

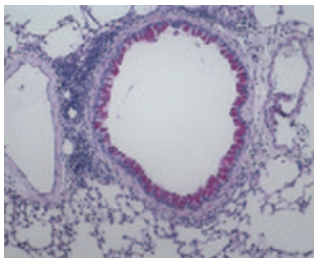
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## Mucosal immunity in HIV and SIV

Jason Brechley adeptly reviews the immunopathogenic mechanisms of HIV and SIV infection that contribute to disease progression and provides a perspective on novel therapeutic approaches to human disease. [See page 657](#)

## Update on M cells

Neil Mabbott and colleagues provide a scholarly discussion of recent progress in elucidating the development and function of gut microfold (M) cells, including the genes that control functional maturation, and the expression of receptors for microbes that are being targeted with novel vaccine approaches. [See page 666](#)



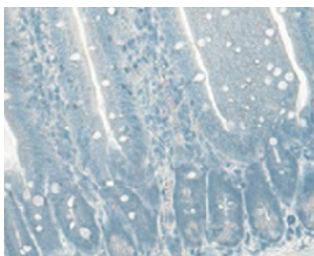
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## Migration of lung dendritic cells

Using a new CCR7-reporter mouse strain, Hideki Nakano and colleagues demonstrate that conventional, but not monocyte-derived, dendritic cell populations in the lung express CCR7 and migrate to the lung-draining lymph nodes following inhalation of lipopolysaccharide. [See page 678](#)

## Short-lived IgA following HIV-1

Nicole Yates and co-workers show that HIV-1 transmission frequently elicits mucosal HIV-1 envelope-specific immunoglobulin A responses targeted to gp41, but that these responses have a very short half-life. [See page 692](#)



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## IL-21 regulates immunity to RSV

Jonathan Dodd and colleagues demonstrate an active role for interleukin-21 (IL-21) in regulating mucosal immune responses to respiratory syncytial virus infection. [See page 704](#)

## Recruitment of fibrocytes in asthma

Mirko Isgrò and co-workers provide data supporting a role of chemokines CCL5, CCL11, and CCL24 in recruiting fibrocytes in patients with severe asthma. [See page 718](#)

## PD-L2 inhibits IL-12 production in asthma

In studies of human tissue and mouse models, Ian Lewkowich and colleagues found that allergen-driven programmed death 1 ligand 2 (PD-L2) signaling limits interleukin-12 (IL-12) secretion from dendritic cells and enhances allergic airway disease, probably via a decreased inhibitory effect of IL-12 on IL-13-induced gene expression. [See page 728](#)

## IL-4 induces mast cell expansion and survival in food allergy

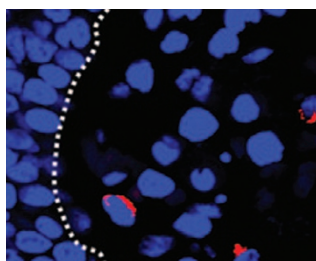
Oliver Burton and co-workers demonstrate a cell-intrinsic role for interleukin-4 (IL-4) signaling in the proliferation and survival of intestinal mast cells. They found that mice with an activating variant of the IL-4 receptor  $\alpha$ -chain exhibited greater mast cell expansion in response to IL-4 and anaphylaxis in a model of food allergy. [See page 740](#)

## Leptin and intestinal DC migration

Hafid Al-Hassi and colleagues present data indicating a role for leptin signaling in dendritic cell migration in the intestine. [See page 751](#)

## Muc5ac in lung injury

Michael Koeppen and co-workers identified a detrimental role for endogenous mucin Muc5ac production in ventilator-induced acute lung injury. [See page 762](#)



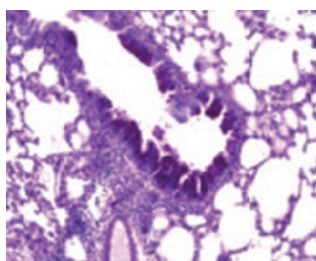
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## HIV-1 entry via the penile urethra

Yonatan Ganor and colleagues found that the penile urethra is a potential site for the entry of HIV-1 that targets urethra macrophages for infection. [See page 776](#)

## C5aR signaling in experimental asthma

Inken Schmutte and co-workers investigated the role of C5a receptor (C5aR) signaling in the development of maladaptive T helper type 2 and 17 responses in experimental asthma. [See page 807](#)



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## Adaptive immunity to *B. pertussis* in a novel baboon model

Jason Warfel and coinvestigators used their recently described baboon model of *Bordetella pertussis* infection to demonstrate the induction of an interleukin-17 mucosal T-cell response and long-lived T helper type 1 and 17 cells following infectious challenge. [See page 787](#)

## Pulmonary model of *V. cholera* infection

Seok-Seong Kang and colleagues describe a new lung model of *Vibrio cholera* infection and induction of protective immunity following immunization with a killed whole-cell-cholera toxin B subunit cholera vaccine. [See page 826](#)

## Spi-B in M-cell functional maturation

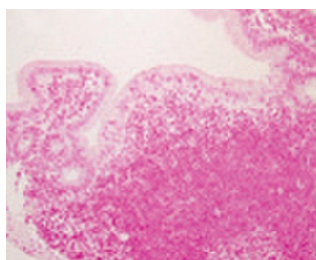
Shintaro Sato and colleagues explore the role of the transcript factor Spi-B in the functional maturation of M cells. [See page 838](#)

## Poor interferon responses in asthma

Michael Edwards and colleagues studied the response to rhinovirus or polyIC stimulation in children with severe therapy-resistant atopic asthma. They found that production of interferon- $\beta$  and - $\lambda$  by bronchial epithelial cells was impaired in these patients. [See page 797](#)

## Gut-homing DC precursors

Ruizhu Zeng and co-workers describe a novel gut-homing precursor population of intestinal dendritic cells, the generation of which is regulated by retinoid acid signaling. [See page 847](#)



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