(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
27 August 2009 (27.08.2009)

PCT

(10) International Publication Number
WO 2009/105570 A3

(51) **International Patent Classification**:
C12N 5/07 (2010.01)

(21) **International Application Number**:
PCT/US2009/034558

(22) **International Filing Date**:
19 February 2009 (19.02.2009)

(25) **Filing Language**: English

(26) **Publication Language**: English

(30) **Priority Data**:
61/030,544 21 February 2008 (21.02.2008) US

(71) **Applicant** *(for all designated States except US)*: **CENTOCOR ORTHO BIOTECH INC.** [US/US]; 800/850 Ridgeview Drive, Horsham, PA 19044 (US).

(72) **Inventors; and**

(75) **Inventors/Applicants** *(for US only)*: **FRYER, Benjamin** [US/US]; 503 South 46th Street, Philadelphia, PA 19143 (US). **NELSON, Shelley** [US/US]; 1 Birch Street, Pennington, NJ 08534 (US). **NIELSEN, Villy** [DK/DK]; Morbjergparken 33 Vindinge, DK-4000 Roskilde (DK). **BREVIG, Thomas** [DK/DK]; Lysttbadebei 28, DK-4040 Jyllinge (DK). **MARWOOD, Tina, Kristensen** [DK/DK]; Malkehaven 3, DK-4330 Hvalso (DK).

(74) **Agents**: **JOHNSON, Philip, S.** et al.; Johnson & Johnson, One Johnson & Johnson Plaza, New Brunswick, NJ 08933 (US).

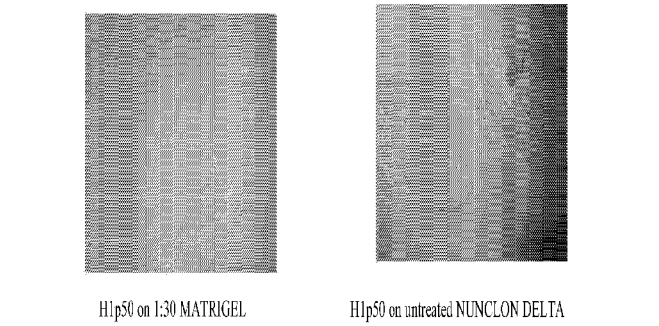
(81) **Designated States** *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) **Designated States** *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ,

[Continued on next page]

(54) **Title**: METHODS, SURFACE MODIFIED PLATES AND COMPOSITIONS FOR CELL ATTACHMENT, CULTIVATION AND DETACHMENT

Figure 1



(57) **Abstract**: The present invention relates to the field of mammalian cell culture, and provides methods and compositions for cell attachment to, cultivation on and detachment from a solid substrate surface containing from at least about 0.5% N, a sum of O and N of greater than or equal to 17.2% and a contact angle of at least about 13.9 degrees, lacking a feeder cell layer and lacking an adlayer. In one embodiment of the present invention, the cells are treated with a compound capable of inhibiting Rho kinase activity. In another embodiment, the cells are treated with a compound capable of inhibiting Rho activity.

WO 2009/105570 A3

TM), European (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, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— *with international search report (Art. 21(3))*

— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

(88) Date of publication of the international search report:
15 April 2010