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Empowering Ideas

Transient Gene Therapy for Neuroprotection

Safe, minimally-invasive, non-viral delivery of nucleic acid into the central nervous system (CNS) to protect cells from ischemic or traumatic injury

Inventor
Dr. James G. Hecker

STAGE OF DEVELOPMENT
- In vivo proof of concept

INTELLECTUAL PROPERTY
UP Application (US20100249208 A1) – received notice of allowance 7/2015

REFERENCE MEDIA
Hecker et al. *Molecular Therapy* (2008) 16 11, 1857–1864

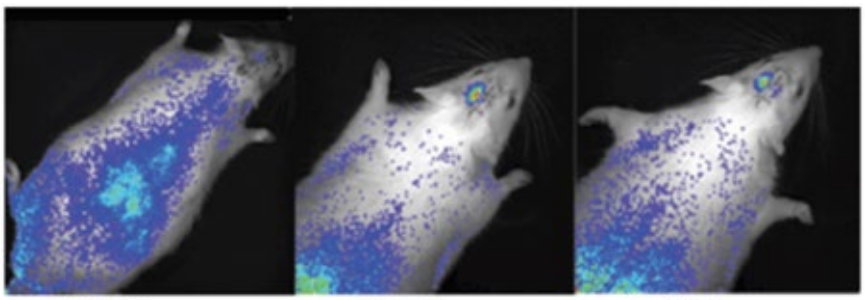
DESIRED PARTNERSHIPS
- License

Problem
Gene therapy has significant potential to advance clinical medicine. However, long-term gene expression delivered by viral modes may contribute to risks and duration of expression must be matched with the appropriate indication. Transient expression to address acute indications, such as neuroprotection after ischemic or traumatic injury, could significantly aid in recovery and prevent long-term effects.

Solution
Dr. Hecker has developed a non-viral cationic lipid-based delivery system to address transient gene therapy needs. The application is minimally invasive, through injection into the CNS, and is highly effective in transfection of both neuronal and non-neuronal cells.

Advantages
- Low immunogenicity
- Easy preparation
- No limitations on vector size

Applications
- Delivery of therapeutic genes transiently
- Delivery of neuroprotective agents, such as heat shock proteins



LEARN MORE
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