

Gene therapy

#	Patent #	Title	Inventor(s)	Features
1	6965009	p53as Protein and Antibody Therefor	Kulesz-Martin	Purified protein and antibodies for p53as. Protein is present in normal cells of a mammal and is essentially identical to p53 until the final 50 amino acids. The antibody may be either a monoclonal or polyclonal antibody. Potentially useful in influencing p53 binding to target genes or detecting p53 mutations.
2	6531512	Method of Treating Cancer in Patients Having a Deficiency in p53 Tumor Suppressor Gene	Kramer et al.	Cancer treatment of p53-deficient patient with polyamine analog (Norspermine; DENSPM) and inducing tumor cell apoptosis.
3	6518012	Method for Regulating the Expression of MHC Antigens and CD40 by Inhibitors of Histone Deacetylation	Tomasi	Enhancing cell surface expression of major histocompatibility complex (MHC) antigens on tumor cells by administration of histone deacetylation inhibitors; especially trichostatin A (TSA) or sodium butyrate.
4	6413775	Polyamine Analog-Activated SSAT Gene Therapy	Porter et al.	Enhanced anti-tumor potency via polyamine analogs (DENSPM; Norspermine). Drug-activated suicide (apoptosis) gene therapy. DENSPM down-regulates key polyamine biosynthetic enzymes, ornithine and S-adenosylmethionine decarboxylase, and up-regulates the polyamine catabolic enzyme, spermidine-spermine N.sup.1 -acetyltransferase (SSAT). SSAT transfection inhibits tumor cell growth in vitro.
5	6187588	Method for Increasing the Efficiency of Transfection	Hui et al.	Improving efficiency of transfection based on the unexpected finding that DNA-uptake induces apoptosis. Method exposes transfected cells to inhibitors of apoptosis, e.g. caspase. Very useful research tool for gene therapy applications.
6	5747650	p53 as Protein and Antibody Therefor	Kulesz-Martin	Monoclonal or polyclonal antibody for p53as protein that is functionally equivalent to p53.
7	5726024	p53 as Protein and Antibody Therefor	Kulesz-Martin	Provides useful tool for expression of p53 and detection and potential treatment of malignant cells.
8	5688918	p53 as Protein and Antibody Therefor	Kulesz-Martin	Provides useful tool for expression of p53 and detection and potential treatment of malignant cells.
9	5789213	Method and Compositions for High Efficiency Loading, Transfection and Fusion of Cells by Electric Pulses	Hui et al.	Facilitates targeted delivery via liposomes. Enables transfer of biological materials such as drugs, nucleic acids, or other materials into target cells by means of a non-toxic, two phase polymer system. Materials can be introduced (loaded) into target cells with high efficiency during and after administration of an electric pulse (electroporation).
10	5681706	Mammalian Anoxia-Responsive Regulatory Element	Anderson et al.	DNA sequences that control the expression of mammalian genes in tissue- or disease stage-specific manner. The recombinant vectors effect anoxic induction of genes in animals. Enables construction of an expression vector to produce an anoxia-induced gene. Potential use in (angiogenic) tumor progression studies and (diabetic) wound healing.
11	5650305	Method to Produce Hybrid Cells by Electrofusion	Hui et al.	Enables fusion of cells of heterogenous sizes, or to transfer macromolecules into target cells, with high efficiency simplicity and in the presence of a variety of pulse medium. High viability of resultant hybrid cells.

Liposomal delivery

#	Patent #	Title	Inventor(s)	Features
12	6991805	Temperature Sensitive Control of Liposome-Cell Adhesion	Hui et al.	A method for targeted delivery of agents comprising the steps of providing a mixture of poloxamer molecules, and liposomes encapsulating the delivery agent; heating the mixture to above the critical micellar temperature (CMT) for the poloxamer, so as to allow a fraction of the poloxamer molecules to form micelles and another fraction of the poloxamer molecules to become incorporated into the liposomes; administering the heated mixture to an individual; and cooling the target site to below the CMT so as to cause the poloxamer molecules forming the micelles and incorporated into the liposomes to dissociate into monomers thereby exposing the liposomal adhesion sites causing the liposomes to be retained at or near the target site.
13	6964778	Temperature Controlled Content Release from Liposomes	Hui et al.	A liposomal composition for targeted delivery of drugs that provides a method for delivery of agents to targeted sites.