



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶: C07J 1/00, A61K 31/565, C07J 31/00, 17/00, 21/00, A61K 31/58	A1	(11) International Publication Number: WO 98/45315 (43) International Publication Date: 15 October 1998 (15.10.98)
(21) International Application Number: PCT/US98/06461 (22) International Filing Date: 2 April 1998 (02.04.98) (30) Priority Data: 08/835,336 7 April 1997 (07.04.97) US 08/850,570 2 May 1997 (02.05.97) US (71) Applicant: AMERICAN HOME PRODUCTS CORPO- RATION [US/US]; Five Giralda Farms, Madison, NJ 07940-0874 (US). (72) Inventors: KONG, Fangming; Apartment 2, 14 Sutton Place, Westwood, NJ 07675 (US). McDONALD, Leonard, Alexander; 323 Briar Patch, Mountainside, NJ 07092 (US). KAGAN, Michael, Z.; 4 Mackenzie Lane, Plainsboro, NJ 08536 (US). SHAH, Syed, Muzafar; 13 Yvette Drive, East Hanover, NJ 07936 (US). RAVEENDRANATH, Panolli; 2 Whitman Place, Monroe, NY 10950 (US). COLLINS, Mark, Andrew; 1011 New Hope Street 13B, Norristown, PA 19401 (US). (74) Agents: ALICE, Ronald, W.; American Home Products Cor- poration, Patent Law Dept. - 2B, One Campus Drive, Par- sipppany, NJ 07054 (US) et al.		(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, 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), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i> <i>Before the expiration of the time limit for amending the</i> <i>claims and to be republished in the event of the receipt of</i> <i>amendments.</i>
(54) Title: ESTRA-5(10),7-DIENES WITH ESTROGENIC ACTIVITY (57) Abstract This invention provides estra-5(10),7-dien-3 β -ol-17-one or a pharmaceutically acceptable salt of its 3-sulfate ester, estra-5(10),7-dien-3 β -ol-17-one 3-glucuronide or a pharmaceutically acceptable salt thereof, estra-5(10),7-dien-3 α -ol-17-one or a pharmaceutically acceptable salt of its 3-sulfate ester, estra-5(10),7-dien-3 β -ol-17-one 3-glucuronide or a pharmaceutically acceptable salt thereof, estra-5(10),7-dien-3 β -ol-17-one 3-alkali metal salt, and estra-5(10),7-dien-3 α -ol-17-one 3-alkali metal salt which are useful as estrogenic agents.		