

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
21 August 2008 (21.08.2008)

PCT

(10) International Publication Number  
**WO 2008/101086 A3**

(51) International Patent Classification:

A61B 18/14 (2006.01) A61N 1/32 (2006.01)  
A61B 18/00 (2006.01)

(21) International Application Number:

PCT/US2008/053973

(22) International Filing Date:

14 February 2008 (14.02.2008)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

11/706,766 15 February 2007 (15.02.2007) US

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(81) Designated States (unless otherwise indicated, for every

kind of national protection available): AE, AG, AL, AM,  
AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA,  
CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, 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, 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, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL,  
NO, 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:

12 February 2009

(54) Title: ELECTROPORATION ABLATION APPARATUS, SYSTEM, AND METHOD

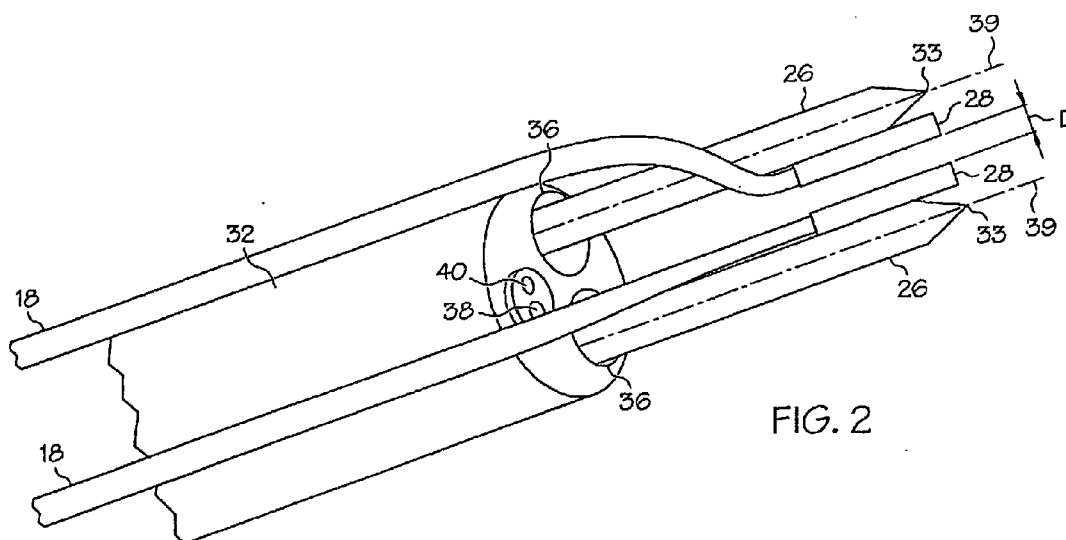


FIG. 2

(57) Abstract: A surgical instrument, such as an endoscopic or laparoscopic instrument, includes an ablation device. The ablation device includes an elongate relatively flexible member having a proximal end and a distal end, the flexible member includes at least a first working channel. A first and second electrode extends from a working channel at the distal end of the flexible member. The first and second electrodes are adapted to be endoscopically located in a tissue treatment region. The first and second electrodes are adapted to couple to an electrical waveform generator to receive an irreversible electroporation electrical waveform sufficient to ablate tissue located between the first and second electrodes.

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# INTERNATIONAL SEARCH REPORT

International application No  
PCT/US2008/053973

## A. CLASSIFICATION OF SUBJECT MATTER

INV. A61B18/14  
ADD. A61B18/00 A61N1/32

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 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

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 99/09919 A (ARTHROCARE CORP [US]) 4 March 1999 (1999-03-04) abstract; figures 3,8A-12,23,24 page 5, lines 14-20 page 10, lines 25-30 page 16, lines 1-22 page 21, line 29 - page 22, line 32 page 27, lines 13-23 page 29, lines 15-29 page 34, line 31 - page 35, line 21 -----	1-6, 12-17
Y	WO 2005/065284 A (UNIV CALIFORNIA [US]; DAVALOS RAFAEL [US]; RUBINSKY BORIS [US]) 21 July 2005 (2005-07-21) abstract paragraphs [0002], [0017], [0054] - [0060] ----- -/--	1-6, 12-17

☒ 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

\*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

27 August 2008

Date of mailing of the international search report

22/12/2008

Name and mailing address of the ISA/

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## INTERNATIONAL SEARCH REPORT

International application No

PCT/US2008/053973

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 2006/041881 A (ARDIAN INC [US]; DEEM MARK [US]; GIFFORD HANSON III [US]; DEMARAIS DEN) 20 April 2006 (2006-04-20) the whole document -----	1-6, 12-17
A	WO 2005/112810 A (ETHICON ENDO SURGERY INC [US]; LONG GARY L [US]; VAKHARIA OMAR J [US]) 1 December 2005 (2005-12-01) the whole document -----	1-6, 12-17
A	EP 1 518 499 A (ETHICON ENDO SURGERY INC [US]) 30 March 2005 (2005-03-30) the whole document -----	1-6, 12-17

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US2008/053973

## 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.: 8-11, 23-29  
because they relate to subject matter not required to be searched by this Authority, namely:  
Rule 39.1(iv) PCT - Diagnostic method practised on the human or animal body (claims 8-11) Rule 39.1(iv) PCT - Method for treatment of the human or animal body by surgery (claims 23-29) Rule 39.1(iv) PCT - Method for treatment of the human or animal body by therapy (claims 23-29)
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 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.:  
1-6, 12-17

### 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: 1-6, 12-17

An ablation instrument having two electrodes and one or more diagnostic probes.

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2. claims: 1, 7, 12, 18-22

An ablation instrument having image sensing and processing components.

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3. claims: 30, 31

An electrical scalpel comprising one electrode used as a blade.

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4. claim: 32

A method for sterilizing and storing a surgical instrument.

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# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2008/053973

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