



(51) International Patent Classification:

A61N 1/32 (2006.01) A61N 1/05 (2006.01)
A61N 1/04 (2006.01) A61N 1/18 (2006.01)

(21) International Application Number:

PCT/US2023/016548

(22) International Filing Date:

28 March 2023 (28.03.2023)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

63/362,086 29 March 2022 (29.03.2022) US

(71) Applicant: **CINTRON MEDICAL CORPORATION**
[US/US]; 1275 W. 124th Avenue, Westminster, CO 80234
(US).

(72) Inventors: **LONG, Gary**; 1151 Beverly Hill Dr., Cincinnati, OH 45208 (US). **BOWERS, William**; 1275 W. 124th Ave., Westminster, CO 80234 (US).

(74) Agent: **PRENDERGAST, Paul**; Kutak Rock LLP, 2300 Main Street, Suite 800, Kansas City, MO 64108 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

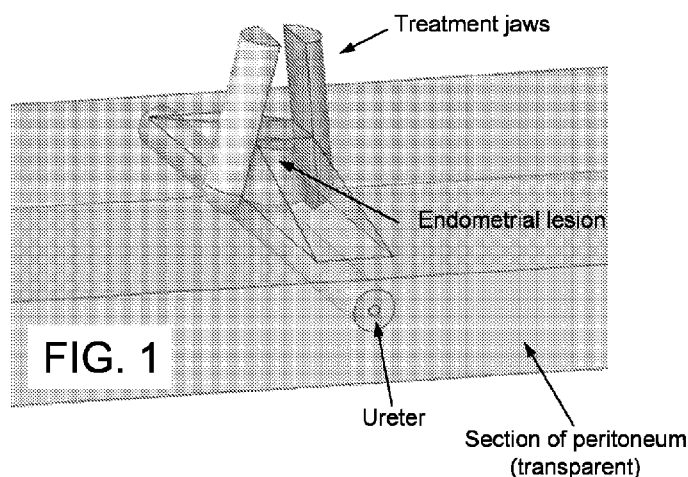
AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CV, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, MG, MK, MN, MU, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, CV, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SC, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, ME, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Published:

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

(54) Title: METHODS AND DEVICES FOR NON-THERMAL TREATMENT OF ENDOMETRIOSIS



(57) Abstract: Methods and devices for non-thermal treatment of endometriosis. The non-thermal treatment of endometrial lesions results in electroporation of the endometrial cells, and ultimately necrosis of the lesion. Lesions are identified and electric field parameters determined to substantially remove all of the endometrial cells in the target lesion. Application of the electric field to the lesion creates a treatment zone where the cells necrose, leaving the cellular matrix mostly undisturbed. Devices include a generator capable of applying an electric field to an endometrial lesion through one or more electrodes.



(88) Date of publication of the international search report:
09 November 2023 (09.11.2023)

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US23/16548

A. CLASSIFICATION OF SUBJECT MATTER

IPC - INV. A61N 1/32; A61N 1/04; A61N 1/05 (2023.01)

ADD. A61N 1/18 (2023.01)

CPC - INV. A61N 1/327; A61N 1/04; A61N 1/0524

ADD. A61N 1/18

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)

See Search History document

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

See Search History document

Electronic database consulted during the international search (name of database and, where practicable, search terms used)

See Search History document

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X — Y	US 2015/0289923 A1 (VIRGINIA TECH INTELLECTUAL PROPERTIES INC.) 15 October 2015; Abstract, paras [0005, 0008, 0009, 0011, 0032, 0046, 0058, 0060, 0065-0067, 0077], figures 2, 6	1-4, 6-16 — 5, 17
Y	CN 105682595 A (GYRUS ACMI INC) 15 June 2016; paras [0002, 0003], figures 1, 9	5, 17
A	US 2008/0200912 A1 (LONG) 21 August 2008; entire document	1-17
A	US 2006/0293731 A1 (RUBINSKY et al.) 28 December 2006; entire document	1-17

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

"D" document cited by the applicant in the international application

"E" earlier application or patent 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

28 June 2023 (28.06.2023)

Date of mailing of the international search report

SEP 11 2023

Name and mailing address of the ISA/

Mail Stop PCT, Attn: ISA/US, Commissioner for Patents

P.O. Box 1450, Alexandria, Virginia 22313-1450

Facsimile No. 571-273-8300

Authorized officer

Shane Thomas

Telephone No. PCT Helpdesk: 571-272-4300