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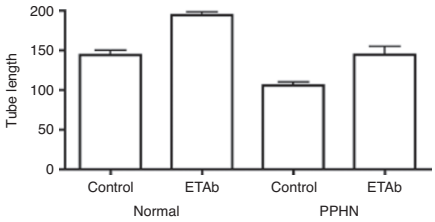
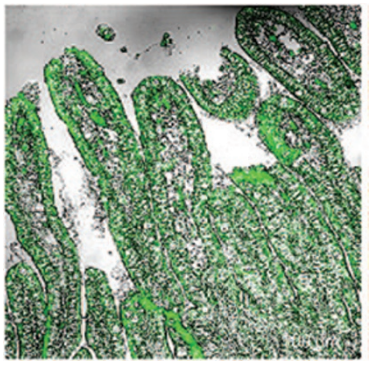
Persistent pulmonary hypertension



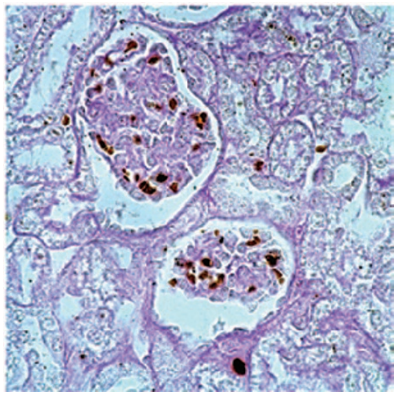
Endothelin-1 (ET-1) and rho-kinase (ROCK) increase vascular tone in experimental persistent pulmonary hypertension of the newborn (PPHN). In a study involving pulmonary arterial endothelial cells, Gien and colleagues found that ET-1 activation of ROCK impairs angiogenesis and might thereby contribute to the inhibition of vascular growth in PPHN.
See page 252

Proteome changes in NEC



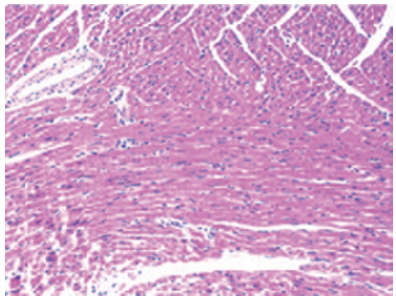
Changes in the intestinal and colonic proteome in newborns with necrotizing enterocolitis (NEC) may help researchers to characterize the disease's pathology and identify new biomarkers and treatment targets. Using gel-based proteomics, Jiang *et al*. compared proteins in NEC-affected intestinal and colonic sections with those in adjacent, near-normal tissue sections in the same patients. Their findings suggest that the identified secretory proteins should be investigated as possible circulating markers of NEC progression in different gut regions. **See page 268**

Iron and fetal growth restriction



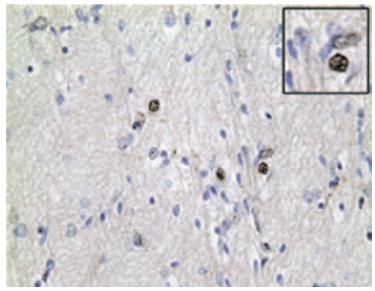
In their in-depth study of the effects of maternal and fetal iron metabolism in intrauterine growth–restricted sheep, Sun and coauthors hypothesized that constrained placental development lowers fetal iron tissue by downregulating expression of both placental transferring receptor and endothelial nitric oxide synthase. In an ovine surgical uterine space–restriction model, they found that fetal iron was regulated in an organ-specific fashion. **See page 277**

Sertraline and the developing heart



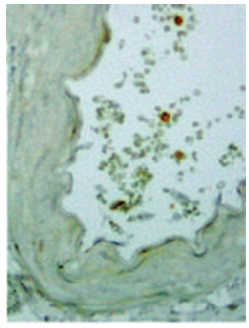
Sertraline, a selective serotonin reuptake inhibitor (SSRI), is commonly prescribed for depression. However, intrauterine SSRI exposure has been linked to decreased fetal growth, altered autonomic regulation, and cardiac malformations. Haskell and coinvestigators found that early postnatal SSRI exposure impairs cardiomyocyte growth and central serotonin signaling, leading to small left heart syndrome in adult mice. **See page 286**

Microglia and periventricular white matter



The periventricular white matter (PVWM) of the immature preterm brain is selectively vulnerable to a spectrum of injury. Although essential for normal brain development, the presence of resident microglia may exacerbate PVWM injury. Supramaniam *et al*. found increased microglial activation in PVWM adjacent to isolated germinal matrix hemorrhage or intraventricular hemorrhage without obvious white matter injury. **See page 301**

Kawasaki disease and vasculitis



Reindel and coinvestigators previously found that subacute/chronic vasculitis begins early in Kawasaki disease (KD), with proliferation of smooth muscle cell–derived myofibroblasts in a complex extracellular matrix. In their present study, they observed upregulation of integrins, collagen 1A1, and matrix metalloproteinase 7 in coronary arteries of patients with KD. This might contribute to inflammation of coronary vessels and subsequent muscle-cell changes. **See page 332**