



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

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<p>(21) International Application Number: PCT/EP98/06986</p> <p>(22) International Filing Date: 22 October 1998 (22.10.98)</p> <p>(30) Priority Data: 97203286.6 23 October 1997 (23.10.97) EP</p> <p>(71) Applicant (for all designated States except US): VLAAMS INTERUNIVERSITAIR INSTITUUT VOOR BIOTECHNOLOGIE VZW [BE/BE]; Rijvisschestraat 120, B-9052 Zwijnaarde (BE).</p> <p>(72) Inventors; and (75) Inventors/Applicants (for US only): DESMEDT, Marjory [BE/BE]; Kartuizerlaan 75, B-9000 Gent (BE). FIERS, Walter [BE/BE]; Beukendreef 3, B-9070 Destelbergen (BE). GROOTEN, Johan [BE/BE]; Violierstraat 23, B-9920 Lovendegem (BE).</p> <p>(74) Common Representative: VLAAMS INTERUNIVERSITAIR INSTITUUT VOOR BIOTECHNOLOGIE VZW; Rijvisschestraat 120, B-9052 Zwijnaarde (BE).</p>	<p>(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, HR, 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, 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).</p> <p><b>Published</b> <i>With international search report.</i></p>	
<p>(54) Title: INDUCIBLE CELLULAR IMMUNITY THROUGH ACTIVATION OF Th1 AND SUPPRESSION OF Th2 RESPONSES BY MACROPHAGES</p>		
<p>(57) Abstract</p> <p>The present invention relates to the use of macrophages in the function of antigen presenting cells (APC) to redirect the balance of the CD4<sup>+</sup> T helper 1 (Th1)/CD4<sup>+</sup> T helper 2(Th2) cell subsets during an immune response. More particularly, the present invention is directed to pharmaceutical formulations comprising macrophages or a cell population containing macrophages, optionally together with a suitable excipient, and methods for suppressing the Th2 dependent humoral immune response and/or to stimulate the Th1 dependent, cellular immune response.</p>		