

Functional Characterization of 1.1B4 - Novel Human Insulin Releasing Cell Line and Effect of High Density Green Photons Irradiation on Beta Pancreatic Cells and Human Pancreatic Islets

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ABSTRACT

The 1.1B4 cell line is a novel human hybrid formed by electrofusion of primary culture of human pancreatic islets with PANC-1. Our analysis of functional parameters of this cell line (insulin expression and secretion, glucose responsiveness, staining with human specific antibodies) confirmed the human identity and the inherited properties of functional beta cells. Irradiation with HDGP (High Density Green Photons) of two beta pancreatic cells lines (1.1B4 and INS-1E) and of human pancreatic islets induced modifications in insulin, pro-insulin and glucagon expression and secretion.

Key words: human pancreatic beta cells 1.1B4, human pancreatic islets, HDGP, insulin