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DIABETES

New marker to predict risk of T2DM

As the number of adults with either diagnosed or undiagnosed type 2 diabetes mellitus (T2DM) continues to rise worldwide, earlier and better detection of the disease will be crucial to stemming the burgeoning epidemic. In new research published in *Diabetes Care*, plasma levels of the vitamin E-binding protein afamin are shown to be strongly associated with both prevalent and incident T2DM. If the findings are validated, afamin could be used in clinical practice as a biomarker to identify individuals at high risk of developing T2DM.

Having previously shown that plasma levels of afamin are predictive of the prevalence and incidence of the metabolic syndrome, Florian Kronenberg and colleagues took the logical next step to investigate a possible association between levels of afamin and T2DM. In a pooled analysis of eight, mainly population-based, prospective cohort studies ($n = 20,136$ at baseline; $n = 14,017$ at follow-up (4.5–12.5 years)), plasma levels of afamin strongly correlated with prediabetes, diabetes-related phenotypes such as insulin resistance and both prevalent and incident T2DM (OR 1.19 and 1.30, respectively), independent of major metabolic risk factors and parameters. Moreover, when added to existing risk classification models, afamin improved model fit and classification accuracy for incident T2DM.

"We are currently performing genome-wide association studies to identify the genetic variants most strongly associated with afamin concentrations in human plasma," explains Kronenberg. "If these variants are also associated with T2DM and related traits, it will provide strong support (via Mendelian randomization) for afamin being causally related to diabetes phenotypes."

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ORIGINAL ARTICLE Kollerits, B. *et al.* Plasma concentrations of afamin are associated with prevalent and incident type 2 diabetes: a pooled analysis in more than 20,000 individuals. *Diabetes Care* https://doi.org/10.2337/dc17-0201 (2017)