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(54) Title: METHODS AND COMPOSITIONS FOR CORRECTION OF CARDIAC CONDUCTION DISTURBANCES

(57) Abstract: The invention provides methods for establishing electrical coupling between cardiomyocytes and recombinant cells which have been genetically engineered to express a connexin protein such as connexin 43 (Cx43) protein. The invention is based on the discovery that genetic modification of skeletal muscle cells to express a recombinant connexin, enables the genetically modified cells to establish electrocommunication with cardiac cells via gap junctions. The recombinant connexin-expressing cells can be used for repair of cardiac tissue and for treatment of cardiac disease by transplantation into cardiac tissue.