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(71) Applicant *(for all designated States except US)*: **THE REGENTS OF THE UNIVERSITY OF CALIFORNIA** [US/US]; 1111 Franklin Street, 12th Floor, Oakland, CA 94607-5200 (US).

(72) Inventor; and

(75) Inventor/Applicant *(for US only)*: **LEE, Randall, J.** [US/US]; University of California, Cardiac Electrophysiology, Rm. MU429, 500 Parnasus Avenue, San Francisco, CA 94143 (US).

(74) Agents: **FRANCIS, Carol, L.** et al.; Bozicevic, Field & Francis LLP, 200 Middlefield Road, Suite 200, Menlo Park, CA 94025 (US).

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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.