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(54) Title: CHIMERIC PANCREAS

(57) Abstract: Novel methods, tissues and compositions for increasing the pancreatic mass of a mammalian recipient including harvesting immature pancreatic tissue from a mammalian donor and transplanting said tissue into the peritoneal cavity of a mammalian recipient under conditions that allow the pancreatic tissue to become vascularized and mature, thereby developing a functioning chimeric, endocrine pancreas that produces at least insulin in the recipient. The invention also includes mammalian immature pancreatic tissue adapted for transplantation into the peritoneal cavity of a mammalian recipient for increasing the pancreatic mass of the mammalian recipient as well as methods and compositions for treatment of the pancreatic tissue, recipient immunosuppression and recipient co-stimulatory blockade.