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(54) Title: GROWING XENOTRANSPLANT MATERIAL IN CULTURE

(57) Abstract: Over time, cultured mammalian cells aggregate into an artificial tissue with 10% homologous serum and nicotinamide. Neonatal porcine islets alone have a SGS index of 4.6. Co-culture with neonatal porcine Sertoli cells formed free-floating islet-like structures, 300-600 microns in diameter (SGS index 21). Basal secretion of insulin remains high for islets in a heavily confluent mixed cell culture.Re-seeded cultures were very responsive to glucose (SGS index 21.8). Co-culture with fibroblasts also provides a high SGS index, permitting use of the recipient's fibroblast line as support/trophic cells for an xenotransplantable graft, as for treatment of diabetes.