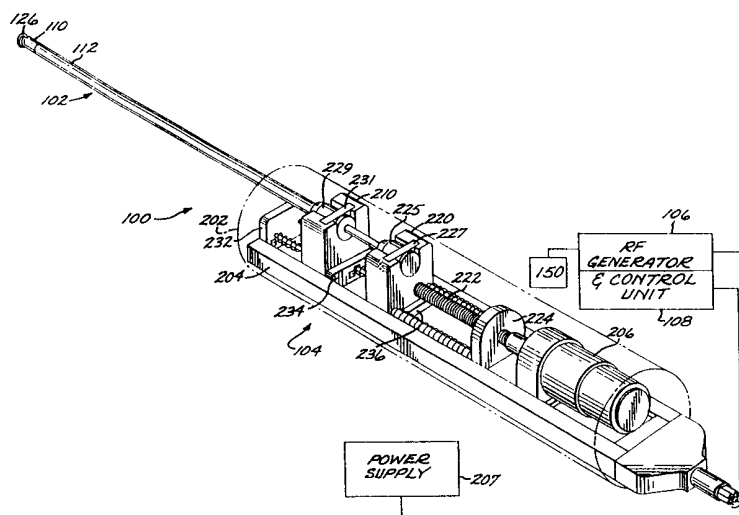




## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

<b>(51) International Patent Classification <sup>7</sup> :</b>  <b>A61B 18/14</b>	<b>A3</b>	<b>(11) International Publication Number:</b> <b>WO 00/16697</b>  <b>(43) International Publication Date:</b> 30 March 2000 (30.03.00)
<b>(21) International Application Number:</b> PCT/US99/21416  <b>(22) International Filing Date:</b> 17 September 1999 (17.09.99)  <b>(30) Priority Data:</b> 09/159,467 23 September 1998 (23.09.98) US  <b>(71) Applicant:</b> SENORX, INC. [US/US]; Suite 144, 13677 Alton Parkway, Irvine, CA 92618 (US).  <b>(72) Inventors:</b> BURBANK, Fred, H.; 30982 Steeplechase Drive, San Juan Capistrano, CA 92675 (US). LUBOCK, Paul; 30 Bethany, Laguna Niguel, CA 92677 (US). JONES, Michael, L.; 34441 Camino El Molino, Capistrano Beach, CA 92624 (US). QUICK, Richard, L.; 32181 Fall River Road, Trabuco Canyon, CA 92679 (US).  <b>(74) Agents:</b> KLEIN, Howard, J. et al.; Klein & Szekeres, LLP, Suite 700, 4199 Campus Drive, Irvine, CA 92612 (US).		<b>(81) Designated States:</b> AE, AL, AM, AT, AT (Utility model), AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, CZ (Utility model), DE, DE (Utility model), DK, DK (Utility model), DM, EE, EE (Utility model), ES, FI, FI (Utility model), GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK (Utility model), SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, 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), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).  <b>Published</b> <i>With international search report.</i>  <b>(88) Date of publication of the international search report:</b> 10 August 2000 (10.08.00)

(54) Title: ELECTROSURGICAL BIOPSY DEVICE AND METHOD



## (57) Abstract

An electrosurgical biopsy device includes a stylet and a cannula movably mounted on a base. The stylet has a shaft with a head at its distal end and a stylet ablation element extending distally from the head. The stylet shaft is disposed through the cannula for axial translation therein between withdrawn and extended positions. The cannula has an opening at its distal end and a cannula ablation element adjacent the opening. Both ablation elements are activatable with energy that ablates adjacent tissue. A translation mechanism controllably moves (a) the stylet between the withdrawn and extended positions and (b) the cannula between a proximal position and a distal position relative to the base. In use, with the stylet in the withdrawn position against the distal end of the cannula, and with the stylet ablation element activated, the stylet and the cannula are pushed through the skin and the underlying tissue until the stylet head is adjacent a targeted tissue mass. Next, the stylet is extended distally from the distal end of the cannula so that its head penetrates the tissue mass. The cannula ablation element is then activated, and the cannula is pushed through the tissue mass toward the stylet head, thereby cutting a "core" through the tissue mass that is captured as a tissue specimen within the distal end of the cannula. The cannula and the stylet are then removed from the patient's body.

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## INTERNATIONAL SEARCH REPORT

International Application No

PCT/JS 99/21416

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61B18/14

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 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)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 470 308 A (LUNDQUIST INGEMAR H ET AL) 28 November 1995 (1995-11-28) the whole document column 10, line 63 -column 11, line 42	1-6,10, 11
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☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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

Date of the actual completion of the international search

22 December 1999

Date of mailing of the international search report

19.05.2000

Name and mailing address of the ISA

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PAPONE, F

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 99/ 21416

## 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.: 23-27  
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 surgery
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.:

1-13

### 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**

**1. Claims: 1-13**

Biopsy device having a shaft and distal extending electrodes

**2. Claims: 14-22**

A biopsy device having coaxial stylet, a base for axial translation and first and second ablation elements.

# INTERNATIONAL SEARCH REPORT

mation on patent family members

International Application No

PC1, JS 99/21416

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