

# Review on Gene Therapy for Cancer

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**Abstract:** *Advances in our understanding of the mechanisms by which tumor cells detect drug-induced DNA damage leading to apoptotic death have aided in the design of novel, potentially more selective strategies for cancer treatment. Several of these strategies use proapoptotic factors and have shown promise in sensitizing tumor cells to the cytotoxic actions of traditional cancer chemotherapeutic drugs. Although antiapoptotic factors are generally regarded as poor prognostic factors for successful cancer chemotherapy, strategies that use antiapoptotic factors in combination with suicide or other gene therapies can also be considered. The introduction of antiapoptotic factors that act downstream of drug-induced mitochondrial transition delays, but does not block, the ultimate cytotoxic response to cancer chemotherapeutic drugs that activate a mitochondrial pathway of cell death.*

**Keywords:** Angiogenesis; Cancer; Gene therapy; Interferon; Angiostatin; Endostatin

## REFERENCES

- [1]. Russell RCG, Williams NS, Bulstrode CJK. Bailey & Love's short practice of surgery. Arnold 2000.
- [2]. Walther W, Stein U. Viral vectors for gene transfer: A review of their use in the treatment of human diseases. *Drugs* 2000; 60(2):249-71.
- [3]. Springer CJ, Niculescu-Duvaz I. 2000. Prodrug-activating systems in suicide gene therapy. *J. Clin. Invest.* 105:1161-67
- [4]. Thomas CE, Ehrhardt A, Kay MA. Progress and problems with the use of viral vectors for gene therapy. *Nat Rev Genet* 2003; 4:346-58.
- [5]. Pathak, A.; Patnaik, S.; Gupta, K.C. Recent trends in non-viral vector-mediated gene delivery. *Biotechnology J.* 2009, 4, 1559-1572.
- [6]. Escoffre, J.M.; Teissie, J.; Rols, M.P. Gene transfer: How can the biological barriers be overcome? *J. Membr. Biol.* 2010, 236, 61-74