

Title (en)

FACTOR VIII MUTATION REPAIR AND TOLERANCE INDUCTION AND RELATED CDNAs, COMPOSITIONS, METHODS AND SYSTEMS

Title (de)

FAKTOR-VIII-MUTATIONSREPARATUR UND TOLERANZINDUKTION SOWIE ENTSPRECHENDE CDNA, ZUSAMMENSETZUNGEN, VERFAHREN UND SYSTEME

Title (fr)

RÉPARATION DE MUTATIONS ET INDUCTION DE TOLÉRANCE DU FACTEUR VIII ET ADNC, COMPOSITIONS, PROCÉDÉS ET SYSTÈMES ASSOCIÉS

Publication

EP 3155098 A4 20180103 (EN)

Application

EP 15807028 A 20150611

Priority

- US 201462011019 P 20140611
- US 2015035399 W 20150611

Abstract (en)

[origin: WO2015191899A1] The present disclosure relates to methods, systems, and compositions to repair one or more mutations in a Factor VIII gene sequence of a subject by introducing into a cell of the subject one or more polynucleotides encoding a DNA scission enzyme (DNA-SE) and one or more repair vehicles (RVs) containing at least a cDNA-repair sequence (RS) such that insertion of the cDNA-RS through homologous recombination with the F8 gene of the subject (sF8) provides a repaired F8 gene (rF8), the repaired F8 gene (rF8) upon expression forming a functional FVIII conferring improved coagulation functionality to the FVIII protein encoded by the sF8. The present disclosure also relates to cells derived using the methods, systems and compositions described.

IPC 8 full level

A61K 48/00 (2006.01); **A61P 7/00** (2006.01); **C07K 14/755** (2006.01); **C12N 9/10** (2006.01); **C12N 9/16** (2006.01); **C12N 15/09** (2006.01); **C12N 15/12** (2006.01)

CPC (source: EP)

A61K 48/005 (2013.01); **A61P 7/00** (2017.12); **C07K 14/755** (2013.01); **C12N 9/22** (2013.01); **C12N 15/102** (2013.01); **C12N 15/907** (2013.01)

Citation (search report)

- [Y] WO 0017375 A2 20000330 - VLAAMS INTERUNIV INST BIOTECH [BE], et al
- [I] C.-Y. PARK ET AL: "Targeted inversion and reversion of the blood coagulation factor 8 gene in human iPS cells using TALENs", PROCEEDINGS NATIONAL ACADEMY OF SCIENCES PNAS, vol. 111, no. 25, 9 June 2014 (2014-06-09), US, pages 9253 - 9258, XP055277137, ISSN: 0027-8424, DOI: 10.1073/pnas.1323941111
- [Y] LIN YI ET AL: "Use of blood outgrowth endothelial cells for gene therapy for hemophilia A", BLOOD, AMERICAN SOCIETY OF HEMATOLOGY, US, vol. 99, no. 2, 15 January 2002 (2002-01-15), pages 457 - 462, XP002430423, ISSN: 0006-4971, DOI: 10.1182/BLOOD.V99.2.457
- [Y] MATSUI HIDETO ET AL: "Ex vivo gene therapy for hemophilia a that enhances safe delivery and sustained in vivo factor VIII expression from lentivirally engineered endothelial progenitors", STEM CELLS (MIAMISBURG), vol. 25, no. 10, 2007, pages 2660 - 2669, XP055426660, ISSN: 1066-5099
- [Y] WALSH C E: "GENE THERAPY PROGRESS AND PROSPECTS: GENE THERAPY FOR THE HEMOPHILIAS", GENE THERAPY, NATURE PUBLISHING GROUP, GB, vol. 10, no. 12, 1 June 2003 (2003-06-01), pages 999 - 1003, XP001155785, ISSN: 0969-7128, DOI: 10.1038/SJ.GT.3302024
- See references of WO 2015191899A1

Cited by

US11083801B2

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

WO 2015191899 A1 20151217; WO 2015191899 A9 20170216; WO 2015191899 A9 20170511; CA 2951882 A1 20151217;
EP 3155098 A1 20170419; EP 3155098 A4 20180103

DOCDB simple family (application)

US 2015035399 W 20150611; CA 2951882 A 20150611; EP 15807028 A 20150611