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The Director

of the United States Patent and Trademark Office has received an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.

Therefore, this United States

Patent

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Katherine Kelly Vidal



DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE

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If the application for this patent was filed on or after June 8, 1995, the term of this patent begins on the date on which this patent issues and ends twenty years from the filing date of the application or, if the application contains a specific reference to an earlier filed application or applications under 35 U.S.C. 120, 121, 365(c), or 386(c), twenty years from the filing date of the earliest such application (“the twenty-year term”), subject to the payment of maintenance fees as provided by 35 U.S.C. 41(b), and any extension as provided by 35 U.S.C. 154(b) or 156 or any disclaimer under 35 U.S.C. 253.

If this application was filed prior to June 8, 1995, the term of this patent begins on the date on which this patent issues and ends on the later of seventeen years from the date of the grant of this patent or the twenty-year term set forth above for patents resulting from applications filed on or after June 8, 1995, subject to the payment of maintenance fees as provided by 35 U.S.C. 41(b) and any extension as provided by 35 U.S.C. 156 or any disclaimer under 35 U.S.C. 253.



US011638831B2

(12) **United States Patent**
Zamar

(10) **Patent No.:** **US 11,638,831 B2**
(45) **Date of Patent:** **May 2, 2023**

(54) **TREATMENT OF PSYCHIATRIC CONDITIONS SUCH AS RESISTANT DEPRESSION, BIPOLAR DISORDER AND/OR MAJOR DEPRESSIVE DISORDER VIA APPLICATION OF REPETITIVE TRANSCRANIAL MAGNETIC STIMULATION WITH THYROID HORMONE TREATMENT AND/OR QUETIAPINE**

(52) **U.S. Cl.**
CPC **A61N 2/002** (2013.01); **A61B 5/0245** (2013.01); **A61B 5/4848** (2013.01);
(Continued)

(58) **Field of Classification Search**
CPC **A61N 2/002**; **A61N 2/006**; **A61N 2/02**; **A61B 5/0245**; **A61B 5/4848**;
(Continued)

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(56) **References Cited**

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U.S. PATENT DOCUMENTS

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 286 days.

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(21) Appl. No.: **16/769,895**

Abraham, G., "Combined Transcranial Magnetic Stimulation and Right Unilateral Electroconvulsive Therapy in Patients With Treatment-Refractory Depression", Can J Psychiatry, vol. 49, No. 6, p. 412 (2004).

(22) PCT Filed: **Dec. 14, 2018**

(Continued)

(86) PCT No.: **PCT/GB2018/053634**

§ 371 (c)(1),
(2) Date: **Jun. 4, 2020**

Primary Examiner — Amanda K Hulbert

(87) PCT Pub. No.: **WO2019/116048**

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PCT Pub. Date: **Jun. 20, 2019**

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(65) **Prior Publication Data**

US 2020/0384279 A1 Dec. 10, 2020

(57) **ABSTRACT**

(30) **Foreign Application Priority Data**

Dec. 14, 2017 (GB) 1720816
Dec. 1, 2018 (GB) 1819647

The present invention relates to treatment of a psychiatric condition, for example resistant depression (RD), bipolar disorder (either threshold or sub-threshold) and/or major depressive disorder via application of repetitive transcranial magnetic stimulation with a drug treatment, in particular application of repetitive transcranial magnetic stimulation with treatment to modulate the activity of the neurones and induce neuroplasticity and the use of Thyroid hormone treatment to increase quantity or activity of thyroid hormones, for example for treatment of thyroid dysfunction.

(51) **Int. Cl.**
A61P 25/24 (2006.01)
A61N 2/00 (2006.01)
(Continued)

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