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IN BRIEF

DIABETES

Islet zinc transporter ZnT8—a novel T2DM target?

New findings suggest that the islet zinc transporter ZnT8 might be a candidate for therapeutic intervention in type 2 diabetes mellitus (T2DM). Loss-of-function mutations in human *SLC30A8* (encoding ZnT8) were found to confer protection against T2DM. Approximately 150,000 participants from five ancestry groups were genotyped and 12 rare protein-truncating *SLC30A8* variants identified. Overall, carriers of these mutations had a 65% reduced risk of developing T2DM. Two of the mutations, p.Arg138* and p.Lys34Serfs*50, were each independently associated with protection against T2DM.

Original article Flannick, J. *et al*. Loss-of-function mutations in *SLC30A8* protect against type 2 diabetes. *Nat. Genet.* doi:10.1038/ng.2915

REPRODUCTIVE ENDOCRINOLOGY

Aromatase $(TTTA)_{13}$ repeat increases risk of central precocious puberty

Carriers of a high number of repeats of the tetranucleotide tandem polymorphism $(TTTA)_n$ in exon 4 of the *CYP19A1* gene, which encodes an aromatase that converts androgens to estrogen, might be at an increased risk of developing central precocious puberty (CPP). Genetic analysis in 203 girls with idiopathic CPP and 101 healthy women revealed that girls harbouring the $(TTTA)_{13}$ allele had a significantly higher risk of developing CPP, were younger at age of puberty onset and had higher levels of estrogen than individuals without this allele.

Original article Lee, H. S. *et al*. Association of aromatase $(TTTA)_n$ repeat polymorphisms with central precocious puberty in girls. *Clin. Endocrinol.* doi:10.1111/cen.12439

GENETICS

A type I interferon expression signature precedes T1DM

Transient expression of a type I interferon (IFN)-inducible gene signature is a risk factor for autoimmunity in children genetically predisposed to develop type 1 diabetes mellitus (T1DM). Microarray analysis was used to define a set of 225 IFN-inducible genes, the expression of which was quantified in 87 healthy controls, 64 individuals with T1DM and 109 children predisposed to develop T1DM IFN-inducible gene expression was found to precede autoantibody development in the latter group, but not in individuals with established disease.

Original article Ferreira, R. C. *et al.* A type I interferon transcriptional signature precedes autoimmunity in children genetically at-risk of type 1 diabetes. *Diabetes* doi:10.2337/db13-1777

CANCER

PKA mutations are associated with Cushing syndrome

Mutations in the gene encoding the catalytic subunit of protein kinase A (*PRKACA*) have been identified in cortisol-producing adrenal adenomas from patients with corticotropin-independent Cushing syndrome. Germline duplications of *PRKACA* resulted in bilateral adrenal hyperplasias, whereas somatic mutations in this gene were associated with unilateral cortisol-producing adrenal adenomas.

Original article Beuschlein, F. *et al.* Constitutive activation of PKA catalytic subunit in adrenal Cushing's syndrome. *NEJM* doi:10.1056/NEJMoa1310359