

IN BRIEF

GUT MICROBIOTA**Human faecal sample processing in metagenomic studies: striving for standards**

In an Analysis published in *Nature Biotechnology*, Costea *et al.* examined the effects of technical variation in metagenomic analysis. The researchers examined the extent to which DNA extraction processes influence the quantification of microbial composition, with shotgun metagenomic sequencing as the readout. Twenty-one representative DNA extraction protocols were tested on the same faecal samples by laboratories across 11 countries, with differences in the observed microbial communities quantified. DNA extraction had the largest effect on the outcome of metagenomic analysis. The authors ultimately recommended a standardized protocol for DNA extraction from human stool samples that, if accepted by the research community, could improve comparability of findings across metagenomic studies.

ORIGINAL ARTICLE Costea, P. I. *et al.* Towards standards for human fecal sample processing in metagenomic studies. *Nat. Biotechnol.* <http://dx.doi.org/10.1038/nbt.3960> (2017)

NAFLD**Early promise for ASK1 inhibition in NASH**

A multicentre, open-label phase II trial ($n = 72$) evaluated the safety and efficacy of selonsertib, a selective inhibitor of ASK1 (also known as MAP3K5), alone or in combination with simtuzumab (a monoclonal antibody against lysyl oxidase homologue 2) in patients with NASH and moderate to severe liver fibrosis (stage 2 or 3). Alongside liver biopsy, non-invasive imaging methods (magnetic resonance elastography (MRE) and MRI-estimated proton density fat fraction) were used to assess liver stiffness and fat content. After a 24-week treatment period, patients who received selonsertib (6 mg or 18 mg) had higher rates of fibrosis improvement and lower rates of fibrosis progression than those receiving simtuzumab alone. Improvements in fibrosis occurred alongside reduced liver stiffness levels, shown by MRE, and improvement in histological assessments. No difference in adverse events were reported between patient groups.

ORIGINAL ARTICLE Loomba, R. *et al.* The ASK1 inhibitor selonsertib in patients with nonalcoholic steatohepatitis: a randomized, phase II trial. *Hepatology* <http://dx.doi.org/10.1002/hep.29514> (2017)

IMMUNOLOGY**Regulatory ILCs help control intestinal inflammation**

A regulatory subpopulation of innate lymphoid cells (ILCregs) has been reported in a new study published in *Cell*. Distinct from ILCs and regulatory T cells, ILCregs were identified in both mouse and human intestine samples and had a unique gene identity. Using mouse models of intestinal inflammation (including a variety of inflammatory stimuli: dextran sodium sulfate, anti-CD40 antibody and *Salmonella* infection), the researchers found that ILCregs contributed to the resolution of innate intestinal inflammation, gradually expanding in numbers in the intestine during the process of inflammation, with peak numbers coinciding with peak inflammation levels. Moreover, ILCregs suppressed the activation of ILC1 and ILC3 subtypes via the secretion of IL-10, with autocrine transforming growth factor β 1 required for the expansion and maintenance of ILCregs during inflammation.

ORIGINAL ARTICLE Wang, S. *et al.* Regulatory innate lymphoid cells control innate intestinal inflammation. *Cell* **171**, 201–216 (2017)