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Fecal transplants

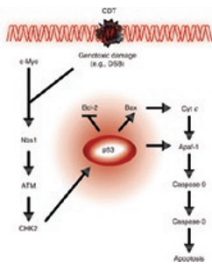
Alex Khoruts and Michael Sadowsky provide an intriguing commentary on the potential benefits and pitfalls of transplanting distal gut microbiota for the treatment of *Clostridium difficile* infection. [See page 4](#)

Microbial discrimination

Philippe Sansonetti discusses the discrimination between pathogens and commensal bacteria at mucosal surfaces, a fundamental issue confronting mucosal immunologists. [See page 8](#)

Adaptive immunity in host-commensal mutualism

Ting Feng and Chuck Elson examine the essential role of the adaptive immune system in establishing a mutualistic relationship between commensal bacteria and the host. [See page 15](#)



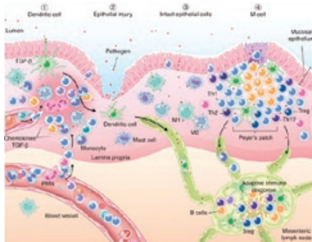
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Helicobacter hepaticus

Jim Fox and colleagues provide a scholarly review of the discovery, immunology, and virulence traits of *Helicobacter hepaticus*, a cause of chronic liver and colon inflammation as well as colorectal cancer in several mouse models. [See page 22](#)

Intestinal macrophages

Phil Smith and colleagues adeptly address the unique functional phenotype of resident intestinal macrophages and monocytes recruited during infection and inflammation. [See page 31](#)



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Intestinal bacteria boost airway Treg function

Deborah Strickland and colleagues demonstrate the ability of gut bacteria to boost baseline regulatory T-cell function as a means of controlling airway hyperresponsiveness in a rat model of asthma. [See page 43](#)

Oral bacterial extract inhibits airway inflammation

S verine Navarro and colleagues demonstrate that oral administration of Broncho-Vaxom, a commercially available bacterial extract, prevents inflammation in a mouse model of asthma. [See page 53](#)

Integrin expression on mucosal T cells

Seung Kang and colleagues demonstrate coordinated effects of retinoic acid and transforming growth factor-  on integrin expression by mucosal homing lymphocytes. [See page 66](#)

IL-4 responsiveness of airway smooth muscle cells

William Horsnell and colleagues describe the contribution of interleukin-4R  responsiveness by smooth muscle cells in driving T helper type 2-dependent mucus production in the lung during infection with *Nippostrongylus brasiliensis*. [See page 83](#)

Immature thymocytes as precursors for CD8   IELs

Studies by Laetitia Peaudecerf and colleagues indicate that a population of very immature CD44+ thymocytes can give rise to CD8   intraepithelial lymphocytes in the intestine. [See page 93](#)

Secretory IL-1 receptor antagonist

Frederic Carvalho and colleagues demonstrate a critical role for Toll-like receptor-5-dependent secretory interleukin-1 receptor antagonist secretion by epithelial cells in controlling intestinal inflammation. [See page 102](#)

HLA-gliadin peptide chimeric proteins

Jianya Huan and colleagues describe the ability of single-chain recombinant HLA-DQ2.5-gliadin peptide chimeric proteins to inhibit the responses of T cells in patients with celiac disease. [See page 112](#)