분류번호	Ⅱ-P-2

Cytotoxicity of Cytosine Deaminase (CD) Adenoviral Vectors (AV) with a Promoter (L-plastin) for Epithelial Cancer Cells.

Injae Chung°, Kihwa Jung, and Albert B. Deisseroth

Duksung Women's University, College of Pharmacy, Seoul, Korea
and Yale University School of Medicine, New Haven, CT USA

The object of this study was to develop a gene therapy strategy for ovarian cancer. We have previously shown that AV with a L-plastin (LP) promoter infects breast and ovarian cancer cells and expressed β-galactosidase cDNA in preference to normal fibroblast cells and hematopoietic cells. We now report on the cytotoxicity of Ad.LP.CD, an AV carrying a CD cDNA which converts the pro-drug, 5-Fluorocytosine (5-FC) into the toxic drug 5-Fluorouracil (5-FU). Infection of Ad.LP.CD into either 293 cells or ovarian cancer cells generated the functional CD as measured by HPLC analysis. Using a ratio of AV to OVCAR3 cell of 100 and a 5-FC concentration of 100 μM, we achieve an over 95 % of cell growth inhibition. We are using flow cytometry analysis for β-galactosidase and ovarian cancer associated folate receptor to screen primary ascites samples for infectivity after infection with an adenoviral vector, i.e., Ad.LP.LacZ. This vector system may be of value in the treatment of microscopic disease of ovarian cancer in the peritoneal cavity.