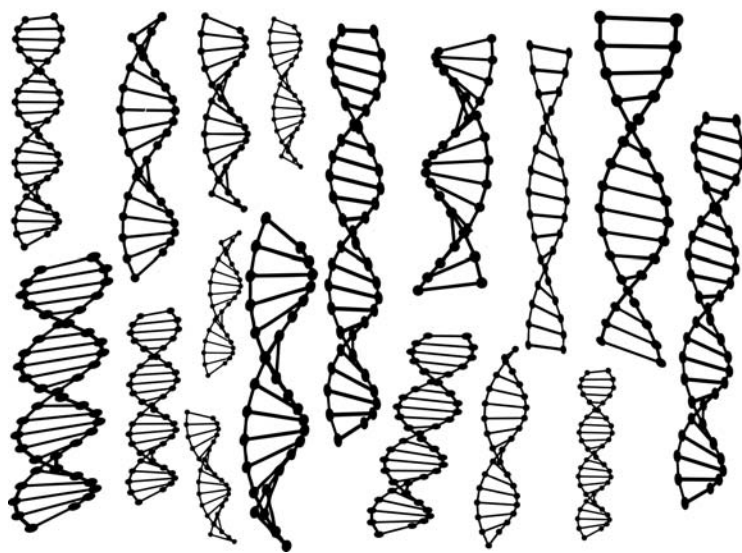




siRNA Targeting DNA and Histone Methylation



DESCRIPTION

RNA interference (RNAi) is a process by which living cells control the activity of genes via post transcriptional modifications. This process is initiated when dsRNA is exposed to cells and is processed into 21-23 nucleotide siRNA fragments also known as Induced Silencing Complex (RISC). The discovery of siRNAs permitted RNAi to be used as an experimental tool in higher eukaryotes. Although dsRNA was used to regulate gene expression in plants and yeast, its applicability in human cells was recently found and is currently being exploited for therapeutic intervention in the clinic. This technology shows that siRNAs can be used to direct the methylation of histones and DNA contained in human cells that are associated with

target genes that produce low copy promoter specific RNA during transcription. Thus, allowing for the transcriptional and post-transcriptional gene silencing (TGS) of target genes in human, cells.

KEY ASPECTS

- Provides pharmaceutical compositions containing siRNA molecules.
- Method for TGS which is specific for a target sequence in the promoter region
- Capable of targeting either DNA directly or Histones to silence gene transcription
- Since these siRNA molecules are sequence specific, multiple different siRNAs can be introduced in parallel with each successfully targeting different genes for TGS

INTELLECTUAL PROPERTY

Title	US Patent Application	Filed
Double stranded nucleic acid targeting low copy promoter-specific RNA	12/772,652	5/3/10

CONTACT

Matthew Grunseth, M.B.S.

Senior Manager, Office of Technology Licensing

Telephone: (626) 471-7221 | Email: mgrunseth@coh.org

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