



Method and Apparatus for Delivery of Molecules to Cells

分子到細胞的遞送方法和儀器

Principal Investigator 項目負責人

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Country	Filing No.	Description	Filing Date	Status
US	13/342,529	Method and Apparatus for Delivery of Molecules to Cells	3 Jan 2012	Pending

Stage of Technology Transfer: Commercially viable technology/product ready for sale

Research Area: Life Science – biotechnology

Abstract

In cell therapy, drugs or genes are required to be delivered to cell cytoplasm or nuclei to be functional but they cannot penetrate cell membranes by simple diffusion. Although there are various delivery methods, they nonetheless are far from perfect. As an alternative method, the micro-nanoneedle patch disclosed is designed for easy delivery of drugs/genes to large numbers of cells without affecting cell viability and physiology, and that no toxins will be introduced.

Patch application at a certain speed

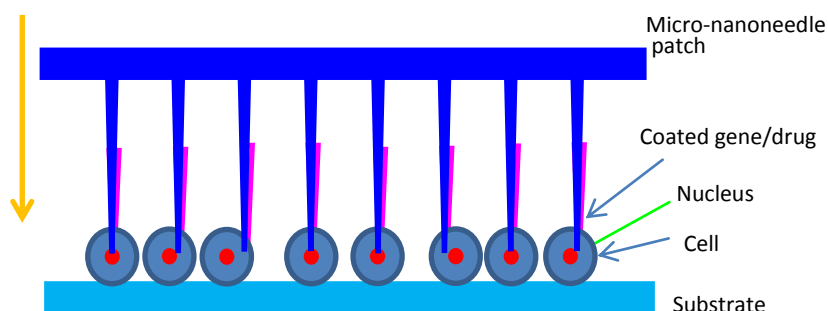


Illustration of gene/drug delivery to cells (or nuclei) by a micro-nanoneedle patch with a certain application speed

Uniqueness and Competitive Advantages

- Quick and easy delivery
- Minimized cell deaths
- No toxins are introduced
- Universal technology

Applications

- Cell therapy
- Gene therapy
- Cell biology

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國家	申請號	發明名稱	受理日期	狀況
美國	13/342,529	Method and Apparatus for Delivery of Molecules to Cells	03.01.2012	處理中

技術轉移階段: 可作商業應用的科技/產品

研究範圍: 生物科學 - 生物科技

簡介

在細胞療法中，為了讓藥物有更有效的藥理作用，有關藥物或基因需要遞送到細胞的細胞質或細胞核中，但是單純採用擴散方法無法使其穿透細胞膜。儘管在市場上有著各種各樣的遞送方法，卻遠不夠完美。微納米針陣列為一種新型替代方法，用於遞送藥物/基因到大量細胞中，這方法已證明不會影響細胞的生存能力和生理機能，而且不會產生任何毒素。

特點與優勢

- 遞送快速、簡便
- 減少細胞死亡
- 不產生任何毒素
- 通用技術

應用

- 細胞療法
- 基因療法
- 細胞生物學

查詢

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Patch application at a certain speed

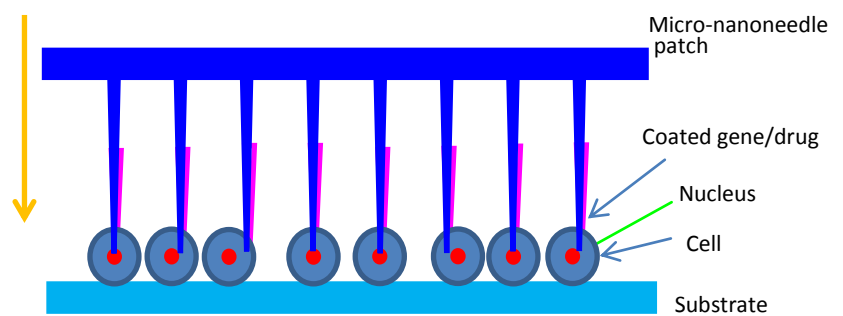


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