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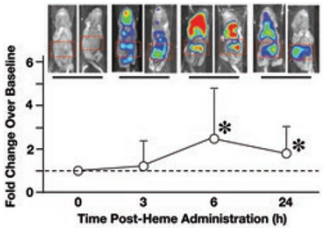
ZnPP-Lipid in the heme-loaded mouse



Inhibition of heme oxygenase (HO) by metalloporphyrins may be an ideal preventive strategy for neonatal hemolytic disease. Fujioka and coauthors recently designed a lipid-based ZnPP formulation (ZnPP-Lipid), which is orally absorbed by newborn mice. They evaluated the efficacy of ZnPP-Lipid in heme-loaded newborn mice, a model analogous to hemolytic infants. Twenty-four hours after heme administration, 3-d-old mice were given ZnPP-Lipid via intragastric injections. Three hours later, liver activity was inhibited whereas brain activity was not. **See page 251**

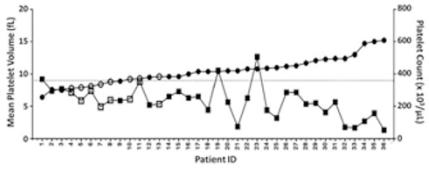
Idiopathic short stature

Animal models and gene deletions in humans suggest that alterations of *HMGA2* might be relevant in causing short stature. Fusco and colleagues investigated the involvement of *HMGA2* in idiopathic short stature (ISS) through an association study and mutation screening. They analyzed 155 ISS patients and 318 normal-stature controls using direct sequencing and multiplex ligation-dependent probe amplification. Their findings indicate that *HMGA2* might not have a significant impact on the monogenic form of short stature. **See page 258**

Postnatal effects of maternal diet in rats

Griffiths and coinvestigators have previously shown a significant correlation between early abnormalities of lipid and glucose metabolism and childhood asthma. The current study's specific aim was to determine whether maternal nutrition in pregnancy affects postnatal metabolic and respiratory outcomes in rat offspring. On gestational day 1, dams were switched from standard chow to either a high-fat hypercaloric diet (HFD) or a control diet. Cytokine expression analysis of lung tissues from newborns of the HFD dams revealed a strong proinflammatory pattern. The results indicate that maternal nutrition in pregnancy is a critical determinant of airway inflammation and hyperreactivity in their offspring. **See page 278**

Surgical bleeding and 22q11.2 deletion syndrome

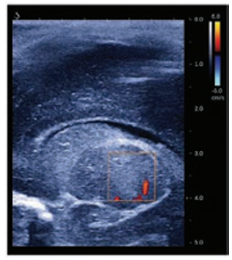


22q11.2 deletion syndrome (DS) is the second most common genetic risk factor for congenital heart defects. Brenner *et al*. performed a case–control study of 91 pediatric patients who underwent cardiac surgery with cardiopulmonary bypass. Patients with 22q11.2 DS had larger platelets and lower platelet counts, bled more excessively, and received more packed red blood cells in the early postoperative period relative to control patients. Presurgical genetic testing for 22q11.2 DS may help to identify pediatric cardiac surgery patients who are at higher risk for excessive bleeding and who may require more transfusion support in the postoperative period. **See page 318**

Pacifier use in preterm infants

Horne and coauthors assessed the effects of dummy/pacifier use on blood pressure, cerebral oxygenation, and heart rate control in preterm infants over the first 6 months of life after term-corrected age, when the risk of sudden infant death syndrome is greatest. A total of 35 preterm infants were studied longitudinally at 2–4 weeks, 2–3 months, and 5–6 months corrected age. Dummy/pacifier use increased blood pressure during sleep, and low-frequency heart rate variability was elevated, suggesting that it alters cardiac control in preterm infants. **See page 325**

Fast Doppler for cerebral perfusion



Peeples and colleagues hypothesized that fast Doppler imaging could provide a reproducible bedside estimation of cerebral perfusion and autoregulation in preterm infants. They found significant and independent correlations between systolic blood flow velocity and both systolic blood pressure and heart rate in 26- to 28-week gestational age infants in the first 48 hours of life. **See page 333**