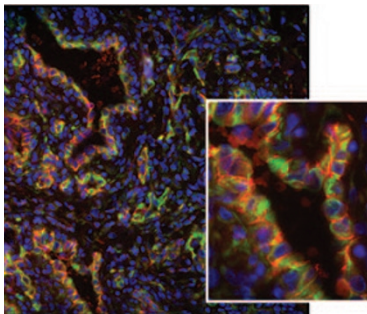


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Propranolol and hemangioma stem cells



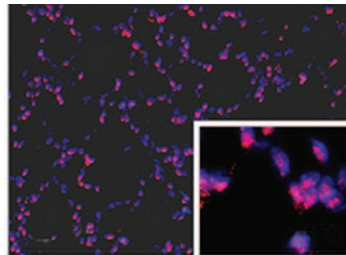
Infantile hemangioma (IH) is the most common tumor in infants, and propranolol is its first-line therapy. However, the mechanisms of its therapeutic effect and of IH regrowth following cessation of treatment are unclear. Kum and Khan investigated IH stem cell responses to propranolol. [See page 381](#)

Glycerol and brain growth



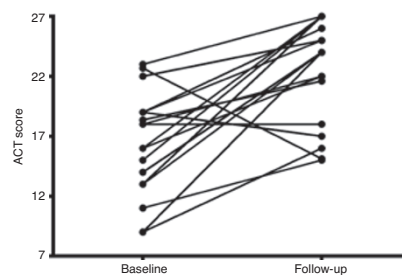
Cerebellar hypoplasia is a common problem among newborns with intraventricular hemorrhage (IVH). To evaluate the effects of IVH on cerebellar growth and development, Traudt and colleagues used a neonatal rabbit model of systemic glycerol to produce IVH. They identified weaknesses in this model owing to the possibility of glycerol toxicity and note the need for an effective model of IVH. [See page 389](#)

Caffeine induces alveolar apoptosis



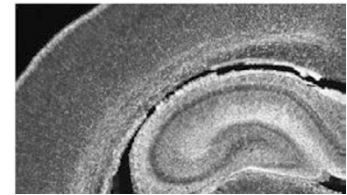
Caffeine is a nonspecific adenosine receptor antagonist used in preterm newborns with apnea of prematurity. Its use may reduce the incidence of bronchopulmonary dysplasia, but the precise mechanisms remain unknown. Dayanim *et al.* hypothesized that hyperoxia-induced alveolar inflammation and hypoplasia are associated with alterations in the adenosine signaling pathway. Results of their studies in a newborn mouse model of alveolar hypoplasia suggest a potentially adverse role of caffeine in alveolar development. [See page 395](#)

Adenotonsillectomy and asthma control



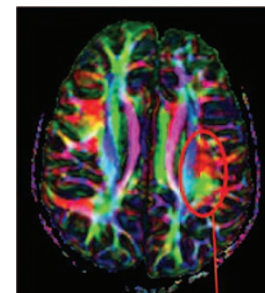
Levin and colleagues conducted a longitudinal, observational study on pediatric patients, both with and without asthma, undergoing adenotonsillectomy. Their results suggest that adenotonsillectomy modulates chitinase activity, affecting airway inflammation and improving airway disease. [See page 403](#)

MRI of acute neonatal neuroinflammation



Injection of lipopolysaccharide into the corpus callosum of rat pups results in diffuse white matter injury similar to the main neuropathology of preterm infants. Lodygensky and co-workers aimed to characterize the structural and metabolic markers of the acute inflammatory injury using high-field magnetic resonance imaging (MRI) and magnetic resonance spectroscopy *in vivo*. Their model seemed to reproduce the typical MRI hallmarks of acute diffuse white matter injury and enable evaluation of *in vivo* biomarkers of acute neuropathology after inflammatory challenge. [See page 415](#)

Exome sequencing and disability



Using diffusion tensor imaging (DTI), Sundaram and coinvestigators had previously shown that the arcuate fasciculus is poorly developed in patients with intellectual and developmental disabilities (IDDs). In a study reported in this issue, they used exome sequencing to identify the candidate variants in IDD patients with and without DTI abnormalities. [See page 443](#)