

عنوان مقاله:

Clinical and commercial cell-based approaches for treatment of type 1 diabetes mellitus

محل انتشار:

اولین کنگره بین المللی مهندسی بافت و پزشکی بازساختی ایران (سال: 1397)

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خلاصه مقاله:

Type 1 diabetes (T1D) is an autoimmune disease where the immune system destroys insulin-producing pancreatic beta cells, leading to increased serum blood glucose levels. Despite tremendous efforts to tightly regulate blood glucose levels in diabetic patients by different methods of insulin therapy, pathologic processes that result in long-term complications exist. Regenerative medicine has opened a new era for treatment of T1D with different cell-based strategies in recent decades. These strategies benefit from cell-based approaches with complex sensing and response system, direct smart migration to the site of injury, cellular decision making to proliferate or death which makes them smart promising tools for treatment of T1D patients. These strategies are following two main goals; first to restore insulin-producing cells and second to protect them from allow and autoimmune destruction. There are three distinct ways to restore insulin-producing cells which include replacement, regeneration, and reprogramming, either there are three ways to protect them from all and autoimmune destruction which includes immunosuppression, immunomodulation, and immune-isolation. In this review, we have focused on some of these strategies which come as clinical or commercial products to treat type I diabetes

کلمات کلیدی:

Cell-based approach, Treatment, Type 1 diabetes

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