

Title (en)

METHODS AND COMPOSITIONS FOR THE REDUCTION OF XENOTRANSPLANTATION REJECTION

Title (de)

VERFAHREN UND ZUSAMMENSTELLUNGEN ZUR VERMINDERUNG DER XENOTRANSPLANTATION-ABSTOSSUNG

Title (fr)

PROCEDES ET COMPOSITIONS DE REDUCTION DU REJET DE XENOGREFFE

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Application

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Abstract (en)

[origin: WO9716064A1] The present invention relates to methods and compositions for the reduction of xenotransplantation rejection. Specifically, the present invention relates, first, to transgenic cells, tissues, organs and animals containing transgenic nucleic acid molecules that direct the expression of gene products, including, but not limited to, enzymes, capable of modifying, either directly or indirectly, cell surface carbohydrate epitopes such that the carbohydrate epitopes are no longer recognized by natural human antibodies or by the human cell-mediated immune response, thereby reducing the human immune system response elicited by the presence of such carbohydrate epitopes. In a preferred embodiment, the transgenic cells, tissues, organs and animals express nucleic acid molecules encoding functional recombinant alpha -Galactosidase A (alpha Ga1A) enzyme which modifies the carbohydrate epitope Gal alpha (1,3)Gal. In a more preferred embodiment, the transgenic cells, tissues, organs and animals expressing the functional recombinant g DOLLAR (a)GalA are transgenic pig cells, organs, tissues and/or animals. Second, the present invention relates to methods for xenotransplantation comprising introducing the transgenic cells, tissues and/or organs into human recipients so that a lower level of hyperacute rejection (HAR) is observed in the human recipients relative to the level of HAR observed in human recipients having received non-transgenic cells, tissues and/or organs.

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