A0402

Intravenous Delivery of Transgene-Liposome Complexes

Seung Kyu Choi[1], Sun Uk Kim[1], Na Na Cho[1], Chang Sik Park[2] and Sang Ho Lee[1]

[1]School of Life Sciences and Biotechnology, Korea University, Seoul 136-701, Korea.
[2]Division of Animal Science & Resources, Research Center for Transgenic Cloned Pigs, Chungnam National University , Daejeon 305-764, Korea.

Gene delivery is one of the keen interests in animal industry as well as research on gene function. Some of the *in vivo* gene delivery techniques have been successively used in various tissues for the gene therapy and transgenesis. Despite intensive efforts, it still remains to overcome problems of limited local and regional administration and low transgene expression. We tried to improve the efficiency of gene delivery combining liposome and consistent flow- injection using tail-vein injection in neonate mouse or electric pulse in testis of adult mouse. In tail vein injection of transgenes, 13/51 of mouse showed expression of pGFP-LacZ or pItm2c-myc but 23/51 showed no expression and the remaining animals are also being bred. Liposome mediated electric gene delivery also showed efficient gene transfection in seminiferous tubules of testis. Transcripts and proteins of the transgene were also detected by RT-PCR or histochemical analysis, respectively. These results suggest that developed gene delivery is an effective way of transfection in various tissues. The gene delivery should be useful in producing transgenic animals and curing disease with reduced morbidity and mortality.

Key words: ***Gene delivery, Tail vein injection, Liposome***