

Technology Offer

New Candidate Gene for Diagnostic and Therapeutic Development to Combat Obesity-associated Diabetes

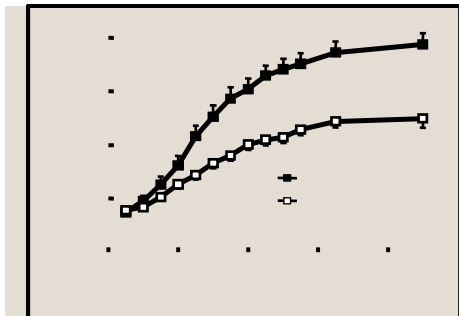
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Challenge

The WHO estimates that > 180 Mio. people worldwide have diabetes. This number is likely to more than double by 2030. In 2005, app. 1.1 Mio. people died from diabetes. Almost half of diabetes deaths occur in people under the age of 70 years. Diabetes deaths are projected to increase by over 80% in leading pharma markets between 2006 and 2015. Clearly there is the urgent need for the development of novel diagnostic and therapeutic options to treat diabetes.



Diabetogenic effect of QTL *Nidd/SJL* on distal mouse chromosome 4. Blood glucose in male backcross mice monitored weekly. Black: intact *zfp69*, white: mutant *zfp69*

Technology

Zfp69 encodes a transcription factor in mice which appears to interfere with lipid storage in adipose tissue, and thereby enhances lipid deposition in liver. In humans with type 2 diabetes, mRNA levels of the human orthologue

of *Zfp69* (*ZNF642*) were increased in adipose tissue and *ZNF642* was found to be particularly active in overweight people with diabetes. Thus, the transcription factor *ZFP69/ZNF642* may be involved in the pathogenesis of obesity-associated diabetes and might be a particularly valuable target for developing diagnostic and therapeutic approaches to combat diabetes.

Commercial Opportunity

The new technology is offered for in-licensing or co-development.

Developmental Status

In vitro experiments as well as studies of blood glucose, plasma and liver triglycerides, as well as adipose tissue in mice are described in the paper mentioned below. Currently the scientists are investigating additional tissues and are characterizing the signalling pathway of the *Zfp69* transcription factor. Also development of a transgenic mouse model is under way.

Patent Situation

A priority claiming application EP2058404A1 "ZFP69, ZNF642 and its paralogue ZNF643 as markers for obesity-associated diabetes" was filed in November 2007. WO/2009/063324 claiming priority was filed 2008.

Further Reading

Scherneck et al.; "Positional Cloning of Zinc Finger Domain Transcription Factor *Zfp69*, a Candidate Gene for Obesity-Associated Diabetes Contributed by Mouse Locus *Nidd/SJL*"; *PLoS Genetics* 2009, 5(7): e1000541

<http://www.sciencecentric.com/news/article.php?q=09070329-jumping-gene-diminishes-the-effect-new-type-2-diabetes-risk-gene>

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