Summary and Conclusion

Diabetes affects 246 million people around the world. To date, no definitive cure has been discovered. Recent clinical trials have shed light on the possibility of successfully transplanting adult pancreatic islets into type 1 diabetic recipients. However, despite encouraging efforts to improve such protocols, the poor availability of pancreatic islets remains a limiting parameter for these transplantation programmes, different strategies to obtain other sources of islet beta cells are embryonic stem cells, mesenchymal stem cells, other cell types such as acinar cells and hepatocytes & cell reprogramming **(Soggia et al, 2011).** Much progress has been made in the programming of non-B cells to B-cells. On one hand, as they currently exist, the protocols for deriving the pancreatic endocrine cells are unlikely to be immediately applicable in the clinic. On the other hand, the field is rapidly advancing, and new discoveries have been appearing in rapid succession. We are optimistic that directed differentiation of non- B cells to B-cells in time will become a practical strategy for treating type 1, and possibly type 2, diabetes**.(Wagner et al 2010).**