

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

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
20 October 2011 (20.10.2011)

PCT

(10) International Publication Number
WO 2011/130119 A3

- (51) **International Patent Classification:**
C12N 7/02 (2006.01) *C12Q 1/70* (2006.01)
- (21) **International Application Number:**
PCT/US2011/031747
- (22) **International Filing Date:**
8 April 2011 (08.04.2011)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
61/324,220 14 April 2010 (14.04.2010) US
- (71) **Applicant (for all designated States except US):** **EMD MILLIPORE CORPORATION** [US/US]; 290 Concord Road, Billerica, MA 01821 (US).
- (72) **Inventors; and**
- (75) **Inventors/Applicants (for US only):** **ASHER, Damon, R.** [US/US]; 143 Sterling Road, Jefferson, MA 01522 (US). **KATZ, Amanda, B.** [US/US]; 153 Range Road, Windham, NH 03087 (US). **KHAN, Navid, Z.** [US/US]; 119 Prospect Hill Drive, Tewksbury, MA 01876 (US). **MEHTA, Ushma** [US/US]; E7 Scotty Hollow Drive, North Chelmsford, MA 01863 (US).
- (74) **Agents:** **CARROLL, Alice, O.** et al.; Hamilton, Brook, Smith & Reynold, P.C., 530 Virginia Rd, P.O. Box 9133, Concord, MA 01742-9133 (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, TH, 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, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (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), 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:**
29 March 2012

(15) **Information about Correction:**

Previous Correction:
see Notice of 29 December 2011

(54) **Title:** METHODS OF PRODUCING HIGH TITER, HIGH PURITY VIRUS STOCKS AND METHODS OF USE THERE-OF

(57) **Abstract:** The purity and titer of virus stocks used for virus clearance studies have a significant influence on study outcome, and impact how well the scale-down model represents the production-scale process. Impurities in virus stocks are particularly important in the testing of small virus retentive filters because these impurities may cause a filter to foul prematurely, leading to underestimation of the true throughput capability of the filter and consequent inappropriate sizing of the production scale unit. In addition, impurities can also affect the levels of virus clearance observed by altering the fouling mechanisms and subsequent fluid passage through the virus filter. Described herein are methods for making, producing and using high purity virus stocks having high titer.



WO 2011/130119 A3