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IN BRIEF

GLOMERULAR DISEASE

Familial *CFHR1* mutation identified in C3 glomerulopathy

A genomic mutation in the *CFHR1* gene that encodes complement factor H-related protein 1 (FHR-1) has been identified in a family of patients with C3 glomerulopathy. Tortajada *et al.* report that this mutation results in duplication of the N-terminal domain of FHR-1 and the formation of large, multimeric factor H-related protein complexes that show increased avidity for C3b, iC3b and C3dg and increased competition with complement factor H, resulting in dysregulation of complement activation.

Original article Tortajada, A. *et al.* C3 glomerulopathy-associated *CFHR1* mutation alters FHR oligomerization and complement regulation. *J. Clin. Invest.* doi:10.1172/JCI68280

CHRONIC KIDNEY DISEASE

Safety and tolerability of a novel nonsteroidal MRA

A phase II randomized clinical trial reports that the novel nonsteroidal mineralocorticoid receptor antagonist (MRA) BAY 94-8862 was as effective as spironolactone in reducing the levels of B-type natriuretic peptide (BNP), amino-terminal proBNP and albuminuria in 392 patients with heart failure, reduced left ventricular ejection fraction and moderate chronic kidney disease. Adverse effects of BAY 94-8862 were infrequent and mostly mild and the drug was associated with a lower incidence of worsening renal function and of hyperkalaemia than was spironolactone.

Original article Pitt, B. *et al.* Safety and tolerability of the novel non-steroidal mineralocorticoid receptor antagonist BAY 94-8862 in patients with chronic heart failure and mild or moderate chronic kidney disease: a randomized, double-blind trial. *Eur. Heart J.* doi:10.1093/eurheartj/eh1187

RISK FACTORS

Living near to a major roadway might affect renal function

Researchers suggest that living near to a major roadway might contribute to reduced renal function. In a cohort of 1,103 US patients hospitalized with acute ischaemic stroke between 1999 and 2004, living near to a major roadway was associated with reduced estimated glomerular filtration rate (eGFR). Patients who lived 50 m away from a major roadway had significantly lower eGFRs than those who lived 1000 m away (difference in eGFR of 3.9 ml/min/1.73 m², 95% CI 1.0–6.7, *P*=0.007).

Original article Lue, S.-H. *et al.* Residential proximity to major roadways and renal function. *J. Epidemiol. Community Health* doi:10.1136/jech-2012-202307

RENAL FIBROSIS

Antifibrotic effects of a synthetic serine protease inhibitor

A new study reports that the synthetic serine protease inhibitor camostat mesilate (CM) has antifibrotic effects. In male Sprague–Dawley rats, unilateral ureteral obstruction resulted in renal fibrosis, phosphorylation of ERK1/2 and smad2/3 and an increase in the levels of profibrotic markers. Treatment with CM attenuated these effects. The researchers suggest that CM might slow the progression of renal fibrosis through inhibition of transforming growth factor- β 1 signalling.

Original article Morinaga, J. *et al.* The anti-fibrotic effect of a serine protease inhibitor in the kidney. *Am. J. Physiol. Renal Physiol.* doi:10.1152/ajprenal.00586.2012