



Inhibition of gene expression from "foreign DNA"

A novel peptide is able to specifically inhibit gene expression from "foreign" DNA while not affecting cellular gene expression ...

BACKGROUND

A new peptide was identified which inhibits gene expression from DNA introduced into cells without affecting expression of genome- encoded genes and with no apparent cell-toxicity. Inhibition occurs at the level of transcription and is independent of the type of protein encoded in the "foreign" DNA. Inhibition is dose- dependent with IC_{50} -values between 0.3 and 0.7 μ M.

Several tests have confirmed a seemingly universal effect in human cell lines, higher eukaryotic cells and even bacterial cells in case of transfection/transformation. Modification of the peptide to enhance cell-penetration showed also inhibition of gene expression from a virus in a transduction model, providing proof- of-principle that the peptide can also target "foreign" DNA when packed in a virus.

TECHNOLOGY

The peptide sequence, already including some possible variations, has been assessed and first studies on the mode of action have been performed. Cellular and biochemical assays are available. This peptide could represent a novel class of inhibitors of gene expression from "foreign DNA" and can act as starting point for the development of a lead molecule to be tested in several transduction and infection models.



OUR OFFER

We offer a co-development of the peptide for the potential use as

- an antiviral drug candidate
- additive to (attenuated) vaccines
- inhibitor of bacterial phage infections
- control of gene expression

We offer a joint development of the peptide and to share the IP. Under protection of a CDA we can disclose more details.

EXPERTS

[Dr. Hanna Harant \(external\)](#)

DEVELOPMENT STATUS

TRL 2-3

IPR

Patent application in preparation – shared IP possible

KEYWORDS

- Novel antibiotics
- Antibacterial
- Antifungal
- Bioactive compounds
- Unique microbial collection

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