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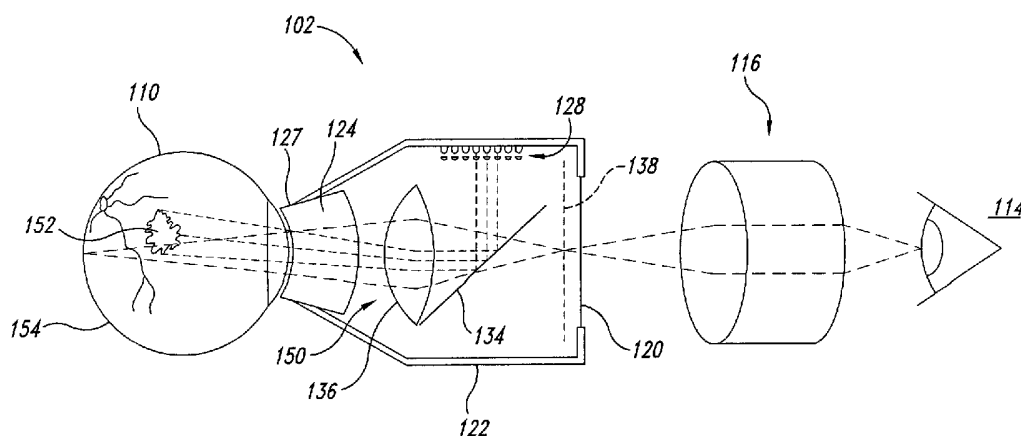
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- Published:  
— with international search report  
— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

[Continued on next page]

(54) Title: EXCITATION OF PHOTOREACTIVE COMPOUNDS IN EYE TISSUE



(57) Abstract: A system and method for excitation of photosensitizers is configured to provide desired illumination on targeted eye tissue. The excitation system includes an optical module that generates illumination and a controller to power the optical module and control the shape, intensity or energy level, and duration of the illumination. The optical module includes a contact portion for interfacing with the eye, a treatment beam portion including a light emitter array to generate shaped light patterns and optics to focus the light patterns onto the eye, and a visualization portion to provide visual feedback of treatment through a visualization interface coupled with a microscope. A typical treatment involves the optical module being placed on a diseased eye of a patient by a clinician to project illumination on a diseased portion of the eye. The clinician typically views the eye through the microscope and the optical module during treatment.

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5 August 2004

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

# INTERNATIONAL SEARCH REPORT

International Application No

US 03/31234

**A. CLASSIFICATION OF SUBJECT MATTER**  
 IPC 7 A61F9/008 A61N5/06

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 A61F A61N

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, WPI Data, PAJ

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 951 663 A (L ESPERANCE JR FRANCIS A) 28 August 1990 (1990-08-28)  column 2, line 37 - line 58 column 4, line 67 - column 6, line 23 -----	1-5, 7-12, 14-22
X	US 6 186 628 B1 (VAN DE VELDE FRANS J) 13 February 2001 (2001-02-13) column 4, line 43 - column 5, line 7 column 5, line 58 - column 8, line 22 -----	1-15,22
X	US 6 099 521 A (SHADDUCK JOHN H) 8 August 2000 (2000-08-08) column 9, line 29 - column 10, line 59 column 11, line 51 - column 12, line 2 column 14, line 25 - line 32 column 18, line 17 - line 58 column 21, line 43 - line 52 -----	23-26

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

\* 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 document 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.
- \*Z\* document member of the same patent family

Date of the actual completion of the international search  
4 June 2004

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# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US 03/31234

## Box I Observations where certain claims were found unsearchable (Continuation of item 1 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.: 27-34  
because they relate to subject matter not required to be searched by this Authority, namely:  
Rule 39.1(iv) PCT - Method for treatment of the human or animal body by therapy
2.  Claims Nos.:  
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.  Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional 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 an additional fee, this Authority did not invite payment of any additional fee.
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.
- No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.1

Claims Nos.: 27-34

Rule 39.1(iv) PCT - Method for treatment of the human or animal body by therapy

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/US 03/31234

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 4951663	A	28-08-1990	US 4931053 A EP 0421030 A1
US 6186628	B1	13-02-2001	EP 1194066 A1 WO 0071019 A1
US 6099521	A	08-08-2000	NONE