

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

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
17 December 2009 (17.12.2009)

(10) International Publication Number  
**WO 2009/152413 A1**

(51) International Patent Classification:  
*C12N 5/06* (2006.01) *C12N 5/10* (2006.01)

(21) International Application Number:  
PCT/US2009/047178

(22) International Filing Date:  
12 June 2009 (12.06.2009)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
61/061,233 13 June 2008 (13.06.2008) US

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

(72) Inventors; and

(75) Inventors/Applicants (for US only): **DORAI, Haimanti**  
[US/US]; 145 King Of Prussia Road, Radnor, PA 19087  
(US). **KYUNG, Yun, Seung** [US/US]; 145 King Of Prus-  
sia Road, Radnor, PA 19087 (US).

(74) Agents: **JOHNSON, Philip, S.** et al.; Johnson & John-  
son, 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, CL, 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, PE, 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,  
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).

**Declarations under Rule 4.17:**

- as to applicant's entitlement to apply for and be granted  
a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of  
the earlier application (Rule 4.17(iii))

**Published:**

- with international search report (Art. 21(3))
- with sequence listing part of description (Rule 5.2(a))

(54) Title: METHODS FOR OBTAINING HIGH VIABLE CELL DENSITY IN MAMMALIAN CELL CULTURE

(57) Abstract: Methods for increasing viability in fed batch eukaryotic cell culture are disclosed.



**WO 2009/152413 A1**