Title: SCF EXTRACT CONTAINING CARDIAC GLYCOSIDE

Abstract: A supercritical fluid (SCF) extract of a cardiac glycoside-containing plant mass is provided. The extract can be included in a pharmaceutical composition containing an extract-solubilizing amount of solubilizer. Oleandrin is included within the extract when a cardiac glycoside-containing plant, such as Nerium oleander, is extracted by SCF extraction. The extract can also contain one or more other SCF extractable pharmacologically active agents. The composition can be used to treat a wide range of disorders that are therapeutically responsive to a cardiac glycoside.
INTERNATIONAL SEARCH REPORT

A CLASSIFICATION OF SUBJECT MATTER
IPC(8) - A61K 36/18 (2008.04)
USPC - 424/774
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(8) - A61K 36/18 (2008.04)
USPC - 424/774

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)
PubWest (USPTO, PGPB, EPO, IPAB, Google Scholar, WIPO, PubMed)
Search terms - Supercritical fluid extract, supercritical fluid extraction, supercritical fluid, Oleandrin, Nerium, cardiac glycoside pERK, Akt expression, Thevetia

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>&quot;LC/MS/MS Analyses of an Oleander Extract for Cancer Treatment&quot; Xiao Min Wang et al Analytical Chemistry 2000, vol 72, pages 3547-3552 esp Abstract and page 3552</td>
<td>31-33 41-43 48 50-55</td>
</tr>
</tbody>
</table>

☐ Further documents are listed in the continuation of Box C ☐

* 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 application or patent 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 19 May 2008 (19 05 2008)

Date of mailing of the international search report 06 AUG 2008

Name and mailing address of the ISA/US
Mail Stop PCT, Attn ISA/US Commissioner for Patents
P O Box 1450 Alexandria, Virginia 22313-1450
Facsimile No 571-273-3201

Authorized officer Lee W Young
INTERNATIONAL SEARCH REPORT

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. 1-16, because they relate to subject matter not required to be searched by this Authority, namely...

2. [ ] Claims Nos. 17-19, 34, 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. [X] Claims Nos. 17-19, 34, because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 64(a).

Bus. Int. Search/Authority found multiple inventions in this international application, as follows:
- **Group I**: Claims 1-16, directed to a supercritical fluid extract comprising Oleandrin.
- **Group II**: Claims 20-26, directed to a supercritical fluid extract comprising a cardiac glycoside.
- **Group III**: Claims 27-33, directed to a supercritical fluid extract comprising a cardiac glycoside.
- **Group IV**: Claims 35-48, directed to a method of treating a disease or disorder.
- **Group V**: Claims 49-59, directed to a supercritical fluid extraction process.

The Searching Authority finds that the present application lacks unity as there are five distinct inventions present in the application, delineated by the groups described above, which do not share a common innovative technical element. The common technical element shared by the groups, supercritical fluid extraction, was a process known to those skilled in the art at the time of filing of the invention and cannot be considered a unifying innovative technical element. Further, although some of the groups comprise elements which may also belong to other groups (e.g., Oleandrin is known to be a cardiac glycoside), the inventions claimed by the groups which may encompass another group are not limited to the species indicated in the smaller groups. As such, the Authority finds that there are five distinct inventions within the present application.

1. [X] 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 additional fees, this Authority did not invite payment of additional fees.

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 and, where applicable, the payment of a protest fee.

[ ] The additional search fees were accompanied by the applicant’s protest but the applicable protest fee was not paid within the time limit specified in the invitation.

[ ] No protest accompanied the payment of additional search fees.

Form PCT/ISA/210 (continuation of first sheet (2)) (April 2007)