Title: TREATMENT OF CANCER WITH POSITRON-EMITTING RADIOPHARMACEUTICALS

Abstract: Fluorine-18, fluorine-18-incorporating radiopharmaceuticals (FRPs), and other positron-emitting isotopes and radiopharmaceuticals have been used for diagnostic purposes in positron emission tomography (PET). This invention describes the therapeutic use of positron-emitting radiopharmaceuticals such as FRPs primarily, but not exclusively, for the treatment of cancer and cancer-related illnesses. The radiopharmaceuticals are administered in dosages significantly higher than those used for diagnostic imaging.
## A. Classification of Subject Matter

**IPC 7** A61K51/04

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, MEDLINE

## 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>X</td>
<td>US 5 924 973 A (WEINBERGER JUDAH Z) 20 July 1999 (1999-07-20) column 38, line 46 - line 49; claims</td>
<td>1</td>
</tr>
</tbody>
</table>

Further documents are listed in the continuation of box C. Patent family members are listed in annex.

* Special categories of cited documents:
  *A* document defining the general state of the art which is not considered to be of particular relevance
  *E* earlier document but published on or after the international filing date
  *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)
  *O* document referring to an oral disclosure, use, exhibition or other means
  *P* document published prior to the international filing date but later than the priority date claimed

* **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

* **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

* **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

* **A** document member of the same patent family

Date of the actual completion of the international search: 4 November 2002

Date of mailing of the international search report: 20/11/2002

Name and mailing address of the ISA

European Patent Office, P.B. 5816 Patentissen 2 NL - 2280 HV Rijswik Tel. (+31-70) 940-2040, Tx. 31 651 epo nl, Fax (+31-70) 940-3016

Authorized officer: Berte, M
<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>
</table>
**INTERNATIONAL SEARCH REPORT**

**Box I** Observations where certain claims were found unsearchable (Continuation of item 1 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. **X** Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:
   
   Although claims 1-18 are directed to 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.

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 II** Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

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

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.:

**Remark on Protest**

□ The additional search fees were accompanied by the applicant's protest.

□ No protest accompanied the payment of additional search fees.
<table>
<thead>
<tr>
<th>Patent document cited in search report</th>
<th>Publication date</th>
<th>Patent family member(s)</th>
<th>Publication date</th>
</tr>
</thead>
<tbody>
<tr>
<td>EP 0963182 A1</td>
<td></td>
<td></td>
<td>15-12-1999</td>
</tr>
<tr>
<td>JP 2001505084 T</td>
<td></td>
<td></td>
<td>17-04-2001</td>
</tr>
<tr>
<td>WO 9812979 A1</td>
<td></td>
<td></td>
<td>02-04-1998</td>
</tr>
<tr>
<td>US 6306073 B1</td>
<td></td>
<td></td>
<td>23-10-2001</td>
</tr>
</tbody>
</table>