

(12) International Application Status Report

Received at International Bureau: 01 November 2019 (01.11.2019)

Information valid as of: 06 May 2020 (06.05.2020)

Report generated on: 26 September 2020 (26.09.2020)

(10) Publication number:

WO2020/111519

(43) Publication date:

04 June 2020 (04.06.2020)

(26) Publication language:

Korean (KO)

(21) Application Number:

PCT/KR2019/014061

(22) Filing Date:

24 October 2019 (24.10.2019)

(25) Filing language:

Korean (KO)

(31) Priority number(s):

10-2018-0152187 (KR)

(31) Priority date(s):

30 November 2018 (30.11.2018)

(31) Priority status:

Priority document received (in compliance with PCT Rule 17.1)

(51) International Patent Classification:

A61K 38/48 (2006.01); A61K 31/7088 (2006.01); A61K 48/00 (2006.01); A61P 19/02 (2006.01); A61P 19/08 (2006.01)

(71) Applicant(s):

INDUSTRY-ACADEMIC COOPERATION FOUNDATION, YONSEI UNIVERSITY [KR/KR]; 50, Yonsei-ro Seodaemun-gu Seoul 03722 (KR) (for all designated states)

(72) Inventor(s):

LEE, Jin Woo; 40-ho Elle Ville, 50, Bangbae-ro 26-gil Seocho-gu Seoul 06588 (KR)

PARK, Kwang Hwan; (Dogok-dong, Hyundai Green APT.) 1-dong 1804-ho, 25, Nonhyeon-ro 51-gil Gangnam-gu Seoul 06269 (KR)

JUNG, Min; (Namgajwa-dong, DMC Parkview Xi) 117-dong 1302-ho, 2, Gajaeulmirae-ro Seodaemun-gu Seoul 03711 (KR)

LEE, Kyoung Mi; 302-dong 1504-ho, 26, Baekseok-ro, Ilsandong-gu Goyang-si Gyeonggi-do 10448 (KR)

BAEK, Da Woon; 201-ho ABMRC, 50-1, Yonsei-ro Seodaemun-gu Seoul 03722 (KR)

(74) Agent(s):

LEE, Jae Young; 7fl. ChungSoo Bldg., 14, Teheran-ro 43-gil Gangnam-gu Seoul 06151 (KR)

(54) Title (EN): PHARMACEUTICAL COMPOSITION COMPRISING, AS ACTIVE INGREDIENT, USP25 PROTEIN OR POLYNUCLEOTIDE FOR ENCRYPTING SAME

(54) Title (FR): COMPOSITION PHARMACEUTIQUE COMPRENANT COMME PRINCIPE ACTIF LA PROTÉINE USP25 OU UN POLYNUCLÉOTIDE CODANT CETTE DERNIÈRE

(54) Title (KO): USP25 단백질 또는 이를 암호화하는 폴리뉴클레오티드를 유효성분으로 포함하는 약학 조성물

(57) Abstract:

(EN): The present invention relates to a pharmaceutical composition for regenerating a tissue and, particularly, to a pharmaceutical composition for regenerating a tissue, comprising, as an active ingredient, ubiquitin carboxyl-terminal hydrolase 25 (USP25) protein or a polynucleotide for encrypting same. If the composition is used, compared to another deubiquitinating enzyme, a bone marrow-derived mesenchymal stem cell can be very effectively induced to be differentiated into a bone tissue cell, particularly a cartilage cell. By inducing such differentiation into a cartilage cell, the present invention can be very usefully applied for prevention or treatment of various diseases which can occur due to cartilage tissue damage.

(FR): La présente invention concerne une composition pharmaceutique pour régénérer un tissu et, en particulier, une composition pharmaceutique pour régénérer un tissu comprenant comme principe actif la protéine à hydrolase de c-terminal d'ubiquitine (USP25) ou un polynucléotide codant cette dernière. Si la composition est utilisée, plutôt qu'une autre enzyme de désubiquitination, il est possible de très efficacement induire des cellules souches mésenchymateuses dérivées de la moelle osseuse à se différencier en cellules de tissu osseux, en particulier en cellules de cartilage. Du fait qu'elle induit une telle différenciation en cellules cartilagineuses, la présente invention peut être appliquée de manière très utile pour la prévention ou le traitement de diverses maladies qui peuvent découler d'une lésion du tissu cartilagineux.

(KO): 본 발명은 조직 재생용 약학 조성물에 관한 것으로, 구체적으로 USP25(Ubiquitin carboxyl-terminal hydrolase 25) 단백질 또는 이를 암호화하는 폴리뉴클레오티드를 유효성분으로 포함하는 조직 재생용 약학 조성물에 관한 것으로, 상

기 조성물을 사용하는 경우, 다른 탈 유비퀴틴화 효소에 비하여 골수 유래 중간엽 줄기 세포가 골 조직 세포, 특히 연골 세포로 분화될 수 있도록 매우 효과적으로 유도할 수 있다. 또한, 이렇게 연골 세포로 분화될 수 있도록 유도함으로써 연골 조직이 손상되어 발생할 수 있는 다양한 질환의 예방 또는 치료에 매우 유용하게 적용될 수 있다.

International search report:

Received at International Bureau: 26 February 2020 (26.02.2020) [KR]

International Report on Patentability (IPRP) Chapter II of the PCT:

Not available

(81) Designated States:

AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JO, JP, KE, KG, KH, KN, KP, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW

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

African Intellectual Property Organization (OAPI) : BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG

African Regional Intellectual Property Organization (ARIPO) : BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW

Eurasian Patent Organization (EAPO) : AM, AZ, BY, KG, KZ, RU, TJ, TM