

EXPRESSION-TARGETED GENE THERAPY FOR CANCER CELL DEATH

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Project Description

One of the focuses of the Godbey laboratory is the use of expression-targeted gene therapy to treat various cancers. The targeted gene expression is achieved through the use of specific promoters to control which cells transcribe the delivered genes. Our data have shown that this targeting method works well both *in vitro* and *in vivo* for a specific class of cancers; we now want to expand this cancer targeting method by including the use of additional promoters. We have constructed two additional targeting vectors and would like to know if these newly constructed plasmids will be expressed in cancer cell lines while being dormant in untransformed cells.

Project Objectives

1. Create transfection complexes with a variety of gene carriers
2. Positively transfect mammalian cancer cells with genes
3. Screen cells with positive gene expression
4. Analyze results to determine the effectiveness of the genes at bringing about cell death

Prerequisites

Must have completed the sophomore year in one of the biosciences or bioengineering. Cell culture experience is required. Must also know what "apoptosis" means.