Treatment for Diabetic Cardiomyopathy

Published date: Feb. 1, 2012

Technology description

Description

Heart disease is the lead cause of mortality among diabetic patients in the U.S. UC San Diego researchers have developed a method to treat diabetic cardiomyopathy by gene therapy using an enzyme specific for the removal of a single sugar molecule from proteins such as transcription factors. The researchers demonstrated that elevated extra-cellular glucose levels result in impaired calcium cycling in myocytes, leading to impaired cardiac contractility and poor myocardial performance, by a mechanism involving O-linked glycosylation of nuclear proteins. They found that these effects can be reversed by gene therapy with an enzyme, O-GlcNAcase, which can remove specific O-linked hexosamines from proteins. Delivery of viral vectors encoding O-GlcNAcase to myocytes from diabetic rats markedly improved calcium flux and contractile function.

Institution

University of California, San Diego

联系我们

叶先生

电 话：021-65679356

手 机：13414935137

邮 箱：yeyingsheng@zf-ym.com