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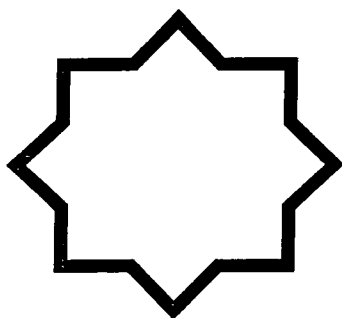
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(54) Title: IMPROVED SURGICAL THREAD



(57) Abstract: In order to make improved threads provided with barbs for surgical purposes, it is envisaged to use threads of polyhedral or stochastic shape and to provide the barbs on said threads, by making a cut in a point corresponding to an edge of the aforesaid polyhedral or stochastic shapes for each barb, preferably by means of techniques of laser etching that enable also barbs with double tip to be obtained so as to increase the biological and histomorphological interaction with the tissues of the host.

# INTERNATIONAL SEARCH REPORT

International application No  
PCT/IT2007/000698

A. CLASSIFICATION OF SUBJECT MATTER  
INV. A61B17/06

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)  
A61B

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

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 99/01071 A (BIONX IMPLANTS OY [FI]) 14 January 1999 (1999-01-14)  figures 4a,4b,7-10 page 7, paragraph 2 page 8, line 23 - page 9, line 9	1-5, 7-11,14, 15
X	WO 99/49792 A (BIONX IMPLANTS OY [FI]) 7 October 1999 (1999-10-07) figures 5-7	1-3,7-11
A	US 2005/267531 A1 (RUFF GREGORY L [US] ET AL) 1 December 2005 (2005-12-01) paragraph [0085]; table 1 figure 56 figures 9-11	1-15

☒ 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 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

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\*&\* document member of the same patent family

Date of the actual completion of the international search

24 April 2008

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## INTERNATIONAL SEARCH REPORT

International application No.

PCT/IT2007/000698

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	DE 10 2005 004317 B3 (ETHICON GMBH [DE]) 1 June 2006 (2006-06-01) paragraph [0022]; figure 4	1-15
A	US 2004/060410 A1 (LEUNG JEFFREY C [US] ET AL) 1 April 2004 (2004-04-01) paragraphs [0143], [0149]; figure 7a tables 7a-7b figure 11	4,6,7, 13,15
X	US 2003/195514 A1 (TRIEU HAI H [US] ET AL) 16 October 2003 (2003-10-16) figures 3g,21 paragraph [0054] claim 20	16,17
X	EP 0 641 546 A (ETHICON INC [US]) 8 March 1995 (1995-03-08) figures 15,16,20 column 13, lines 39-53 column 14, line 52 - column 15, line 4	16,17
A	US 3 123 077 A (ALCAMO J. H.) 3 March 1964 (1964-03-03) figure 11	16-18

**FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210**

Continuation of Box II.2

Claims Nos.: 19

The present claim 19 relates to an extremely large number of possible surgical threads with barbs. and is unclear what exactly the subject-matter for which protection is sought is, contrary to the requirements of Article 6 PCT, see also PCT Guidelines 5.10.

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.2), should the problems which led to the Article 17(2)PCT declaration be overcome.

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/IT2007/000698

## 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.: 19  
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:  
see FURTHER INFORMATION sheet PCT/ISA/210
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 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:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this international search report covers allsearchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of 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.

**FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210**

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-15 .

Surgical thread with barbs and its method of manufacturing, the cross-section of the thread being polygonal or stochastic and the barbs having variable lengths  
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2. claims: 16-18

Surgical thread with barbs one of more of said barbs being provided with a double tip.  
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# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/IT2007/000698

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
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