Title (en)

VECTORS FOR GENETICALLY ENGINEERED CELLS THAT PRODUCE INSULIN IN RESPONSE TO GLUCOSE

Title (de)

VEKTOREN FÜR GENTEMANIPULIERTE ZELLEN, DIE INSULIN ALS REAKTION AUF GLUKOSE PRODUZIEREN

Title (fr)

VECTEURS POUR DES CELLULES OBTENUES PAR TECHNIQUE GENETIQUE PRODUISANT DE L'INSULINE EN REACTION AU GLUCOSE

Publication

EP 0707646 A1 19960424 (EN)

Application

EP 94920831 A 19940628

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Abstract (en)

[origin: WO9500644A1] The present disclosure relates to the application of genetic engineering to provide artificial beta cells, i.e. cells which can secrete insulin in response to glucose. This is achieved preferably through the introduction of one or more genes selected from the insulin gene, glucokinase gene, and the glucose transporter gene GLUT-2, so as to provide an engineered cell having all three of these genes in a biologically functional and responsive configuration. Advantageous methods for adenovirus-mediated gene transfer into islet cells are described, as are recombinant adenovirus constructs containing genes involved in glucose sensing, including GLUT-2, GLUT-1 and normal and disease-associated glucokinase genes. Also disclosed are methods for the detection of diabetes-associated antigens, and methods employing engineered cells in the large-scale production of human insulin.

IPC 1-7

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