

Highly Significant Body Weight Increase of Lit/Scid Mice after Electrotransfer of hGH-coding Plasmid DNA

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Gene therapy is considered a good alternative to the treatment of systemic protein deficiencies, like GH deficiency. In this study, a gene therapy strategy based on plasmid DNA intramuscular injection followed by electrotransfer was utilized to enhance the efficiency of naked DNA administration. The pUC-UBI-hGH plasmid was administered into the quadriceps muscle of *lit/scid* mice followed by electroporation. Blood was collected in different days and hGH levels were determined by radioimmunoassay. The body weight of the animals was determined daily for 60 days and used to calculate the average daily weight variation. A significant increase in the body weight of the treated group from an average weight of 8.92 ± 1.29 g/mouse to 11.87 ± 0.53 g/mouse with a weight gain of 33.1% ($P < 0.001$) was observed, while the control group decreased from 9.08 ± 0.95 g/mouse to 8.70 ± 0.88 g/mouse with weight loss of 4.2%. hGH circulating levels were continuous in treated group throughout the experiment. In conclusion, we report for the first time sustained circulating hGH levels after a single intramuscular naked DNA administration and consequent highly significant weight increase of dwarf "little" mice.

Keywords: electrotransfer, *lit/scid* mice, naked DNA
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