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(21) International Application Number: PCT/US99/10643 (22) International Filing Date: 13 May 1999 (13.05.99) (30) Priority Data: 09/080,080 15 May 1998 (15.05.98) US (71) Applicant (for all designated States except US): BAYER CORPORATION [US/US]; 100 Bayer Road, Pittsburgh, PA 15205 (US). (72) Inventors; and (75) Inventors/Applicants (for US only): SHANAFELT, Armen, B. [US/US]; 1309 Rimer Drive, Moraga, CA 94556 (US). GREVE, Jeffrey, M. [US/US]; 1066 Park Hills Road, Berkeley, CA 94708 (US). JESMOK, Gary [US/US]; 485 Carlston Street, Richmond, CA 94805 (US). LEMBACH, Kenneth, J. [US/US]; 662 Park Hill Road, Danville, CA 94526 (US). WETZEL, Gayle, D. [US/US]; 971 Center Avenue, Martinez, CA 94553 (US). (74) Agents: GREENMAN, Jeffrey, M. et al.; Bayer Corporation, 400 Morgan Lane, West Haven, CT 06516-4175 (US).		(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, 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, GW, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>
(54) Title: IL-2 SELECTIVE AGONISTS AND ANTAGONISTS (57) Abstract The invention is directed to a polypeptide comprising a human IL-2 mutein numbered in accordance with wild-type IL-2 wherein said human IL-2 is substituted at at least one of positions 20, 88 or 126, whereby said mutein preferentially activates T cells over NK cells. D20H and I, N88G, I, and R, in particular have a relative T cell-differential activity much greater than native IL-2, with predicted associated reduced <i>in vivo</i> toxicity. The invention also includes polynucleotides coding for the muteins of the invention, vectors containing the polynucleotides, transformed host cells, pharmaceutical compositions comprising the muteins, and therapeutic methods of treatment.		