

## Approaches to enhancing the retroviral transduction of human synoviocytes

### ABSTRACT

This report focuses on an experimental design for rheumatoid arthritis, where an amphotropic retrovirus (MFG-IRAP) was used to transfer a cDNA encoding human interleukin-1 receptor (IL-1Ra) to synovium. The protocol required the cells to secrete at least 30 ng of these proteins before reimplantation, and there are several alternative methods available for increasing efficiency in this process.

### INTRODUCTION

Introduction In this paper we describe a novel approach to enhancing retroviral transduction of human synoviocytes using a novel DNA-guided DNA polymerase chain reaction (PCR) approach.

Our approach involves creating a DNA-guided DNA polymerase chain reaction (DNA-PCR) platform that can be designed to target DNA-binding proteins that are expressed in human synoviocytes. The DNA-PCR platform can be used to target DNA-binding proteins that are expressed in human synoviocytes. The DNA-PCR platform can be designed to target DNA-binding proteins that are expressed in human synoviocytes. The DNA-PCR platform can be designed to target DNA-binding proteins that are expressed in human synoviocytes.

We investigated whether the DNA-PCR platform can target a variety of For this study we looked at several different ways to find out what is most likely to occur: first, if rabbit type B synoviocytes were transduced with the amphotropic retrovirus MFG-IRAP and under standard, static conditions that they secrete into their culture medium about 100 ng human immunoglobulin-1 (IL-1) virus per day; second a mouse model expressing human IL-1RA/106 cells per nightly time of arrival; and finally we need to establish which conditions would yield the highest transduction efficiency.

### CONCLUSION

Remarkable conclusions These data indicate that high titer retrovirus leads to the highest increase in retroviral transduction in human synoviocytes. High reactivity with flow-through transducing or centrifugation of these factors also resulted in an overall increase, for instance, of IL-1Ra production by 50–100 times compared to static transductions performed with standard tenth-generator virus. This will be especially important when performing gene therapy with such transgenes as AMPs (which are produced in large molar excess over the