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IN BRIEF

GENETICS

New risk loci for IgAN suggests role for intestinal pathogens

A genome-wide analysis of 20,612 individuals of European and East Asian descent has revealed new risk loci that suggest a role for pathways involved in intestinal pathogen immunity in susceptibility to IgA nephropathy (IgAN). Kiryluk *et al.* identified six new signals that contribute to IgAN; these loci overlap significantly with loci for other autoimmune and inflammatory disorders, including inflammatory bowel disease. The researchers say that the geospatial distribution of these risk alleles and correlation with local pathogens indicates a potential role for host–intestinal pathogen interactions in IgAN.

Original article Kiryluk, K. *et al.* Discovery of new risk loci for IgA nephropathy implicates genes involved in immunity against intestinal pathogens. *Nat. Genet.* doi:10.1038/ng.3118

ACUTE KIDNEY INJURY

TRPM2 and RAC1: mediators of oxidative stress in AKI

Kidney ischaemia is associated with a loss of intracellular potassium and an increase in intracellular levels of sodium, chloride and calcium; however, the mechanisms involved in the loss of cellular ion homeostasis are unknown. A new study has revealed a critical role for the nonselective cation channel TRPM2 in promoting acute kidney injury (AKI) via a mechanism that involves the activation of RAC1, oxidative stress and mitochondrial apoptotic pathways. The researchers believe that targeting TRPM2 or RAC1 might be a strategy to reduce or prevent ischaemic AKI.

Original article Gao, G. *et al.* TRPM2 mediates ischemic kidney injury and oxidant stress through RAC1. *J. Clin. Invest.* doi:10.1172/JCI76042

DIALYSIS

Sex-specific differences in haemodialysis practices

An analysis of 35,964 patients by Dialysis Outcomes and Practice Patterns Study (DOPPS) researchers has revealed sex-specific differences in haemodialysis use. Among these patients, more men than women were on haemodialysis (59% versus 41%, respectively). The researchers also found that the survival advantage of women in the general population was reduced in patients on haemodialysis, and that the mortality risk associated with several comorbidities and catheter use was lower for men than for women.

Original article Hecking, M. *et al.* Sex-specific differences in hemodialysis prevalence and practices and the male-to-female mortality rate: The Dialysis Outcomes and Practice Patterns Study (DOPPS). *PLoS Med.* 11, e1001750 (2014).

CARDIOVASCULAR DISEASE

Role for Klotho and phosphate in cardiac remodelling

Klotho deficiency is a mediator of pathologic cardiac remodelling, and fibroblast growth factor (FGF)-23 might contribute to this process in the settings of chronic kidney disease (CKD) and ageing, conclude the authors of a new study. Hu *et al.* found that mice with Klotho deficiency—achieved by genetic modification, a high-phosphate diet, ageing or CKD—exhibited cardiac remodelling. FGF-23 level correlated with cardiac remodelling in Klotho-deficient but not Klotho-replete mice.

Original article Hu, M. C. *et al.* Klotho and phosphate are modulators of pathologic uremic cardiac remodeling. *J. Am. Soc. Nephrol.* doi:10.1681/ASN.2014050465