Abstract: The topical administration of a combination of nerve growth factor (NGF) and docosahexaenoic acid (DHA) has been discovered to synergistically increase the effects of NGF in re-innervating the cornea. This enhancement in corneal nerve re-growth will yield a faster anatomical and functional recovery after PRK or LASIK surgeries. Using rabbits, the application of NGF and DHA resulted in increased corneal nerve surface area, increased epithelial proliferation, and decreased rose bengal staining as compared with NGF, DHA, or vehicle control individually. The topical application of NGF plus DHA in accelerating the re-innervation after PRK or LASIK, will help avoid or alleviate the symptoms of dry eye or other neurotrophic keratopathies due to corneal injuries. The topical application can be by using a corneal shield or lens. This treatment will also be useful in other corneal abnormalities including those caused by chemical burn, congenital corneal neuropathy, or acquired corneal neuropathy.
INTERNATIONAL SEARCH REPORT

A CLASSIFICATION OF SUBJECT MATTER

IPC AOI1N 61/00 (2006 01) AOI1N 37/18 (2006 01), A61K 31/00 (2006 01)

USPC 514/1,2,12.530/300

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)

US 514/1,2,12,530/300

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)

Please See Continuation Sheet.

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>VERBEY et al  The influence of a fish oil dietary supplement on immunogenic keratitis Invest Ophthalm &amp; Vis Sci August 1990, Vol 31, pages 1526-1532 See abstract, and figs 2-4</td>
<td>1-19</td>
</tr>
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</table>

Further documents are listed in the continuation of Box C

See patent family annex

Date of the actual completion of the international search

05 September 2007 (05 09 2007)

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
Steven H Standley
Telephone No (571) 272 0500

Form PCTAS/2 10 (second sheet) (April 2005)
Continuation of B. FIELDS SEARCHED Item 3:

PubMed: dha, decosohexaenoic acid, NGF, decosohexaenoic acid AND NGF, decosohexaenoic acid AND cornea, NGF AND cornea, Lasik review, Lasik injury review

East: dha, decosohexaenoic acid, NGF, decosohexaenoic acid AND NGF, decosohexaenoic acid AND cornea, NGF AND cornea, Lasik review, Lasik injury review