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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
16 October 2008 (16.10.2008)

PCT

(10) International Publication Number
WO 2008/124508 A1

(51) International Patent Classification:
*G01N 33/50* (2006.01) *G01N 33/68* (2006.01)

(21) International Application Number:
PCT/US2008/059275

(22) International Filing Date: 3 April 2008 (03.04.2008)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/910,574 6 April 2007 (06.04.2007) US

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(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, 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, 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, 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*
— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*
— *with sequence listing part of description published separately in electronic form and available upon request from the International Bureau*

(54) **Title:** METHODS OF EVALUATING CELLS AND CELL CULTURES

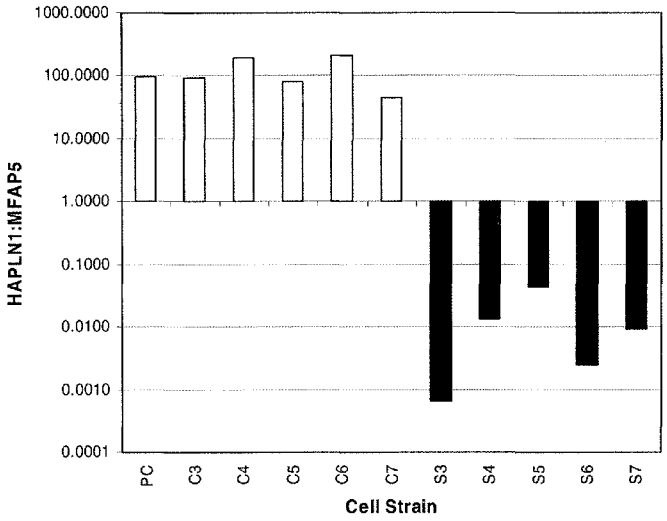



*Fig. 9*

(57) **Abstract:** Methods of evaluating the composition of a cell culture (e.g., to distinguish chondrocytes from fibroblasts) and methods for evaluating the phenotype of an individual cell (e.g., as a chondrocyte) are disclosed. The methods may be used, for example, for assessing chondrocyte cultures used for treatment of cartilage defects. In some embodiments, the invention involves identifying cell culture composition or the identity of a cell based on expression level of a fibroblast marker. In other embodiments, the invention involves comparing expression levels of at least one chondrocyte marker and at least one fibroblast marker in a cell culture sample or in an individual cell. In illustrative embodiments, the chondrocyte marker is hyaluronan and proteoglycan link protein 1 (HAPLN1 ), and the fibroblast marker is microfibrillar associated protein 5 (MFAP5).

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