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Poster Abstract

TRANSDUCTION OF HUMAN MONOCYTE DERIVED DENDRITIC CELLS BY
ADENOVIRAL VECTOR CONTAINING HUMAN PAPILLOMAVIRUS TYPE
18E7 ANTIGEN GENE: APPLICATION FOR TUMOR THERAPY

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Dendritic cells (DCs) have been proposed for use in a number of tumor immunotherapies since they play a pivotal role in the immune system. DCs transduced with tumor antigen genes might have the advantages of priming naive T cells and propagating tumor-specific cytotoxic T lymphocytes for a long term. In this study, we transduced human papillomavirus (HPV) 18E7 oncoprotein gene into monocyte derived DCs (MoDCs) using adenoviral vector and analyzed the function of the MoDCs by allogeneic mixed lymphocyte reaction (MLR) and cytokine production. The results were (1) the expression of the gene transduced into MoDCs was dose-dependent manner of adenoviral vector; (2) the transduction increased the expression of CD80, CD86 and CD83 on the surface of MoDCs; (3) HPV18E7-transduced MoDCs enhanced allogeneic MLR; and (4) these MoDCs induced the production of IL-12p70 and IFN-gamma in the supernatant when co-cultured with autologous lymphocytes. These data suggest that transgene by adenoviral vector into MoDCs might be feasible application for DCs-based tumor immunotherapies.