive discrimination between patients with NRCD ( $n = 15$ ) and those with responsive coeliac disease ( $n = 45$ ; 87% sensitivity, 89% specificity). Of note, dGP antibody titre correlated with mucosal damage so it could be used to monitor histological improvement.

**Original article** Spatola, B. N. *et al.* Persistence of elevated deamidated gliadin peptide antibodies on a gluten-free diet indicates nonresponsive coeliac disease. *Aliment. Pharmacol. Ther.* doi:10.1111/apt.12603

### IBS

#### A combination of biomarkers could aid IBS diagnosis

A panel of gene expression and serological markers in combination with psychological measures can differentiate patients with IBS from healthy individuals, as well as between subtypes of IBS. A combination of 34 markers and psychological measures differentiated between 168 patients with IBS and 76 individuals with no functional gastrointestinal disorder. The biological markers also gave good discrimination between IBS subtypes (60 IBS-C, 57 IBS-D and 51 mixed). The authors conclude that this is “exciting progress towards a diagnostic test for IBS”.

**Original article** Jones, M. P. *et al.* A biomarker panel and psychological morbidity differentiates the irritable bowel syndrome from health and provides novel pathophysiological leads. *Aliment. Pharmacol. Ther.* doi:10.1111/apt.12608