Title (en)

NUCLEIC ACID CONSTRUCTS AND USES THEREOF FOR DIRECT NUCLEIC ACID INCORPORATION INTO CELLS

Title (de)

NUKLEINSÄUREKONSTRUKTE UND DEREN VERWENDUNG FÜR DIREKTEN NUKLEINSÄUREEINBAU IN ZELLEN

Title (fr)

CONSTRUCTIONS D'ACIDE NUCLEIQUE ET LEUR UTILISATION EN VUE D'UNE INCORPORATION DIRECTE DANS LES CELLULES

Publication

EP 0946718 A1 19991006 (EN)

Application

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Abstract (en)

[origin: WO9828417A1] Disclosed are compositions for incorporating nucleic acid into a cell. Transgene constructs that include a desired nucleic acid sequence of interest may be injected into a cell together with a protein to provide site specific or random incorporation of the nucleic acid sequence into the chromosomal DNA of the cell. The transgene construct and the protein are included in the described compositions together, with the protein facilitating the incorporation of the nucleic acid sequence of interest within the transgene construct, directly into the nucleic acid of a cell in a site-specific manner. In other embodiments, the compositions include a transgene construct and an expression construct, the expression construct including a nucleic acid sequence that encodes an enzyme capable of facilitating the incorporation of the transgene sequence of interest into a cell. The invention further includes methods for incorporating a foreign nucleic acid into a cell employing a microinjection method. In particular embodiments, the method may be employed to introduce foreign nucleic acid into cells that grow in a non-adherent state. In these applications, the cells are immobilized onto a substrate surface that includes an adherent molecule, such as fibronectin. Alternatively, the cells may be stabilized sufficiently to permit microinjection using holding pipettes or through the stimulation of the cells themselves to express molecules on their surface which bind chemical entities included at the surface of a culture plate.

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