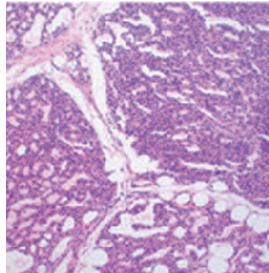


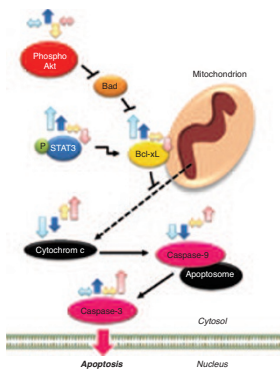
doi:10.1038/pr.2013.32

β1-Adrenoceptor in infantile hemangioma



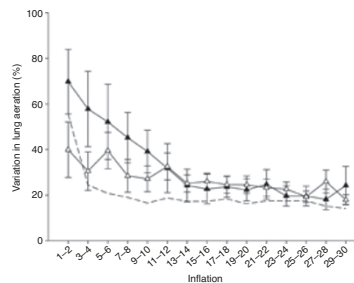
Propranolol, a nonselective β1- and β2-adrenoceptor inhibitor, was recently introduced into the therapy of severe proliferating infantile hemangioma (IH). However, the underlying mechanism of its action is still unclear. Rössler and colleagues report distinctions between IH and vascular malformations with regard to β-adrenoceptor-subtype messenger RNA levels. [See page 409](#)

Propofol, asphyxia, and the fetal lamb heart



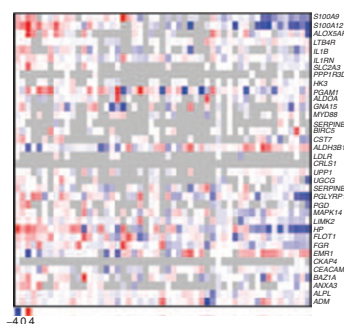
Seehase *et al.* hypothesized that using maternal propofol anesthesia during emergency cesarean section would diminish cardiac injury in preterm fetuses exposed to global severe asphyxia *in utero*. In investigating whether propofol decreased the activity of proapoptotic caspase-3 in pregnant ewes, they found that propofol administration offered better cardiac protection than isoflurane. [See page 427](#)

Inspiration and aeration



Recent phase-contrast X-ray imaging studies suggest that inspiration is the primary driver of lung aeration and airway liquid clearance at birth, which brings into question the role of adrenaline-induced activation of epithelial sodium channels (ENaCs). In a study in newborn rabbits, Siew and coauthors found that pressures generated by inspiration had a larger role in airway liquid clearance than ENaCs did. Their findings indicate that inspiration is a major determinant of airway liquid clearance and functional residual capacity development during positive-pressure ventilation. [See page 443](#)

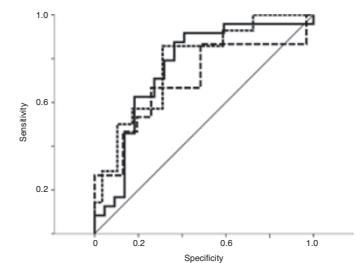
Newborn gene expression in CP



Gene expression in archived blood spots in newborns may reflect pathophysiological disturbances useful in understanding the etiology of cerebral palsy (CP). Using archived, unfrozen residual blood spot specimens from 53 newborns with CP and 53 controls, Ho and colleagues quantified the expression of gene sets representing four physiological

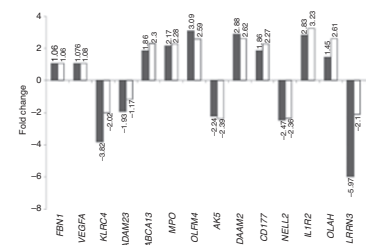
pathways hypothesized to contribute to CP. They found three gene sets—each reflecting a separate pathophysiological pathway—that were significantly dysregulated in newborns who later developed CP. [See page 450](#)

Immunodepression in VLBW infants



Birth and intensive care present major immunologic challenges for very-low-birth-weight (VLBW) infants. Palojarvi and colleagues found in a group of such infants that postnatal immunodepression was associated with gestational age and was also a predisposing factor for late infections. [See page 469](#)

Genome expression in ROP



Retinopathy of prematurity (ROP) is one of the most common preventable causes of blindness and impaired vision among children in developed countries. Pietrzyk and coauthors compared whole-genome expression in the first month of postnatal life in infants with and without ROP. Pathway enrichment analysis revealed that genes in four pathways related to inflammatory response differed between groups defined by ROP and gestational age. [See page 476](#)