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**Declaration under Rule 4.17:**

— of inventorship (Rule 4.17(iv)) for US only

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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: IMPROVEMENTS TO GAMMA DELTA T CELL-MEDIATED THERAPY

(57) Abstract: The present invention relates to compositions and methods for determining or modulating the activity of immune and/or target cells in vitro, ex vivo or in vivo. The invention more specifically relates to methods and compositions for determining sensitivity of cells to the activity of  $\gamma\delta$ T cells, as well as to the use of these compositions and methods for patient screening or selection, therapy improvement, compound selection, etc. The invention also provides compositions and kits suitable for carrying out these methods. The methods may be used in any mammalian subject, preferably any human subject that may benefit from  $\gamma\delta$ T cell-mediated therapy, including patients with tumors, immune or infectious diseases.

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INTERNATIONAL SEARCH REPORT

International Application No  
PCT/EP2004/005408

<p>A. CLASSIFICATION OF SUBJECT MATTER IPC 7 G01N33/573 G01N33/50 C07K14/705</p>		
<p>According to International Patent Classification (IPC) or to both national classification and IPC</p>		
<p>B. FIELDS SEARCHED</p>		
<p>Minimum documentation searched (classification system followed by classification symbols) IPC 7 G01N C07K</p>		
<p>Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched</p>		
<p>Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal</p>		
<p>C. DOCUMENTS CONSIDERED TO BE RELEVANT</p>		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>ESPINOSA E ET AL: "Y2K+1 state-of-the-art on non-peptide phosphoantigens, a novel category of immunostimulatory molecules" MICROBES AND INFECTION, ELSEVIER, PARIS, FR, vol. 3, no. 8, July 2001 (2001-07), pages 645-654, XP002239729 ISSN: 1286-4579 the whole document</p>	1-12, 15-19, 21
A	<p>DUTRONC Y ET AL: "The CD1 family and T cell recognition of lipid antigens." TISSUE ANTIGENS. NOV 2002, vol. 60, no. 5, November 2002 (2002-11), pages 337-353, XP002297371 ISSN: 0001-2815 page 347, right-hand column page 350, right-hand column</p>	1-12, 15-19, 21
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<p><input checked="" type="checkbox"/> Further documents are listed in the continuation of box C. <input type="checkbox"/> Patent family members are listed in annex.</p>		
<p>° Special categories of cited documents :</p>		
<p>*A* document defining the general state of the art which is not considered to be of particular relevance</p>		<p>*T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>*X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</p> <p>*Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.</p> <p>*&amp;* document member of the same patent family</p>
<p>*E* earlier document but published on or after the international filing date</p>		
<p>*L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p>		
<p>*O* document referring to an oral disclosure, use, exhibition or other means</p>		
<p>*P* document published prior to the international filing date but later than the priority date claimed</p>		
<p>Date of the actual completion of the international search 22 September 2004</p>		<p>Date of mailing of the international search report 21.03.05</p>
<p>Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016</p>		<p>Authorized officer Cuendet, P</p>

## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/EP2004/005408

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>MARTINEZ LAURENT O ET AL: "Ectopic beta-chain of ATP synthase is an apolipoprotein A-I receptor in hepatic HDL endocytosis." NATURE. 2 JAN 2003, vol. 421, no. 6918, 2 January 2003 (2003-01-02), pages 75-79, XP002297372 ISSN: 0028-0836 cited in the application the whole document</p> <p>-----</p>	1-12, 15-19, 21

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/EP2004/005408

## Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1.  Claims Nos.: 13, 14, 20  
because they relate to subject matter not required to be searched by this Authority, namely:  
see FURTHER INFORMATION sheet PCT/ISA/210
2.  Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3.  Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1.  As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2.  As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3.  As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4.  No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:  
1-12, 15-19, 21

Remark on Protest

- The additional search fees were accompanied by the applicant's protest.
- No protest accompanied the payment of additional search fees.

**FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210**

Continuation of Box II.1

Although claims 3 and 4 are directed to a diagnostic method practised on the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.

Although claims 15 and 16 would imply a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.