The story of diabetes and its treatment and a look at the future

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A short background on the historical milestones of diabetes will be presented, especially on the contributions of surgeons with an overview of advances in therapeutic developments in pancreas and islet transplantation. The author will summarise an update on current research on new approaches to treat diabetes and our collaborative efforts to harness gene therapy using the human insulin gene. The gene has been packaged in a virus, which after one intravenous injection enters the liver and persuades the liver cells to produce insulin. This technique has been successful in treating haemophilia B for up to 7 years by collaborator Amit Nathwani’s group at University College London. In Singapore, they have been successful in curing diabetic mice for more than 100 days and in Cambridge they have now started a research program to treat naturally diabetic dogs with early encouraging results.