

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
14 February 2008 (14.02.2008)

PCT

(10) International Publication Number
WO 2008/018892 A3

(51) International Patent Classification:
A61K 9/36 (2006.01)

(21) International Application Number:
PCT/US2006/048033

(22) International Filing Date:
18 December 2006 (18.12.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/753,319 22 December 2005 (22.12.2005) US

(71) Applicant (for all designated States except US):
PLUROMED, INC. [US/US]; Five Oak Meadow
Road, Lincoln, MA 01773 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **COHN, William, E.** [US/US]; 4540 Magnolia Street, Bellaire, TX 77401 (US). **VOGEL, Jean-Marie** [FR/US]; 25-k Olympia Avenue, Woburn, MA 01801 (US).

(74) Agents: **GORDON, Dana, M.** et al.; Patent Group_p, Foley Hoag LLP, 155 Seaport Boulevard, Boston, MA 02210-2698 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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

(88) Date of publication of the international search report:
16 October 2008

(54) Title: METHODS AND KITS FOR TREATING LACERATIONS AND PUNCTURE WOUNDS USING INVERSE THERMOSENSITIVE POLYMERS

(57) Abstract: In certain embodiments, the present invention relates to methods and kits for treating wounds, comprising the step of introducing into said wound a composition comprising at least one optionally purified inverse thermosensitive polymer, wherein said at least one optionally purified inverse thermosensitive polymer forms a gel in said wound, thereby temporarily occluding said wound. In certain embodiments, the present invention relates to the aforementioned method wherein a wound to a blood vessel or a segment of the GI tract is occluded, thereby preventing exsanguination and/or septicemia. In other embodiments, the inventive methods and kits described herein may be used to ameliorate (e.g., fill) temporarily a defect in a biological lumen, thereby strengthening said defect, preventing rupture of, or maintaining, improving or optimizing fluid flow through said lumen.



WO 2008/018892 A3

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US06/48033

A. CLASSIFICATION OF SUBJECT MATTER

IPC: A61K 9/36(2006.01)

USPC: 424/484

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. : 424/484

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)

MEDLINE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 01/85845 A1 (RIPPON et al) 15 November 2001 (15.11.2001), page 8 line 13-page 9 line 3 and page 21 lines 13-15.	1, 4-8, 11
X	WO 04/084703 A2 (SCHWARZ et al) 7 October 2004 (07.10.2004) , abstract, page 3 lines 5-14, page 9 lines 10-24, page 13 lines 17-31, page 26 lines 10-24, page 31 lines 3-10.	2-18, 43-45
---		-----
A	entire document.	1-18 and 43-45

☐ 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

"E" earlier application or patent 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

19 May 2008 (19.05.2008)

Date of mailing of the international search report

04 AUG 2008

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

Michael Woodward

Telephone No. 571-272-0700

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US06/48033

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.:
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.: 19-42, 46-70
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:

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.:

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.