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(54) Title: SYNTHESIS OF EPOPHILINES, INTERMEDIATES THERETO AND ANALOGUES THEREOF

(57) Abstract: The present invention provides convergent processes for preparing epophilones, desoxyepophilones, and analogues thereof. The present invention further provides novel compositions and methods for the treatment of cancer and additionally provides methods for the treatment of cancer which has developed a multi-drug phenotype.
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C07D225/02 C07D315/00 A61P35/00 C07D417/06 A61K31/427

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 C07D

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)
EPO-Internal, PAJ, WPI Data

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>
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<tbody>
<tr>
<td>X</td>
<td>HARRIS C R ET AL: &quot;COMPLEX TARGET-ORIENTED SYNTHESIS IN THE DRUG DISCOVERY PROCESS: A CASE HISTORY IN THE DEPOB SERIES&quot; JOURNAL OF ORGANIC CHEMISTRY, AMERICAN CHEMICAL SOCIETY, EASTON, US, vol. 64, 1999, pages 8434-8456, XP000984318 ISSN: 0022-3263 cited in the application page 8440, Scheme 6, step c page 8441, Scheme 9, steps c and d page 8445, compound 57 page 8448, compounds 56, 57, 89, 90, 95-103, 105</td>
<td>1-12, 26-29, 45,51-58</td>
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Further documents are listed in the continuation of box C.

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  *A* document defining the general state of the art which is not considered to be of particular relevance
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Date of the actual completion of the international search: 5 March 2002
Date of mailing of the international search report: 14/03/2002

Name and mailing address of the ISA
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<table>
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<th>Relevant to claim No.</th>
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</thead>
</table>
| X        | NICOLAOU K C ET AL: "Chemical Biology of Epothilones"  
           | ANGEWANDTE CHEMIE. INTERNATIONAL EDITION, VERLAG CHEMIE. WEINHEIM, DE,  
           | vol. 37, no. 15, August 1998 (1998-08), pages 2044-2045, XP002131418  
           | ISSN: 0570-0833  
           | page 2043, compound 284  
           | page 2035, compound 312  
           | page 2040, right-hand column, last paragraph | 1-12,  
          |                                                   | 26-29,  
          |                                                   | 45, 51-58 |
This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-17

   Epothilones (not novel).

2. Claims: 18-25

   Polymeric or dimeric compositions comprising the compounds of claim 1.

3. Claims: 26-33

   Medical use of the compounds of claim 1.

4. Claims: 34-61

   Process for the preparation of the compounds of claim 1 including the preparation of intermediates.