Modulation Of p53 as a Cancer Therapeutic Target

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ABSTRACT

Researchers at the University of California, Davis have designed peptides and sequences to enhance p53 expression.

FULL DESCRIPTION

p53 plays an important role in normal cell growth and development. Disruption or decreased levels of p53 is a common feature of greater than 50% of human cancers. Consequently, restoration of p53 function or increasing its activity or expression is useful to induce cancer cell death. Current chemotherapeutic drugs can induce p53 expression but are associated with debilitating side effects. There is a need for alternative therapeutic agents that induce p53 expression without these side-effects.

Researchers at the University of California, Davis have developed synthetic peptides and sequences to induce translation of p53 protein. By disrupting RBM38 mediated inhibition of p53 expression, these peptides (in therapeutic combination with low doses of chemotherapeutic agents) can reduce the associated toxic side-effects while boosting therapeutic potential. The peptides have been successfully tested to enhance the induction of p53 and suppress colony formation in MCF7 breast cancer cells.

APPLICATIONS

- Treat cancers with decreased p53 protein levels
- Use in therapeutic combination with low doses of chemotherapeutic agents to potentially reduce side-effects while boosting therapeutic potential

FEATURES/BENEFITS

- Increases p53 expression
- Enhance the efficacy and potency of currently prescribed cancer drugs

PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Issued Patent	11,505,574	11/22/2022	2017-277

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OTHER INFORMATION

KEYWORDS

p53, RBM38, cancer, peptides

CATEGORIZED AS

- **Medical**
  - Disease: Cancer
  - Therapeutics
- **Research Tools**
  - Nucleic Acids/DNA/RNA
  - Reagents

RELATED CASES

2017-277-0

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