



Al-Salam University
Faculty of Pharmacy

Stem cells for Type II Diabetes
(Promising Hope)

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Pharm Degree

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ABSTRACT

Diabetes, a chronic metabolic disease, is recognized as the most frequent disorder in the endocrine system with hyperglycemia dealing with either insulin resistance or insufficiency or both. This disease is usually associated with numerous acute and chronic complications. However, the treatment of diabetes complications has imposed a heavy financial burden on most societies. During the last decade, pancreatic islet transplantation has been widely studied as a potential therapy for diabetes. Of course, due to its limitations removing pancreatic cells from the corpse is very difficult. Stem cells are renewable cellular sources that are proposed as a substitute for organ transplantation. These cells which can be found in almost all multicellular organisms are capable of division and transforming into highly specialized cells, they can also replace injured and lost cells. The possibility of using stem cells in diabetes therapy and building insulinproducing islets has long been considered by most scientists and can be a future hope for controlling diabetes. Interestingly, human stem cells derived from hematopoietic organs, liver, pancreas, and embryonic human stem cells are among these factors. In this research, a series of studies carried out on this field is briefly reviewed.