

PCTWORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

9904695-J

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶: C07B 31/00, C07C 29/143, 209/52, C07F 17/00, B01J 31/22	A1	(11) International Publication Number: WO 98/42643 (43) International Publication Date: 1 October 1998 (01.10.98)
(21) International Application Number: PCT/GB98/00862 (22) International Filing Date: 20 March 1998 (20.03.98) (30) Priority Data: 9706321.8 26 March 1997 (26.03.97) GB (71) Applicant (for all designated States except US): ZENECA LIMITED [GB/GB]; 15 Stanhope Gate, London W1Y 6LN (GB). (72) Inventors; and (75) Inventors/Applicants (for US only): BLACKER, Andrew, John [GB/GB]; Leeds Road, P.O. Box A38, Huddersfield, West Yorkshire HD2 1FF (GB). MELLOR, Ben, James [GB/GB]; Earls Road, Grangemouth, Stirlingshire FK3 8XG (GB). (74) Agents: REVELL, Christopher; Zeneca Specialties, Intellectual Property Group, P.O. Box 42, Hexagon House, Blackley, Manchester M9 8ZS (GB) 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, US, 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, 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>
(54) Title: TRANSFER HYDROGENATION PROCESS AND CATALYST (57) Abstract A catalytic transfer hydrogenation process is provided. The catalyst employed in the process is a metal cyclopentadienyl complex which is coordinated to defined bidentate ligands. Preferred metals include rhodium, ruthenium and iridium. Preferred bidentate ligands are diamines and aminoalcohols, particularly those comprising chiral centres. The hydrogen donor is advantageously a secondary alcohol or a mixture of triethylamine and formic acid. The process can be employed to transfer hydrogenate ketones and imines, which are preferably prochiral. Catalysts for use in such a process are also provided.		