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(54) Title: COMPOUNDS AND METHODS FOR TREATMENT OF DISORDERS ASSOCIATED WITH ER STRESS

(57) Abstract: The invention provides novel compounds, methods for treating or preventing a condition related to ER-stress, e.g. hypercholesterolemia, atherosclerosis and related conditions, and pharmaceutical compositions related thereto.

**INTERNATIONAL SEARCH REPORT**

International application No.

PCT/US07/07228

**A. CLASSIFICATION OF SUBJECT MATTER**  
 IPC: C07J 9/00( 2006.01);A61K 31/56( 2006.01),31/58( 2006.01)  
  
 USPC: 552/551;514/176,182  
 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. : 552/551; 514/176, 182

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)  
 REGISTRY, CAPLUS, MARPAT, EAST

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0,100,983 A1 (PROTER et al.) 22 February 1984 (22.02.1984), see the entire article, especially Example 1.	1,4,5-11,43 and 45-49
Y		13,14,84-87,102-105 and 122-125

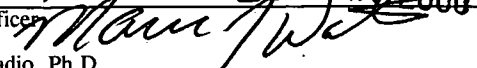
Further documents are listed in the continuation of Box C.  See patent family annex.

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

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# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US07/07228

## Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 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.  Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
  
2.  Claims Nos.: 16-29,32,56-59,61-65,106-108,114-116 and 126-189  
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:  
The instant claims lack a single general inventive concept in that the claimed compounds are of vastly different structures.
  
3.  Claims Nos.: 12,15,39,42,52-55, and 68-71  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box No. III Observations where unity of invention is lacking (Continuation of item 3 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 additional fees, this Authority did not invite payment of any 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.: 1-11,13,14,43-51,84-87,102-105 and 122-125

- 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.

**BOX III. 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 1, claim(s) 1-11, 13, 14, 43-51, 84-87, 102-105 and 122-125, drawn to compounds, compositions and method of treatment utilizing compounds of formula I.

Group 2, claim(s) 30, 37, 38, 40, 41, 66, 67 and 122-125, drawn to compounds of claims 30 and 66 having an aryl ring system and compositions thereof.

Group 3, claim(s) 30, 37, 38, 40, 41, 66, 67 and 122-125, drawn to compounds of claims 30 and 66 having a heteroaryl ring system and compositions thereof.

Group 4, claim(s) 31, 33-36 and 60, drawn to a method of treatment utilizing compounds of Group 2.

Group 5, claim(s) 31, 33-36 and 60, drawn to a method of treatment utilizing compounds of Group 3.

Group 6, claim(s) 72-77 and 88-94, drawn to a method of treating hypercholesterolemia utilizing compounds of formula (I).

Group 7, claim(s) 78-83 and 95-101, drawn to a method of treating atherosclerosis utilizing compounds of formula (I).

Group 8, claim(s) 109-113, 171-175 and 190-194, drawn to a method of treating hypercholesterolemia utilizing compounds of claims 109, 171 and 190 having an aryl ring system.

Group 9, claim(s) 109-113, 171-175 and 190-194, drawn to a method of treating hypercholesterolemia utilizing compounds of claims 109, 171 and 190 having a heteroaryl ring system.

Group 10, claim(s) 117-121, drawn to a method of treating atherosclerosis utilizing compounds of claim 117 having an aryl ring system.

Group 11, claim(s) 117-121, drawn to a method of treating atherosclerosis utilizing compounds of claim 117 having a heteroaryl ring system.