



Study Name: Pilot Study of the Felix System in Patients  
with Essential Tremor and Parkinson's Tremor

**CIP-1**

**Pilot Study of the Felix System in Patients with Essential Tremor and Parkinson's Tremor**

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Clinical Investigation Plan (CIP) Author of Current Version	[REDACTED]



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with Essential Tremor and Parkinson's Tremor

STUDY PRINCIPAL INVESTIGATOR  
SIGNATURE PAGE

I have read and agree to adhere to the clinical investigation plan and all regulatory requirements applicable in conducting this clinical investigation.

Study Co-Principal Investigator

Printed name:	
Signature:	
Date:	

Study Co-Principal Investigator

Printed name:	
Signature:	
Date:	

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## COMPLIANCE STATEMENT:

This clinical investigation will be conducted in accordance with this Clinical Investigation Plan, the Declaration of Helsinki and the applicable regulatory requirements (such as, 21 CFR Part 50, 21 CFR Part 56, 21 CFR Part 812, 21 CFR Part 54, and 21 CFR Part 11). The conduct of the clinical investigation will be approved by the appropriate Institutional Review Board (IRB) of the respective investigational site.

## 1.0 INTRODUCTION

This clinical investigation will be conducted in accordance with this CIP. All investigators involved in the conduct of the clinical investigation will be qualified by education, training, or experience to perform their tasks and this training will be documented appropriately.

### 1.1 Background and Rationale

#### 1.1.1 Background

Essential tremor (ET) is one of the most common movement disorders affecting approximately 7 million people in the United States<sup>1</sup>. ET is characterized by the presence of postural and kinetic tremor in the upper limbs in most patients, and less commonly in the head, lower limbs, voice, tongue, face, and trunk<sup>2</sup>. Tremor negatively impacts several domains of quality of life, from physical such as eating and drinking, to psychosocial such as personal relationships and depression, in a subset of ET patients<sup>3</sup>.

The mechanism producing tremor is unknown in ET but it is thought to arise from the oscillatory activity within a central tremor network, which involves the ventral intermediate nucleus of the thalamus (VIM)<sup>4,5</sup>. Growing evidence suggests that degeneration of Purkinje cells in the cerebellum is involved in the pathophysiology of the condition<sup>6</sup>. Propranolol and primidone are the medications used most frequently and successfully to treat ET, and propranolol is the only medication approved by the US Food and Drug Administration (FDA) for this indication. Unfortunately, 30-50% of patients will not respond to either propranolol or primidone<sup>7</sup>. Moreover, even in first-line drug responders, the reduction in tremor amplitude is only on the order of 50-60%<sup>8</sup>. Second-line medications for ET include topiramate, benzodiazepines, gabapentin, zonisamide, and pregabalin with variable patient responses<sup>2</sup>. For patients who do not respond to medications, current alternative options are invasive neurosurgical procedures, including VIM deep brain stimulation (DBS), or magnetic resonance-guided focused ultrasound (MRgFUS) VIM thalamotomy. These options, while effective for many, carry significant safety risks and expenses associated with invasive procedures<sup>9</sup>. Additionally, there are stringent selection criteria for these surgical approaches such that many patients will not qualify for either procedure.

<sup>1</sup> Louis ED, Ottman R, How Many People in the USA Have Essential Tremor? Deriving a Population Estimate Based on Epidemiologic Data, Tremor and Other Hyperkinetic Mov. 2014; 4.

<sup>2</sup> Zesewicz TA, et al., Practice Parameter: Therapies for essential tremor: report of the Quality Standards Subcommittee of the American Academy of Neurology, Neurology. 2005; 64(12):2008-2020.

<sup>3</sup> Louis ED, Machado DG, Tremor Related Quality of Life: A Comparison of Essential Tremor vs. Parkinson's Disease Patients, Parkinsonism Relat Disord. 2015; 21(7): 729-735.

<sup>4</sup> Hua SE, et al., Thalamocortical activity correlated with essential tremor, Journal of Neurology, Neurosurgery, and Psychiatry. 1998; 64(2):273-276.

<sup>5</sup> Hewgill B, et al., Tremor correlated corticocortical activity in essential tremor. Lancet. 2001; 357(9255):519-23.

<sup>6</sup> Louis ED, Essential Tremor: A Common Disorder of Purkinje Neurons? Neuroscientist. 2016; 22(2):108-118.

<sup>7</sup> Zesewicz TA, et al., Evidence-based guideline update: Treatment of essential tremor: Report of the Quality Standards Subcommittee of the American Academy of Neurology, Neurology. 2011; 77(19):1752-1755.

<sup>8</sup> Koerner WC, Royse VL, Efficacy of primidone in essential tremor, Neurology. 1986; 36:121-124.

<sup>9</sup> Isaacson SH, et al. Prospective Home use Study on Non-invasive Neuromodulation Therapy for Essential Tremor, Tremor and Other Hyperkinetic Movements. 2020; 10(1): 29, 1-16.

Previous research demonstrating that electrical stimulation of peripheral nerves at the wrist evokes activity within the VIM and other regions of the central tremor network led to the development of a non-invasive neuromodulation therapy called Transcutaneous Afferent Patterned Stimulation (TAPS)<sup>9 10 11</sup>. FDA cleared the first TAPS device in 2017, which applies bursts of non-invasive electrical stimulation alternating between the median and radial nerves at the wrist at a frequency tuned to ameliorate an individual patient's tremor<sup>9</sup>. Through a series of randomized and single-arm studies, TAPS has been shown to be a safe and effective symptomatic treatment for upper extremity postural and action tremor in ET<sup>9 12 13</sup>.

Parkinson's disease (PD) is the second most common neurodegenerative disease. Over 1 million Americans currently live with PD. Tremor is one of the most visible features of the disease, and rest tremor is often the first PD symptom noticed by patients<sup>14</sup>. In a study of 135 PD patients, 62% were classified as tremor-dominant PD<sup>15</sup>. Similar to ET, impact on several aspects of quality of life were reported by a large proportion of PD patients<sup>3</sup>.

Parkinson's tremor is poorly understood but may also be due to a network dysfunction involving the cerebellum<sup>16</sup>. Levodopa is generally regarded as the most effective treatment for PD, yet many patients have levodopa-resistant tremor (39% in one study<sup>17</sup>). For those patients with levodopa resistant tremor, DBS or high-intensity focused ultrasound (HIFU) can provide excellent tremor control. However, side effects are possible with both procedures, and stringent selection criteria leave many patients with disabling tremor without a surgical option. As a result, disability from tremor remains a source of concern for PD patients<sup>14</sup>.

A study of 40 PD patients has shown promising evidence that TAPS may reduce Parkinson's tremor. Between 38% and 70% of patients with postural, kinetic, or rest tremor improved by at least 1 point in a task assessing tremor. Overall, 81% of patients reported improvement after TAPS therapy<sup>18</sup>.

### 1.1.2 Rationale for Conducting this Clinical Investigation

<sup>10</sup> Hanajima R, et al. Somatosensory evoked potentials (SEPs) recorded from deep brain stimulation (DBS) electrodes in the thalamus and subthalamic nucleus (STN). *Clin Neurophysiol*. 2004; 115: 424-434.

<sup>11</sup> Kostermann F, et al. Thalamocortical processing of near threshold somatosensory stimuli in humans. *Eur J Neurosci*. 2009; 30: 1815-1822.

<sup>12</sup> Lin PT, et al. Noninvasive neuromodulation in essential tremor demonstrates reduction in a sham-controlled pilot trial. *Mov Disord*. 2018; 33(7):1182-1183.

<sup>13</sup> Pahwa R, et al. An Acute Randomized Controlled Trial of Noninvasive Peripheral Nerve Stimulation in Essential Tremor. *Neuromodulation*. 2019; 22(5): 537-545.

<sup>14</sup> Heusinkveld LE, et al. Impact of Tremor on Patients with Early Stage Parkinson's Disease. *Front. Neurosci*. 2018; 9:628.

<sup>15</sup> Llanos TH, et al. Tremor Dominant in Parkinson Disease: The Relevance to Iron Metabolism and Inflammation. *Front. Neurosci*. 2019; 13:255.

<sup>16</sup> Brittan JS, et al. Disruption of the central drive to tremor in Parkinson's disease and essential tremor. *J Neurosci*. 2015 Jan 14;35(2):795-806.

<sup>17</sup> Zach H, et al. Dopamine responsive and dopamine resistant resting tremor in Parkinson's disease. *Neurology*. 2020; 95:e1461-e1470.

<sup>18</sup> Bruman S, et al. Transcutaneous Afferent Patterned Stimulation Provokes Upper Limb Motor Symptom Reduction in Patients with Parkinson's Disease (P711.006). *Neurology*. 2022, 98 (18 Suppl.) 361.



This pilot study will evaluate the safety and effectiveness of the Felix system in both clinical disorders.

## 2.0 CLINICAL INVESTIGATION OVERVIEW

### 2.1 Clinical Investigation Objective

The objective of this clinical investigation is to evaluate the safety and effectiveness of the Felix device to aid in the relief of upper limb tremor in adults with ET and PD.

### 2.2 Device(s) Used in the Clinical Investigation

#### 2.2.1 Name of the Device(s) Under Investigation

Device name	Model/Type	Serial/Lot Controlled	Manufacturer	Region/Country	Investigational or Market Released
Felix			Fasikl Inc	US	Investigational

#### 2.2.2 Indication for Use

The Felix system is indicated to aid in the relief of upper limb tremors in the treated upper limb(s) following stimulation in adults with ET and PD.

#### 2.2.3 Description of the Device(s) Under Investigation

Felix is a wrist-worn, noninvasive, transcutaneous neurostimulation system. It is intended to be used by adult patients with ET or PD daily to suppress hand tremors. The device also continuously monitors tremor. The Felix system consists of the following components: Felix watch, watch band (detachable), connector band (detachable), electrode band (disposable), wireless charger, and smartphone app. Figure 1 below provides schematics of the Felix system.

The Felix watch contains all the stimulator circuitry, sensors, Bluetooth communication, and battery. The Felix watch has three side pushbuttons for simple controls such as on/off or adjusting stimulation amplitude. Other controls are carried out through the mobile device app. Stimulation can be either manually adjusted or automatically controlled by the Felix watch throughout the day with the goal being to minimize tremor. Patients will have the ability to overwrite the automatic stimulation control at any time.

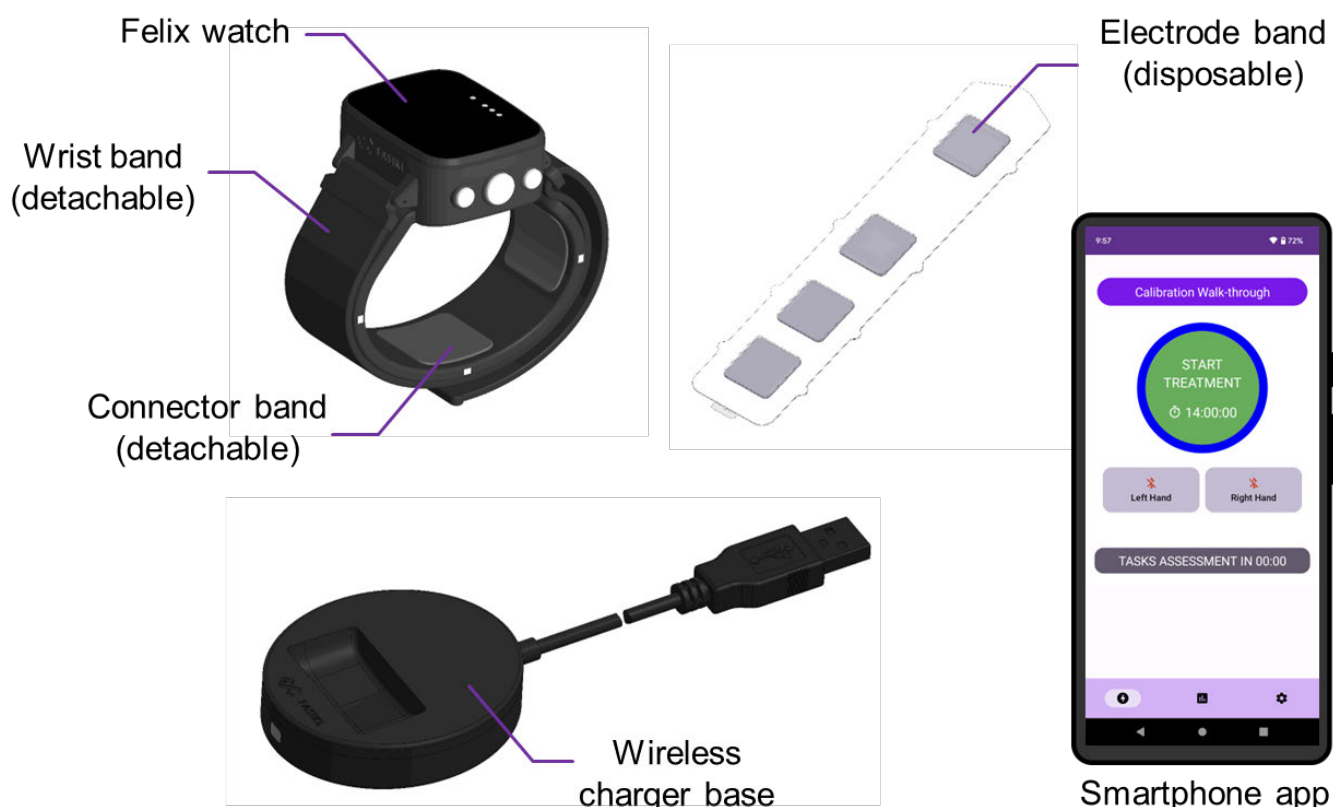
The user will be fitted with a connector band and an electrode band from several available sizes, depending on their wrist's surface anatomy. The user will be trained to locate their peripheral nerves on the wrist in order to apply the electrode band at the appropriate location. The electrode band sticks to the wrist and provides a direct interface with the user's peripheral nerves. The electrode band is for single use and should be replaced daily. The connector band magnetically snaps into the watch's back. It provides electrical connections between the watch and electrode band. The user secures the watch around their wrist with the watch band.



The charger can be used with any standard USB 2.0 port with at least a 5V/1A power rating. An AC adapter is provided separately. The watch can be charged by placing it sideways (the side without buttons) onto the wireless charger base.

The smartphone app has full control over the watch, including starting/stopping stimulation, selecting stimulation parameters, and changing stimulation mode. It connects to the Felix watch via Bluetooth. Real-time sensor data are streamed from the Felix watch to the app via Bluetooth. The app can communicate with a secure cloud database to store inertial measurement unit (IMU) data and to receive system updates.

**Figure 1. The Felix system**



## 2.2.4 Device Labels and Handling

All current labeling and Instructions for Use (IFU) will be sent under a separate cover to clinical sites.

The Sponsor requires clinical sites to store all investigational products according to the labeling and IFU in a secure area to prevent unauthorized access or use.

## 3.0 CLINICAL INVESTIGATION DESIGN

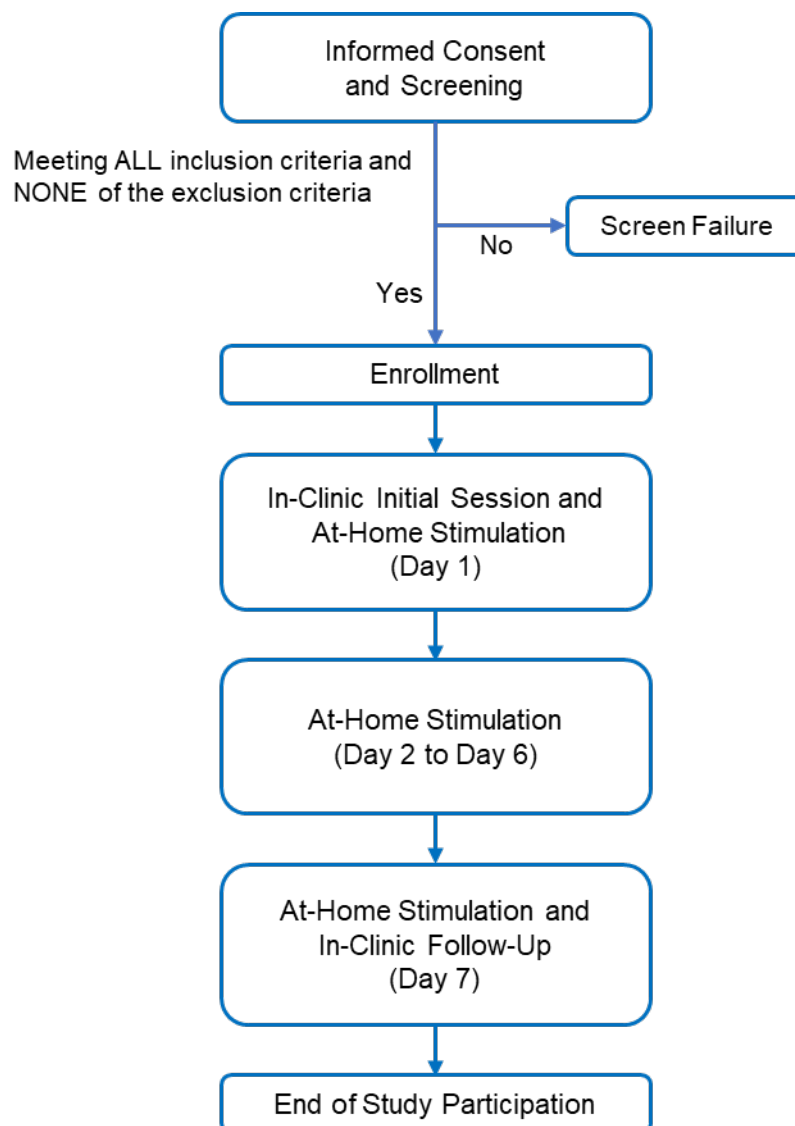
This is a prospective, open-label, multi-center pilot study designed to evaluate the safety and effectiveness of the Felix device. Approximately 35 subjects will be enrolled in this clinical investigation. The clinical investigation will be conducted at two clinical sites in the US. Subjects participating in this

clinical investigation will be followed for 7 days (+3 days to allow for flexibility in scheduling the last-day visit). The expected duration of enrollment is 3.5 months. The total duration of the clinical investigation is expected to be 4 months.

### 3.1 Clinical Investigation Procedures and Follow-up Schedule

The flowchart and the follow-up requirements of this clinical investigation are described below.

**Figure 2: Clinical Investigation Flowchart**



Clinical sites will follow subjects until the last subject completes their 7-day visit. Clinical investigation visits will occur at Day 1 and Day 7.

### 3.2 Suspension or Early Termination of the Clinical Investigation

While no formal statistical rule for early termination of the clinical investigation for insufficient effectiveness of the device under investigation is defined, the Sponsor reserves the right to discontinue the clinical investigation at any time or reduce the follow-up period with suitable written notice to the investigator. Possible reason(s) may include, but are not limited to:

- Unanticipated serious adverse device effect (USADE) occurs and it presents an unreasonable risk to the participating subjects
- Further product development is cancelled

Should the Sponsor discontinue the clinical investigation, sites will follow subjects per routine hospital practice with device-related AEs reported to the Sponsor as per vigilance reporting requirements. The investigator shall return all clinical investigation materials (including devices) to the Sponsor and provide a written statement to the IRB (if applicable). All applicable clinical investigation documents shall be subject to the same retention policy as detailed in Section 11.5 of the CIP.

If suspension or premature termination occurs, the Sponsor will remain responsible for providing resources to fulfill the obligations created by the CIP and existing agreements for following the subjects enrolled in the clinical investigation, and the Principal Investigator or authorized designee will promptly inform the enrolled subjects at his/her site, as indicated.

A Principal Investigator, IRB, or regulatory authority may also suspend or prematurely terminate participation in the clinical investigation at the investigational site(s) for which they are responsible. The investigators will follow the requirements specified in the Clinical Trial Agreement.

## 4.0 ENDPOINTS

### 4.1 Effectiveness Endpoints

Physician-rated assessments (in-office):

- Tremor Research Group Essential Tremor Rating Assessment Scale (TETRAS) Performance Subscale<sup>19</sup>
  - Forward outstretched posture
  - Lateral “wing beating” posture
  - Finger-nose-finger
  - Archimedes spiral drawing
  - Handwriting
  - Dot approximation
- For subjects with PD only: Movement Disorder Society Unified Parkinson's Disease Rating Scale (MDS-UPDRS)<sup>20</sup> Part III. Motor Examination, with the following items being the primary assessments and the rest of Part III being secondary assessments:
  - Postural tremor of the hands
  - Kinetic tremor of the hands

<sup>19</sup> Elber, et al., Reliability of a new scale for essential tremor, *Movement Disorders*. 2012; 27(12):1567-1569.

<sup>20</sup> Goetz CG, et al., Movement Disorder Society Sponsored Revision of the Unified Parkinson's Disease Rating Scale (MDS-UPDRS): Scale Presentation and Core Motor Test Results, *Movement Disorders*. 2008; 23(15):2129-2170.

- Rest tremor amplitude (sitting with hands in lap, palms down, elbows resting quietly at sides, reciting the months of the year backwards)
  - Constancy of rest tremor
  - Clinical Global Impression of Severity (CGI-S)
  - Clinical Global Impression of Improvement (CGI-I)
- Subject-rated assessments (in-office and at-home):
- TETRAS Activities of Daily Living (ADL) Subscale<sup>19</sup>
    - Speaking
    - Feeding with a spoon
    - Drinking from a glass
    - Hygiene
    - Dressing
    - Pouring
    - Carrying food trays, plates or similar items
    - Using keys
    - Writing
    - Working
    - Overall disability with the most affected task
    - Social impact
  - Patient Global Impression of Severity (PGI-S)
  - Patient Global Impression of Improvement (PGI-I)
  - Survey of satisfaction and durability of effect (i.e., how long tremor relieve lasts after stimulation)
- Device-measured tremor power, tremor amplitude, and tremor frequency (in-office and at-home)
- Improvement/trend of assessments above

## 4.2 Safety Endpoints

Device and therapy-related adverse events

## 5.0 SUBJECT SELECTION AND WITHDRAWAL

### 5.1 Subject Population

This clinical investigation will enroll adult subjects (at least 18 years of age) of all genders who have experienced either predominant action tremor or predominant rest tremor in their upper extremity and who have a clinical diagnosis of either ET or PD.

### 5.2 Subject Recruitment/Screening and Informed Consent

#### 5.2.1 Subject Recruitment and Screening

A member of the site's clinical investigation team previously trained to the CIP must evaluate patients for the clinical investigation eligibility criteria. Sites will enter these patients into the screening log. A patient

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who does not satisfy all eligibility criteria prior to informed consent is considered a screen failure and should not be enrolled in the clinical investigation.

Sites will ask patients meeting all inclusion criteria and no exclusion criteria to sign an Informed Consent form following the established Informed Consent process described in Section 5.2.2 if they wish to participate in the clinical investigation. Sites will enter these patients into the recruitment/screening log.

## 5.2.2 Informed Consent

The Investigator or his/her authorized designee (if applicable) will conduct the Informed Consent process, as required by applicable regulations and the center's IRB. This process will include a verbal discussion with the patient on all aspects of the clinical investigation that are relevant to the patient's decision to participate, such as details of clinical investigation procedures, anticipated benefits, and potential risks of clinical investigation participation. Sites must inform patients about their right to withdraw from the clinical investigation at any time and for any reason without sanction, penalty, or loss of benefits to which the patient is otherwise entitled. Withdrawal from the clinical investigation will not jeopardize their future medical care or relationship with the investigator.

During the discussion, the Principal Investigator or his/her authorized designee will avoid any improper influence on the patient and will respect patient's legal rights. Financial incentives will not be given to patients. Patients may be compensated for time and travel directly related to the participation in the clinical investigation. The site shall provide the patient with the Informed Consent form written in a language that is understandable to the patient and that has been approved by the center's IRB. The patient shall have adequate time to review, ask questions, and consider participation. The Principal Investigator or his/her authorized designee will make efforts to ensure that the patient understands the information provided. If the patient agrees to participate, they must sign and date the Informed Consent form, along with the person obtaining the consent prior to any clinical investigation-specific procedures. The site will file the signed original in the patient's hospital or research charts, and provide a copy to the patient.

Sites should report any failure to obtain informed consent from an enrolled patient to the Sponsor within 5 working days and to the reviewing center's IRB according to the IRB's reporting requirements.

If, during the clinical investigation, new information becomes available that can significantly affect a subject's future health and medical care, the Principal Investigator or his/her authorized designee (if applicable) will provide this information to the subject. If relevant, sites will ask the subject to confirm their continuing informed consent in writing.

A template informed consent form (ICF) will be provided under a separate cover. Refer to the ICF and CIP procedure for guidance on managing the content.

### 5.2.2.1 Special Circumstances for Informed Consent

This clinical investigation excludes the following individuals from participation:

- Individuals unable to make the decision to participate in a clinical investigation on their own or who are unable to fully understand all aspects of the investigation that are relevant to the decision to participate, or who could be manipulated or unduly influenced as a result of a compromised position, expectation of benefits or fear of retaliatory response.
- Individuals under the age of 18 or age of legal consent from the clinical investigation population.
- Individuals unable to read or write.
- Pregnant or breastfeeding women.

In addition, sites must obtain an authorization for use and disclosure of the subject's protected health information, in accordance with the Health Insurance Portability and Accountability Act (HIPAA), from the subject.

### 5.3 Eligibility Criteria

Assessment for eligibility criteria is based on medical records of the site and interview with a candidate patient. Patients must meet ALL inclusion criteria and NONE of the exclusion criteria to participate in the clinical investigation, otherwise the patient is excluded from the clinical investigation and cannot be enrolled (screen failure).

#### 5.3.1 Inclusion Criteria

1. At least 18 years of age.
2. Willing to provide written, informed consent to participate in the study.
3. For subjects with ET:
  - a. A clinical diagnosis of ET.
  - b. For either upper limb, a tremor severity score of 2 or higher as measured by one of the TETRAS items and a total score of 7 or higher across all TETRAS tasks:
    - i. Forward outstretched posture
    - ii. Lateral "wing beating" posture
    - iii. Finger-nose-finger
    - iv. Archimedes spiral drawing
    - v. Handwriting
    - vi. Dot approximation
4. For subjects with PD:
  - a. A clinical diagnosis of PD (MDS-PD criteria).
  - b. A tremor score of 2 or higher on MDS-UPDRS question 3.15 (postural tremor) or 3.16 (kinetic tremor), OR
  - c. A rest tremor score of 2 or higher on MDS-UPDRS question 3.17 (rest tremor amplitude) in one upper extremity and a score of 2 or higher on MDS-UPDRS question 3.18 (constancy of tremor).
5. Stable dosage of any medication, if applicable, for 30 days prior to study entry.
6. Familiar with operating a touch-screen smartphone and connecting to Wi-Fi internet at home.
7. If necessary, have a dedicated caregiver to help with study required activities, such as putting on the study device, etc.
8. Willing to comply with study protocol requirements including:
  - a. Remaining on a stable dosage of current medications, if applicable, during the course of the study.
  - b. Remaining on stable caffeine consumption, if applicable, during the course of the study.
  - c. No alcohol consumption on the day before a study visit.

#### 5.3.2 Exclusion Criteria

1. Prior limb amputation or any known symptomatic peripheral neuropathy condition of the involved upper extremity.
2. Any current drug or alcohol abuse.
3. Current unstable epileptic conditions with a seizure within 6 months of study entry.
4. Pregnant or nursing subjects and those who plan pregnancy during the course of the study.
5. Swollen, infected, inflamed areas, or skin eruptions, open wounds, or cancerous lesions of skin at the stimulation site.
6. Known allergy to adhesives.
7. History of Alzheimer's disease or dementia (Montreal Cognitive Assessment (MoCA)  $\leq 19$ <sup>21</sup>).
8. Botulinum Toxin injection for hand tremor within 4 months prior to study enrollment.
9. Subject is currently participating or has participated in another interventional clinical trial in the last 30 days which may confound the results of this study, unless approved by the Sponsor.
10. Subject is unable to communicate with the investigator and staff.
11. Any health condition that in the investigator's opinion should preclude participation in this study.

## 5.4 Subject Enrollment

Subject will be enrolled into the study after the following:

- Signed informed consent
- Meeting ALL inclusion criteria
- Meeting NONE of the exclusion criteria

## 5.5 Subject Withdrawal and Discontinuation

Each subject meeting all general and screening eligibility criteria shall remain in the clinical investigation until completion of the required follow-up period; however, a subject's participation in any clinical investigation is voluntary and the subject has the right to withdraw at any time without penalty or loss of benefit. Conceivable reasons for discontinuation may include, but not be limited to, the following:

- Subject death
- Subject voluntary withdrawal
- Investigator withdrawing the subject from the study

Sites must notify the Sponsor of the reason(s) for subject discontinuation. Investigators must also report this to their respective IRB as defined by their institution's procedure(s).

No additional follow-up is required nor will data be recorded from subjects once withdrawn from the clinical investigation, except for their status as deceased or alive.

However, if a subject withdraws from the investigation due to problems related to the safety or performance of the device under investigation, the investigator shall ask for the subject's permission to follow his/her status/condition outside of the clinical investigation.

<sup>21</sup> Tan JP, et al., Optimal cutoff scores for dementia and mild cognitive impairment of the Montreal Cognitive Assessment among elderly and oldest old Chinese population, J Alzheimers Dis. 2015; 43(4):1403-12.



## 5.6 Number of Subjects

The clinical investigation will enroll approximately 35 subjects, including approximately 10 subjects with PD and approximately 5 subjects with deep brain stimulator (DBS) or high-intensity focused ultrasound (HIFU). The sponsor may impose enrollment cap(s) on subpopulation(s) to ensure balanced distribution of patient characteristics.

## 5.7 Total Expected Duration of the Clinical Investigation

The expected duration of enrollment is 4 months. The expected duration of each subject's participation is 7 days, including the scheduled visits on day 1 and day 7 and data collection for this clinical investigation that will occur for approximately 7 days. Subjects will exit the trial at the end of their 7-day follow-up visit (+3 days to allow for flexibility in scheduling the last-day visit). Therefore, the total duration of the clinical investigation is expected to last 4 months, consisting of approximately 3.5 months of enrollment plus 7 days of follow-up.

## 6.0 TREATMENT AND EVALUATION OF ENDPOINTS

The Felix device will continuously collect data from the patient including tremor amplitude, tremor frequency, and tremor power while the device is powered on (regardless of whether stimulation is turned on).

### 6.1 Baseline In-Clinic Visit (Day 1)

#### 6.1.1 Pre-Stimulation Assessments

1. Subject demographics: age, sex, race, ethnicity
2. Subject medical history: ET onset/diagnosis, family history of ET, ET treatment(s), sensitivity of tremor to alcohol and caffeine
3. Physical exams: height, weight, body mass index (BMI)
4. Wear the Felix device (without the connector band and the electrode band) and turn the power on but without the stimulation turned on, so that the device sensor can record tremor data during the assessments below.
5. Physician-rated assessments (while wearing the Felix device that's powered on but without the stimulation turned on):
  - a. Tremor Research Group Essential Tremor Rating Assessment Scale (TETRAS) Performance Subscale
    - i. Forward outstretched posture
    - ii. Lateral "wing beating" posture
    - iii. Finger-nose-finger
    - iv. Archimedes spiral drawing
    - v. Handwriting
    - vi. Dot approximation
  - b. For subjects with PD only: Movement Disorder Society Unified Parkinson's Disease Rating Scale (MDS-UPDRS) Part III
  - c. Clinical Global Impression of Severity (CGI-S)

6. Subject-rated assessments (while wearing the Felix device that's powered on but without the stimulation turned on):
  - a. TETRAS ADL Subscale
    - i. Speaking
    - ii. Feeding with a spoon
    - iii. Drinking from a glass
    - iv. Hygiene
    - v. Dressing
    - vi. Pouring
    - vii. Carrying food trays, plates or similar items
    - viii. Using keys
    - ix. Writing
    - x. Working
    - xi. Overall disability with the most affected task
    - xii. Social impact
  - b. For subjects with PD only: Modified MDS-UPDRS question 2.10
    - i. At the moment, do you have shaking or tremor?
      - 0: Normal: Not at all. I have no shaking or tremor.
      - 1: Slight: Shaking or tremor occurs but would not cause problems with any activities
      - 2: Mild: Shaking or tremor would cause problems with only a few activities
      - 3: Moderate: Shaking or tremor would cause problems with many of my daily activities
      - 4: Severe: Shaking or tremor would cause problems with most or all activities.
  - c. Patient Global Impression of Severity (PGI-S)
7. Device fitting and calibration (after performing all the assessments above):
  - a. Subject will be fitted with a connector band and an electrode band based on the location of their peripheral nerves (radial, median, and ulnar nerves) measured according to the instruction provided under a separate cover.
  - b. Wash the wrist area with soap and pat dry.
  - c. Put on the electrode band and the Felix device (with the connector band attached),
  - d. Device fitting will be checked by stimulating individual nerves and confirming the corresponding radiating sensations according to the instructions provided under a separate cover. If needed, select a different sized electrode band and repeat the confirmation step until all three nerves (radial, median, and ulnar nerves) can be properly stimulated.
  - e. Identify the maximum level of stimulation intensity that causes no discomfort or muscle contraction, and the minimum level of stimulation intensity below which the subject cannot feel the stimulation.

### 6.1.2 Initial Stimulation Session (40 minutes)

Stimulation will be turned on and the initial stimulation session Stimulation will last for 40 minutes. Stimulation intensity will be set at the maximum comfortable level identified in Step 7 in Section 6.1.1. Patient can adjust the intensity as needed.

Stimulation will be turned off after 40 minutes. Device will remain powered on.

### 6.1.3 Post Initial Stimulation Assessments

Immediately after the initial stimulation session of 40 minutes, the following will be assessed (while wearing the Felix device that's powered on but with the stimulation turned off):

- Physician-rated assessments:
  - Tremor Research Group Essential Tremor Rating Assessment Scale (TETRAS) Performance Subscale, as detailed in Section 6.1.1
  - For subjects with PD only: Movement Disorder Society Unified Parkinson's Disease Rating Scale (MDS-UPDRS) Part III
  - Clinical Global Impression of Severity (CGI-S)
  - Clinical Global Impression of Improvement (CGI-I)
- Subject-rated assessments:
  - ~~TETRAS ADL Subscale as detailed in Section 6.1.1~~
  - For subjects with PD only: Modified MDS-UPDRS question 2.10 as detailed in Section 6.1.1
  - Patient Global Impression of Severity (PGI-S)
  - Patient Global Impression of Improvement (PGI-I)

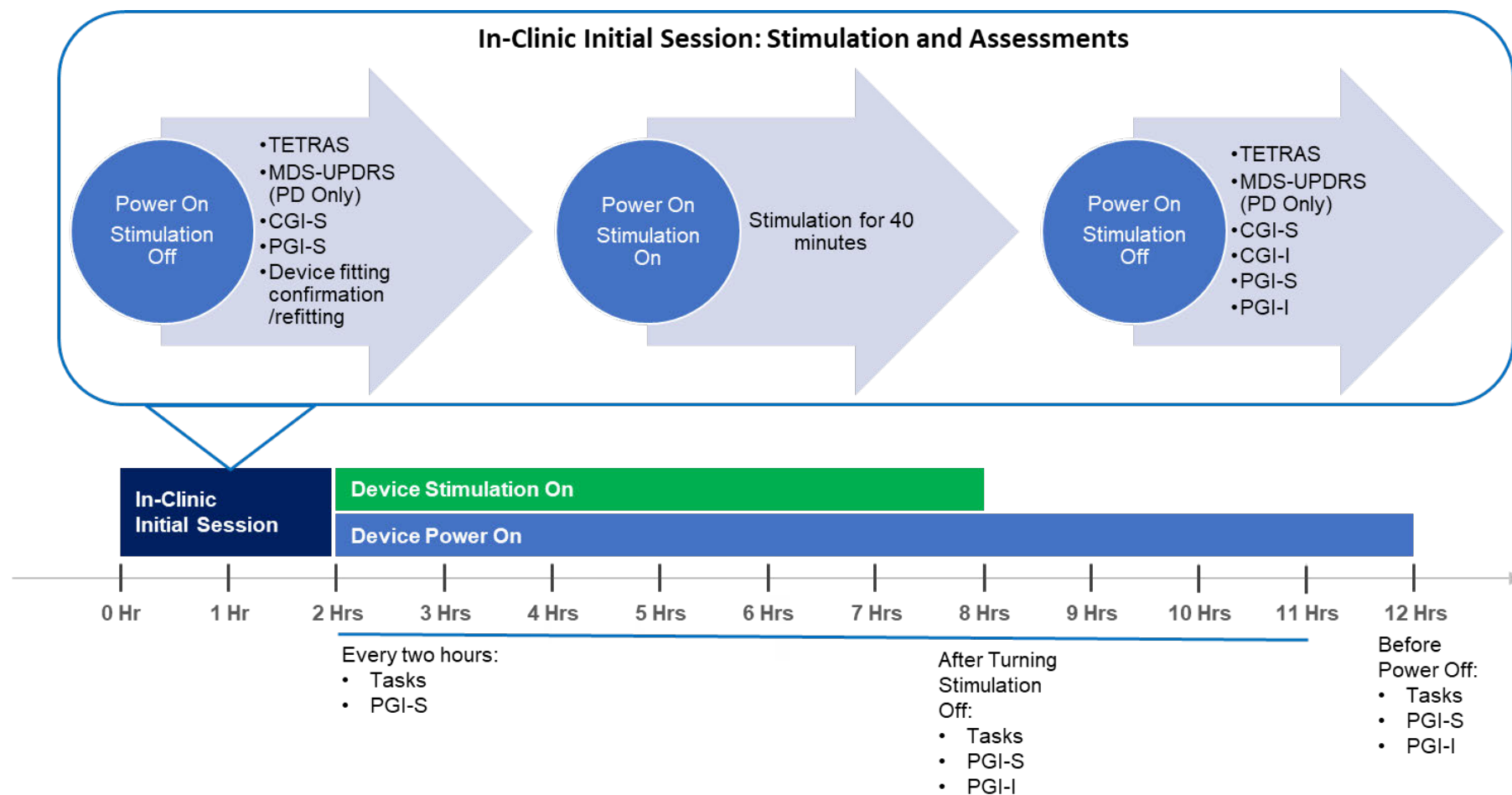
### 6.1.4 Post Initial In-Clinic Visit

After the assessments listed in Section 6.1.3 have been completed, subject will be trained on how to use the device and complete tasks at home (by completing a set of at-home tasks for demonstration purpose). Subject will be discharged with automatic stimulation turned on. After discharge, to the extent possible, subject will continue to wear the device until the end of the day (when the device has to be taken off). The device, while being worn, should always be powered on. Stimulation should be kept on for up to 6 hours. To the extent possible, subjects are required to stay in close proximity to the provided smartphone at all times to ensure data transmission. Subject will perform the following tasks at home:

- Forward and lateral posture hold for 20 seconds and spiral drawing, and PGI-S (every 2 hours)
- For subjects with PD only: sitting with hands in lap, palms down, elbows resting quietly at sides, reciting the months of the year backwards, after which subjects will answer modified MDS-UPDRS question 2.10 as detailed in Section 6.1.1 and PGI-S (every 2 hours)
- PGI-I (right after stimulation, at the end of the day)

Figure 3 below provides an overview of the study workflow on Day 1 (detailed hours are for illustration purpose).

**Figure 3. Day 1 Study Workflow**



## 6.2 At-Home Treatment (Day 2 to Day 7)

### 6.2.1 Treatment Procedures

From Day 2 to Day 7, to the extent possible, subjects will wear the Felix device continuously for up to 14 hours. The device, while being worn, should always be powered on. Automatic stimulation should be turned on at the beginning of the day and last up to 10 hours. To the extent possible, subjects are required to stay in close proximity to the provided smartphone at all times to ensure data transmission. Subjects have the ability to overwrite the automatic stimulation control at any time.

### 6.2.2 At-Home Assessments (Subject-Rated)

- Forward and lateral posture hold for 20 seconds and spiral drawing, and PGI-S (every 2 hours)
- For subjects with PD only: sitting with hands in lap, palms down, elbows resting quietly at sides, reciting the months of the year backwards, after which subjects will answer modified MDS-UPDRS question 2.10 as detailed in Section 6.1.1 and PGI-S (every 2 hours)
- PGI-I (right after stimulation, at the end of the day)
- Survey of satisfaction and durability of effect about the previous day (i.e., how long tremor relieve lasts after stimulation) (at the beginning of the day)

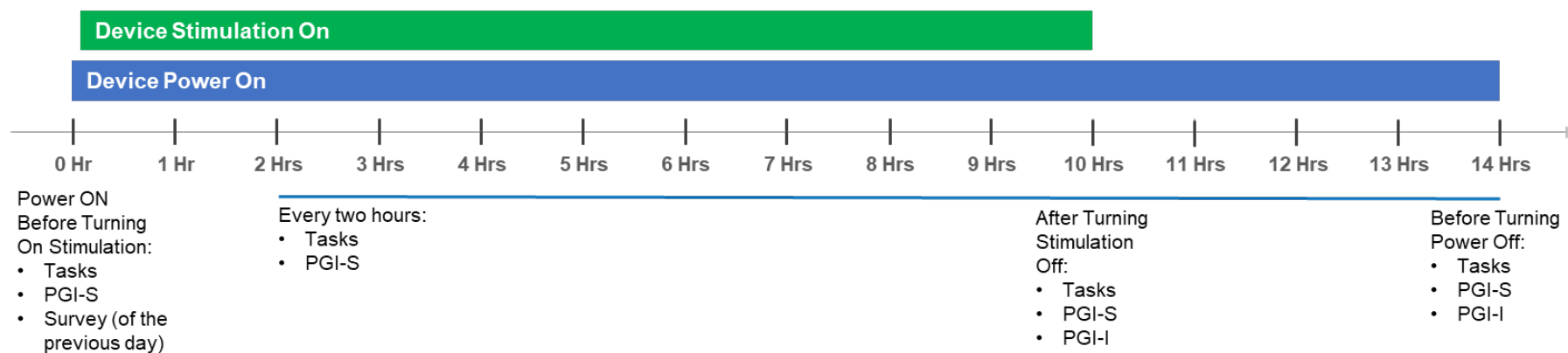
### 6.2.3 Virtual/In-Office Visit

It is strongly recommended that this visit be scheduled for the morning.

On Day 2, there will be a virtual/in-office visit by the study coordinator to answer any potential questions from the patient and ensure the patient can successfully apply the study device and follow study requirements. Additional virtual/in-office visit can be arranged between Day 3 and Day 6 if needed.

Figure 4 below provides a summary of at-home treatment and assessments based on an illustrative schedule.

**Figure 4. At Home Stimulation and Assessments (Day 2 to Day 7)**



### 6.3 Follow-up In-clinic Visit (Day 7)

It is strongly recommended that this visit be scheduled for the afternoon. There is a +3 days window to allow for flexibility in scheduling for this visit.

During the follow-up in-clinic visit, the following will be assessed (while wearing the Felix device that's powered on with stimulation on):

- Physician-rated assessments:
  - Tremor Research Group Essential Tremor Rating Assessment Scale (TETRAS) Performance Subscale, as detailed in Section 6.1.1
  - For subjects with PD only: Movement Disorder Society Unified Parkinson's Disease Rating Scale (MDS-UPDRS) Part III
  - Clinical Global Impression of Severity (CGI-S)
  - Clinical Global Impression of Improvement (CGI-I)
- Subject-rated assessments:
  - TETRAS ADL Subscale as detailed in Section 6.1.1
  - For subjects with PD only: Modified MDS-UPDRS question 2.10 as detailed in Section 6.1.1
  - Patient Global Impression of Severity (PGI-S)
  - Patient Global Impression of Improvement (PGI-I)
  - Survey of experience with the study device

All study devices will be returned by the patient at the end of this visit.



## 6.4 Schedule of Events

CIP Activity	Day 1 (In-clinic)	Day 1 to Day 7 (At home)	Day 7 (In-clinic)
Informed Consent Process	X		
Demograph cs	X		
Phys ca Exam nat on	X		
Med ca H story	X		
Med cat on	X		
Dev ce F tt ng/Programm ng	X		
TETRAS Performance Subsca e	X		X
MDS-UPDRS (PD On y)	X		X
CGI-S	X		X
CGI-I	X		X
TETRAS ADL Subsca e	X		X
PGI-S	X	X	X
PGI-I	X	X	X
Tremor Power/Frequency/Amp tude	X	X	X
Survey		X	X
Adverse Event	X	X	X
Dev at on	X		X
Dev ce Def c ency	X	X	X
W thdrawa	X	X	X

## 7.0 Adverse Events

To comply with worldwide standards and guidelines on clinical investigation adverse event reporting, the Sponsor has adopted uniform and worldwide applicable standard definitions and reporting timelines to be used and adhered to by the investigators.

### 7.1 Definition

#### 7.1.1 Adverse Event

An adverse event (AE) is any untoward medical occurrence, unintended disease or injury, or untoward clinical signs (including abnormal laboratory findings) in subjects, users or other persons, whether or not related to the medical device under investigation.

As part of ISO14155 Section 3.2, the Adverse Event definition has the following notes:

**Note 1:** This definition includes events related to the medical device under investigation or the comparator.

**Note 2:** This definition includes events related to the procedures involved.

**Note 3:** For users or other persons, this definition is restricted to events related to medical devices under investigation.

#### 7.1.2 Serious Adverse Event

If the AE meets any of the criteria below, it is regarded as a serious adverse event (SAE).

- a) Led to a death,
- b) Led to a serious deterioration in health of the subject, that either resulted in
  1. a life-threatening illness or injury, or
  2. a permanent impairment of a body structure or a body function, or
  3. in-patient hospitalization or prolongation of existing hospitalization, or
  4. medical or surgical intervention to prevent life threatening illness or injury or permanent impairment to a body structure or a body function.
  5. chronic disease
- c) Led to fetal distress, fetal death or a congenital abnormality or birth defect.

**Note:** A planned hospitalization for a pre-existing condition, or a procedure required by the CIP without a serious deterioration in health, is not considered to be an SAE.

#### 7.1.3 Device Deficiency/Device Malfunction

Device deficiency is defined as an inadequacy of a medical device related to its identity, quality, durability, reliability, safety or performance, such as malfunction, misuse or use error and inadequate labeling. This includes the failure of the device to meet its performance specifications or otherwise perform as intended. Note: performance specifications include all claims made in the labeling of the device.

A device malfunction is the failure of a device to meet its performance specifications or otherwise perform as intended, when used in accordance with the instructions for use or CIP.

## 7.2 Device Relationship

Determination of whether there is a reasonable possibility that an investigational product or device under investigation caused or contributed to an AE is to be **determined by the Investigator** and recorded on the appropriate CRF form. Determination should be based on the assessment of temporal relationships, evidence of alternative etiology, medical/biologic plausibility and patient condition (pre-existing condition).

### 7.2.1 Unanticipated Serious Adverse Device Effect (USADE)

Unanticipated serious adverse device effect (USADE) refers to any serious adverse effect on health or safety or any life-threatening problem or death caused by, or associated with, a device, if that effect, problem or death was not previously identified in nature, severity, or degree of incidence in the investigational plan or application (including a supplementary plan or application), or any other unanticipated serious problem associated with a device that relates to the rights, safety, or welfare of subjects.

## 7.3 Adverse Event and Device Deficiency/Device Malfunction Reporting

### 7.3.1 Adverse Event Reporting

Safety surveillance and reporting starts as soon as the patient is beginning the stimulation in the clinical investigation. Adverse events will not be collected for screen failure subjects. Safety surveillance and reporting will continue until sites perform the last follow-up visit, the subject is deceased, the subject concludes participation in the clinical investigation, or the subject withdraws from the clinical investigation. Sites will collect all adverse event data, including deaths and device deficiency data (if applicable), throughout the period defined above and will report these events to the Sponsor on a CRF. Sites should update additional information regarding an adverse event on the appropriate CRF.

Unchanged, chronic, non-worsening or pre-existing conditions are not AEs and should not be reported.

The investigator must report all SAEs to the Sponsor as soon as possible but no later than 10 working days from the day the site personnel became aware of the event or as per the investigative site's local requirements, if the requirement is more stringent than those outlined.

Sites must record the date the site staff became aware that the event met the criteria of an SAE in the source document. The Investigator will further report the SAE to the local IRB according to the institution's IRB reporting requirements.

### 7.3.2 Unanticipated Serious Adverse Device Effect Reporting to Sponsor and IRB (if applicable)

The Sponsor requires the Investigator to report any USADE to the Sponsor as soon as possible but no later than 10 working days of the investigator's knowledge of the event, unless local requirements are more stringent, and to the IRB per IRB requirements.

### 7.3.3 Device Deficiency/Malfunction Reporting

Sites should report all device deficiencies/malfunctions on the appropriate CRF form.

The investigator must report all device deficiencies/malfunctions to the Sponsor as soon as possible but no later than 10 working days from the day the site personnel became aware of the event or as per the investigative site's local requirements, if the requirement is more stringent than those outlined.



Sites must report device deficiencies/malfunctions to the IRB per the investigative site's local requirements.

Sites should return the device to the Sponsor.

## **8.0 STATISTICAL CONSIDERATIONS**

Data will be summarized using standard statistics, such as mean, median, range, standard deviation, and confidence intervals. Classical frequentist tests, such as t-test, will be used to examine observed trends.

## **9.0 DIRECT ACCESS TO SOURCE DATA/DOCUMENTS**

The investigator/institution will permit direct access to source data/documents for performing clinical investigation-related monitoring, audits, IRB review and regulatory inspections.

Subjects providing informed consent are agreeing to allow clinical investigation monitors or regulatory authorities, including foreign countries, to review in confidence any records identifying the subjects in this clinical investigation. This information may be shared with regulatory agencies; however, the Sponsor undertakes not to otherwise release the subject's personal and private information.

## **10.0 QUALITY CONTROL AND QUALITY ASSURANCE**

### **10.1 CIP Amendments**

The Sponsor will provide approved CIP amendments to the Investigators prior to implementing the amendment. The Principal Investigator is responsible for notifying the IRB or equivalent committee of the CIP amendment (administrative changes) or obtaining IRB's approval of the CIP amendment (changes in subject care or safety), according to the instructions provided by the Sponsor with the CIP amendment.

Sites must document in writing acknowledgement/approval of the CIP amendment by the IRB prior to implementation of the CIP amendment. Sites must also provide copies of this documentation to the Sponsor.

### **10.2 Training**

All Investigators and clinical investigation personnel are required to attend Sponsor training sessions, which may be conducted at a site initiation visit, or other appropriate training sessions. Over-the-phone or self-training may take place as required. Training of Investigators and clinical investigation personnel will include, but is not limited to, the CIP requirements, investigational device usage, electronic case report form completion, and clinical investigation personnel responsibilities. All Investigators and clinical investigation personnel that are trained must sign a training log (or an equivalent) upon completion of the training.

### **10.3 Monitoring**

Sponsor and the study principal investigator will monitor the clinical investigation over its duration.

## 10.4 Deviations from CIP

The Investigator should not deviate from the CIP for any reason except in cases of medical emergencies when the deviation is necessary to protect the rights, safety, and well-being of the subject, or to eliminate an apparent immediate hazard to the subject. In that event, the Investigator will notify Sponsor immediately by phone or in writing within 5 working days.

Except in such an emergency, prior approval by the Sponsor is required for changes in or deviations from the CIP.

In the event of repeated non-compliance, as determined by the Sponsor, a Sponsor's monitor or company representative will attempt to secure compliance by one or more of the following (and not limited to):

- Visiting the investigator and/or delegate
- Telephoning the investigator and/or delegate
- Corresponding with the investigator and/or delegate

Repeated non-compliance with the signed agreement, the CIP, or any other conditions of the clinical investigation may result in further escalation, including securing compliance or, at its sole discretion, the Sponsor may terminate the investigator's participation in the clinical investigation.

## 11.0 DATA HANDLING AND RECORD KEEPING

For the duration of the clinical investigation, the Investigator will maintain complete and accurate documentation including, but not limited to, medical records, clinical investigation progress records, laboratory reports, CRFs, signed ICFs, device accountability records (if applicable), correspondence with the IRB and clinical investigation monitor/Sponsor, adverse event reports, and information regarding subject discontinuation or completion of the clinical investigation.

### 11.1 Protection of Personally Identifiable Information

The Sponsor respects and protects personally identifiable information collected or maintained for this clinical investigation.

The Sponsor implements technical and physical access controls to ensure that Personal Information is accessible only to and processed only on a 'need to know' basis, including periodic review of access rights, and revocation of access when an individual's employment is terminated or the individual transitions to a role that does not require access to Personal Information, and appropriate restrictions on physical access to premises, facilities, equipment, and records containing Personal Information.

The Sponsor requires the investigational sites to enter only pseudonymous Personal Information (key-coded) necessary to conduct the clinical investigation, such as the patient's medical condition, treatment, dates of treatment, etc., into Sponsor's data management systems. The Sponsor discloses as part of the clinical investigation informed consent process that some Sponsor representatives still may see Personal Information at the participating sites for technical support of the participating physicians on the device use or procedures, monitoring and quality control purposes. All parties will observe confidentiality of Personal Information always throughout the clinical investigation. All reports and data publications will preserve the privacy of each subject and confidentiality of his/her information.

The Sponsor data management systems and processes were designed, developed, and tested according to industry standards to appropriately safeguard Confidential Information (including any Personal Information) against unauthorized access and/or interference by third parties, intrusion, theft, destruction, loss or alteration. Clinical Investigation data are encrypted in transit and in storage.

The Sponsor maintains a Privacy Incident procedure that complies in all respects with Applicable Law and industry best practices.

## 11.2 Source Documentation

Regulations and GCP require the Investigator to maintain information in the subject's original medical records that corroborates data collected on the CRFs. To comply with these regulatory requirements/GCP, sites should include the following information in the subject record at a minimum and if applicable to the clinical investigation:

- Medical history/physical condition of the subject before involvement in the clinical investigation sufficient to verify CIP entry criteria
- Dated and signed notes on the day of entry into the clinical investigation referencing the Sponsor, CIP number, subject ID number, and a statement that informed consent was obtained
- Dated and signed notes from each subject visit (for specific results of procedures and exams)
- AEs reported and their resolution, including supporting documents, such as discharge summaries, catheterization laboratory reports, electrocardiograms (ECGs), and lab results including documentation of site awareness of SAEs and of investigator assessment of device relationship for SAEs.
- Notes regarding CIP-required and prescription medications taken during the clinical investigation (including start and stop dates)
- Subject's condition upon completion of or withdrawal from the clinical investigation
- Any other data required to substantiate data entered into the CRF
- Patient reported outcome measures will be completed by the patient electronically. The electronic CRF output will serve as source documentation.

## 11.3 Case Report Form Completion

Site research personnel trained on the CIP and CRF completion will perform the primary data collection clearly and accurately based on source-documented hospital and/or clinic chart reviews. The investigator will ensure accuracy, completeness, legibility, and timeliness of the data reported to the Sponsor on the CRFs and in all required reports.

Sites will collect data on all subjects enrolled into the clinical investigation. Only authorized site personnel will be permitted to enter the CRF data through the electronic data capture (EDC) system deployed by the Sponsor. The Sponsor will use an electronic audit trail to track any subsequent changes of the entered data.

## 11.4 Record Retention

The Sponsor and Investigator/Site will archive and retain all documents pertaining to the clinical investigation as per the applicable regulatory record retention requirements. The Investigator must obtain

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permission from Sponsor in writing before destroying or transferring control of any clinical investigation records.

### **11.5 Investigational Devices Accountability**

The Sponsor ships investigational products only to the Principal Investigator (the responsible leader of the investigational site) or his/her legal designee of each site, after sites receive documentation of site activation and shipping authorization is complete.

The Investigator or an authorized designee must maintain adequate records of the receipt and disposition of each investigational device, including part number, batch/lot number, and serial number (if applicable), date used, subject identification, and treating physician.

Storage locations for the devices at investigational sites must be locked with access restricted only to investigators and authorized personnel.

Sites must return all investigational devices associated with a device failure or device deficiency immediately to the Sponsor.

## **12.0 ETHICAL CONSIDERATION**

### **12.1 Institutional Review Board/Medical Ethics Committee Review and Approval**

The Principal Investigator at each investigational site will obtain IRB approval for the CIP and ICF/other written information provided to the patient prior to consenting and enrolling patients in this clinical investigation. The site must receive the approval letter prior to the start of this clinical investigation and provide a copy to the Sponsor.

Sites will submit any amendments to the CIP as well as associated ICF changes to the IRB and written approval obtained prior to implementation, according to each institution's IRB requirements.

No changes will be made to the CIP or ICF or other written information provided to the patient without appropriate approvals, including IRB, the Sponsor, and the regulatory agencies (if applicable).

Until the clinical investigation is completed, the Investigator will advise his/her IRB of the progress of this clinical investigation, per IRB requirements. Written approval must be obtained from the IRB yearly to continue the clinical investigation, or according to each institution's IRB requirements.

Sites will not perform any investigative procedures, other than those defined in this CIP, on the enrolled subjects without the written agreement of the IRB and the Sponsor.

## **13.0 CLINICAL INVESTIGATION CONCLUSION**

The clinical investigation will be concluded when:

- All sites are closed AND
- The final report has been provided to investigators or the Sponsor has provided formal documentation of clinical investigation closure.



## 14.0 PUBLICATION POLICY

The data and results from the clinical investigation are the sole property of the Sponsor. The Sponsor shall have the right to access and use all data and results generated during the clinical investigation. The Investigators will not use this clinical investigation-related data without the written consent of the Sponsor for any purpose other than for clinical investigation completion or for generation of publication materials, as referenced in the Clinical Trial Agreement. The Sponsor must review and approve any proposals for publications or presentations by the investigators in a timely manner in compliance with the Sponsor's publication policy set forth in the Clinical Trial Agreement. The sponsor will cooperate with the PI in developing a manuscript reporting the results of this trial in a timely fashion. Sponsor agrees that publication of the results will occur regardless of the outcome of the study.

The Sponsor will be responsible for determining whether to register the clinical investigation on [www.clinicaltrials.gov](http://www.clinicaltrials.gov) or any other clinical trials, in accordance with the International Committee of Medical Journal Editors guidelines, or any other applicable guidelines. In the event the Sponsor determines that the clinical investigation should be registered, the Sponsor shall be responsible for any such registration and results posting as required by the ClinicalTrials.gov website. Institution and/or Principal Investigator(s) shall not take any action to register the clinical investigation.

## **15.0 RISK ANALYSIS**

### **15.1 Anticipated Clinical Benefits**

The Felix system is expected to provide the following clinical benefits:

- Improvement of action and rest hand tremor in patients with ET or PD
- Improvement of quality of life (QoL).

Note that these benefits may be temporary and may diminish after completion of or withdrawal from this study.

### **15.2 Foreseeable Adverse Events and Anticipated Adverse Device Effects**

During stimulation, patients may temporarily experience the following in the stimulated wrist area: skin irritation (redness and/or itchiness), electric tingling sensation, stinging pain, soreness, discomfort, and worsening of tremor. All of these should resolve without intervention after decreasing stimulation amplitude or discontinuing stimulation.

### **15.3 Nonsignificant Risk Medical Device**

Based on US FDA's "Information Sheet Guidance for IRBs, Clinical Investigators, and Sponsors on Significant Risk and Nonsignificant Risk Medical Device Studies.", Fasikl (the sponsor) has determined that this study is a nonsignificant risk medical device study (21 Code of Federal Regulations (CFR) 812.2(b)(1)(ii)).

### **15.4 Steps Taken to Control or Mitigate Risks**

In-depth recommendations, special precautions, and instructions regarding patient selection, device fitting, device operation are included in the IFU.

Risks associated with the use of the device under investigation are minimized through device design, investigator selection and training, pre-specified patient eligibility requirements, study monitoring to ensure adherence to the protocol. Sites will report all adverse events and device deficiencies to the Sponsor and the Sponsor will monitor internally for safety surveillance purposes.

## APPENDIX I: ABBREVIATIONS AND ACRONYMS

AE	Adverse Event
ADL	Activities of Daily Living
BMI	Body Mass Index
CFR	Code of Federal Regulations
CGI-I	Clinical Global Impression of Improvement
CGI-S	Clinical Global Impression of Severity
CIP	Clinical Investigation Plan
CRF	Case Report Form
DBS	Deep Brain Stimulation
ECG	Electrocardiogram
EDC	Electronic Data Capture
ET	Essential Tremor
FDA	Food and Drug Administration
GAS	Goal Attainment Scale
HIFU	High-Intensity Focused Ultrasound
HIPAA	Health Insurance Portability and Accountability Act
ICF	Informed Consent Form
IMU	Inertial Measurement Unit
IRB	Institutional Review Board
MDS-UPDRS	Movement Disorder Society Unified Parkinson's Disease Rating Scale
MoCA	Montreal Cognitive Assessment
MRgFUS	Magnetic Resonance-guided Focused Ultrasound
PD	Parkinson's Disease
PGI-I	Patient Global Impression of Improvement
PGI-S	Patient Global Impression of Severity
QoL	Quality of Life
SAE	Serious Adverse Event
TAPS	Transcutaneous Afferent Patterned Stimulation
TETRAS	Tremor research group Essential Tremor Rating Assessment Scale
USADE	Unanticipated Serious Adverse Device Effect
VIM	Ventral intermediate nucleus of the thalamus



Study Name: Pilot Study of the Felix System in Patients  
with Essential Tremor and Parkinson's Tremor

## **APPENDIX II: SITE CONTACT INFORMATION**

Contact information for each participating clinical site is available under separate cover by contacting the Sponsor at:



### APPENDIX III: REVISION HISTORY

Amendment Number	Version	Date	Details	Rationale
Not Applicable	1	21FEB2023	First release of CIP	NA
1	2	27APR2023	<ul style="list-style-type: none"> <li>• [REDACTED]</li> <li>• Updated the Smartphone App picture (in Figure 1)</li> <li>• Added clarification to inclusion criteria 3b which was intended for either upper limb</li> <li>• Removed patient task 7c (in Section 6.1.1) which is no longer required</li> <li>• Added survey for patient on Day 7 in-clinic about experience with the device</li> <li>• A few minor editorial changes to remove duplicate paragraphs or language that's not applicable</li> </ul>	[REDACTED]
2	3	XXJUL2023	<p>Added a 3-day window to allow for flexibility in scheduling the last-day clinic visit.</p> <p>Replaced BF-ADL with TETRAS ADL subscale.</p> <p>Removed mid-stimulation assessments in-clinic on Day 1.</p> <p>Added two inclusion criteria:</p> <ul style="list-style-type: none"> <li>• Familiar with operating a touch-screen smartphone and connecting to Wi-Fi internet at home.</li> <li>• If necessary, have a dedicated caregiver to help with study required activities, such as putting on the study device, etc.</li> </ul> <p>Added one exclusion criteria:</p> <ul style="list-style-type: none"> <li>• Known allergy to adhesives.</li> </ul> <p>Removed two exclusion criteria:</p> <ul style="list-style-type: none"> <li>• Prior electrical medical device implantation</li> </ul>	[REDACTED]

			<p>(except for pacemaker or implantable cardioverter defibrillator) such as deep brain stimulator, vagus nerve stimulator, responsive neurostimulator, etc.</p> <ul style="list-style-type: none"> <li>• Previous thalamotomy procedure, including stereotactic thalamotomy, gamma knife radiosurgical thalamotomy, and focused ultrasound for the treatment of tremor.</li> </ul> <div style="background-color: black; width: 200px; height: 100px; margin-top: 10px;"></div>	
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## APPENDIX IV: CIP SUMMARY

<b>Clinical Investigation Name and Number</b>	CIP-1
<b>Title</b>	Pilot Study of the Felix System in Patients with Essential Tremor and Parkinson's Tremor
<b>Objective</b>	The objective of this clinical investigation is to evaluate the safety and effectiveness of the Felix device to aid in the relief of upper limb tremor in adults with ET and PD.
<b>Device Under Investigation</b>	Felix
<b>Number of Subjects Required for Inclusion in Clinical Investigation</b>	Approximately 35 subjects, including approximately 10 subjects with PD and approximately 5 subjects with deep brain stimulator (DBS) or high-intensity focused ultrasound (HIFU)
<b>Clinical Investigation Design</b>	Prospective, open-label, multi-center, pilot study
<b>Endpoints</b>	<p>Physician-rated assessments (in-office):</p> <ul style="list-style-type: none"> <li>Tremor Research Group Essential Tremor Rating Assessment Scale (TETRAS)</li> <li>For subjects with PD only: Movement Disorder Society Unified Parkinson's Disease Rating Scale (MDS-UPDRS) Part III. Motor Examination</li> <li>Clinical Global Impression of Severity (CGI-S)</li> <li>Clinical Global Impression of Improvement (CGI-I)</li> </ul> <p>Subject-rated assessments (in-office and at-home):</p> <ul style="list-style-type: none"> <li>TETRAS Activities of Daily Living (ADL) scale</li> <li>Patient Global Impression of Severity (PGI-S)</li> <li>Patient Global Impression of Improvement (PGI-I)</li> <li>Survey of satisfaction and durability of effect (i.e., how long tremor relieve lasts after stimulation)</li> </ul> <p>Device-measured tremor power, tremor amplitude, and tremor frequency (in-office and at-home)</p> <p>Improvement/trend of assessments above</p> <p>Device and therapy-related adverse events</p>
<b>Subject Follow-up</b>	7 days (+3 days to allow for flexibility in scheduling the last-day visit)
<b>Inclusion Criteria</b>	1. At least 18 years of age.



	<ol style="list-style-type: none"> <li>2. Willing to provide written, informed consent to participate in the study.</li> <li>3. For subjects with ET: <ol style="list-style-type: none"> <li>a. A clinical diagnosis of ET.</li> <li>b. For either upper limb, a tremor severity score of 2 or higher as measured by one of the TETRAS items and a total score of 7 or higher across all TETRAS tasks: <ol style="list-style-type: none"> <li>i. Forward outstretched posture</li> <li>ii. Lateral “wing beating” posture</li> <li>iii. Finger-nose-finger</li> <li>iv. Archimedes spiral drawing</li> <li>v. Handwriting</li> <li>vi. Dot approximation</li> </ol> </li> </ol> </li> <li>4. For subjects with PD: <ol style="list-style-type: none"> <li>a. A clinical diagnosis of PD (MDS-PD criteria).</li> <li>b. A tremor score of 2 or higher on MDS-UPDRS question 3.15 (postural tremor) or 3.16 (kinetic tremor), OR</li> <li>c. A rest tremor score of 2 or higher on MDS-UPDRS question 3.17 (rest tremor amplitude) in one upper extremity and a score of 2 or higher on MDS-UPDRS question 3.18 (constancy of tremor).</li> </ol> </li> <li>5. Stable dosage of any medication, if applicable, for 30 days prior to study entry.</li> <li>6. Familiar with operating a touch-screen smartphone and connecting to Wi-Fi internet at home.</li> <li>7. If necessary, have a dedicated caregiver to help with study required activities, such as putting on the study device, etc.</li> <li>8. Willing to comply with study protocol requirements including: <ol style="list-style-type: none"> <li>a. Remaining on a stable dosage of current medications, if applicable, during the course of the study.</li> <li>b. Remaining on stable caffeine consumption, if applicable, during the course of the study.</li> <li>c. No alcohol consumption on the day before a study visit.</li> </ol> </li> </ol>
<b>Exclusion Criteria</b>	<ol style="list-style-type: none"> <li>1. Prior limb amputation or any known symptomatic peripheral neuropathy condition of the involved upper extremity.</li> <li>2. Any current drug or alcohol abuse.</li> <li>3. Current unstable epileptic conditions with a seizure within 6 months of study entry.</li> <li>4. Pregnant or nursing subjects and those who plan pregnancy during the course of the study.</li> <li>5. Swollen, infected, inflamed areas, or skin eruptions, open wounds, or cancerous lesions of skin at the stimulation site.</li> <li>6. Known allergy to adhesives.</li> </ol>

	<ol style="list-style-type: none"> <li>7. History of Alzheimer's disease or dementia (Montreal Cognitive Assessment (MoCA) <math>\leq 19</math>).</li> <li>8. Botulinum Toxin injection for hand tremor within 4 months prior to study enrollment.</li> <li>9. Subject is currently participating or has participated in another interventional clinical trial in the last 30 days which may confound the results of this study, unless approved by the Sponsor.</li> <li>10. Subject is unable to communicate with the investigator and staff.</li> <li>11. Any health condition that in the investigator's opinion should preclude participation in this study.</li> </ol>
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