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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
18 October 2001 (18.10.2001)

PCT

(10) International Publication Number
WO 01/77298 A2

(51) International Patent Classification[7]: C12N 5/06, 1/38, G01N 33/53, 33/00, A61K 35/48

(21) International Application Number: PCT/US01/10998

(22) International Filing Date: 4 April 2001 (04.04.2001)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
09/545,435 7 April 2000 (07.04.2000) US

(63) Related by continuation (CON) or continuation-in-part (CIP) to earlier application:
US 09/545,435 (CIP)
Filed on 7 April 2000 (07.04.2000)

(71) Applicant *(for all designated States except US)*: **RAVEN BIOTECHNOLOGIES, INC.** [US/US]; 305 Old County Road, San Carlos, CA 94070 (US).

(72) Inventors; and
(75) Inventors/Applicants *(for US only)*: **LI, Ronghao** [CN/US]; 1001 Continentals Way #309, Belmont, CA 94002 (US). **MATHER, Jennie, Powell** [US/US]; 269 La Prenda Drive, Millbrae, CA 94030 (US).

(74) Agents: **SHIEH-NEWTON, Terri, M.** et al.; Morrison & Foerster LLP, 755 Page Mill Road, Palo Alto, CA 94304-1018 (US).

(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(84) Designated States *(regional)*: ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:
— *without international search report and to be republished upon receipt of that report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 01/77298 A2

(54) Title: HUMAN MÜLLERIAN DUCT-DERIVED EPITHELIAL CELLS AND METHODS OF ISOLATION AND USES THEREOF

(57) Abstract: This invention discloses a substantially pure population of human Müllerian duct-derived epithelial cells and methods of isolating and culturing the Müllerian duct-derived epithelial cells. By carefully manipulating the microenvironment in which the Müllerian duct-derived epithelial cells are grown, multiple passages are attainable wherein the Müllerian duct-derived epithelial cells are capable of becoming uterine, cervical, vaginal, and oviductal cells. In addition, several uses of human Müllerian duct-derived epithelial cells and cells differentiating therefrom are disclosed herein.