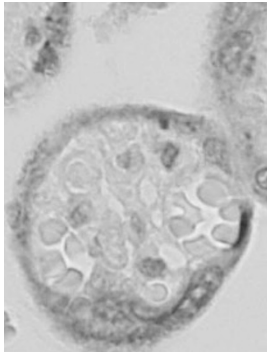


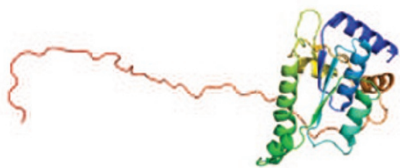
doi:10.1038/pr.2013.94

## Gene expression and growth restriction



Mandò and coinvestigators offer the first study investigating *SNAT2* (neutral amino acid transporter) expression and regulation mechanisms in human placentas from pregnancies with intrauterine growth restriction. It confirms previous results obtained in rats and cell cultures supporting a fundamental role for *SNAT2* in fetal growth and well-being. [See page 104](#)

## Sensorineural hearing loss

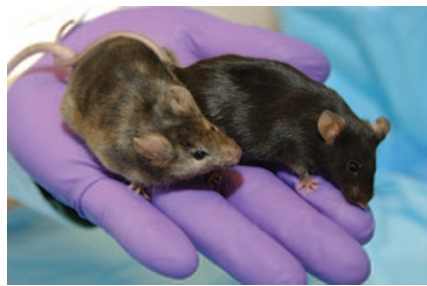


Pleiotrope

Congenital cytomegalovirus (CMV) infection and mutation of the gap junction  $\beta$ -2 gene (*GJB2*) are important causes of sensorineural hearing loss. The findings by Li and colleagues, who used *GJB2* sequencing and tested auditory brainstem response in 159 newborns, suggest that congenital CMV infection does not coincide with *GJB2* mutation. [See page 121](#)

## Vaccination and sickle cell disease

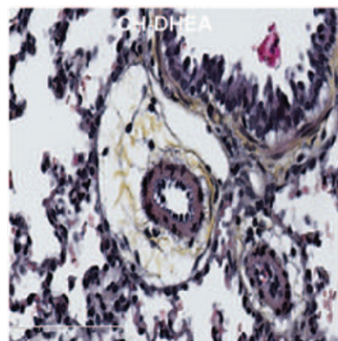
Children with sickle cell disease (SCD) are susceptible to recurrent infections



Maggie Bartlett, NHGRI

that necessitate frequent vaccinations. Given the altered baseline immunity and proinflammatory state associated with SCD, Szczepanek and colleagues found that transgenic SCD mice have a dysregulated immune response to vaccination. This suggests that the relative safety and immunogenicity of vaccination in the context of SCD warrant further study. [See page 141](#)

## Reversing pulmonary hypertension



Dehydroepiandrosterone (DHEA) is a steroid hormone that prevents and reverses pulmonary hypertension (PH) in adult rats. Dumas de la Roque and colleagues investigated its effect in a rat-pup model of chronic hypoxic PH. Their results indicate that DHEA prevents PH in infant rats and may therefore be clinically relevant in newborns. [See page 163](#)

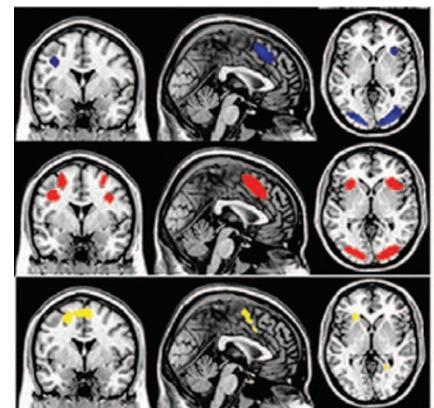
## Microcirculation and hypotension

Hypotension is a common phenomenon in preterm infants and is associated with neonatal morbidity



and mortality. Schwepcke *et al.* studied microcirculation in extremely-low-birth-weight infants in order to understand the relationship between blood pressure and skin perfusion. Hypotensive infants had higher functional vessel density, possibly due to loss of microvascular tone leading to vasodilation and flow redistribution. [See page 186](#)

## fMRI in preterm children



Extremely preterm (EPT) children often have problems with working memory and selective attention when they reach school age. Griffiths and coauthors compared blood oxygen level-dependent (BOLD) activation on functional magnetic resonance imaging (fMRI) during a selective attention-working memory task between EPT children and term-born controls at 11 years of age. The BOLD pattern displayed less activation in the preterm group than in the control group, particularly when the cognitive load was increased. [See page 196](#)