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(54) Title: USE OF LIGNAN COMPOUND FOR ANTI-WRINKLE TREATMENT

FIG. 7

A

B

C

D









(57) Abstract: The present invention relates to a novel use of lignan compounds, which are isolated and purified from nutmeg or the aril of nutmeg for anti-wrinkle, and more particularly, the present invention relates to a novel use for anti-wrinkle of an extract of the nutmeg or an extract of the aril of the nutmeg, fragrin A, austobailignan 7, licarin E, and macelignan. The extracts and lignan compounds of the present invention have activities in suppressing collagen degradation enzyme-1(MMP-I, matrix metalloprotei-nase-1) and formation of new collagen (type-1 procollagen), thereby having effect on inhibiting wrinkle caused by photoaging. Accordingly, the extracts and lignan compounds of the present invention may be useful for preventing or treating wrinkle caused by photoaging.



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A. CLASSIFICATION OF SUBJECT MATTER

A61K 8/34(2006.01)i

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: A61K 8, A61K 9, A61K 31

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) eKIPASS (KIPO internal), FPD, PAJ, PUBMED

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 05070402 A1 (NEWTREE INDUSTRY CO., LTD. et al.) 04 August 2005 See whole document.	1-15
A	WO 2007001150 A2 (HWANG JAE KWAN et al.) 04 January 2007 See whole document.	1-15
A	JP 2006298824 A2 (KAO CORP.) 02 November 2006 See whole document.	1-15
A	US 7157413 B2 (L'Oreal) 02 January 2007 See whole document.	1-15

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

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INTERNATIONAL SEARCH REPORT

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 05070402 A1	04-08-2005	KR 5073027 A JP 2007524666 T2	13-07-2005 30-08-2007
WO 2007001150 A2	04-01-2007	KR 7001326 A JP 2008543931 T2 EP 1948161 A2	04-01-2007 04-12-2008 30-07-2008
JP 2006298824 A2	02-11-2006	None	
US 7157413 B2	02-01-2007	US 20050101499 A9 US 20040077510 A1 MX 3006076 A JP 2004035563 A2 JP 03754970 B2 FR 2841776 A1 ES 2245767 T3 EP 1380284 B1 EP 1380284 A1 DE 60300913 T2 DE 60300913 C0 BR 0302728 A AT 0298554 E	12-05-2005 22-04-2004 14-02-2005 05-02-2004 15-03-2006 09-01-2004 16-01-2006 29-06-2005 14-01-2004 11-05-2006 04-08-2005 29-03-2005 15-07-2005