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IN BRIEF

POLYCYSTIC KIDNEY DISEASE

Defective glucose metabolism in ADPKD

Defective glucose metabolism is involved in the pathogenesis of autosomal dominant polycystic kidney disease (ADPKD) via an ERK-mediated pathway, according to a new study. Using metabolomic profiling, Rowe and colleagues found that mutation of *PKD1* led to enhanced glycolysis in cells in a mouse model of ADPKD and in renal cysts from humans with ADPKD. Administration of 2-deoxyglucose to inhibit glycolysis in mice with polycystic kidney disease led to lower kidney weight and a lower cystic index compared to vehicle administration.

Original article Rowe, I. *et al.* Defective glucose metabolism in polycystic kidney disease identifies a new therapeutic strategy. *Nat. Med.* doi:10.1038/nm.3092

GLOMERULAR DISEASE

Effects of prednisone on podocyte repopulation

Prednisone might improve outcomes in focal segmental glomerulosclerosis (FSGS) via direct actions on glomerular cells, say researchers. Administration of prednisone significantly increased podocyte number and decreased glomerulosclerosis in an experimental mouse model of FSGS. Prednisone treatment also reduced podocyte apoptosis and increased the number of podocyte progenitor cells expressing both a parietal epithelial cell protein and a podocyte protein.

Original article Zhang, J. *et al.* Podocyte repopulation by renal progenitor cells following glucocorticoids treatment in experimental FSGS. *Am. J. Physiol. Renal Physiol.* doi:10.1152/ajprenal.00020.2013

TRANSPLANTATION

Transvenous renal transplant biopsy via the femoral vein

Transfemoral renal transplant biopsy (TFRTB) appears to be safe and feasible and may provide an alternative to percutaneous renal biopsy (PRB) in selected patients, according to new research. Schmid *et al.* performed 71 TFRTBs in 53 consecutive patients who were unsuitable for PRB. Positioning of the biopsy system within the transplant vein was achieved in 58 of 71 procedures and the sample was considered adequate for diagnosis in 98.2% of these. Major procedure-related complications occurred in one of the 58 biopsies.

Original article Schmid, A. *et al.* Transvenous renal transplant biopsy via a transfemoral approach. *Am. J. Transplant.* doi:10.1111/ajt.12199

GLOMERULAR DISEASE

The glomerular endothelium: a barrier to albumin filtration

New findings suggest that the polyanionic endothelial surface layer (ESL) component, hyaluronan, is a key component of the glomerular endothelial protein permeability barrier. Dane *et al.* disturbed the ESL in mice by infusing hyaluronidase and monitored albumin passage using immunolabelling and correlative light-electron microscopy. Enzyme treatment induced albumin passage across the endothelium in 90% of glomeruli but did not induce albuminuria, due to binding and uptake of filtered albumin by the podocytes and parietal epithelium.

Original article Dane, M. J. *et al.* Glomerular endothelial surface layer acts as a barrier against albumin filtration. *Am. J. Pathol.* doi:10.1016/j.ajpath.2013.01.049