THE 5’UTR-DEPENDENT ENHANCEMENT OF PROTEIN TRANSLATION EFFICIENCY TRIGGERED BY SELF-TRANSFECTING 3’-AMINOALLYL-CONTAINING OLGONUCLEOTIDES (aa-dGoligos) TARGETING A POOL OF STRONGLY FOLDED TRANSCRIPT VARIANTS OF THE THRBP SUPPRESSOR GENE

OBJECTIVES

In vitro RESULTS

The 5’UTR-dependent enhancement of protein translation efficiency triggered by self-transflecting 3’-aminoallyl-containing oligonucleotides (aa-dGoligos) targeting a pool of strongly folded transcript variants of the THRBP suppressor gene.

INTRODUCTION

In vitro RESULTS

Translational control of cell growth and differentiation is one of the most important targets for the control of gene expression. In previous studies, we have reported that microRNAs and antisense oligonucleotides (aa-dGoligos) can increase translation of mRNAs harboring 5’UTR-dependent translational regulatory elements.

B. mRNA1

C. Protein

In vitro RESULTS

In vitro RESULTS

In vitro RESULTS

CONCLUSIONS

Although the artificial translational control of the 5’UTR is an important strategy for the treatment of cancer, it is also important to consider the potential for off-target effects and the long-term consequences of translational control.

Methodological improvements and the development of more specific and targeted oligonucleotides are necessary to achieve the desired therapeutic effects while minimizing the risk of off-target effects.