

Title (en)

TRANSFECTION OF MALE GERM CELLS FOR GENERATION OF SELECTABLE TRANSGENIC STEM CELLS

Title (de)

TRANSFEKTION MÄNNLICHER KEIMZELLEN ZUR HERSTELLUNG SELEKTIERBARER TRANSGENER STAMMZELLEN

Title (fr)

TRANSFECTION DE CELLULES GERMINALES MALES PERMETTANT DE GENERER DES CELLULES SOUCHES TRANSGENIQUES
SELECTIONNABLES

Publication

EP 1129205 A1 20010905 (EN)

Application

EP 99917539 A 19990415

Priority

- US 9908277 W 19990415
- US 9824238 W 19981113
- US 19192098 A 19981113

Abstract (en)

[origin: WO0029602A1] Disclosed is a method of obtaining selectable transgenic stem cells of a vertebrate by transfecting a male germ cell with a transfection mixture comprising a nucleic acid construct containing a transcriptional unit of a stem cell-specific promoter, for example, a cyclin A1 promoter, operatively linked to a gene encoding a fluorescent or light-emitting reporter protein. The transfection mixture is a composition for transfection, in vivo or ex vivo, of a vertebrate's male germ cells, which comprises a nucleic acid or transgene, and a gene delivery system, and optionally a protective internalizing agent, such as an endosomal lytic agent, a virus or a viral component, which is internalized by cells along with the transgene and which enhances gene transfer through the cytoplasm to the nucleus of the male germ cell. In stem cells, other than germ cells, grown in vivo, expression of the reporter gene from a cyclin A1 promoter is facilitated by preventing methylation of promoter DNA by the use of flanking insulator elements in the nucleic acid construct. Alternatively, inhibitors of DNA methylation can be used in an in vitro growth medium. A kit contains components of the transfection mixture. Selectable transgenic stem cells have stably integrated the DNA, and non-human transgenic vertebrates comprise these selectable transgenic stem cells.

IPC 1-7

C12N 15/89; **C12N 15/86**; **C12N 15/88**; **C12N 5/06**; **A01K 67/027**; **A61K 48/00**; **C12N 15/65**; **C07K 14/47**; **C12Q 1/68**

IPC 8 full level

A01K 67/02 (2006.01); **A01K 67/027** (2006.01); **A61K 48/00** (2006.01); **A61P 43/00** (2006.01); **C12N 5/076** (2010.01); **C12N 5/10** (2006.01); **C12N 15/09** (2006.01); **A61K 35/12** (2015.01)

CPC (source: EP)

A01K 67/027 (2013.01); **A01K 67/0275** (2013.01); **A61K 48/00** (2013.01); **A61P 43/00** (2017.12); **C12N 5/061** (2013.01); **A01K 2217/05** (2013.01); **A61K 35/12** (2013.01); **C12N 2510/00** (2013.01); **C12N 2510/02** (2013.01); **C12N 2799/021** (2013.01); **C12N 2799/022** (2013.01); **C12N 2799/027** (2013.01)

Citation (search report)

See references of WO 0029602A1

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)

WO 0029602 A1 20000525; AU 3563499 A 20000605; CA 2350829 A1 20000525; EP 1129205 A1 20010905; JP 2003526326 A 20030909

DOCDB simple family (application)

US 9908277 W 19990415; AU 3563499 A 19990415; CA 2350829 A 19990415; EP 99917539 A 19990415; JP 2000582583 A 19990415