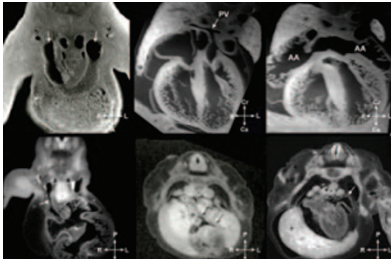


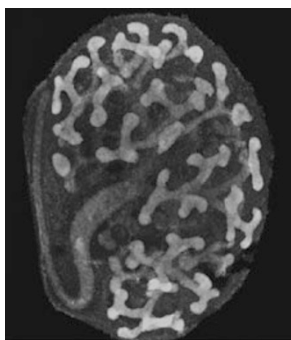
doi:10.1038/pr.2014.150

Mouse and human heart development



Mouse mutants are used to model human congenital cardiovascular disease, but little has been published comparing normal cardiovascular development in mice with that in humans. Krishnan and colleagues' systematic comparative analysis supports the idea that mouse morphogenesis is a reliable model of human cardiovascular development. [See page 500](#)

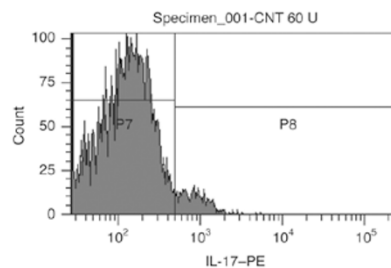
Antibiotics and renal branching



Many preterm newborns with infections receive antibiotics during active nephrogenesis. Bueters *et*

al. studied the effects of clinical concentrations of gentamicin, ceftazidime, and meropenem on ureteric branching in mice. Metanephroi were dissected on embryonic day 13 and cultured in media with or without drug, at various concentrations. Only ceftazidime reduced ureteric branching in mice. [See page 508](#)

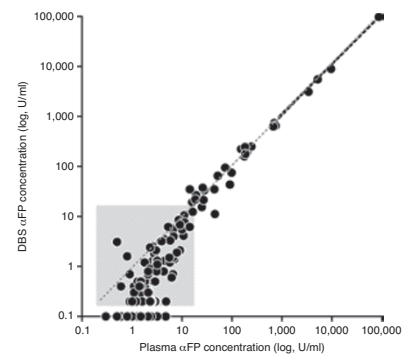
Neonatal host defense



The role of T-helper 17 (Th17) cells in neonatal host defense remains to be fully explained. Caron and colleagues examined neonatal production of interleukin-17 (IL-17) in mixed mononuclear cells isolated from umbilical-cord blood for comparison with adult peripheral blood mononuclear cells. Their results suggest that a profound IL-17 deficiency, associated with a marked decrease in Th17 cells, probably contributes to the increased susceptibility of human newborns to invasive bacterial and fungal infections. [See page 522](#)

Hepatoblastoma screening

Beckwith-Wiedemann syndrome and hemihyperplasia are overgrowth



conditions with a predisposition to hepatoblastoma, for which α -fetoprotein (α FP) is an early tumor marker. Mussa and coinvestigators analyzed the reliability of α FP detection using an analytical micromethod based on blood dried on filter paper. This method appears to measure α FP reliably, offering novel potential avenues for conducting cancer screening in overgrowth syndromes. [See page 544](#)

Early puberty

Hormonal indicators could be useful for detecting early onset of puberty, but there has been little research on how they are related to puberty in US girls. Using data from the Third National Health and Nutrition Examination Survey, Addo *et al.* determined median age at hormonal onset of puberty and explored the extent to which body composition moderates this timing process. Among other findings, they report that preadolescent weight gain lowers the age of hormonal onset. [See page 564](#)