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(54) Title: IN VIVO PRIMING OF NATURAL KILLER CELLS

(57) Abstract: The disclosure concerns a method for cancer treatment by in vivo priming and activation of natural killer cells for achieving tumor cell lysis. The method includes introducing into a patient a priming tumor cell preparation (PTCP) derived from a first tumor cell line, which is irradiated to inactivate the first tumor cells or a membrane preparation thereof, the first tumor cells having known priming ligands on the membrane surface thereof. The patient's rest NK cells are contacted by the PTCP in vivo, resulting in primed NK cells, which are characterized by upregulation of CD69, shedding of CD16, or a combination of CD69+ and CD16-. These primed NK cells then contact second tumor cells, the cancer, and are configured to lyse and kill the second tumor cells.
### A. CLASSIFICATION OF SUBJECT MATTER

**A61K 35/12 (2015.01)**
**A61P 35/00 (2006.01)**
**C12N 5/0783 (2010.01)**

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)

- A61K 35/00, 35/12, A61P 35/00, 35/02, C12Q 1/00, 1/02, C12N 5/0783

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)

- EAPATIS, ESP@CENET, MEDLINE, RUPAT, USPTO, PAJ

### C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category*</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>US 6849452 B1 (INSTITUT GUSTAVE ROUSSY) 01.02.2005, col.2, lines 40-43, col.3, lines 12-14, col.4, lines 43-49, col.9, lines 19-23, col.11, lines 47- col.13, lines 10</td>
<td>1-14</td>
</tr>
<tr>
<td>Y</td>
<td>US 5356635 A (MALLINCKRODT VETERINARY INC) 18. 10. 1994, claims</td>
<td>11-13</td>
</tr>
</tbody>
</table>

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

### Date of the actual completion of the international search

03 April 2017 (03.04.2017)

### Date of mailing of the international search report

06 April 2017 (06.04.2017)

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