A RANDOMIZED, BALANCED, PHASE 1, MULTIPLE-DOSE, OPEN-LABEL, TWO-TREATMENT, TWO-PERIOD, TWO-SEQUENCE, CROSSOVER, RELATIVE BIOAVAILABILITY STUDY TO INVESTIGATE LITHIUM BRAIN/PLASMA PHARMACOKINETICS AND SAFETY OF AN AL001 ORAL CAPSULE COMPARED TO A MARKETED IMMEDIATE-RELEASE LITHIUM CARBONATE CAPSULE IN HEALTHY ADULT SUBJECTS

NCT #: NCT06921590

Informed Consent Form Date: 18 November 2025

Mass General Brigham

Research Consent Form
General Template - Drug Clinical Trial
Version Date: November 2022

Subject Name:

MRN or DOB:

Subject Identification

Protocol Title: A RANDOMIZED, BALANCED, PHASE 1, MULTIPLE-DOSE, OPEN-LABEL, TWO-TREATMENT, TWO-PERIOD, TWO-SEQUENCE, CROSSOVER, RELATIVE BIOAVAILABILITY STUDY TO INVESTIGATE LITHIUM BRAIN/PLASMA PHARMACOKINETICS AND SAFETY OF AN AL001 ORAL CAPSULE COMPARED TO A MARKETED IMMEDIATE-RELEASE LITHIUM CARBONATE CAPSULE IN HEALTHY ADULT SUBJECTS

Principal Investigator: Ovidiu Andronesi MD, PhD

Description of Subject Population: Healthy subjects between the ages of 18 and 64

About This Consent Form

Please read this form carefully. It tells you important information about a research study. A member of our research team will also talk to you about taking part in this research study. People who agree to take part in research studies are called "subjects". This term will be used throughout this consent form.

If you decide to take part in this research study, you must sign this form to show that you fully understand the requirements of the study and are willing to participate. We will give you a signed copy of this form to keep.

Key Information

We are asking you to be in a research study, consisting of a 28-days screening period, two treatment periods of 16 days each – separated by a 9- to 28-days washout period – and a 4-week follow-up period after the second treatment period. This form will tell you what you should expect if you agree to be in the study. You will find more information about the research study and visit schedule later in this form.

It is your decision whether or not to join the study. We are asking you to be in this study because you are in reasonably good physical health. We are conducting this clinical trial to assess the safety, tolerability and effects of a new lithium formulation that could be helpful for people with psychiatric or neurological disorders. If you agree, you will take daily doses of either the investigational study drug (AL001) or a marketed Lithium Carbonate drug for 14 days while staying overnight at the research center on the main campus of Massachusetts General Hospital (MGH). You will also undergo a series of blood draws and MRI scans over a 24-hour period. You will then be released from the research center to begin the washout period prior to returning

for the second treatment period. Each treatment period will be for 16 days. When you return to the research center for the second treatment period, you will repeat the above process with the alternate drug. You will be in the study for approximately 16 weeks if you decide to complete the entire study.

The main risks of being in the study are fatigue, frustration, and feelings of isolation due to study procedures and design.

You will be paid up to $10,300 via a debit card for completing the entire research study. You will find more information about the payment amount for each visit and a compensation plan if you do not complete all study visits later in this form.

Prior to signing this informed consent (and anytime afterwards), you can ask the study staff or call us with your questions or concerns. Our telephone numbers are listed below. Ask questions as often as you want.

Ovidiu Andronesi, MD, PhD is the person in charge of this research study. You can call him at (617) 643-6864, M-F 9am-5pm. You can also call the Study Nurse at (617) 643-8464, M-F 9am-5pm, or Alison McManus, DNP at (617) 643-4848, 24/7, with questions about this research study.

If you have questions about the scheduling of appointments or study visits, call the Study Coordinator at (617) 724-6094.

If you want to speak with someone **not** directly involved in this research study, please contact the Mass General Brigham IRB. You can call them at (857) 282-1900.

You can talk to them about:

- Your rights as a research subject
- Your concerns about the research
- A complaint about the research
- Any pressure perceived to take part in, or to continue in the research study

Detailed Information

A description of this clinical trial is available on ClinicalTrials.gov Web site (*http://www.ClinicalTrials.gov/study/NCT06921590*), as required by U.S. Law. This Web site will not include information that can identify you. At most, the Web site will include a summary of the results. You can search this Web site at any time.

Why is this research study being done?

We are doing this research study to find out if AL001, a new crystalized form of Lithium, has a better absorption and metabolic profile than commonly used marketed lithium salts. We will also be monitoring any side effects that may arise when taking AL001.

AL001 is not approved by the U.S. Food and Drug Administration (FDA). This means that AL001's use in this research study is considered "investigational" and it can currently only be used in research studies.

About 64 healthy volunteers and volunteers with Alzheimer's disease have taken part in a prior research study to assess a safe and tolerable dose of AL001. In addition, 28 healthy volunteers participated in an initial safety study. AL001 was shown to be well tolerated and safe in both healthy and Alzheimer's disease populations.

This research study will compare AL001 (five crystallized lithium capsules/dose) to a comparable dose of Lithium Carbonate (one capsule/dose) given by mouth 3 times per day for 14 days. You will stay overnight at our research centers at MGH during this time. Lithium Carbonate is commonly used to treat neuropsychiatric conditions. During one of the 16-day treatment periods of the study you will receive five AL001 capsules three times a day. During the other 16-day treatment period you will receive one Lithium Carbonate capsule three times a day. There is a 9- to 28-days washout period between the two treatment periods. The treatment you start the study on will be assigned randomly (like a toss of a coin), but you will know which of the two drug products you are receiving during each treatment period.

Who will take part in this research?

We are asking you to take part in this research study because you are between the ages of 18 and 64 and are not suffering from any chronic or current medical conditions. This study will only involve healthy volunteers.

Up to 12 participants will take part in this research study. All participants will take part in this study at Massachusetts General Hospital (MGH).

Alzamend Neuro, Inc. is the sponsoring company paying for this research to be done.

How long will you take part in this research?

It will take you approximately 16 weeks to complete this research study. This research study consists of an in-person screening period (which may take place across multiple days), two 16-day (overnight) treatment periods separated by a 9- to 28-days washout period, and a follow up period. The two treatment periods in the study will involve each a 16-day, 15-night (overnight) stay, mainly occurring at Massachusetts General Hospital's main campus within the Translational and Clinical Research Centers (TCRC). The last overnight stay for each treatment period will occur at the Clinical and Translational Research Unit (CTRU) at the Charlestown Navy Yard campus of MGH. After the second treatment period there is a 4-weeks follow-up period.

What will happen in this research study?

If you choose to take part in this study, we will ask you to sign this consent form before we perform any study procedures.

Participation in this study will require modifications to your diet during the treatment periods. These modifications also include avoidance of specific foods and drinks throughout your participation. At the start of the study, it is important to:

- Avoid drinking alcohol for at least *72 hours* before all in-person visits.
- Avoid eating grapefruit, pomelo, Seville orange products and drinking Seville orange juices for at least *14 days* prior to the start of Treatment Period 1.

Further information regarding your diet and foods/drinks you will need to avoid will be covered in detail later in this form.

Screening Period

Informed Consent Visit (Visit 1a – Virtual)

The informed consent visit will occur remotely via a secure videoconferencing platform. At this visit you will meet with the Principal Investigator and/or another study investigator to review the study in detail and electronically sign the informed consent form. This virtual meeting will last between an hour to an hour and a half. At this visit the following information will also be collected to start to assess your eligibility to participate in this study:

- Obtain your demographics (statistical data that describes you)
- Review of your medical and surgical history
- Review of your prior medications (taken up to 60 days before signing informed consent) and current medications
- Begin to review the study's Inclusion/Exclusion criteria to determine your eligibility to participate in the research study

Screening Visit (Visit 1b – In Person)
The in-person screening visit will take about 6 hours at the CTRU. At this visit, we will do some tests and procedures to determine if you qualify to take part in this research study. The study doctor will review the results of these tests and procedures to determine your eligibility to participate in the study. If you do not qualify, the study doctor will tell you why.

At this visit, we will:

- Continue to review the study's Inclusion/Exclusion criteria to determine your eligibility to participate in the research study
- Document any adverse events and review of your current medications
- Perform a physical exam (including a brief neurological exam)
- Obtain vital signs (blood pressure, pulse rate and forehead body temperature)
- Measure body height and body weight
- Administer mood questionnaires
- Perform an electrocardiogram (ECG)
- Perform a blood draw and collect saliva and urine samples for clinical lab analysis and to test for illicit drugs and alcohol use
- Perform a blood pregnancy test if you are a female and able to become pregnant
  (Note: Pregnant or breast-feeding females cannot take part in this research study)
- Perform a brain MRI scan (up to 90 minutes)
- Determine your standardized meal plan for both Treatment Periods

These procedures will be scheduled to occur within a one-day study visit. However, in some instances, **the screening procedures may take place across multiple days. You may be asked to undergo multiple MRI procedures to ensure that you are comfortable and able to complete the MRI scanning session throughout this study.**

For accurate laboratory results from the blood draw, please fast for a period of at least *10 hours* before attending this in-person screening visit. You may drink water before this visit.

Urine Drug Screening and Ethanol (Alcohol) Test
During this study, we will test your urine for certain illicit drugs (Methamphetamine, Cocaine, Marijuana, Opiates, Benzodiazepines, Ecstasy, Oxycodone, Barbiturates, Buprenorphine, Methadone, Phencyclidine, Amphetamines, Methadone Metabolite, Tricyclic Antidepressants, Propoxyphene) and test your saliva, urine, or blood for ethanol (alcohol). If testing shows that you have taken any of these drugs or have consumed alcohol within 72 hours prior to this screening visit, you cannot be in this study. The results of these tests may become part of your medical record and will be saved in your study record.

Electrocardiogram (ECG)

This test checks the electrical activity of your heart. We will place several small, sticky pads on your chest, arms, and legs. Each pad has a wire attached to it. The wires connect to a machine that makes a recording of your heart rhythm. This painless non-invasive test takes about 15 minutes to complete.

Magnetic Resonance Imaging (MRI)

We will take detailed pictures of your brain using an MRI (magnetic resonance imaging) scan 17 times during this study. During these MRI scans, we will use a specific imaging technique called magnetic resonance spectroscopy (MRS) to explore brain metabolism. An MRI scanner uses a strong magnet and radio waves to take these pictures. Due to this, people who have certain metal implants cannot have this scan. You will be asked to remove all removable metal items (i.e., chains, bracelets, watches, etc.) and clothing before the scan and be given specific pants, shirts, and a robe (if needed) to wear for the procedure.

The MRI scanner is a large machine shaped like a tube. You will lie on a narrow table and will be moved into the MRI tunnel. The tunnel is only a little larger than your body. You will be asked to lie still during the scan. Each MRI short scan will last up to 60 minutes, and each MRI long scan will last up to 120 minutes. For select MRI scans, you may be asked to wear a respiratory belt to track your breathing motion throughout the scan. This device will help the team to better analyze the MRI scans when the study is finished.

The MRI scanner makes loud banging noises as it takes pictures. We will give you earplugs to reduce the noise. You will be able to hear and speak to the research staff at all times during the scan. We can stop the scan at any time, if needed. You will be given a button while you are in the MRI scanner that you can use to alert the staff if you need to stop or if you are experiencing problems during the scan.

In some instances, additional MRI scanning may be needed due to MRI scanner issues or upgrades. In these instances, you will be asked to come back for an additional MRI scan. You will receive additional compensation for this scan (see Page 22 for details).

Blood Draws

We will draw blood from a vein in your arm for standard laboratory tests, and to determine how your body uses the study drug at various timepoints throughout the study. Blood will be drawn for safety checks at your screening and follow-up visits. Additional blood will be collected at certain days during each Treatment Period to measure levels of study drug in your blood. If any problems arise that are thought to be associated with AL001 and/or Lithium Carbonate, you may have more blood drawn, based on assessment from a study investigator.

On the morning of Treatment Day 14 of each Treatment Period (Visit 16 and Visit 32), an Intravenous line (IV) will be placed in your arm. This IV is a small flexible tube that is inserted into a vein and will be used to obtain all the blood samples collected over this 24-hour period. In instances where this IV fails to collect blood or an adequate amount of blood is not collected from the IV, regular phlebotomy using a different vein in your arm will be performed to obtain the blood samples needed.

Breakdown of Blood Draw Amounts
At the Screening visit, we will draw up to 38 mL (about 2.5 tablespoons) of blood from a vein in your arm for clinical safety labs.

Safety labs blood draws occurring at the beginning and at the end of each treatment period will involve drawing up to the following amount of blood, in total:

- Treatment Period 1: up to 19 mL (about 1 1/3 tablespoons)
- Treatment Period 2: up to 24 mL (about 1 2/3 tablespoons)

During each treatment period, there will be 31 blood draws to assess for the presence of the study drugs in your blood. When you are taking AL001, we will draw up to 310 mL (about 21 tablespoons) of blood throughout this treatment period. When you are taking Lithium Carbonate, we will draw up to 190 mL (about 13 tablespoons) of blood throughout this treatment period. Twenty-nine (29) of these draws in each treatment period will occur over a 24-hour period. For these blood draws we will use a blood sparing intravenous catheter for your comfort.

At the in-clinic follow-up visit after Treatment Period 2, we will draw up to 22 mL (about 1 1/2 tablespoons) of blood for clinical safety labs.

In total, up to 603 mL (about 41 tablespoons) of blood will be collected over the course of the entire research study lasting approximately 16 weeks.

Please note that if you stop your study participation early, we will perform a blood draw for safety analysis at the Early Termination visit. At this visit, up to 32 mL (about 2 tablespoons) of blood will be drawn from a vein in your arm.

Study Drug Assignment Schedule
If you qualify for the study, we will assign you by chance (like a coin toss) to start the study in either the AL001 group or the Lithium Carbonate group. You and the study doctor cannot choose your initial study group. You will receive the alternate treatment during the second treatment period. Therefore, you will take both study drugs during the study with an outpatient washout period in between treatments.

Treatment Period 1 (16 days)

When you start Treatment Period 1, you will first report to the CTRU at the Charlestown Navy Yard campus of MGH to complete some study procedures prior to your admission. You will then be transported over to the TCRC on MGH's main campus and admitted for your overnight stay period. You will spend 15 days and 14 nights within the TCRC. On the morning of the 15th day (Treatment Day 14), you will be transported back to the CTRU for the last overnight stay.

You will be randomly assigned to take either AL001 or Lithium Carbonate for the entirety of this treatment period. During this treatment period, we will perform specific procedures on the following days:

Check-in Day (Visit 2 for Treatment Period 1; Visit 18 for Treatment Period 2)

- Obtain vital signs (blood pressure, pulse rate and forehead body temperature)
- Document any adverse events and review of your current medications
- Measure body weight
- Review the study's Inclusion/Exclusion criteria to confirm your continued eligibility to participate in the study
- Perform a blood draw and collect saliva and urine samples for clinical lab analysis and to test for illicit drugs and alcohol use
    - For accurate laboratory results from the blood draw, please fast for a period of at least *10 hours* before attending this visit. You may drink water before this visit.
- Perform a pregnancy test (if you are a female and able to become pregnant)
- Administer mood questionnaires
- For Visit 2 Only: Administer a health status questionnaire
- Once continued eligibility is confirmed, assign you to a study drug for this treatment period
- Provide you with a meal (dinner)

Treatment Day 1 (Visit 3 for Treatment Period 1; Visit 19 for Treatment Period 2)

- Prior to first 8AM dose:
    - Obtain vital signs (blood pressure, pulse rate and forehead body temperature)
    - Document any adverse events and review of medications taken in the last 24 hours
    - Perform an ECG
    - Perform a blood draw for study drug level analysis
- Administer three daily doses (8AM, 2PM, 8PM) while fasting of either AL001 or Lithium Carbonate capsules
- Provide standardized meals (breakfast, lunch, and dinner)

- You are able to have one snack per day which may be provided with either lunch or dinner. The meal the snack comes with cannot change throughout the study.

- One hour after the third dose (8PM)
  - Perform an ECG

Treatment Days 2-12 (Visits 4 to 14 for Treatment Period 1; Visits 20 to 30 for Treatment Period 2)

- Prior to first 8AM dose:
  - Obtain vital signs (blood pressure, pulse rate and forehead body temperature)
  - Document any adverse events and review of medications taken in the last 24 hours
- Administer three daily treatments (8AM, 2PM, 8PM) while fasting of AL001 or Lithium Carbonate capsules
- Administer a mood questionnaire (this will occur on *at least* two separate days during the treatment period)
- Provide standardized daily meals (breakfast, lunch, and dinner)
  - You are able to have one snack per day which may be provided with either lunch or dinner. The meal the snack comes with cannot change throughout the study.

Treatment Day 13 (Visit 15 for Treatment Period 1; Visit 31 for Treatment Period 2)

- Prior to first 8AM dose:
  - Obtain vital signs (blood pressure, pulse rate and forehead body temperature)
  - Document any adverse events and review of medications taken in the last 24 hours
  - Perform an ECG
  - Perform a blood draw for study drug level analysis
- Administer three daily doses (8AM, 2PM, 8PM) while fasting of AL001 or Lithium Carbonate capsules
- Provide standardized meals (breakfast, lunch, and dinner)
  - You are able to have one snack per day which may be provided with either lunch or dinner. The meal the snack comes with cannot change throughout the study.

Treatment Day 14 (Visit 16 for Treatment Period 1; Visit 32 for Treatment Period 2)

- Transfer from TCRC (MGH Main Campus) to CTRU in Charlestown
- Prior to first 8AM dose:
  - Obtain vital signs (blood pressure, pulse rate and forehead body temperature)
  - Document any adverse events and review of medications taken in the last 24 hours
  - Perform an ECG

- IV placement in your arm for repeat blood draws over the next 24 hours for study drug level analysis and clinical safety labs
- Perform a blood draw for study drug level analysis
- Perform an MRI scan within 1 hour before 1st dose of the day (up to 60 mins)

- Administer three daily doses (8AM, 2PM, 8PM) while fasting of either AL001 or Lithium Carbonate capsules
- Perform repeated blood draws (28 total) over the next 24 hours after first 8AM dose
- Perform repeated MRI scans (7 total) over the next 24 hours after first 8AM dose (one scan will last up to 90 minutes and the other 6 scans will last up to 60 minutes each)
- Provide standardized meals (breakfast, lunch, and dinner)
  - You are able to have one snack per day which may be provided with either lunch or dinner. The meal the snack comes with cannot change throughout the study.
- Overnight Stay at CTRU
  - *Please note: The 5th, 6th, and 7th MRIs as well as the 20th through 28th blood draws will occur overnight into the morning of Day 15 (Visit 17 for Treatment Period 1; Visit 33 for Treatment Period 2).*

Day 15 (Visit 17 for Treatment Period 1; Visit 33 for Treatment Period 2)

- No study drug treatment will be administered on this day
- Obtain vital signs (blood pressure, pulse rate and forehead body temperature)
- Document any adverse events and review of medications taken in the last 24 hours
- Perform an ECG
- Perform a physical exam (including a brief neurological exam)
- Measure body weight
- Perform a blood draw for clinical safety labs and study drug level analysis
  - For accurate laboratory results from the blood draw, please fast for a period of at least *10 hours* before this blood draw. You may drink water before this visit.
- Collect a urine sample for clinical lab analysis
- For Visit 33 only: Perform a pregnancy test (if you are a female and able to become pregnant)
- Administer mood questionnaires
- Provide a meal (breakfast)
- Discharged from the CTRU

Washout Period

After clinic discharge from Treatment Period 1, you will enter a "Washout Period" where you will no longer be taking the study drug from Treatment Period 1. This washout period will last between 9 to 28 days and will allow the drug from Treatment Period 1 to be eliminated from your body before beginning Treatment Period 2. During this time a study staff member will call you twice, at a minimum, to check in. These phone calls will occur approximately 3 days and 9 days after completing Treatment Period 1. The timing of these phone calls may vary. During these calls we will ask you to complete some questionnaires over the phone.

Please note that if the Washout Period extends beyond 14 days after your completion of Treatment period 1, we may schedule up to 2 additional check-in phone calls with you.

Treatment Period 2 (16 days; Visits 18 to 33)

At the beginning of Treatment Period 2, you will first report to the CTRU to complete some study procedures prior to your admission to TCRC. You will then be transported over to the TCRC to begin your overnight stay. During Treatment Period 2, you will again be admitted into the TCRC (at MGH main campus) for 15 days and 14 nights (*Treatment Check-In Day* to *Treatment Day 14*). Again, there will also be an overnight stay at the CTRU in Charlestown for the last overnight stay (*Treatment Day 14* to *Day 15*). The same procedures performed during Treatment Period 1 will be performed during this period; however, you will be taking the alternate study drug. In other words, you will either take AL001 or Lithium Carbonate for the entirety of this period, depending on which drug you took during Treatment Period 1.

For accurate laboratory results from the blood draw on your Check-in Day (Visit 18) for the second Treatment Period, please fast for a period of at least *10 hours* before this visit. You may drink water during this time.

On Day 15 of Treatment Period 2 (Visit 33), we will also perform a urine pregnancy test if you are a female able to become pregnant.

Taking the Study Drug

You will take each of the study drugs by mouth three times a day with approximately 237 mL of non-carbonated water. All doses will be taken under fasted conditions at 8AM, 2PM, and 8PM (6 hours apart, within ±10 minutes of this scheduled time). In order words, the first daily dose (8AM) is taken after a 10-hour overnight fast; the remaining two daily doses are taken at least 4 hours after a meal (breakfast/lunch) and at least 1 hour before the next meal (lunch/dinner). Non-carbonated water will be allowed as desired except for 1 hour before and 1 hour after drug administration. You will also be asked to maintain a seated or an upright posture without walking for at least one hour after each drug administration. It is important that you follow our instructions about how to take the study drug. A mouth check will be performed by a study staff after each dose to ensure that you have swallowed all the capsules.

General Information about Study Participation and Each Treatment Period

During each treatment period you are allowed to:

- Have visitors (one person at a time)
- Bring items to keep you busy (e.g., crafts, books, laptop, etc.)
- Shower – make sure you bring shower shoes and a hair dryer
- Do laundry with the help of a study staff member
- Go on supervised short walks on the MGH campus grounds with a study staff member or an MGH staff member

During each treatment period you are **not** allowed to:

- Leave the TCRC or MGH campus unsupervised

Standardized Meals During Treatment Periods

During each Treatment Period, your meals will be standardized. This means that each breakfast, lunch, and dinner will be consistent based on your choices, starting with your first breakfast on Day 1 at the TCRC. You will work with a dietitian to create a meal plan which will remain the same for both of the 16-day Treatment Period stays. You may be provided with a snack at either lunch or dinner if you wish. The snack you choose will remain the same throughout the study and be given with the same meal (lunch or dinner) throughout the duration of your participation. You will not be able to eat any additional food outside of your selected meal plan during the treatment periods. You may drink non-carbonated water throughout the study; however, you will not be able to drink any liquid 1 hour before and 1 hour after each dosing of the study medication.

Foods and Drinks to Avoid During your Participation

In addition to your standardized meals during each treatment period, there are specific foods you must avoid throughout your participation in the study, *including during the washout period*.

- Avoid drinking alcohol for at least *72 hours* before each in-person study visit and during each Treatment Period. In general, during the times where you could consume alcohol, you should avoid drinking more than 2 standard drinks in one sitting.

- Avoid consuming (eating or drinking) Poppy seeds and Quinine (tonic water) for at least *48 hours* before your check in day for Treatment Period 1 until the end of your participation in the study, *including during the washout period*.

- Avoid consuming (eating or drinking) caffeine for at least *48 hours* before your check in day for Treatment Period 1 until your completion of Treatment Period 2. This includes

also avoiding caffeine during the washout period. Caffeine can be in coffee, energy drinks, soda, and chocolate, among other foods and drinks.

- Refrain from consuming the following for at least *14 days* prior to your check in day for Treatment Period 1 until your completion of Treatment Period 2, *including during the washout period*:
  - Grapefruits
  - Pomelos
  - Seville Orange products and juices

Please inform a study staff member if you do eat or drink any of the above-mentioned foods or drinks. Please also inform a study staff member if you happen to eat or drink anything outside of your standardized meal plan during your Treatment Periods at the TCRC or during your overnight stays at the CTRU.

Follow-Up Period

The follow-up period consists of an in-person visit to the CTRU in Charlestown and a telephone call.

In-Clinic Follow-up Visit (Visit 34)
This visit will take place approximately 8 days after completion of Treatment Period 2. This visit will last up to 2 hours and involve the following procedures:

- Obtain vital signs (blood pressure, pulse rate and forehead body temperature)
- Document any adverse events and review of your current medications
- Perform an ECG
- Perform a physical exam (including a brief neurological exam)
- Measure body weight
- Perform a blood draw and collect a urine sample for clinical lab analysis
  - For accurate laboratory results from the blood draw, please fast for a period of at least *10 hours* prior to attending this visit. You may drink water before this visit.
- Perform a pregnancy test (if you are a female and able to become pregnant)
- Administer a health status questionnaire and mood questionnaires

Telephone Follow-up Call (Visit 35)
This phone call will occur approximately 19 days after completion of Treatment Period 2 and will serve as your last day of study participation. This phone call will last about 30 minutes and include the following procedures:

- Document any adverse events and review of your current medications

- Administer a health status questionnaire and a mood questionnaire

If any lab results from the blood draw performed at the in-clinic follow-up visit (Visit 34) are found to be clinically significant with reasonable possibility for this clinical finding to be related to the study drug, then we will ask you to come in person for a repeat blood draw. This significant finding will then be followed until resolved.

COVID-19 Testing (if applicable)
At the discretion of the investigator, you may undergo testing for COVID-19 throughout the study. This will be based on local health policies and guidance at the time of your participation and if there is any suspected or known contact with an individual infected with COVID-19. The same principles apply to testing for other emergent infectious diseases and illnesses.

Early Termination (if applicable)

An in-person Early Termination Visit will take place if you decide to stop taking part in the study for any reason after starting treatment, but prior to completing all study procedures. This visit will take approximately 1 ½ hours at the CTRU in Charlestown and involve the following procedures:

- Obtain your vital signs (blood pressure, pulse rate and body temperature)
- Document any adverse events and review of your current medications
- Perform a physical exam (including a brief neurological exam)
- Collect body weight measurements
- Perform an ECG
- Perform a blood draw and collect a urine sample for clinical lab and study drug level analyses
  - For accurate laboratory results from the blood draw, please fast for a period of at least *10 hours* prior to attending this visit. You may drink water before this visit.
- Perform a pregnancy test (if you are a female and able to become pregnant)
- Administer a health status questionnaire and mood questionnaires

Also, the study doctor may take you out of the study without your permission. This may happen because:

- The study doctor thinks it is best for you to stop taking the study drug
- You cannot make the required study visits
- You failed to continue to meet the study eligibility criteria
- You were non-compliant or violated protocol restrictions
- The sponsor decides to stop the study
- We stop conducting the study for other reasons

If this happens, the study doctor will explain why you need to stop taking part in the study. We will ask you to come in for a final study visit as described above.

Review of Medical Records from Hospital Admissions or Emergency Department Visits

Mass General Brigham has an electronic system that lets your study doctors know if you are admitted to a Mass General Brigham Hospital, or if you visit a Mass General Brigham Hospital Emergency Department. We want to make sure the study doctors know about any possible problems or side effects that you experience while you are taking part in the study.

Study Information Included in Your Electronic Medical Record

A notation that you are taking part in this research study may be made in your electronic medical record. Information from the research that relates to your general medical care may be included in the record (for example: list of allergies, results of standard blood tests done at the hospital labs).

Please ask your study doctor if you have any questions about what information will be included in your electronic medical record.

Sending Study Information to Research Collaborators Outside Mass General Brigham

We will label all your study materials with a code instead of your name. The key to the code connects your name to your study information and samples. We will keep the key to the code here at Mass General Brigham and will not share it with our research collaborators. No one outside of Mass General Brigham will know which study information or samples are yours.

We will securely send your study information and/or samples to Alzamend Neuro, Inc. (the study sponsor). All information sent to The study sponsor will not include any private health information (PHI). Laboratory samples will sometimes be sent to laboratories outside MGH for analysis. However, these samples will not contain your name or identifying information. This study will also have a data monitor – someone not performing the research who oversees the data collected throughout the study. This monitor will see all study data, some of which may include PHI such as date of birth, medical record number (MRN) and name as this information is needed for some study visit documents.

How may we use and share your samples and health information for other research?

The samples and information we collect in this study may help advance other research. If you join this study, we may remove all information that identifies you (for example your name, medical record number, and date of birth) and use these de-identified samples and data in other research. It will not be possible to link the information or samples back to you. Information and/or samples

may be shared with investigators at our hospitals, at other academic institutions or at for-profit, commercial entities. You will not be asked to provide additional informed consent for these uses.

Will you get the results of this research study?

No. The research study we are doing is only a steppingstone in understanding the safety and effects of AL001 when compared to Lithium Carbonate. Therefore, no information about the results of this research study or the results of your individual participation in the research study will be given to you or your doctor. Tests done for the research using your samples will not be useful in directing your medical treatment. The results of the tests will not be placed in your medical record.

What are the risks and possible discomforts from participating in this research study?

Risks of Taking AL001

AL001 is composed of Lithium and Salicylate, and an amino-acid, L-proline, that is an essentially needed dietary component commonly found in foods. Taking AL001 may cause you to have one or more of the side effects listed below.

Common side effects of Lithium:

- Headache
- Mild to moderate nausea or vomiting
- Diarrhea
- Dizziness
- Drowsiness
- Changes in appetite
- Hand tremors
- Dry mouth
- Increased thirst
- Increased urination
- Hair thinning/hair loss
- Acne-like rash

Less common side effects of Lithium:

- Severe nausea and vomiting
- Severe hand tremors
- Confusion
- Vision changes
- Unsteadiness while walking

Uncommon side effects of Lithium:

- Diabetes

Common side effects of Salicylate:

- Indigestion
- Ringing in the ears
- Heartburn
- Nausea

Less common side effects of Salicylate:

- Mild to moderate vomiting
- Anorexia
- Abdominal pain

There may be other risks of AL001 that are currently unknown.

Risks of Taking Lithium Carbonate

Taking Lithium Carbonate may cause you to have one or more of the side effects listed below.

Common side effects of Lithium Carbonate:

- Muscle tremors or twitching, usually in the hands
- Dizziness
- Drowsiness
- Trouble walking
- Increased urination
- Increased thirst, dry mouth
- Nausea, vomiting
- Appetite changes
- Rash
- Blurred vision

Less Common side effects of Lithium Carbonate:

- Headache
- Diarrhea
- Abdominal pain
- Dry or thinning hair
- Confusion, poor memory

- Fainting
- Irregular heartbeat
- Stiffness in the arms or legs
- Trouble breathing – particularly with physical exercise
- Weight gain or loss
- Indigestion
- Cough
- Fever
- Agitation
- Swelling of the ankles or wrists

Rare Side effects of Lithium Carbonate:

- Blue color and pain in fingers and toes
- Eye pain
- Ringing in the ears

As with any drug, an allergic reaction can occur. Allergic reactions can be mild or more serious, and can even result in death. Common symptoms of an allergic reaction are rash, itching, skin problems, swelling of the face and throat, or trouble breathing. If you think you are having an allergic reaction, alert the study doctor and or study staff right away. If you are having trouble breathing, alert the TCRC staff, study staff, or (if not at MGH) call 911 immediately.

Risks of Taking Other Medications with either AL001 or Lithium Carbonate

Various drug types have been known to have significant interactions with lithium.

For your safety during this study, call your study doctor **BEFORE** you take any:

- new medications prescribed by your own doctor
- other medications sold over-the-counter without a prescription
- dietary or herbal supplements

Please note that if you do start taking a new medication either prescribed or over the counter while you are participating in this study, even during the washout period, you may be dismissed from this study. Please inform the study doctor or a staff member if you may be starting any new medication while participating in the study.

Only a small number of people have taken AL001. Therefore, we don't know about all the side effects that can happen when taking AL001 with other drugs. Due to this and the fact that other

products may affect AL001 and Lithium Carbonate, we kindly ask that you refrain from taking, eating, or ingesting any of the following products:

Product	Restriction Time Before Treatment Period	Restriction Time During Treatment and Participation
Prescription drugs, over the counter (OTC) drugs, including cold preparations, acetaminophen* (for example, Tylenol), anti-inflammatory drugs (for example, Advil, Motrin), vitamins, and natural products (for example, St. John's Wort) used for therapeutic benefits, and antacid preparations	14 days prior to the in-person screening visit and 14 days prior to TCRC Check-in Day	Throughout study participation*, including during the washout period*
Salicylate-containing product (for example, Aspirin) other than low dose aspirin for cardio (heart) protection	7 days prior to first study drug dose (Treatment Day 1)	Throughout the study *(including during the washout period)* until 7 days after the last study drug administration
Alcohol-based products	72 hours before study visits	Throughout study participation
Products containing caffeine/xanthines (for example, coffee, tea, chocolate, cola, caffeine-containing soda like Mountain Dew, Dr. Pepper, beverages and energy drinks such as Red Bull, Extreme Energy Shot and Guru)	48 hours prior to TCRC Check-in Day	Throughout study participation*, including during the washout period*
Products containing poppy seeds or quinine (tonic water)	48 hours prior to TCRC Check-in Day	Throughout study participation*, including during the washout period*
Products containing pomelo, grapefruit and/or Seville orange products, or juice	14 days prior to TCRC Check-in Day	Throughout study participation*, including during the washout period*

* Acetaminophen may be concomitantly used at the discretion of the Investigator (up to 1000 mg three times a day).

Risks of Blood Draws

You may have a bruise (a black and blue mark) or pain in the area we take the blood samples. There is also a small risk of infection, lightheadedness, and/or fainting.

Risks of IV Placement

Risks of having an IV include pain, bruising and infection at the insertion site. Less common risks are nerve damage, excessive bleeding, fainting, or developing a blood clot (hematoma) under the skin. The IV may also become dislodged or fail, requiring additional blood draw using a needle.

Risks of Magnetic Resonance Imaging (MRI)

MRIs use powerful magnets to make images. There are no known radiation risks associated with MRIs. However, people with metal implants such as surgical clips or pacemakers should not have MRIs. All credit cards and other items with magnetic strips should also be kept out of the MRI room. People who feel uncomfortable in confined spaces (claustrophobia) may feel uncomfortable in the narrow tube. The MRI makes loud banging noises as it takes images. Earplugs will be used to reduce this noise. The MRI can be stopped at any time at your request. You will be given a button you can press at any time to talk to the MRI and study staff.

If you are or suspect you are pregnant, you should not participate in this study. The MRI has the potential during routine use to cause localized warming of your skin and underlying tissues. You should immediately inform us if you experience discomfort due to warming and the procedure will be stopped.

Some people may experience dizziness or rarely nausea when going into an MRI scanner and these sensations may be more common in scans with higher magnetic fields. In most cases, these symptoms only last a short time. However, some people may experience them throughout the scan and/or continue to experience them for a short period of time after; generally, less than half an hour. No case of permanent problems is known.

Scanning may last up to 120 minutes. You will be required to lie still for much of this time. Some people may find it uncomfortable lying still for such long periods of time. Others may feel uncomfortable with the narrow dimensions of the scanner or find the loud scanner noises unpleasant. The respiratory belt that we may use to track your motion during the scanning session may be uncomfortable after a period of time. If you feel uncomfortable, you may request that scanning be stopped at any time.

Risk of Overnight Hospital Stay

You may become frustrated or experience feelings of isolation or loneliness during the extended overnight stays at the TCRC. Please talk to a study staff member or a member of the TCRC if these feelings become intense or unmanageable.

Due to being in a new environment overnight, you may also experience trouble sleeping.

Risks of Questionnaires

Questionnaires may cause you to feel sad or upset. Study personnel are experienced with such evaluations and sensitive to these issues; also, you are free to cease or take a break from the questionnaire sessions at any time.

Data Security Risks

Study data that we collect throughout your participation in the study will be stored within QMENTA Imaging Hub, REDCap Cloud, and MGH's REDCap database. These are secured database platforms and only necessary MGH study staff and qualified QMENTA and REDCap personnel will have access to data collected within this study. Your study data will be identified within the study database by using a unique study ID. Your name, date of birth, and general contact information (e.g., email, telephone number, address) will be collected and stored within the study database, however, no other personal identifiers will be collected. The risk is very small; however, data security breaches are always a risk when using electronic based systems. Every precaution will be put in place by QMENTA, REDCap, and the MGH staff to ensure your privacy and confidentiality are protected both during and after your study participation. Any data shared with the sponsor or outside laboratories used for blood specimen processing will only contain your unique study ID and no identifiable information.

Safety Procedures for Female Participants Who are Able to Become Pregnant

If you are a menopausal woman and have not had a menstrual period in the past 12 months or more, you will not need to have a pregnancy test. Also, if you have had any well-documented method of surgical sterilization, you will not need to have a pregnancy test. Methods of surgical sterilization include having had a hysterectomy (removal of the uterus), bilateral oophorectomy (removal of both ovaries), a tubal ligation (having your tubes tied), and transvaginal occlusion (plugging the opening of the tubes with a coil). All other female subjects must have a negative pregnancy test before starting the study drug and throughout their participation in the study.

If you are sexually active and able to become pregnant, you must agree to use one of the birth control methods listed below. You must use birth control starting at the screening visit until 30 days after your last dose of study drug in Treatment Period 2.

Acceptable birth control methods for use in this study are:

- hormonal methods, such as birth control pills, patches, injections, vaginal rings, or implants
- barrier methods (such as a condom, cervical cap, or diaphragm) used with a spermicide (a foam, cream, or gel that kills sperm)
- intrauterine device (IUD)
- abstinence (no sex)

If you miss a period, or think you might be pregnant during the study, you must tell the study doctor immediately. If you become pregnant, you must stop taking the study drug and stop taking part in the study. The study doctor may ask for your permission to collect information about the outcome of your pregnancy and the condition of your newborn.

Safety Procedures for Male Participants Who are Able to Father a Child

If you are sexually active and able to father a child, you must agree to use one of the birth control methods listed below. You must use birth control starting at the screening visit until 30 days after your last dose of the study drug in Treatment Period 2.

Acceptable birth control methods that you can use in this study are:

- condoms with spermicide (a foam, cream, or gel that kills sperm)
- abstinence (no sex)

Acceptable birth control methods that your female partner(s) should use are:

- hormonal methods, such as birth control pills, patches, injections, vaginal ring, or implants
- barrier methods (such as a condom, cervical cap, or diaphragm) used with a spermicide (a foam, cream, or gel that kills sperm)
- intrauterine device (IUD)

If your female partner becomes pregnant during your participation in the study or within 30 days of study completion, the sponsor, Alzamend Neuro, Inc., would like to follow the outcome of the pregnancy. You should notify us immediately if your partner becomes pregnant. We will work with you and your female partner to provide contact information to the sponsor. She may be asked to sign a release of medical information form that gives her doctors permission to provide information to the sponsor. You will not have to stop taking the study drug or stop taking part in the study if your partner becomes pregnant.

What are the possible benefits from being in this research study?

You will not benefit from participating in this research study. However, others with psychiatric and neurological conditions may benefit in the future from what we learn in this study**.**

Can you still get medical care within Mass General Brigham if you don't take part in this research study, or if you stop taking part?

Yes. Your decision won't change the medical care you get within Mass General Brigham now or in the future. There will be no penalty, and you won't lose any benefits you receive now or have a right to receive.

We will tell you if we learn new information that could make you change your mind about taking part in this research study.

What should you do if you want to stop taking part in the study?

If you take part in this research study, and want to drop out, you should tell us. We will make sure that you stop your participation in the study safely. We will also talk to you about follow-up care, if needed.

Also, it is possible that we will have to ask you to drop out of the study before you finish it. If this happens, we will tell you why. We will also help arrange other care for you, if needed.

Will you be paid to take part in this research study?

We will pay you up to $10,300 if you complete the study in its entirety. You will be paid after completion of Baseline MRI scan, Treatment Period 1, Treatment Period 2, and then again after completion of the full study. If you do not complete all the procedures in the study, we will prorate your compensation for all the visits and/or procedures you completed. Compensation breakdown for specific procedures is as follows:

- Baseline MRI scan - $100
- Treatment Period 1
  - TCRC Overnight Stays - $200/day ($2,800 total)
  - CTRU Procedures on Day 14 & Day 15 – $800
    - Repeated PK Blood Draws (29): $25/draw ($725 total)
    - Day 15 CTRU Procedures: $75
  - 7 Short MRI scans - $700 ($100 for each completed scan)
  - Long MRI scan - $100
  - Total for Treatment Period 1: $4,400
- Treatment Period 2
  - TCRC Overnight Stays - $200/day ($2,800 Total)
  - CTRU Procedures on Day 14 & Day 15 – $800
    - Repeated PK Blood Draws (29): $25/draw ($725 total)
    - Day 15 CTRU Procedures: $75
  - 7 Short MRI scans - $700 ($100 for each completed scan)
  - Long MRI scan - $100
  - Total for Treatment Period 2: $4,400
- Completion Bonus: $1,400

- *Note: You will only receive the completion bonus if and only if you complete all the procedures in the study. This includes Treatment Period 1, the Washout Period, Treatment Period 2, and the Follow-up visits in full. No exceptions will be made.*

We will pay for transportation to and from the hospital for the drug treatment periods. If you are coming from out of state or live over 2 hours away by car, you will be given the option to stay overnight in a hotel before traveling home after each treatment period.

In instances where an additional MRI scan is needed, either due to technical difficulties or updates to the MRI scanner, we will pay you an additional $100 for completing this additional MRI scan.

We may use your samples and information to develop a new product or medical test to be sold. The sponsor, hospital, and researchers may benefit if this happens. There are no plans to pay you if your samples are used for this purpose. Any samples used for this purpose will be de-identified and cannot be linked to your individual identity.

What will you have to pay for if you take part in this research study?

Alzamend Neuro, Inc. is providing the study drugs at no cost.

Study funds will pay for study-related procedures and study visits that are done only for research.

Study funds will pay for certain study-related items and services. We may bill your health insurer for, among other things, routine items and services you would have received even if you did not take part in the research. You will be responsible for payment of any deductibles and co-payments required by your insurer for this routine care or other billed care. If you have any questions about costs to you that may result from taking part in the research, please speak with the study doctors and study staff. If necessary, we will arrange for you to speak with someone in Patient Financial Services about these costs.

What happens if you are injured as a result of taking part in this research study?

We will offer you the care needed to treat any injury that directly results from taking part in this research study. We reserve the right to bill your insurance company or other third parties, if appropriate, for the care you get for the injury. We will try to have these costs paid for, but you may be responsible for some of them. For example, if the care is billed to your insurer, you will be responsible for payment of any deductibles and co-payments required by your insurer.

In this study, Alzamend Neuro, Inc. will pay for medical treatment for any injury that is not paid for by your health insurer if the injury is a direct result of your taking part in the study. Alzamend Neuro, Inc. has no plans to offer you any other payments or other types of compensation.

Injuries sometimes happen in research even when no one is at fault. There are no plans to pay you or give you other compensation for an injury, should one occur. However, you are not giving up any of your legal rights by signing this form.

If you think you have been injured or have experienced a medical problem as a result of taking part in this research study, tell the person in charge of this study as soon as possible. The researcher's name and phone number are listed in the beginning of this consent form.

If you take part in this research study, how will we protect your privacy?

Federal law requires Mass General Brigham to protect the privacy of health information and related information that identifies you. We refer to this information as "identifiable information".

In this study, we may collect identifiable information about you from:

- Past, present, and future medical records
- Research procedures, including research office visits, tests, interviews, and questionnaires

Who may see, use, and share your identifiable information and why they may need to do so:

- Mass General Brigham researchers and staff involved in this study
- The sponsor(s) of this study, and people or groups it hires to help perform this research or to audit the research
- Other researchers and medical centers that are part of this study
- The Mass General Brigham ethics board or an ethics board outside Mass General Brigham that oversees this research
- A group that oversees the data (study information) and safety of the study
- Non-research staff within Mass General Brigham who need identifiable information to do their jobs, such as for treatment, payment (billing), or hospital operations (such as assessing the quality of care or research)
- People or groups that we hire to do certain work for us, such as data storage companies, accreditors, insurers, and lawyers
- Federal agencies (such as the U.S. Department of Health and Human Services (DHHS) and agencies within DHHS like the Food and Drug Administration, the National Institutes of Health, and the Office for Human Research Protections), state agencies, and foreign government bodies that oversee, evaluate, and audit research, which may include inspection of your records
- Public health and safety authorities, if we learn information that could mean harm to you or others (such as to make required reports about communicable diseases or about child or elder abuse)

- Other: N/A

Some people or groups who get your identifiable information might not have to follow the same privacy rules that we follow and might use or share your identifiable information without your permission in ways that are not described in this form. For example, we understand that the sponsor of this study may use your identifiable information to perform additional research on various products or conditions, to obtain regulatory approval of its products, to propose new products, and to oversee and improve its products' performance. We share your identifiable information only when we must, and we ask anyone who receives it from us to take measures to protect your privacy. The sponsor has agreed that it will not contact you without your permission and will not use or share your identifiable information for any mailing or marketing list. However, once your information is shared outside Mass General Brigham, we cannot control all the ways that others use or share it and cannot promise that it will remain private.

Because research is an ongoing process, we cannot give you an exact date when we will either destroy or stop using or sharing your health information. Your permission to use and share your identifiable information does not expire.

The results of this research study may be published in a medical book or journal, or used to teach others. However, your name or other identifying information **will not** be used for these purposes without your specific permission.

Your Privacy Rights

You have the right **not** to sign this form that allows us to use and share your health information for research; however, if you don't sign it, you can't take part in this research study.

You have the right to withdraw your permission for us to use or share your health information for this research study. If you want to withdraw your permission, you must notify the person in charge of this research study in writing. Once permission is withdrawn, you cannot continue to take part in the study.

If you withdraw your permission, we will not be able to take back information that has already been used or shared with others, and such information may continue to be used for certain purposes, such as to comply with the law or maintain the reliability of the study.

You have the right to see and get a copy of your health information that is used or shared for treatment or for payment. To ask for this information, please contact the person in charge of this research study. You may only get such information after the research is finished.

Informed Consent and Authorization

Statement of Person Giving Informed Consent and Authorization

- I have read this consent form.
- This research study has been explained to me, including risks and possible benefits (if any), other possible treatments or procedures, and other important things about the study.
- I have had the opportunity to ask questions.
- I understand the information given to me.

Signature of Subject:

I give my consent to take part in this research study and agree to allow my health information to be used and shared as described above.

_____

Print Name of Subject

_____ _____ _____

Subject Signature Date Time (optional)

Signature of Study Doctor or Person Obtaining Consent:

Statement of Study Doctor or Person Obtaining Consent

- I have explained the research to the study subject.
- I have answered all questions about this research study to the best of my ability.

_____

Print Name

_____ _____ _____

Signature of Study Doctor
or Person Obtaining Consent Date Time (optional)

Consent Form Version: November 4th, 2025 (v4.0)