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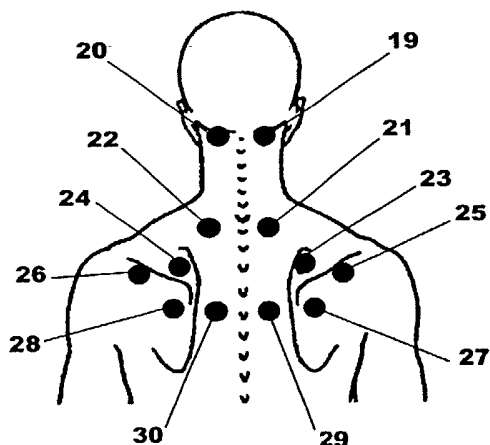
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(54) Title: THERAPEUTIC METHODS USING ELECTROMAGNETIC RADIATION



(57) Abstract: This invention provides methods for treating a variety of disorders using electromagnetic radiation directed at excitable tissues (19-30), including nerves (21, 22), muscles and blood vessels. By controlling the wavelength, the wavelength bandpass, pulse duration, intensity, pulse frequency, and/or variations of those characteristics over time, and by selecting sites of exposure (19-30) to electromagnetic radiation, improvements in the function of different tissues and organs can be provided. By monitoring physiological variables such as muscle tone and activity, temperature gradients, surface electromyography, blood flow and others, the practitioner can optimize a therapeutic regimen suited for the individual patient



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INTERNATIONAL SEARCH REPORT

International application No.

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**A. CLASSIFICATION OF SUBJECT MATTER**

IPC(7) : A61N  
US CL : 607/1

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. : 607/1, 2, 88; 600/13, 33

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	US 5,405,369 A (SELMAN et al) 11 April 1995 (11.04.1995), see entire document	1-8, 52
X	US 5,814,078 A (ZHOU et al) 29 Sept 1998 (19.09.1998), see entire document	9-17, 41-44, 50, 35-40, 45-46
Y		30, 31, 47-49, 53-67
X	US 5,269,746 A (JACOBSON) 14 Dec 1993 (14.12.1993), see entire document	18-25
Y	US 5,344,384 A (OSTROW et al) 6 Sept 1994 (06.09.1994), see entire document	30, 31, 47-49, 53-67
X	US 4,989,604 A (FANG) 3 Oct 1985 (3.10.1985), see entire document	34
X	US 6,140,346 A (ANDRULIS et al) 31 Oct 2000 (31.10.2000) see entire document	51

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	"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
"E" earlier application or patent published on or after the international filing date	"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
"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)	"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
"O" document referring to an oral disclosure, use, exhibition or other means	"&"	document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed		

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# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US02/20131

## Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)

This international report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1.  Claim Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
  
2.  Claim Nos.: 26-29,32 and 33  
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:  
(independent) claims 26 and 32 are missing from the disclosure
  
3.  Claim 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:

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.:
- Remark on Protest**
- The additional search fees were accompanied by the applicant's protest.
- No protest accompanied the payment of additional search fees.