ABSTRACT FORM

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Title: Expression of cloned immunoglobulin genes in heterologous cells

Author(s): Please underline speaker's name
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Abstract: (single space)

Transfer of cloned genes into tissue culture cells has been shown to be a useful strategy for the study of the mammalian gene expression. To this end a mouse immunoglobulin k light chain gene specific for the hapten 2,4,6 trinitrophenyl (TNP) has been inserted into a transducing vector (pSV2-neo) carrying the bacterial phosphotransferase gene (neo) which confers resistance to the antibiotic G418. The recombinant plasmids were then transferred into a mutant hybridoma cell line (igk-14) which was known to be missing the TNP specific k light chain gene by the method of protoplast fusion (W. Schaffner, Proc. Natl. Acad. Sci. USA, 77, p 2167, 1980). The G418 resistant transformants were assayed for secretion of functional antibody by restoration of anti-TNP plaque formation. Our system demonstrated that a cloned k light chain gene is capable of restoring specific antibody production to the transformed cells. (Ochi et al. Nature (in press)). The results of the transfer of light chain and heavy chain genes into several other cell lines, including T cells, pre-B cells, and fibroblasts, will be discussed. The work was supported by grants from the Medical Research Council of Canada, the National Cancer Institute of Canada, the Arthritis Society of Canada and the Allstate Foundation.

Please type the names of all Authors in full for Author Index. (Check the box to indicate the Speaker)

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