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(54) Title: TARGETED DELIVERY OF THERAPEUTIC AND DIAGNOSTIC MOIETIES

(57) Abstract: Compositions and methods for improving cellular internalization of one or more compounds are disclosed. The invention provides a drug conjugate composition that can be delivered to a target cell, which comprises a carrier compound that has a binding specificity for a receptor molecule and is conjugated to a therapeutic or diagnostic moiety. When this composition is administered to a subject, the carrier compound binds to the receptor and is internalized by the target cell. Furthermore, monoclonal antibodies are disclosed that are internalized into target cells. The monoclonal antibodies of the invention are specific for target cells, particularly for cells expressing the surface antigen p185HER-2. The antibodies of the invention may be conjugated with a molecule for delivery into a target cell. Such molecules may be used for therapeutic treatment, including gene therapy, and for imaging. The invention also provides DNA sequences of the variable regions of particular monoclonal antibodies.

INTERNATIONAL SEARCH REPORT

International Application No

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A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61K47/48 A61K49/00 A61K41/00

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)

IPC 7 A61K

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 practical, search terms used)

CHEM ABS Data, EMBASE, BIOSIS, EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
E	WO 01 00244 A (GENENTECH INC ;SCHWALL RALPH (US); ERICKSON SHARON (US)) 4 January 2001 (2001-01-04) claims	1-66
X	PARDRIDGE, WILLIAM M. ET AL: "Enhanced endocytosis in cultured human breast carcinoma cells and in vivo biodistribution in rats of a humanized monoclonal antibody after cationization of the protein" J. PHARMACOL. EXP. THER. (1998), 286(1), 548-554 , XP001024036 abstract page 549, column 2, paragraph 4 page 550, column 2, paragraph 5; figures 3,5,7	1-60



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

* Special categories of cited documents :

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P document published prior to the international filing date but later than the priority date claimed

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Internal Application No

PCT/US 00/31424

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	SCHMIDT, MATHIAS ET AL: "Synergistic Interaction between an Anti-p185HER-2 Pseudomonas Exotoxin Fusion Protein 'scFv(FRP5)-ETA! and Ionizing Radiation for Inhibiting Growth of Ovarian Cancer Cells That Overexpress HER-2" GYNECOL. ONCOL. (2001), 80(2), 145-155 , XP001024046 abstract; figure 6	1-3,8-66
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E	WO 01 21192 A (CORIXA CORP ;CHEEVER MARTIN A (US); GAIGER ALEXANDER (US)) 29 March 2001 (2001-03-29) page 1, paragraph 3; claims page 20, paragraph 3 - paragraph 4	1-66
X	WO 93 17715 A (IMP CANCER RES TECH ;UNIV TEXAS (US)) 16 September 1993 (1993-09-16) claims 1,32,33	1-66
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International Application No

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
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