UF | Institutional Review Board
UNIVERSITY of FLORIDA

INFORMED CONSENT FORM
to Participate in Research, and

AUTHORIZATION
to Collect, Use, and Disclose Protected Health Information (PHI)

INTRODUCTION

Name of person seeking your consent:_____

Place of employment & position: _____

Please read this form, which describes the study in some detail. A member of the research team will describe this study to you and answer all of your questions and is available should any questions arise at (352) 294-8582. Your participation is entirely voluntary. If you choose to participate you can change your mind at any time and withdraw from the study. You will not be penalized in any way or lose any benefits to which you would otherwise be entitled if you choose not to participate in this study or to withdraw. If you have questions about your rights as a research subject, please call the University of Florida Institutional Review Board (IRB) office at (352) 273-9600

GENERAL INFORMATION ABOUT THIS STUDY

1. **Name of Participant ("Study Subject")**

   _____

2. **What is the Title of this research study (this "Research Study")?**

   Sleep, Pain and Aging: Potential Underlying Mechanisms
   (Short title **L**atent **A**ging **M**echanisms in **P**ain and **S**leep — **LAMPS** Study)

3. **Whom do you call if you have questions about this Research Study (the "Study Team")?**

   Principal Investigator: Yenisel Cruz-Almeida, MSPH, PhD at (352) 294-5845

   Co-Principal Investigator: Soamy Montesino Goicolea, MD at (352) 294-8582

   Other Study Staff: Ben Griffith at (352) 294-8582

4. Who is paying for this Research Study?

The sponsors of this study are the University of Florida Clinical Translational Science Institute (CTSI), which is supported in part by the National Institutes for Health (NIH) National Center for Advancing Translational Sciences, and the Center for Advancing Minority Pain and Aging Science (CAMPAS), which is supported in part by the NIH National Institutes of Aging (NIA).

5. In general, what do you need to know about this Research Study?

Agreeing to become involved in any research is always voluntary. By signing this form, you are not waiving any of your legal rights. If you decide not to participate in this research, you will not be penalized in any way and you will not lose any benefits to which you are entitled. If you have questions about your rights as a research subject, please call the University of Florida Institutional Review Board (IRB) office at (352) 273-9600.

a) In general, what is the purpose of the research, how long will you be involved?

The purpose of the research is to study how sleep and pain are related in older adults.

You are being asked to participate in this research study because you are an older adult over 45 years of age experiencing pain of at least moderate intensity on more days than not during the past three months, and who also reports poor sleep quality. We are studying how taking the brain chemical, Gamma-Aminobutyric acid (GABA), may benefit both conditions. GABA is one of the most important chemicals in the brain. GABA has many different effects on the body including emotions, sleep and pain. The study takes approximately 3 months, with follow up calls 3 months after study completion, for a possible total study duration of up to 6 months.

A description of this study will be available on http://www.ClinicalTrials.gov as required by U.S. Law. This website will not include information that can identify you. At most, the website will include a summary of the results. You can search this website at any time.

b) What is involved with your participation, and what are the procedures to be followed in the research?

Your participation will involve 4 study visits with a medication period. You will undergo various testing before and after taking GABA or placebo by mouth. See below (#7) for more in depth information on the procedures.

c) What are the likely risks or discomforts to you?

Likely risks and discomforts associated with this study include a risk of falling or losing your balance while performing the physical performance procedures and activity tests. The hot and cold pain testing procedures may also produce discomfort at the area of stimulation, which may result in mild reddening of the

skin. There is a slight chance that the pressure testing may leave a small bruise at the area of stimulation. In addition, the Magnetic resonance imaging (MRI), a body pictures created by using magnetic energy rather than x-ray energy, may feel uncomfortable if you do not like to be in close spaces. The MRI scanner produces a loud hammering noise; however, earplugs will be given to reduce any risk. Also, the risks of drawing blood from a vein includes discomfort at the site of puncture, which can leave a bruise or swelling at the puncture site. Last, you may feel uncomfortable answering some of the questions on the questionnaires or become stressed or frustrated on the thinking and memory tests.

d) What are the likely benefits to you or to others from the research?

The likely benefits to you or to others from the research are listed in depth on question (#11). Some participants may experience improved pain and sleep quality. Participation in this research study may help advance our understanding of sleep and pain as well as help to develop better treatments for individuals with pain and sleep problems.

e) What are the appropriate alternative procedures or courses of treatment, if any, that might be helpful to you?

Only your physician can inform and prescribe you of any alternative treatments you qualify for. You have the option not to participate in the present study.

Additional and more detailed information is provided within the remainder of this Informed Consent form, please read before deciding if you wish to participate in this study.

WHAT CAN YOU EXPECT IF YOU PARTICIPATE IN THIS STUDY?

6. What will be done as part of your normal clinical care (even if you did not participate in this Research Study)?

Dr. Cruz-Almeida or Dr. Montesino do not provide clinical care. Your clinical care will not be affected by your participation in the current study.

7. What will be done only because you are in this Research Study?

You will take, by mouth, 2 pills of GABA (500 mg) (Capsule 250mg) or Placebo daily at home, at 08:00 pm, over 4 weeks. This study has the following parts:

- Initial screening
- 2 baseline study visits (Health and Sensory testing and Neuroimaging visit)
- 4-week medication phase during which you will take the GABA/PLACEBO daily and short weekly phone contact with study staff.
- 2 study visits after the intervention (Health and Sensory testing and Neuroimaging visit)
- Repeat Follow-up phone contact one week, and 3 months
- Wear an OURA ring during the entire study

All study visits (4 visits in total) will be conducted in the Dental Tower, and the McKnight Brain Institute at the University of Florida. Each visit is expected to last between 2 and 2 ½ hours for a total of 10 hours. You will be taking by mouth the GABA or PLACEBO pill in your home for a period of 4 weeks.

You will be assigned by chance, much like the flip of a coin, to receive either GABA or a placebo pills to take. The placebo is a substance that looks like and is given in the same way as the GABA but contains no GABA. Neither you nor the research assistant will know which type of pill you are getting. This information is coded and securely stored away until the data is analyzed. This is called a "double-blind study" for that reason, but that information is available if it is needed.

There is some flexibility on when the following assessments may be conducted and in general, questionnaires and other testing may be collected during any session that is most convenient for you as long as it is collected before you start taking the study treatment.

Medication Part:

Screening, Baseline Health Assessment and Sensory testing Visit: Together with the information obtained in the phone pre-screening that we have already conducted, the main purpose of the screening visit is to find out if you are eligible to continue in the study.

At the beginning of this visit, after receipt the signed copy of the informed consent, we will conduct a physical examination including vitals (blood pressure, temperature, and pulse as well as weight, waist circumference, and height) medical, sleep and pain history and the review of systems.

You will be given some questionnaires concerning your health, pain, sleep, and feelings and emotions. You do not have to answer any questions that you do not want to answer.

If after this first part of the visit, we determine that you are not eligible for this study because you have a condition that interferes with the study or the study would put you at risk, you will still be compensated for your time. If you are eligible to continue in the study, we will do the second part of the visit that include, the blood draw, Urine Test, pregnancy test (if you are women under the oge of 62), and the sensory testing.

- A blood draw (~3 tablespoonfuls) by a phlebotomist (someone who is trained to collect blood samples). The study clinician will review the blood tests. Results of blood may indicate that you should not participate in the study (e.g., certain test results could be out of normal range). If this is the case, we will give you a copy of your lab results, so that you may share them with your own medical provider and seek care if appropriate. All samples will be stored in a locked space, labelled using a unique ID and without any identifiable information. If blood is not fully collected during one session, with your request, the remaining blood sample may be collected at a later session. We will also collect a urine sample to determine how well your kidneys are working.

- We will assess in detail your ability to feel sensations due to touch, vibration, and changes in temperature on your skin at several locations, some pre-selected (i.e., hands and feet) and some unique to you (in an area where you experience pain that last a long time). **You can stop any of these procedures at any time.**
- Touch Sense: We will measure your touch sensitivity by applying small, plastic, blunt-tipped sticks (filaments) of differing thickness against your skin. The larger filament is about the thickness of a toothpick and the smaller is about three-quarters that size. We will touch your skin with one filament at a time and ask you to tell us if you feel any painful sensation. If you have pain, we will also assess your pain response to touch that is normally not painful by using another plastic filament about one-third the thickness of a toothpick lightly tapping your skin 1 to 10 times. Additionally, we will brush your skin with a soft-bristle paintbrush 1 to 10 times.
- Vibration Sense: We will use a small blunt device that vibrates more and more vigorously over time, and you will be asked to let us know when you first start to feel the vibration. We will repeat this procedure 3 times at each test site (hands, feet, and painful areas).
- Temperature Sense: A small metal heating/cooling surface, about the size of two adjacent postage stamps, will be placed on your skin. You will be asked to tell us when you first feel coolness, warmth, or pain due to cold or heat. We will repeat these 3 or 4 times at each site. The metal heating/cooling surface is not able to reach temperatures, or be of a duration, that could cause tissue damage to your skin. The machine has built-in safety features and algorithms to ensure participant's safety.
- Sensitivity to Heat: One type of sensation will be produced by a small heat probe, or heated metal plate placed on your skin, that will increase in temperature. You will feel several different levels of heat. Some of these temperatures might cause you to experience pain. You will be asked to tell the researcher how the heat feels to you by rating the sensation using numbers or a sliding scale. For your safety, the small heat probe is not able to reach temperatures, or be of a duration, that could cause tissue damage to your skin. The machine has built-in safety features to ensure this.
- Sensitivity to Cold: A second type of sensation will be produced by a small cold contact placed on your skin that will decrease in temperature. You will feel several different levels of cold. Some of these temperatures might cause you to experience pain. You will be asked to tell the researcher how the cold feels to you by rating the sensation using numbers or a sliding scale. For your safety, the small cold contact does not reach temperatures, which would cause tissue damage to your skin.
- Pressure Sense: Another type of sensation will be produced by a device that will be pressed against the skin for several seconds. This might produce pressure pain, similar to what you would feel if you pressed your finger against

your skin. You will be asked to press a button and give a rating to indicate how the pressure feels to you.

- Pinprick Pressure: We will also apply a series of weighted pinprick probes. The probes will not penetrate your skin. We will ask you to tell us which probes produce pain, and then a weighted probe will be applied several times in a row, and you will be asked to rate the pain experienced from the probe. In addition, we will apply a small, plastic, pinprick device to your hand and foot and you will be asked to rate the level of pain you experience at each site.
- Combined Heat and Cold Test: We will also conduct some heat and cold pain testing procedures to assess how the heat pain feels by itself, and then we will test how the heat pain feels after you remove your hand from a cold-water bath. First, we will have you rate several heat pulses. Then, we will ask you to put your hand into the cold water for up to a minute. After you take your hand out of the cold water, we will ask you.
- to rate the heat pulses one more time.

Before and after the sensory testing procedures, several physical measures will be taken including:

- Blood Pressure and Heart Rate: We will measure your blood pressure and heart rate with a device that attaches to your arm.
- Temperature: We will measure the temperature of your skin. This will tell us about how stressed you are. We use round flat sensors, about the size of a dime, that are taped to the skin in places such as your arm, leg, or finger. You will not have any sensation where these sensors are attached to your skin.

We will also perform tests of your physical ability that include:

- Standing up from a chair
- Balance tests
- Muscle strength tests of your arm and leg

We will train you on how to use the app you need to have in your cellphone to use an OURA ring. You may wear this ring during the entire study period to record your daily physical activities (e.g., number of steps you take) throughout the day as well as your sleep quality over the night. At the end, you will return the ring to the study coordinators.

The OURA ring includes a secure smartphone app that summarizes sensor-monitored data. Sleep quality will be captured each day throughout the entire study. Data will be downloaded remotely or when the participant reports to the clinic during the intervention phase. You will start wearing the device during the baseline weeks and at each visit, we will ask you about wearing the ring.

Baseline Neuroimaging Visits (up to 2):

At the beginning of this visit, we will ask to get some information about your general health since your last visit, your current grade of pain as well as your feeling and emotion at this moment. During this session, we will also collect a small blood sample to quantify circulating GABA concentrations. We will also take your vital signs again, and you will also receive the GABA or PLACEBO pill you are going to be taking during the next 4 weeks since this visit and will be provided with a copy of a medication diary log sheet to records the precise date and time of the administration of the GABA/Placebo each day.

We will take pictures of your brain at rest and while at work using magnetic resonance imaging (MRI). During the MRI, we will also apply pain since we are also interested in examining changes in your brain when you experience pain. MRI is a procedure non-invasively using magnetic waves to look at soft tissues of the brain-body and is a relatively safe and common practice.

We will also measure chemical changes in your brain at rest using a non-invasive technology called magnetic resonance spectroscopy or MRS for short.

If an obvious gross abnormality is discovered during your MRI scan, the PI will be notified immediately. Per the standard protocol of our neuroimaging facility, the on-call licensed radiologist will receive the scans for review. The radiologist will contact you and encourage you to seek further evaluation and follow-up.

If we cannot finish your imaging session in one visit, we will ask you to come back in another visit which will be equally compensated

Study Medication Period: During the 4-week part when you will take the pill, you will also be asked to do the following:

- You will take either a GABA or Placebo pill by mouth daily at around 08:00 pm, over 4 weeks.
- You will continue to fill in short diary (asking about your bedtime and waketimes) that we provided you in your first visit where we ask you about last night's sleep and you will fill it out every day throughout the entire study (3 months approximately).
- You will also wear the OURA ring that was shown to you in the previous visit. The device will also automatically record your physical activity levels and your sleep quality, that information will be updated each day in your OURA application we installed in your cell phone in the first visit. We will call you once a week during the medication period, to ensure proper remote download of data from your ring and also, to ask you whether you experienced any side effects or any problems with your health.
- Every day you will record your pain ratings as well as if you took any pain medications.

We will provide either GABA or Placebo pills and the ring for the duration of the medication phase. When the study is complete, you will return both to the study coordinator.

Post-Intervention Health Assessment and Sensory Testing Visit: You will be asked to participate in the following:

- You will again be physically examined (including vitals) under the supervision of the study clinician.
- We will ask you questions about your health condition since your last visit, your current grade of pain as well as your feeling and emotion at this moment.
- You will be given some questionnaires concerning your pain, sleep, and feelings and emotions. These measures will be very similar to the ones you did before the intervention phase. You do not have to answer any questions that you do not want to answer.
- Any side effects from the intervention period and recent activities.
- Another blood draw (~3 tablespoonful) will be conducted by the phlebotomist to run blood tests, and another urine sample to measure urine specific gravity. The samples will be stored in a locked research space, labeled using a unique ID and without any identifiable information.
- The sensory testing will be the same described before in the intervention phase.

Post-Intervention Neuroimaging Visit: We will ensure that you are eligible and safe to participate in the MRI/MRS scanning session on days of testing. This visit will be exactly like the Neuroimaging before the intervention.

Similar to the baseline visits, if brain imaging is not fully collected during one session, with your request, the remaining brain images may be collected at a later session and you will be compensated for the extra session.

Upon completion of the study, we will tell you about the general goals of the study and answer any questions that you may have.

Follow-Up Phone Call: We will call you about one week, and 3 months after your last study visit to inquire whether you experienced any GABA side effects or any health problems. This phone call will consist of questionnaires already exposed to the participant.

If you participate in this research study, as mentioned above, we will collect blood and urine for laboratory tests. The samples will be stored in a locked research space at the University of Florida. We will use the samples to measure standard clinical parameters and the GABA levels in your blood.

When there is no longer enough amounts of blood samples collected from you for analysis, or samples become degraded, or you request in writing that we destroy it, any remaining genetic material will be destroyed. The samples will only be accessible to the research staff and will be labeled only by an identification number, not your

name. The University of Florida will not sell the samples and will not use the DNA for cloning.

Once this research study is completed, any information that could identify you might be removed from any identifiable private information or identifiable biospecimens collected. After such removal, the information or biospecimens could be used for future research studies or distributed to another investigator for future research studies without additional informed consent from you or your legally authorized representative. You can stop any procedure or test at any time by simply telling us to stop. Furthermore, if you have any questions now or at any time during the study, or if you have any discomfort or concerns during or after the study, you are encouraged to get in contact with the Principal Investigators listed in question 3 of this form.

8. What identifiable health information will be collected about you and how will it be used?

The Research Team will also collect:

- Your contact information
- Information you provide regarding your demographic, health history, medical conditions, and treatments.
- List of medications you are taking
- Email and home address
- Information obtained from the questionnaires
- Information related to diagnosis of a mental health condition as provided by you.
- Your social security number for compensation purposes.
- Your responses to study procedures including sensory testing procedures.
- Results of assessment of your physical abilities
- Results of imaging by MRI
- Results of laboratory tests assessing chemical markers related to pain perception

This information will be stored in locked filing cabinets or on computer servers with secure passwords or encrypted electronic storage devices until the completion of the study. All data entered into computers or electronic storage files are assigned subject ID numbers that are de-identified to ensure that all information is protected.

Some of the information collected could be included in a "limited data set" to be used for other research purposes. If so, the limited data set will only include information that does not directly identify you. For example, the limited data set cannot include your name, address, telephone number, SSN, photographs, or other codes that link you to the information in the limited data set. If limited data sets are created and used, agreements between the parties creating and receiving the limited data set are required in order to protect your identity, confidentiality and privacy

The Research Team may collect this information from other healthcare providers, such as laboratories, which are a part of this research, as well as healthcare

providers that are not part of this research (other doctors, hospitals or clinics). Other professionals at the University of Florida or Shands Hospital who provide study-related care, and the University of Florida Institutional Review Board (IRB), may also collect your health information.

The Research Team listed in question 3 above will use or share your health information as described below to carry out this research study.

9. With whom will this health information be shared?

This health information may be shared with:

- the study sponsor (listed in Question 4 of this form);
- United States governmental agencies which are responsible for overseeing research, such as the Food and Drug Administration, the Department of Health and Human Services, and the Office of Human Research Protections;
- Government agencies which are responsible for overseeing public health concerns such as the Centers for Disease Control and federal, state and local health departments.
- The IRB that reviewed this Research Study and ensures your rights as a Study Subject are protected

Otherwise, your identifiable health information will not be shared without your permission unless required by law or a court order. Once your health information is shared with those listed above, it is possible that they could share it without your permission because it would no longer be protected by the federal privacy law.

10. How long will you be in this Research Study?

The entire study is roughly 3 months, over the course of 4 separate visits with follow up calls during the study and 3 months after study completion.

This Authorization to use and share your health information expires at the end of the study, unless you revoke it (take it back) sooner.

11. How many people are expected to take part in this Research Study?

We anticipate that we will need to enroll and screen 50 people to achieve the targeted number of participants needed for study completion of 28.

WHAT ARE THE RISKS AND BENEFITS OF THIS STUDY AND WHAT ARE YOUR OPTIONS?

12. What are the possible discomforts and risks from taking part in this Research Study?

Equipment used in this research meets all current safety standards and research staff is highly trained in the use of all equipment. There are no known physical or economic

risks to participants and minimal, if any, known psychological risk from any of the procedures. This study may include risks that are unknown at this time. The reported side effects in relation to the intake of GABA supplements include dizziness, anxiety, drowsiness, dry mouth, balance problems, constipation, blurred vision, itchiness, irritation and stomach pain. Despite these being the most common side effects, only a small number of users appear to be affected by GABA. The use of GABA oral supplement produces no consistent side effects and provides no known risk to participants who meet the study's eligibility criteria.

During the intervention phase and one week and three months after study completion, you will respond to questions to detect any possible side effects or discomfort related to drug administration. Throughout the study, the researchers will notify you of new information that may become available and might affect your decision to remain in the study.

Magnetic Resonance Imaging (MRI)/Magnetic Resonance Spectroscopy (MRS): MRI and MRS are non-invasive procedures that allow study of the brain and body non-invasively using magnetic fields and radio waves. These procedures are used routinely for medical care and are very safe for most people, but you will be monitored during the MRI/MRS scans in case any problems occur.

The risks of MRI/MRS are:

- The MRI/MRS scanner contains a very strong magnet. Therefore, you may not be able to have the MRI/MRS if you have any type of metal implanted in your body, for example, any pacing device (such as a heart pacer), any metal in your eyes, or certain types of heart valves or brain aneurysm clips. The research staff will ask you questions about this every time before you have the MRI/MRS.
- There is not much room inside the scanner. You may be uncomfortable if you do not like to be in close spaces ("claustrophobia"). During the procedure, you will be able to talk with the research staff through a speaker system, and, in the event of an emergency, you can tell them to stop the scan.
- The scanner produces a loud hammering noise, which has produced hearing loss in a very small number of people. You will be given foam earplugs that will be placed inside your ear canal and headphones that cover your ears entirely, to reduce this risk.
- If an obvious gross abnormality is discovered during your MRI scan, the PIs will be notified immediately. Per the standard protocol of our neuroimaging facility, the on-call licensed radiologist will receive the scans for review. The radiologist will share his/her findings with the PI, and the PI will contact you within a day of receiving the findings and encourage you to seek further evaluation and follow-up.
- You will be monitored very carefully while in the scanner, and repeatedly checked upon to ensure comfort. At the end of the MRI/MRS scan, you will respond to a questionnaire to detect any possible discomfort related to the MRI/MRS scanning.

Blood Draw: The risks of drawing blood from a vein include discomfort at the site of puncture; possible bruising and swelling around the puncture site; rarely an infection; and, uncommonly, faintness from the procedure

Blood Pressure Measurement: Placing a blood pressure cuff on your arm may cause pinching or slight bruising.

Physical Tests: There is a risk of losing your balance and falling, development of chest discomfort due to spasm of heart vessels, or being short of breath, due to heart failure or lung disease, that could be associated with the physical ability testing (e.g., the ¼ mile walk test, balance tests, rising from a chair). We will minimize this risk by: (i) safely escorting you to chairs located along the walking course should you become unsteady; (ii) following you at a close distance; and, (iii) being at your side should you need assistance. Additionally, you may experience very minor muscle soreness following some of the physical testing. This soreness usually disappears completely after 2 days. To minimize risk, only trained study team members will oversee the physical performance tests.

Questionnaires**:** You may feel uncomfortable about answering some of the questions on the questionnaires. You are free not to answer those questions.

Sensory Testing: The sensory testing procedures may be uncomfortable or unpleasant, in that you may experience some temporary discomfort from the thermal, pressure, and mechanical stimulation. However, if you feel the sensation is greater than you wish to tolerate, you can stop any of the procedures at any time

*Heat probe***:** Several things may occur in the area of skin (1 inch square) after the heated probe contacts your skin: (1) It may turn red like a mild sunburn, and (2) there may be a slight burning feeling after the heat is removed. For most people this is gone in 1-2 minutes. It may take up to 1-2 hours for all the symptoms to disappear. It is very unlikely (less than 1% chance) that you will get a burn serious enough to cause a blister and it depends on the skin susceptibility of each participant. In addition, you can stop any testing at any time if the pain becomes intense. The risk of an electrical injury as a result of your contact with the test equipment is very small and comparable to the electrical shock risk of a common household appliance.

*Pressure***:** There is a slight chance that a small bruise may form as a result of the testing your sensitivity to pressure. If a bruise should appear it is usually short lasting and not painful.

The OURA ring: Wearing the OURA ring has the same physical risks of wearing a normal ring. You can wear your Oura Ring 24/7; It's built for all day comfort. It is waterproof up to 100m/328 ft. While unlikely, if you experience skin irritation/redness on your finger, remove the product immediately. In case the ring gets stuck on your finger: Use cold water and a small amount of soap, wet your finger, and slowly twist the ring to remove it. Hold your hand up above your heart until the blood pressure gets lower, and then try the removal. In case of emergency, cut the ring with a ring cutter from the palm side of the finger - the ring's thinnest point. Do not cut the ridge of the Balance or the plain of Heritage. This prevents the battery from being cut. The lithium-

ion polymer battery should not have electrolyte flowing, but in case electrolyte comes in contact with your skin or eyes, flush it out with water and seek immediate medical attention.

Finally, there is a minor risk that the ring could be stolen, if this happened, there is no way to get information from the ring because it is associated with the OURA application we installed in your phone. Only authorized personnel have access to research information, and no names, social security numbers, or personal information will be stored on the OURA application.

Your Personal Information: Some of the questions you will be asked may be personal in nature and may make you uncomfortable. Time will be made to talk with you if you appear to be distressed. In addition, we will be asking you for information about sensitive issues which may make you feel uncomfortable. If you are uncomfortable answering these questions, you can choose not to answer and discontinue participation in the study. Research staff will explain what to do during your clinic visits. There is no right or wrong answer on these tests.

Researchers will take appropriate steps to protect any information they collect about you. However, there is a slight risk that information about you could be revealed inappropriately or accidentally. Depending on the nature of the information, such a release could upset or embarrass you, or possibly affect your insurability or employability.

Please note, participating in more than one research study or project may further increase the risks to you. If you are already enrolled in a research study, please inform one of the Research Team members listed in question 3 of this form or the person reviewing this consent with you before enrolling in this or any other research study or project.

During the study, the Research Team will notify you of new information that may become available and might affect your decision to remain in the study.

The University of Florida is required by law to protect your health information. Your health information will be stored in locked filing cabinets or on computer servers with secure passwords, or encrypted electronic storage devices, as required by University policy. However, there is a slight risk that information about you could be released inappropriately or accidentally. Depending on the type of information, a release could upset or embarrass you, or possibly affect your ability to get insurance or a job.

If you wish to discuss the information above or any discomforts you may experience, please ask questions now or call one of the Research Team members listed in question 3 in this form.

13a. What are the potential benefits to you for taking part in this Research Study?

You may or may not benefit from participating in this study. It is possible, but not promised, that some participants may experience improved sleep and/or experience some pain relief.

13b. How could others possibly benefit from this Research Study?

Study results will increase our understanding of sleep disorder and chronic pain in aging and the role of GABA as a treatment. This would benefit future patients.

13c. How could the Research Team members benefit from this Research Study?

In general, presenting research results helps the career of a researcher. Therefore, the Principal Investigator may benefit if the results of this Research Study are presented at scientific meetings or in scientific journals.

13d. Will you be allowed to see the research information collected about you for this Research Study?

You may not be allowed to see the research information collected about you for this Research Study, including the research information in your medical record, until after the study is completed. When this Research Study is over, you will be allowed to see any research information collected and placed in your medical record.

14. What other choices do you have if you do not want to be in this study?

Participation in this study is entirely voluntary. You are free to refuse to be in the study, and your refusal will not influence current or future health care you receive at this institution. If you do not want to take part in this study, tell the Principal Investigator and do not sign this Informed Consent Form. You have the option to participate in either the first or the second part of the study, or both of them.

You may also refuse to authorize the use of your health information, but if you refuse, you may not be allowed to be in this research study or receive any research-related treatment that is only available in this research study. However, your decision not to sign this Authorization will not affect any other treatment you may be eligible to receive.

15a. Can you withdraw from this study?

You may withdraw your consent and stop participating in this Research Study at any time. If you do withdraw your consent, there will be no penalty to you, and you will not lose any benefits to which you are otherwise entitled. If you decide to withdraw your consent to participate in this Research Study for any reason, please contact the Research Team listed in question 3 of this form. They will tell you how to safely stop your participation.

You can also change your mind and take back this Authorization at any time by sending a written notice to the Research Team listed in question 3 of this form to let them know your decision. If you take back this Authorization, the Research Team may only use and disclose your health information already collected for this research study. No additional health information about you will be collected or disclosed to the Research Team. However, if you take back this Authorization, you may not be able to continue in this study. Please discuss this with a member of the Research Team listed in question #3.

15b. Can the Principal Investigator withdraw you from this Research Study?

You may be withdrawn from this Research Study without your consent for the following reasons:

- You do not follow the instructions given to you by the study team
- It is not safe for you to continue your study participation
- Unforeseen administrative reasons

Ask the Principal Investigators listed in question (#3) of this form if you would like more information about this.

WHAT ARE THE FINANCIAL ISSUES IF YOU PARTICIPATE?

16. If you choose to take part in this Research Study, will it cost you anything?

Study Services

The Sponsor will pay for or provide all study services/activities required as part of your participation in this study. There will be no cost to you. If you receive a bill related to this study, please contact Yenisel Cruz-Almeida, MSPH, PhD, at (352) 294-8584.

Items/Services Not Paid for by the Sponsor

Any other medical services provided to you that are not directly required by this study will be billed to you or your insurance company in the usual manner.

17. Will you be paid for taking part in this Research Study?

Yes. You will be compensated in the amount of $35 for each non-MRI session and $40 for each MRI session that you attend, and $10 per weekly phone follow up for 4 weeks; for a total of up to $190 in cash.

Your payment for participation in this research study is handled through the University of Florida's Human Subject Payment (HSP) Program. Your information which will include your name, address, date of birth, and SSN (depending on amount of money you are paid) is protected. Access to the (HSP) Program site is limited to certain staff with the assigned security role. You will be randomly assigned a specific identification (ID) number to protect your identity. If you have any problems regarding your payment contact the study coordinator

If you are paid more than $75 for taking part in this study, your name and social security number will be reported to the appropriate University employees for purposes of making and recording the payment as required by law. You are responsible for paying income taxes on any payments provided by the study. Payments to nonresident aliens must be processed through the University of Florida Payroll and Tax Services department. If the payments total $600 or more in a calendar year, the University must report the amount you received to the Internal Revenue Service (IRS). The IRS is not provided with the

study name or its purpose. If you have questions about the collection and use of your Social Security Number, please visit: http://privacy.ufl.edu/SSNPrivacy.html.

18. What if you are injured while in this Research Study?

If you are injured as a direct result of your participation in this study, only the professional services that you receive from any University of Florida Health Science Center healthcare provider will be provided without charge. These healthcare providers include physicians, physician assistants, nurse practitioners, dentists, or psychologists. Any other expenses, including Shand's hospital expenses, will be billed to you or your insurance provider.

You will be responsible for any deductible, co-insurance, or co-payments. Some insurance companies may not cover costs associated with research studies or research-related injuries. Please contact your insurance company for additional information.

The Principal Investigator will determine whether your injury is related to your participation in this study.

No additional compensation is offered. The Principal Investigator and others involved in this study may be University of Florida employees. As employees of the University, they are protected under state law, which limits financial recovery for negligence.

Please contact Dr. Yenisel Cruz-Almeida at 352-294-5845 if you experience an injury or have questions about any discomforts that you experience while participating in this study.

SIGNATURES

As an investigator or the investigator's representative, I have explained to the participant the purpose, the procedures, the possible benefits, and the risks of this Research Study; the alternative to being in the study; and how the participant's protected health information will be collected, used, and shared with others:

Signature of Person Obtaining Consent and Authorization	Date

You have been informed about this study's purpose, procedures, possible benefits, and risks; the alternatives to being in the study; and how your protected health information will be collected, used and shared with others. You have received a copy of this Form. You have been given the opportunity to ask questions before you sign, and you have been told that you can ask questions at any time.

You voluntarily agree to participate in this study. You hereby authorize the collection, use and sharing of your protected health information as described above. By signing this form, you are not waiving any of your legal rights.

Signature of Person Consenting and Authorizing	Date