

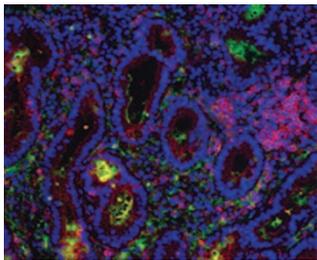
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Inhibitory signals for mononuclear phagocytes

Matija Hedl and Clara Abraham discuss negative regulation of pattern-recognition receptor-mediated macrophage and dendritic cell activation and the potential consequences for mucosal immunity when these pathways are disrupted. [See page 205](#)

Intestinal stromal cells

Benjamin Owens and Alison Simmons succinctly review what is currently known regarding the role of stromal cells in immune homeostasis in the intestine. [See page 224](#)



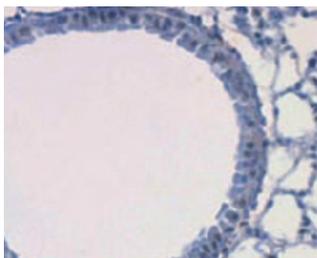
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Chlamydia induces IL-1 β via Nod1

Paula Kavathas and colleagues demonstrate an important role for Nod1, but not the Nalp3/ASC inflammasome, in the production of interleukin-1 β (IL-1 β) from human trophoblast cells infected with *Chlamydia trachomatis*. [See page 235](#)

Regulation of IL-21 in celiac disease

Massimiliano Sarra and co-workers provide data supporting a role for interleukin-15 (IL-15) in the production of IL-21 by intestinal T cells in patients with celiac disease. [See page 244](#)



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Aspirin and lung injury

Olaf Eickmeier and colleagues found that aspirin-triggered resolvin D1 inhibited lung inflammation in a murine model of acute lung injury. [See page 256](#)

Treg impairment in SAMP1/Yit mice

Dai Ishikawa and colleagues provide data suggesting a functional impairment of regulatory T cells (Tregs) in SAMP1/Yit mice, which develop spontaneous ileitis. [See page 267](#)

Broad cellular immunity with influenza M2e vaccine

Michael Schotsaert and co-workers report that immunization of mice with a vaccine composed of virus-like particles and the conserved matrix 2 protein (M2e) antigen of influenza A induced robust, broadly protective cellular immune responses following a primary challenge. [See page 276](#)

Polysaccharide vaccines and local B-cell memory

Ed Clarke and colleagues demonstrate the failure of polysaccharide-conjugate vaccines to induce local B-cell memory in the human nasopharyngeal mucosa. [See page 288](#)

Intestinal nematodes, IL-10, and diabetes

Pankaj Mishra and coauthors found that the protection against diabetes development in nonobese diabetic mice that is provided by intestinal infection with *Heligmosomoides polygyrus* is dependent on interleukin-10 (IL-10) but not on T helper type 2 cells. [See page 297](#)

Poor iTreg differentiation in *mdr1a*-deficient mice

Scott Tanner and colleagues show that naive T cells from *mdr1a*-deficient mice have a poor capacity to develop into induced regulatory T cells (iTregs) both *in vitro* and *in vivo* following adoptive transfer into *Rag*-knockout mice. [See page 309](#)

CTLA-4 promotes Treg accumulation in the colon

Michael Barnes and coauthors demonstrate that the inhibitory molecule CTLA-4 (cytotoxic T-lymphocyte antigen 4) helps promote the differentiation of induced T regulatory cells (iTregs), their accumulation in the colon, and their function during intestinal inflammation. [See page 324](#)



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Th17 cells in airway inflammation and remodeling

Using a mouse model of asthma, Jingyue Zhao and co-workers identified a role for T helper type 17 (Th17) cells in abrogating regulatory T cell-mediated allergen-induced tolerance and in airway remodeling. [See page 335](#)

Vaginal TLR-agonists enhance local immunity

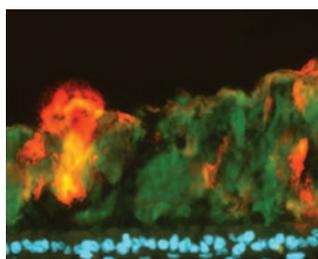
Sonia Domingos-Pereira and co-workers found that intravaginal application of Toll-like-receptor (TLR) agonists enhanced local CD8⁺ T-cell responses to a parenteral human papillomavirus vaccine. [See page 393](#)

IL-9 and colitis

Hye Sung Kim and Doo Hyun Chung demonstrate that interleukin-9 (IL-9)-producing natural killer T cells can protect against dextran sulfate sodium-induced colitis. [See page 347](#)

IL-33-T1/ST2 in allergic bronchopulmonary mycosis

Daniel Piehler and colleagues describe an important role for T1/ST2, the receptor for interleukin-33 (IL-33), in driving allergic T helper type 2 responses to pulmonary *Cryptococcus neoformans* infection. [See page 405](#)



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Intestinal microbiota of *Xenopus laevis*

Sara Mashoof and colleagues found that neither endogenous intestinal microbiota of *Xenopus laevis* nor immunization-induced class switching to immunoglobulin X—a secreted immunoglobulin and likely ancient precursor of immunoglobulin A—are affected by thymectomy. [See page 358](#)

Bacterial glycan regulates Th17 responses

Rajendra Settem and co-workers provide data to support the conclusion that the surface O-linked glycosidation of *Tannerella forsythia*, an important periodontal pathogen, can suppress the induction of T helper type 17 (Th17) responses through its effects on dendritic cells. [See page 415](#)

T-cell effects on the brush border

Shahram Solaymani-Mohammadi and Steven Singer demonstrate that CD4 and CD8 T-cell responses to *Giardia duodenalis* infection influence the presence and functions of ezrin and villin, cytoskeletal components of the intestinal brush border. [See page 369](#)

Cervicovaginal mucus blocks HIV diffusion

Shetha Shukair and colleagues demonstrate that cervicovaginal mucus is particularly effective in blocking HIV diffusion, possibly via pH-dependent viral interactions with mucin glycoproteins. [See page 427](#)



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Airway mucins and glycocalyx

Mehmet Kesimer and colleagues present a detailed view of the molecular organization of the mucins and glycocalyx of airways. [See page 379](#)