Title (en)

INCREASED DELIVERY OF A NUCLEIC ACID CONSTRTUCT IN VIVO BY THE POLY-L-GLUTAMATE (PLG) SYSTEM

Title (de)

ERHÖHTE ABGABE EINES NUKLEINSÄURE-KONSTRUKTS IN VIVO MIT DEM POLY-L-GLUTAMAT (PLG) SYSTEM

Title (fr)

DELIVRANCE AUGMENTEE D UN PRODUIT DE RECOMBINAISON D ACIDE NUCLEIQUE IN VIVO PAR LE SYSTEME POLY-L-GLUTAMATE (PLG)

Publication

EP 1513559 A4 20060118 (EN)

Application

EP 03741818 A 20030523

Priority

- US 0316541 W 20030523
- US 15667002 A 20020528
- US 39570903 A 20030324

Abstract (en)

[origin: WO03099341A1] Plasmid DNA delivered by injection / electroporation to the skeletal muscle can be expressed, and physiologic levels of transgene could be achieved into the circulation. Nevertheless, stabilization of naked DNA may be required and necessary in some cases, as prolonged storage at different temperatures before usage, injection into a large number of animals, etc. It is imperative that the associated compound should not be toxic to the cells (e.g. muscle cells) or cause breakage of plasmid DNA. It would be preferable for the coated DNA to have a similar or increased uptake into the target cells. Low molecular weight polyL-glutamate compounds have all the desired properties. It was determined that mole/mole ratio DNA/PLG is the optimum concentration for gene therapeutic applications to the skeletal muscle, resulting in increased expression of the transgene, with no damage to the target tissue. Furthermore, stabilization of plasmid DNA by PLG has never been observed or described in the literature.

IPC 1-7

A61K 48/00; C12N 15/63; C07K 14/60

IPC 8 full level

A61K 48/00 (2006.01); **C07K 14/60** (2006.01)

CPC (source: EP)

A61K 48/0008 (2013.01); A61K 48/00 (2013.01)

Citation (search report)

- [XY] WO 0166149 A2 20010913 - VALENTIS INC [US], et al
- [Y] WO 0106988 A2 20010201 - BAYLOR COLLEGE MEDICINE [US], et al
- [LE] WO 03049700 A2 20030619 - ADVISYS INC [US], et al
- [DXY] FEWELL J G ET AL: "Gene therapy for the treatment of hemophilia B using PINC-formulated plasmid delivered to muscle with electroporation", MOLECULAR THERAPY, ACADEMIC PRESS, SAN DIEGO, CA,, US, vol. 3, no. 4, April 2001 (2001-04-01), pages 574 - 583, XP002965532, ISSN: 1525-0016
- [PX] DRAGHIA-AKLI R ET AL: "ELECTRICAL ENHANCEMENT OF FORMULATED PLASMID DELIVERY IN ANIMALS", TECHNOLOGY IN CANCER RESEARCH AND TREATMENT, ADENINE PRESS, SCHENECTADY, NY, US, vol. 1, no. 5, October 2002 (2002-10-01), pages 365 - 371, XP001182428, ISSN: 1533-0346
- See references of WO 03099341A1

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