

Design of Enhanced Endosomal Escape Domains for Delivery of Macromolecules into Cells

Tech ID: 24545 / UC Case 2015-010-0

BACKGROUND

Macromolecular peptide, protein and oligonucleotide therapeutics have great potential to treat human disease; however, due to their size, they have no ability to enter cells. Peptide/Protein transduction domains (PTDs), also called cell-penetrating peptides (CPPs), promote uptake of macromolecules via endosomal macropinocytosis. However, overcoming the rate-limiting step of endosomal escape remains the major challenge.

TECHNOLOGY DESCRIPTION

UC San Diego researchers have designed an Endosomal Escape Domain (EED) that resulted in a significant enhancement of cytoplasmic delivery in the absence of cytotoxicity. In addition they developed an assay to measure transduction into the cytoplasm to compare and contrast PTDs/CPPs.

CONTACT

University of California, San Diego
Office of Innovation and Commercialization
innovation@ucsd.edu
tel: 858.534.5815.



OTHER INFORMATION

KEYWORDS

drug delivery, macromolecule,
endosomal escape, membrane
transduction

CATEGORIZED AS

- **Medical**
- Delivery Systems
- Research Tools

RELATED CASES

2015-010-0