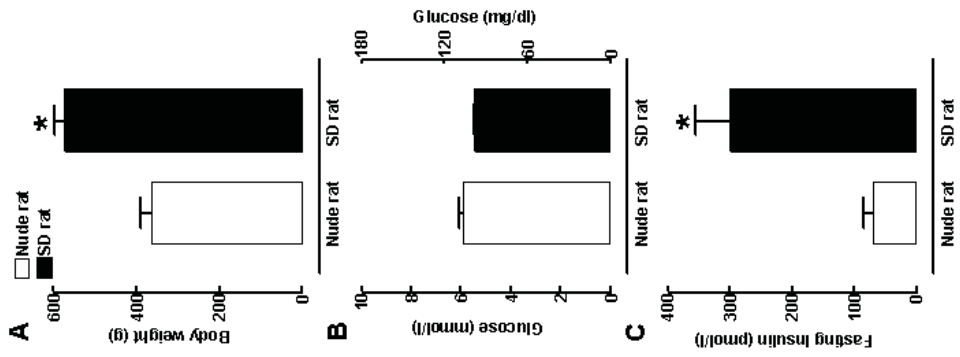
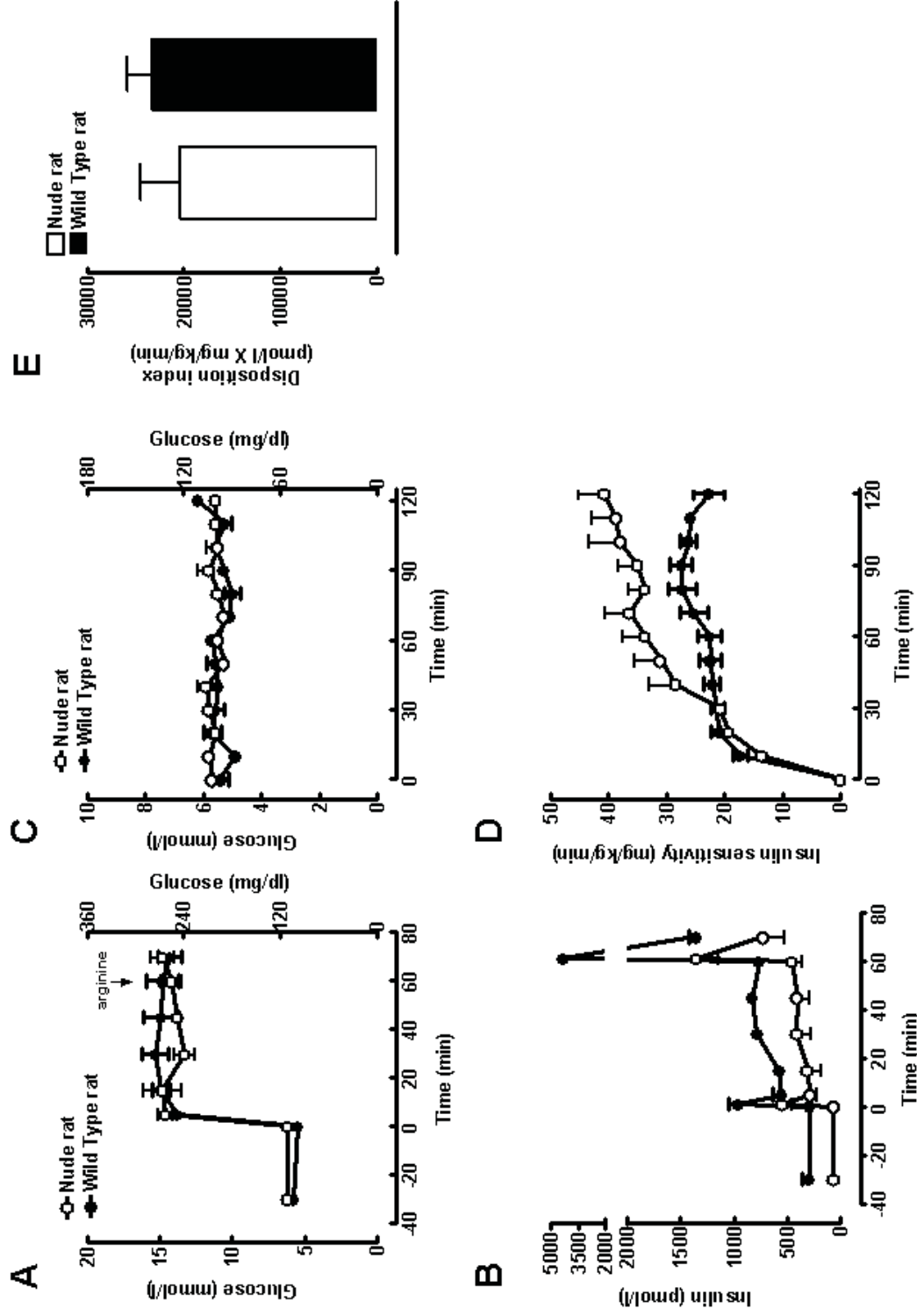


Supplemental Figures



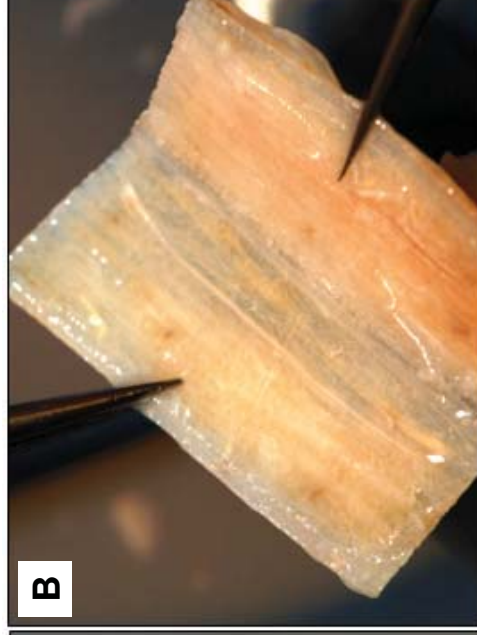
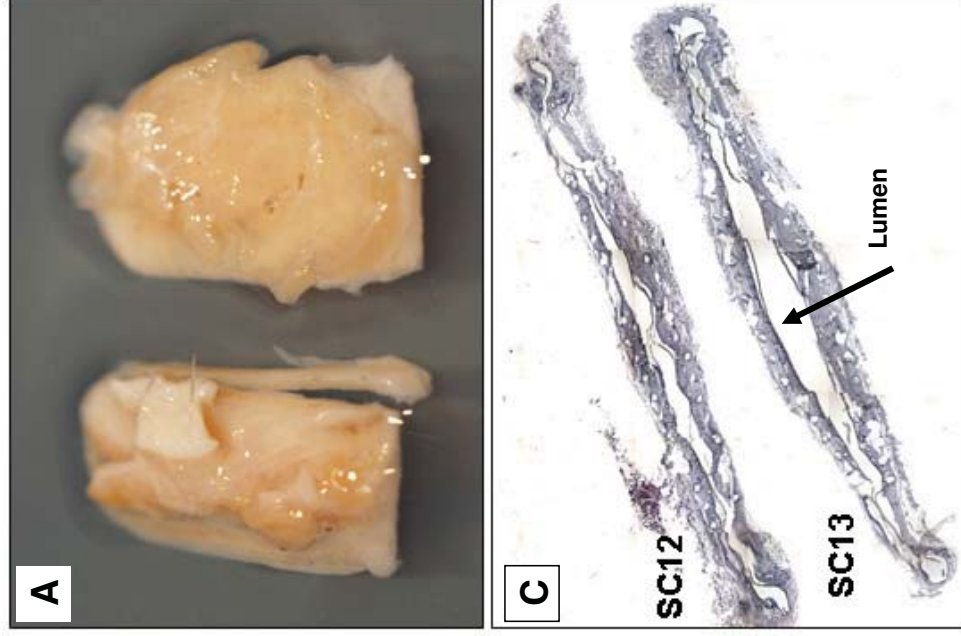
Supplemental Figure 1. Basal metabolic characteristics in athymic “nude” and wild type Sprague Dawley rats at 5 months of age. Fasting body weight (A), fasting plasma glucose (B) and fasting plasma insulin (C) levels in “nude” (n=4) and wild type rats (n=6) at fasting. Data are expressed as mean \pm SE.

Human embryonic stem cell derived endoderm in nude rats

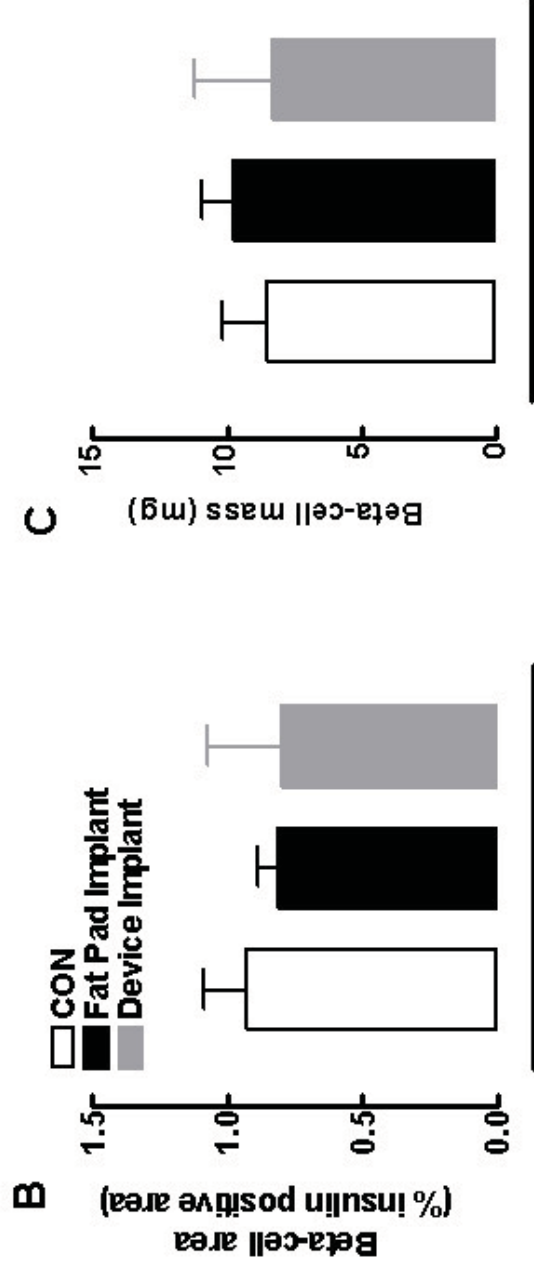
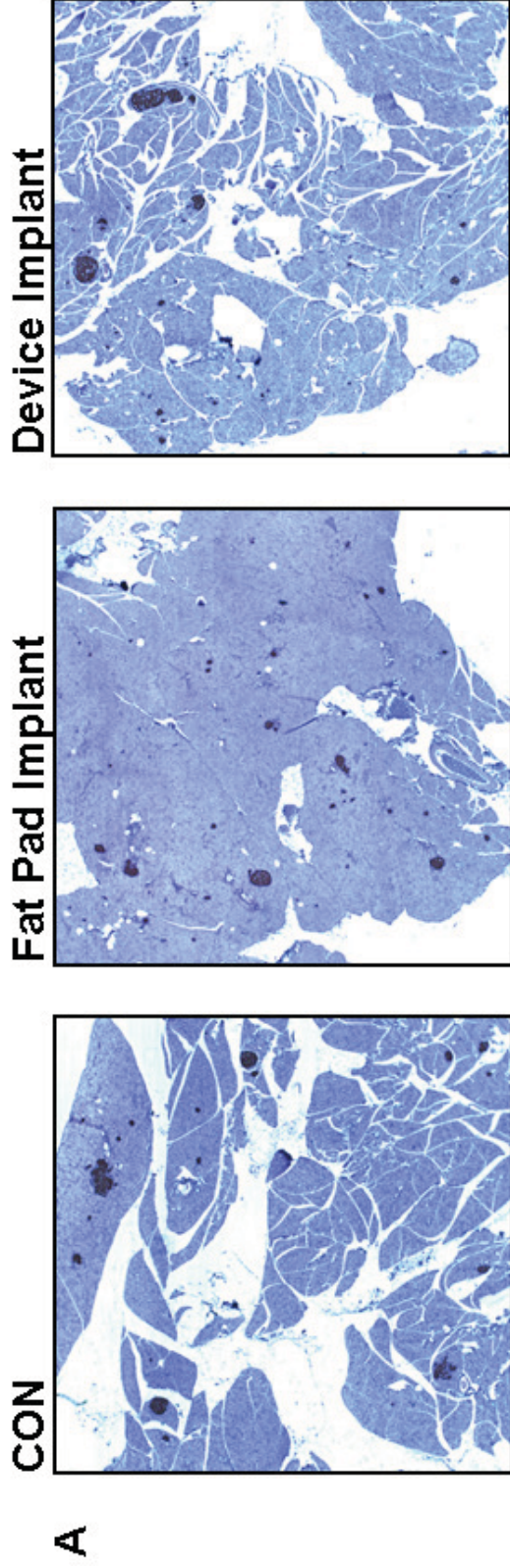


Supplemental Figure 2. Comparison of glucose-stimulated insulin secretion and insulin sensitivity in athymic “nude” and wild type Sprague Dawley rats at 5 months of age. (A and B) Mean plasma glucose and corresponding insulin concentration profiles at fasting (-30 to 0 min) and during a hyperglycemic clamp (0–70 min) with arginine bolus injection given at 60 min in “nude” and wild type rats. (C-D) Mean plasma glucose and corresponding glucose infusion rates at fasting (0 min) and during the hyperinsulinemic-euglycemic clamp (0-120 min) in “nude” and wild type rats. (E) Mean disposition index in “nude” and wild type rats at 5 months of age. Data are expressed as mean \pm SE.

Human embryonic stem cell derived endoderm in nude rats



Supplemental Figure 3. Examination of TheraCyte devices removed at 20-weeks post-transplantation from the subcutaneous space. (A) Representative gross photograph of a retrieved TheraCyte device. Note extensive tissue fibrosis encapsulating the device. (B) Representative image of a TheraCyte device split open to expose the inner cell compartment. (C) Representative images of 2 TheraCyte devices stained for Hematoxylin and Eosin. Devices contained no viable tissue.



Supplemental Figure 4. (A) Representative endogenous pancreatic sections imaged at 4X from control (CON) nude rats, and nude rats implanted with pancreatic endoderm into either epididymal fat pad or Theracyte device for 18 weeks. (B) Beta-cell fractional area and (C) beta-cell mass of the endogenous pancreas in CON, Fat pad implanted and Theracyte device implanted rats 18 weeks post endoderm implantation. Data are expressed as mean \pm SE.