METHOD OF REDUCING ANGIOGENESIS

The invention features methods of identifying a compound capable of modulating angiogenesis. Further features of the invention are methods of promoting or inhibiting angiogenesis. Methods for the diagnosis of a CD39-associated condition and for determining the prognosis of a patient diagnosed with a CD39-associated condition are also disclosed.
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER
   IPC(7) : C12Q 1/44
   US CL : 435/19
   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. : 435/19
   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)
   MEDLINE, AGRICOLA, EMBASE, WPIDS, CAPLUS, EAST

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>A</td>
<td>WO 00/23459 (IMMUNEX CORPORATION) 27 April 2000 (27.04.00), see the whole document.</td>
<td>1-4</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
04 March 2005 (04.03.2005)

Date of mailing of the international search report
03 OCT 2005

Name and mailing address of the ISA/US
MailStop PCT, Attn: ISA/US
Commissioner of Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Authorized officer
David J. Steadman
Telephone No. 571-272-1600

Facsimile No. (703) 305-3230
Form PCT/ISA/210 (second sheet) (July 1998)
**Box I**  Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)

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

1. [ ] Claim Nos.:
   because they relate to subject matter not required to be searched by this Authority, namely:

2. [ ] Claim 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. [ ] Claim 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:

Please See Continuation 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.: 1-4

**Remark on Protest**

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

[ ] No protest accompanied the payment of additional search fees.
BOX II. OBSERVATIONS WHERE UNITY OF INVENTION IS LACKING

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fees must be paid.

**Group I**, claims 1-4, drawn to the special technical feature of a method of identifying a compound capable of modulating angiogenesis in a subject by assaying for a change in CD39 biological activity.

**Group II**, claims 5-7, drawn to the special technical feature of a method for identifying a compound capable of modulating CD39-associated angiogenesis by assaying for the ingrowth of blood vessels.

**Group III**, claims 8-14 and 23, drawn to the special technical feature of a pharmaceutical composition comprising CD39 antisense RNA and the first claimed method of use, i.e., a method of decreasing angiogenesis in a subject.

**Group IV**, claims 15-22, drawn to the special technical feature of a method of promoting angiogenesis in a subject.

**Group V**, claims 24-29, drawn to the special technical feature of a method of diagnosing an increased risk of an angiogenesis-associated condition.

**Group VI**, claims 30-35, drawn to the special technical feature of a method for determining the prognosis for treatment of an angiogenesis-associated condition. The inventions listed as Groups I-VI do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

According to PCT Rule 13.2 unity of invention exists only when there is a shared same or corresponding special technical feature among the claimed inventions. The inventions of Groups I-VI each has a different special technical feature not shared by the remaining Groups. Group I, which has the special technical feature of a method for identifying a compound capable of modulating angiogenesis by assaying CD39 biological activity, is not shared by any of the remaining groups. Group II, which has the special technical feature of a method for identifying a compound capable of modulating CD39-associated angiogenesis by assaying for ingrowth of blood vessels, is not shared by any of the remaining groups. Group III, which has the special technical feature of a pharmaceutical composition comprising CD39 antisense RNA, is not shared by any of the remaining groups. Group IV, which has the special technical feature of a method for promoting angiogenesis in a subject, is not shared by any of the remaining groups. Group V, which has the special technical feature of a method for diagnosing an increased risk of an angiogenesis-associated condition, is not shared by any of the remaining groups. Group VI, which has the special technical feature of a method for determining the prognosis for treatment of an angiogenesis-associated condition, is not shared by any of the remaining groups.

In the absence of any response from Applicant, this Authority will establish the International Search Report based on the main invention, i.e., the claims of Group I (claims 1-4).