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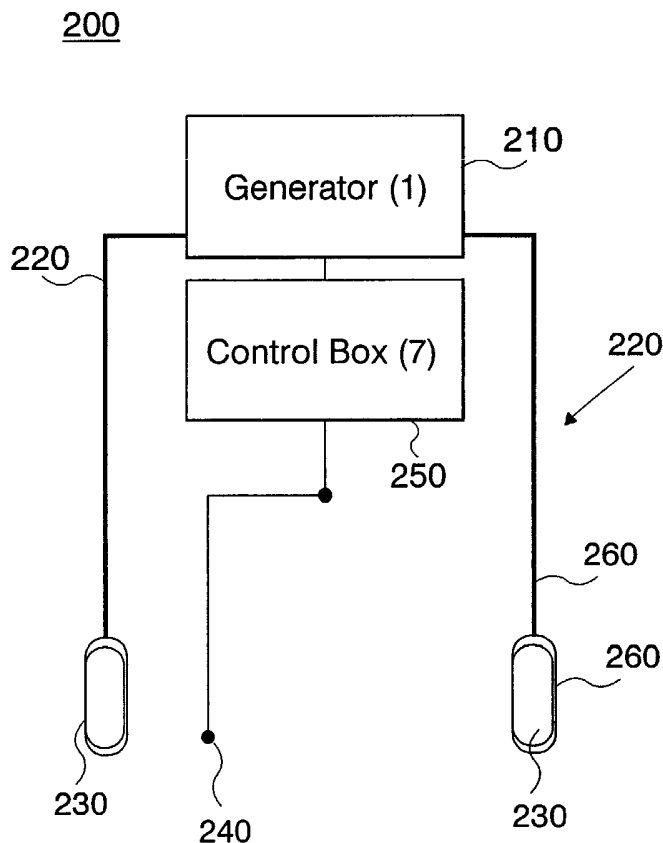
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Published:

- 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

[Continued on next page]

(54) Title: APPARATUS FOR TREATING A TUMOR BY AN ELECTRIC FIELD



(57) Abstract: An apparatus is provided for selectively destroying dividing cells in living tissue formed of dividing cells and non-dividing cells. The dividing cells contain polarizable intracellular members and during late anaphase or telophase, the dividing cells are connected to one another by a cleavage furrow. The apparatus includes insulated electrodes to be coupled to a generator for subjecting the living tissue to electric field conditions sufficient to cause movement of the polarizable intracellular members toward the cleavage furrow in response to a non-homogeneous electric field being induced in the dividing cells. The movement of the polarizable intracellular members towards the cleavage furrow causes the breakdown thereof which adversely impacts the multiplication of the dividing cells. Preferably, an intervening member is disposed between each insulated electrode and the skin surface and each intervening member includes a conductive "floating" plate that protects against the effects on the patient from a breakdown in the insulation of the electrode.

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

INTERNATIONAL SEARCH REPORT

In national Application No
PCT/IB 03/04321

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61N1/40

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 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)

EP0-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 01/60994 A (PALTI YORAM PROF) 23 August 2001 (2001-08-23) page 10, line 10 - line 19 page 14, line 9 - line 15 page 18, line 7 - line 9 claims 20-23	1-4, 10-12
X	GB 1 419 660 A (ESB INC) 31 December 1975 (1975-12-31) page 3, line 56 - line 65 page 4, line 36 - line 57 page 8, line 21 - line 50 page 10, line 28 - line 46 ----- -/--	1-4,10, 11

☒ 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

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"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

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INTERNATIONAL SEARCH REPORT

International Application No
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 413 255 B1 (STERN ROGER A) 2 July 2002 (2002-07-02) column 5, line 51 - column 6, line 65 column 8, line 27 - line 62 column 10, line 55 - column 11, line 47 figure 12	1-4,6
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A	GB 2 026 322 A (LAWRENCE J) 6 February 1980 (1980-02-06) page 1, line 102 - line 114 page 2, line 49 - line 61 -----	1
A	US 4 467 809 A (BRIGHTON CARL T) 28 August 1984 (1984-08-28) column 3, line 3 - line 31 -----	1

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IB 03/04321

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:
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.:

1-15, 51-73

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

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

1. claims: 1-15,51-73

Apparatus for treating a tumor by an electric field having electrodes with improved dielectric properties

2. claims: 16-50

Apparatus for treating a tumor by an electric field being adapted for localized treatment

INTERNATIONAL SEARCH REPORT

Information on patent family members

In International Application No

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Information on patent family members

In tional Application No

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