Dendritic Peptide Bolaamphiphiles for siRNA Delivery

Tech ID: 24751 / UC Case 2015-033-0

BRIEF DESCRIPTION

Novel dendritic peptide bolaamphiphiles that are safe and efficient for siRNA delivery.

FULL DESCRIPTION

Lipid nanoparticles (LNPs) and polymeric vectors have great promise for therapeutic delivery of siRNA to tumors. Despite major advances in this area, these LNPs and vectors may cause cell membrane disruption thus altering cell behavior and causing cytotoxicity.

Researchers at the University of California, Irvine have developed novel dendritic peptide bolaamphiphiles that cause low cellular membrane damage and also these bolaamphiphiles exhibited 20-40 times higher cellular uptake than Lipofectamine. In addition, experiments showed that these bolaamphiphiles displayed robust luciferase knockdown in luciferase expressing cell lines with minimal cytotoxicity.

SUGGESTED USES

These bolaamphiphiles may be used as research reagents or as a drug delivery vehicle for siRNA delivery.

PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Issued Patent	9,867,845	01/16/2018	2015-033

LEAD INVENTOR

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OTHER INFORMATION

KEYWORDS

Amphiphiles, Bolaamphiphiles, Drug delivery, siRNA

CATEGORIZED AS

- **Biotechnology**
  - Other
- **Medical**
  - Gene Therapy

RELATED CASES

2015-033-0

ADDITIONAL TECHNOLOGIES BY THESE INVENTORS

- Biodegradable Polymeric Vectors For Delivery Of Various RNAs
- Electrically Fueled Active Supramolecular Materials
- Dynamic polymers based on siloxane exchange

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