August 17, 2021

Brainsway Ltd.
Ahava Stein
Regulatory Consultant
A. Stein-Regulatort Affairs Consulting Ltd.
20 Hata'as Str., Suite 102
Kfar Saba 4442520 Israel

Re: K210201
Trade/Device Name: Deep Transcranial Magnetic Stimulation (DTMS) System
Regulation Number: 21 CFR 882.5805
Regulation Name: Repetitive transcranial magnetic stimulation system
Regulatory Class: Class II
Product Code: OBP
Dated: January 17, 2021
Received: January 25, 2021

Dear Ahava Stein:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. Although this letter refers to your product as a device, please be aware that some cleared products may instead be combination products. The 510(k) Premarket Notification Database located at https://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfpmn/pmn.cfm identifies combination product submissions. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration. Please note: CDRH does not evaluate information related to contract liability warranties. We remind you, however, that device labeling must be truthful and not misleading.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register.

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's

requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); medical device reporting (reporting of medical device-related adverse events) (21 CFR 803) for devices or postmarketing safety reporting (21 CFR 4, Subpart B) for combination products (see https://www.fda.gov/combination-products/guidance-regulatory-information/postmarketing-safety-reporting-combination-products); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820) for devices or current good manufacturing practices (21 CFR 4, Subpart A) for combination products; and, if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21 CFR Part 807.97). For questions regarding the reporting of adverse events under the MDR regulation (21 CFR Part 803), please go to https://www.fda.gov/medical-devices/medical-device-safety/medical-device-reporting-mdr-how-report-medical-device-problems.

For comprehensive regulatory information about medical devices and radiation-emitting products, including information about labeling regulations, please see Device Advice (https://www.fda.gov/medical-devices/device-advice-comprehensive-regulatory-assistance) and CDRH Learn (https://www.fda.gov/training-and-continuing-education/cdrh-learn). Additionally, you may contact the Division of Industry and Consumer Education (DICE) to ask a question about a specific regulatory topic. See the DICE website (https://www.fda.gov/medical-devices/device-advice-comprehensive-regulatory-assistance/contact-us-division-industry-and-consumer-education-dice) for more information or contact DICE by email (DICE@fda.hhs.gov) or phone (1-800-638-2041 or 301-796-7100).

Sincerely,

Pamela Scott
Assistant Director
DHT5B: Division of Neuromodulation
and Physical Medicine Devices
OHT5: Office of Neurological
and Physical Medicine Devices
Office of Product Evaluation and Quality
Center for Devices and Radiological Health

Enclosure

DEPARTMENT OF HEALTH AND HUMAN SERVICES
Food and Drug Administration

Indications for Use

Form Approved: OMB No. 0910-0120
Expiration Date: 06/30/2023
See PRA Statement below.

510(k) Number *(if known)*
K210201

Device Name
Brainsway Deep TMS System

Indications for Use *(Describe)*
The BrainsWay Deep TMS™ System is indicated for the treatment of depressive episodes and for decreasing anxiety symptoms for those who may exhibit comorbid anxiety symptoms in adult patients suffering from Major Depressive Disorder (MDD) and who failed to achieve satisfactory improvement from previous antidepressant medication treatment in the current episode.

Type of Use *(Select one or both, as applicable)*

☒ Prescription Use (Part 21 CFR 801 Subpart D) ☐ Over-The-Counter Use (21 CFR 801 Subpart C)

CONTINUE ON A SEPARATE PAGE IF NEEDED.

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510(K) SUMMARY

BRAINSWAY DEEP TMS™ SYSTEM

510(k) Number K210201

Applicant Name:
Company Name: BrainsWay Ltd
Address: BrainsWay Ltd.
19 Hartom St. (Bynet Bldg)
Har Hotzvim, Jerusalem, ISRAEL 9777518
Tel: +972-2-5813140
Fax: +972-2-5812517
E-mail: ahava@asteinrac.com

Contact Person:
Official Correspondent: Ahava Stein
Company Name: A. Stein – Regulatory Affairs Consulting Ltd.
Address: 18 Hata'as Str., Suite 102
Kfar Saba 4442520 Israel
Tel: + 972-9-7670002
Fax: +972-9-7668534
E-mail: ahava@asteinrac.com

Date Prepared: June 9, 2021

Trade Name: BrainsWay Deep TMS™ System

Classification Name: CFR Classification section 882.5805; (Product Code OBP)

Classification: Class II Medical Device

Predicate Device:

The subject device is a modification of the BrainsWay Deep TMS System ("predicate device") that was cleared in 510(k) document no. K122288 and the BrainsWay Deep TMS System cleared in K173540 ("reference device").

Predicate	Device	Manufacturer	510(k) No.
Main	BrainsWay Deep TMS System	BrainsWay Ltd.	K122288
Reference	BrainsWay Deep TMS System	BrainsWay Ltd.	K173540

Device Description:

The BrainsWay Deep TMS System enables direct non-invasive activation of deep brain structures. Transcranial magnetic stimulation (TMS) is a non-invasive technique used to apply brief magnetic pulses to the brain. The pulses are administered by passing high currents through an electromagnetic coil placed adjacent to a patient's scalp. The pulses induce an electric field in the underlying brain tissue. When the induced field is above a certain threshold, and is directed in an appropriate orientation relative to the brain's neuronal pathways, localized axonal depolarizations are produced, thus activating neurons in the targeted brain structure.

The BrainsWay Deep TMS System is composed of the following main components:

1. Cart
    a) TMS Neurostimulator
    b) Cooling System
    c) Positioning Device
2. Helmet
    a) Aiming Apparatus (i.e., ruler/grid)
    b) Electromagnetic Coil (H1-Coil)
    c) Cap

Intended Use/Indication for Use:

The BrainsWay Deep TMS™ System is indicated for the treatment of depressive episodes and for decreasing anxiety symptoms for those who may exhibit comorbid anxiety symptoms in adult patients suffering from Major Depressive Disorder (MDD) and who failed to achieve satisfactory improvement from previous antidepressant medication treatment in the current episode.

Performance Standards:

BrainsWay Deep TMS System complies with the following FDA recognized consensus standards:

- EC 60601-1 Medical Electrical Equipment - Part 1: General requirements for basic safety and essential performance (Ed 3.1, 2005 + CORR.1:2006 + CORR.2:2007 + A1:2012 AND 2006 + AC:2010 + A1:2013)
- IEC 60601-1-2 Medical Electrical Equipment - Part 1-2: General requirements for basic safety and essential performance - Collateral standard: Electromagnetic compatibility - Requirements and test (Ed 4 2014)
- IEC 62304 Medical Devices Software life-cycle processes (2006 + A1:2015)
- ISO 10993-5 Biological evaluation of medical devices - Part 5: Tests for in vitro cytotoxicity
- ISO 10993-10 Biological evaluation of medical devices - Part 10: Tests for irritation and delayed-type hypersensitivity
- ISO 14971 Medical devices - Application of risk management to medical devices

Non-Clinical (Bench) Performance Data:

Tests were conducted on the BrainsWay Deep TMS System. The tests were performed according to the FDA Guidance Document *Class II Special Controls Guidance Document: Repetitive Transcranial Magnetic Stimulation (rTMS) Systems*. These tests included Output Waveform, Electrical Field Spatial Distribution and Magnetic Field Strength Gradient Testing. Additional performance testing included electrical and mechanical safety testing, electromagnetic compatibility testing and software validation testing in compliance with FDA guidelines for software validation and IEC 62304 standard requirements. The results of the performance tests demonstrated that the BrainsWay Deep TMS System is substantially equivalent to the predicate device.

Animal Performance Data / Histology Data:

Not Applicable

Clinical Performance Data:

The clinical performance supporting the safety and effectiveness of the BrainsWay Deep TMS device for decreasing anxiety symptoms for those who may exhibit comorbid anxiety symptoms in adult patients suffering from Major Depressive Disorder (as described in the Indications for Use statement) was based on 3 Randomized Controlled Trials (RCTs) and supportive data from meta-analyses from 11 clinical studies (including the 3 RCTs and another 8 open label studies) using the BrainsWay Deep TMS device in 573 patients.

The Deep TMS vs. Sham between group (adjusted) effect size for the Multicenter MDD Study (Levkovitz 2015) was 0.34 and for the Kaster 2018 study was 0.36. The effect size for the RCT that used medication as SOC, Filipcic 2019, was 0.905. (See the table below). A meta-analysis of the three RCT studies, comparing the BrainsWay Deep TMS treatment to Sham or medication as standard of care treatment, demonstrated an overall, weighted pooled (between group, adjusted) effect size of 0.55 (Cohen's d), representing a medium effect size of the BrainsWay Deep TMS device for decreasing anxiety symptoms in this patient population, when compared to Sham or medication as standard of care.

The above effect sizes achieved with the BrainsWay Deep TMS device for decreasing anxiety symptoms, although based on the HDRS-21Anxiety-Somatization Factor score, may be compared to the effect size seen in the Multicenter MDD Study for all MDD subjects using the HDRS-21 score, where an effect size of 0.76 (adjusted difference between groups: -3.11±1.6, p value: 0.008) was reported. This effect size compares

favorably to the weighted effect sizes obtained in the above mentioned 3 RCTs which used Deep TMS, demonstrating a clinically significant decrease in anxiety symptoms in adult patients suffering from MDD (as described in the Indications for Use statement).
The supportive data included two meta-analyses published by Kezior et al (including 6 of the 11 studies) and by Hung et al (including 8 of the 11 studies) reporting a pooled weighted effect size of 1.45 (Cohen's d) and -1.282 (Hedges' g), respectively.

In summary, the gamut of clinical data with the BrainsWay Deep TMS device demonstrates an effect size that is consistent, robust and similar to that reported forMDD subjects in the Multicenter MDD Study.. Hence, the results are clinically meaningful for decreasing anxiety symptoms for those who may exhibit comorbid anxiety symptoms in adult patients suffering from Major Depressive Disorder who failed to achieve satisfactory improvement from previous anti-depressant medication treatment in the current episode.

Substantial Equivalence:

The modified device has the same intended use as the BrainsWay Deep TMS Systems cleared in 510(k) K122288 and K173540. The subject device has an expanded indication for use, to include decreasing anxiety symptoms for those who may exhibit comorbid anxiety symptoms in patients suffering from Major Depressive Disorder who failed to achieve satisfactory improvement from previous anti-depressant medication treatment in the current episode.

Both the modified device and the cleared BrainsWay Deep TMS System are similar in terms of their intended prescription use only, suitable for adult population, indicated for anatomical sites according to indications for use and to be used in hospital or clinic settings.

All components of the subject BrainsWay Deep TMS System are identical to the previously cleared, predicate devices and have the same mechanism of operation and use the same underlying technology. The performance characteristics, including the Electrical and Magnetic Field Distribution testing are the same as the previously cleared BrainsWay Deep TMS Systems (K122288 and K173540). Supportive clinical data has been provided to demonstrate the safety and effectiveness of the subject BrainsWay Deep TMS Systems for the expanded indications for use.

Conclusions:

Consequently, it can be concluded that the modified BrainsWay Deep TMS System is substantially equivalent to the main predicate BrainsWay Deep TMS System, cleared

under 510(k) K122288 and the reference predicate BrainsWay TMS System, cleared under 510(k) K173540. Therefore, the modified BrainsWay Deep TMS System can be legally marketed in the USA.

Study	Design	Population	Sample Size, Age	Tx Duration	Stimulation Protocol	Assessment	Effect size (Cohens d with lower / upper 95% limits)
Levkovitz 2015 Efficacy and safety of deep transcranial magnetic stimulation for major depression: a prospective multicenter randomized controlled trial Analysis provided in 510(k) K210201	RCT	Treatment Resistant Depression, DSM-IV	SS: DTMS: 89 Sham:92 Age: DTMS: 45.1±11.7 Sham: 47.6±11.6	4 weeks	18Hz, 120% MT, 20 mins, 1980 pulses/session, 20 sessions	Change in HDRS-21 A/S Factor Score from baseline at 5 weeks	*0.34 (0.009,0.667)* *HDRS A-S (PP):* *DTMS: Pre: 7.55±1.92* *Post: 4.25±2.88* *Diff: -3.18±2.79* *Adj Diff: -2.93+0.31(SE)* *Sham: Pre: 6.83±1.94* *Post: 4.62±2.7* *Diff: -2.05±2.50* *Adj Diff:-2.03+0.32(SE)* *Adjusted Diff btwn groups: -0.90±0.41* *P value: 0.0306*
Kaster 2018 Efficacy, tolerability, and cognitive effects of deep transcranial magnetic stimulation for late-life depression: a prospective randomized controlled trial	RCT	Treatment Resistant Depression, DSM-IV	SS: DTMS: 25 Sham: 27 Age: DTMS: 65.0 ± 5.5 Sham: 65.4 ± 5.5	4 weeks	18Hz, 120% MT, 61 mins, 6012 pulses/session, 20 sessions	Change in HDRS-21 A/S Factor Score from baseline at 5 weeks	0.36 (-0.23,0.95) *HDRS A-S (ITT):* *DTMS: Pre: 6.48±1.98* *Post: 3.65±2.70* *Diff: -2.75±3.04* *Adj Diff:-2.9+0.60(SE)* *Sham: Pre: 6.85±1.51* *Post: 4.85±2.78* *Diff:-2.0+2.62* *Adj Diff:-1.9+0.52(SE)* *Adjusted Diff btwn groups: -1.0±0.80(SE)* *P value: 0.2171*
Filipcic 2019 Efficacy of repetitive transcranial magnetic stimulation using a figure-8-coil or an H1-Coil in treatment of major depressive disorder; A randomized clinical trial	RCT	Treatment Resistant Depression, DSM-IV	SS: DTMS: 65 Med as SOC: 72 Age: DTMS: 50 + 2.7 MedSOC: 53 + 2.2	4 weeks	18Hz, 120% MT, 20 mins, 1980 pulses/session, 20 sessions	Change in HDRS-21 A/S Factor Score from baseline at 5 weeks	*0.90 (0.55,1.26)* *(DH1 vs DSOC)* *HDRS A-S (PP):* *DTMS: Pre: 5.35±2.20* *Post: 2.08±1.97* *Diff: -3.28±2.39* *Adj Diff:-3.41+0.27(SE)* *SOC: Pre: 5.79±2.71* *Post: 4.69±2.46* *Diff: -1.10±2.89* *Adj Diff:-0.96+0.26(SE)* *Adjusted Diff btwn groups: -2.46±0.37(SE)* *P value: <0.0001*