

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
1 August 2002 (01.08.2002)

PCT

(10) International Publication Number
WO 02/058667 A3

(51) International Patent Classification⁷: **A61K 9/00**

(21) International Application Number: PCT/US02/02119

(22) International Filing Date: 23 January 2002 (23.01.2002)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/264,441 26 January 2001 (26.01.2001) US

(71) Applicant: **BAUSCH & LOMB INCORPORATED**
[US/US]; One Bausch & Lomb Place, Rochester, NY
14604 (US).

(72) Inventors: **BRUBAKER, Michael, J.**; 5206 Bryant Irvin
Road, Ft. Worth, TX 76132 (US). **PAPADOPOULOS,**
Pavlos; 715 Creek Bend Lane, Antioch, IL 60002 (US).
KRISHNAMOORTHY, Ramesh; 403 Sherwood Forest
Place, Apex, NC 27502 (US).

(74) Agents: **POLYN, Denis, A.** et al.; One Bausch & Lomb
Place, Rochester, NY 14604 (US).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG,
SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN,
YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR,
GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent
(BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,
NE, SN, TD, TG).

Declaration under Rule 4.17:

— as to the identity of the inventor (Rule 4.17(i)) for the fol-
lowing designations AE, AG, AL, AM, AT, AU, AZ, BA, BB,
BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK,
DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU,
ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT,
LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ,
OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM,
TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, ARIPO
patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG,
ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU,
TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES,
FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI
patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
MR, NE, SN, TD, TG)

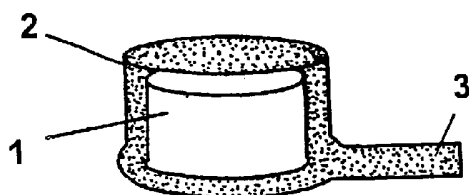
Published:

— with international search report

(88) Date of publication of the international search report:
13 March 2003

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: IMPROVED PROCESS FOR THE PRODUCTION OF SUSTAINED RELEASE DRUG DELIVERY DEVICES



(57) Abstract: Disclosed is an improved sustained release drug de-
livers device and method of producing such device. The device com-
prises a drug core in an impermeable cup or impermeable coating
layer that is adhered to an uncured suture tab and covered with a per-
meable polymer coating layer that is similar to the makeup of the suture
tab. The permeable polymer coating layer that covers the device, cover-
ing the impermeable coating layer and at least a portion of the drug
core, is cured (after drying) along with the uncured suture tab. The
"cocuring" or one step curing process forms a very strong bond be-
tween the outer coating layer to the suture tab preventing leaks.

WO 02/058667 A3

INTERNATIONAL SEARCH REPORT

International Application No.

PCT/US 02/02119

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61K9/00

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 A61K

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 5 378 475 A (BLANDFORD DAVID L ET AL) 3 January 1995 (1995-01-03) cited in the application the whole document	1-22
A	US 5 773 019 A (ASHTON PAUL ET AL) 30 June 1998 (1998-06-30) examples 1,3	1-22
A	US 5 902 598 A (ASHTON PAUL ET AL) 11 May 1999 (1999-05-11) cited in the application claims 1,2 column 9, line 38 - line 50	1-22

☐ 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.
- *&* document member of the same patent family

Date of the actual completion of the international search

29 August 2002

Date of mailing of the international search report

11/09/2002

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Pacreu Largo, M

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 02/02119

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.:
because they relate to subject matter not required to be searched by this Authority, namely:

Although claims 12-14 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
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:

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.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 02/02119

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5378475	A	03-01-1995	AT 171617 T	15-10-1998
			AU 660012 B2	08-06-1995
			AU 1419792 A	15-09-1992
			CA 2104699 A1	22-08-1992
			DE 69227187 D1	05-11-1998
			DE 69227187 T2	02-06-1999
			DK 577646 T3	21-06-1999
			EP 0577646 A1	12-01-1994
			EP 0861659 A1	02-09-1998
			ES 2125259 T3	01-03-1999
			JP 6505274 T	16-06-1994
			WO 9214450 A1	03-09-1992
US 5773019	A	30-06-1998	AU 717209 B2	23-03-2000
			AU 7371896 A	17-04-1997
			CA 2230947 A1	03-04-1997
			EP 0863729 A1	16-09-1998
			JP 11512711 T	02-11-1999
			US 6001386 A	14-12-1999
			WO 9711655 A1	03-04-1997
US 5902598	A	11-05-1999	AU 741846 B2	13-12-2001
			AU 9029198 A	22-03-1999
			BR 9811381 A	29-08-2000
			CA 2301685 A1	11-03-1999
			CN 1283992 T	14-02-2001
			EP 1009388 A1	21-06-2000
			HU 0002797 A2	29-01-2001
			NO 20000735 A	28-04-2000
			PL 344039 A1	24-09-2001
			TR 200001029 T2	21-05-2001
			WO 9911244 A1	11-03-1999