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(54) Title: IDENTIFICATION AND ENGINEERING OF ANTIBODIES WITH VARIANT Fc REGIONS AND METHODS OF USING SAME

(57) Abstract: The present invention relates to molecules, particularly polypeptides, more particularly immunoglobulins (*e.g.*, antibodies), comprising a variant Fc region, wherein said variant Fc region comprises at least one amino acid modification relative to a wild-type Fc region, which variant Fc region binds FcγRIIIA and/or FcγRIIA with a greater affinity, relative to a comparable molecule comprising the wild-type Fc region. The molecules of the invention are particularly useful in preventing, treating, or ameliorating one or more symptoms associated with a disease, disorder, or infection. The molecules of the invention are particularly useful for the treatment or prevention of a disease or disorder where an enhanced efficacy of effector cell function (e.g., ADCC) mediated by FcγR is desired, *e.g.*, cancer, infectious disease, and in enhancing the therapeutic efficacy of therapeutic antibodies the effect of which is mediated by ADCC.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US04/00643

A. CLASSIFICATION OF SUBJECT MATTER
IPC(7) : A61K 39/395 C07K 16/28
US CL : 530/387.3, 388.22, 424/133.1, 143.1
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
U.S. : 530/387.3, 388.22, 424/133.1, 143.1

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Please See Continuation Sheet

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	US 2004/0002587 A1 (WATKINS et al) 01 January 2004 (01.01.2004), see pages 2, 21-22.	1, 15, 40, 57-58, 60
P,Y	US 2004/0185045 A1 (KOENIG et al) 23 September 2004 (23.09.2004), see pages 3-8.	165-173

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

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Continuation of B. FIELDS SEARCHED Item 3:
WEST, Medline, EMBASE, Cancerlit, CAPLUS, Biotechno, Biosis.
Search terms:Fc variant/mutant, FcgammaRIIIA, Fc gammaRIIB, CH2, CH3, autoimmune, infectious disease, cancer or tumor, Fc residues.