HOUSTON Methodist LEADING MEDICINE

Informed Consent for Participation in Research

Participant's Name: _____ **Subject ID Number:**_____

Study Title: Multifocal brain magnetic stimulation in chronic ischemic stroke

Official Study Title: An Innovative Approach to Restoration of Function in Chronic Ischemic Stroke using a New Wearable Multifocal Brain Stimulator

Principal Investigator: David Chiu, M.D.

Funding Source: Seraya Medical Systems LLC

Study Purpose/Executive Summary:

The purpose of this study is to test whether a new wearable non-invasive brain stimulation device brings about improvement in motor function in chronic ischemic stroke. This study involves giving non-invasive research treatment to patients recovering for more than 3 months from ischemic stroke with weakness on one side of the body, and studying the outcomes of the treatment, which are currently unknown. This is a randomized, double-blind, placebo-controlled clinical trial in which you will be randomly assigned to one of two groups to receive either mild magnetic stimulation treatment to areas of your brain, on both sides of the head for 40 minutes each week day for four weeks or a placebo treatment (non-active stimulation). The strength and function of your affected limbs will be assessed by clinical tests. Clinical assessments and tests will be done immediately before and after the four week treatment, at one week after treatment, and at one month and three month follow up time points. In addition, a 30 minute EEG recording will be performed before the treatment and a 40-60 minute MRI scan and a surface EMG will be done before and after the treatment. The MRI scans and EMGs will also be repeated at the one month follow up time point. The expected time you will be in the study is 3 months. Forty patients will be enrolled at Houston Methodist throughout the study. You will have procedures done that are considered research and may or may not be a part of the usual care for your condition. You have the choice not to participate in this research. If you decide to participate, your private health information will be collected; however the researchers in this study will take appropriate measures to ensure confidentiality of your information. In case you are injured as a result of the study, medical treatment is available.

Preliminary results from a single subject study showed no adverse effects, and improved brain activation shown on functional MRI after treatment.

Why me: You were selected to possibly take part in this study because you are a recovering stroke patient with weakness on one side of the body. You were selected making sure that you can safely undergo application of mild repeated magnetic pulses at the surface of your scalp.

If you go to Houston Methodist or another healthcare facility or provider for any reason while participating in this study, you should inform them that you are involved in this research study, as it may impact the type(s) of care provided and protect your safety.

Your participation in this study is voluntary. You can choose not to participate at any time without any penalty or loss of benefits to which you are entitled.

What risks will I face by taking part in the study and how will Researchers protect me from these risks?
The tables below show the most common and the most serious side effects that researchers know about. There might be other side effects that researchers do not yet know about.

If important new side effects are found, the study doctor will discuss these with you.

Possible side effects of active brain stimulation treatment

Common, Some May be serious (i.e. in 100 people, more than 20 will have)
• Mild discomfort from wearing a nylon cap, and feeling a vibratory sensation of a running motor. You will be questioned about known metal implants or injuries that may have resulted in metal being retained in your body.

Occasional, Some May be serious (i.e. in 100 people, 4 to 20 may have)
• Headache, twitching of muscles.

Rare, and serious (i.e. in 100 people 3 or fewer will have)
• Dizziness. • Seizure. • Tissue heating • Hearing change • Psychiatric changes

Possible side effects of placebo brain stimulation treatment

Common, Some May be serious (i.e. in 100 people, more than 20 will have)
• Mild discomfort from wearing a nylon cap, and feeling a vibratory sensation of a running motor. You will be questioned about known metal implants or injuries that may have resulted in metal being retained in your body.

The researchers have taken steps to minimize the risks of this study. Please tell the researchers in the contact section about any injuries, side effects, or other problems that you have during this study. You should also tell your regular doctors**.**

As with any research study, there may be additional risks that are unknown or unexpected. If these become known, the study team will notify you in a timely manner of any changes that may change your willingness to participate. If new information is provided to you after you have joined the study, it is possible that you may be asked to sign a new consent form that includes the new information.

How could I and others benefit if I take part in this study?

This study may or may not help you. Possibly, the treatment will lead to improvement in your motor function, though this is not guaranteed. This study may also help us learn things that could help people in the future.

Are there any cost or payments?

The sponsor/study will cover the cost of the research treatment, study MRIs, EMGs and study EEGs.

You and/or your insurance company will be responsible for payment of items and services that you would receive even if you were not participating in the research study. You will be responsible for your normal co-payments and co-insurance/deductibles.

You will not receive compensation for your participation in the study. The study will cover your parking in the Scurlock Tower garage by giving you parking coupons at each visit.

If you have any questions as to what your obligations are for payment for items or services under this study, or would like to see a list of procedures or items for which you are responsible financially, please talk with the study team and/or your insurance company.

Who could profit or financially benefit from the study results?

If commercial products or other valuable discoveries result from this research project, these products and discoveries could be patented, licensed, or otherwise developed for commercial sale by The Methodist Hospital Research Institute or the inventor and sub-investigator, Dr. Santosh Helekar, or their respective designees. However, the Principal Investigator, Dr. David Chiu, does not have any financial interest in the outcome of the study. There are no plans to provide financial compensation to you. There are no plans for you to share in the patent rights, other ownership rights, or rights to control the commercial products and discoveries that may result from this research project.

What is the usual approach to my: Chronic ischemic stroke

- Drug treatment for symptoms, physical therapy and assistive equipment

What extra test and procedures will I have if I take part in the study?

Most of the exams, tests, and procedures you will have are part of the usual approach for your condition. However, there are some extra MRI, EMG, EEG and clinical tests that you will need to have if you take part in this study.

Before you begin the study:

You will have a complete clinical examination done by the Principal Investigator of the study.

Neither you nor your health care plan/insurance carrier will be billed for the procedures that will be used for this study.

You will have a set of evaluations and procedures done at Visit 1 and/or Visit 2 prior to treatment, and visits 23-26, which may include:

- National Institutes of Health Stroke Scale (NIHSS)
- Modified Rankin Scale (mRS)
- Grip strength
- Pinch strength
- Timed Up and Go Test (walking speed)
- Fugl-Meyer Assessment (motor tasks)
- Action Research Arm Test (ARAT)
- Functional MRI
- Electroencephalogram (EEG)
- Electromyography (EMG)
-

During treatment (Visits 3 to 22):

- No additional evaluations

Schedule of Assessments							
	Visit 1	**Visit 2**	**Visit 3-22**	**Visit 23**	**Visit 24**	**Visit 25**	**Visit 26**
	Pre-treatment	Pre-treatment 1week later	Treatments	Immediately Post-treatment	1 week Post treatment	1 month Post treatment	3 months Post treatment
NIHSS	X	X		X	X	X	X
mRS		X		X			X
Grip strength	X	X		X	X	X	X
Pinch strength	X	X		X	X	X	X
Timed Up and Go (gait speed)	X	X		X	X	X	X
Fugl-Meyer assessment	X	X		X	X	X	X
ARRT (Action Research Arm Test)	X	X		X	X	X	X
Electroencephalographic (EEG)	(X)1	(X)1					
fMRI	(X)1	(X)1		X		X	
TRPMS Treatment			X				
Electromyography (EMG)	(X)1	(X)1		X		X	
1= can be performed at either visit							

To start the treatment, you will be asked to sit in a chair. You will then be assisted in placing the flexible device cap on your head. This cap is essentially similar to a diving or swimming cap, and fits and feels exactly the same when worn (see figure below).

If I take part in this study, can I also participate in other studies?

Being in more than one research study at the same time, or even at different times, may increase the risks to you. It may also affect the results of the studies. You should not take part in more than one study without approval from the researchers involved in each study.

If I want to stop participating in the study, what should I do?

If you wish to stop your participation in this research study for any reason you should let the principal investigator/study coordinator know as soon as possible so that you can stop safely. You may be asked why you are leaving the study and your reasons for leaving may be kept as part of the study record. If you decide to leave the study before it is finished, please tell one of the persons listed in "Contact Information".

Could the researchers take me out of the study even if I want to continue to participate?

- ✓ *The researcher believes that it is not in your best interest to stay in the study.*
- ✓ *You become ineligible to participate.*
- ✓ *Your condition changes and you need treatment that is not allowed while you are taking part in the study.*
- ✓ *You do not follow instructions from the researchers.*
- ✓ *The study is suspended or canceled.*

What happens if I get hurt, my condition worsens, or have other problems as a result of this research?

If you are injured as a direct result of this study, medical care is available. In general, no long-term medical care or financial compensation for research-related injuries will be provided by Houston Methodist. You do not waive (give up) any legal rights by signing this informed consent form.

What information about me could be seen by the researchers or by other people? Why? Who might see it? How will it be protected?

Release of Health Information – If you decide to participate in this study, information about your health may be used or disclosed (shared outside of the Hospital) for the purposes of conducting this study. This information may include information from your medical record that is relevant to this study, such as your medical history, medications, test results, diagnoses, treatments, operative reports (reports from operations that you have undergone), and discharge summaries. It may also include information *relating to: Human Immunodeficiency Virus ("HIV") infection or Acquired Immunodeficiency Syndrome ("AIDS"); treatment for or history of drug or alcohol abuse; or mental or behavioral health or psychiatric care.* Information collected by the study doctor and/or research staff specifically for this study, such as test results, blood samples, physical examinations, information about possible side effects, and surveys you might be asked to complete could also be used or disclosed.

Individuals that may use or release this information include: physicians, physicians' office staff, hospital staff, the study doctor, and authorized members of the study doctor's research staff. These individuals may release this information to the study doctor, authorized members of the study doctor's staff, other researchers, the Institutional Review Board (IRB), the United States Food and Drug Administration (FDA) and its representatives, and other government agencies.

In most cases, the information released to the above listed individuals or entities will not contain your name, social security number, or any other personal information. However, authorized representatives of your study doctor, IRB, FDA, or other government agencies may review records containing personal information to make sure that the study information is correct. Because of the need to provide information to these parties, absolute confidentiality cannot be guaranteed.

Use of Information – This information may be used to determine whether you meet all requirements for participation in the study, to monitor your healthcare during the study, to enable the sponsor to answer the scientific questions for which the study was designed, and to ensure that the study has been done properly. Examples of the use of this information are as follows: the sponsor may use the information in submissions to government agencies throughout the world, to request approval of the study drug or device; the sponsor may use the information for reporting adverse events to government agencies, such as the FDA; the sponsor may also transfer the information to business partners or companies it hires to provide study-related services; the sponsor may also provide overall study results, including your information, to other study doctors; and the sponsor may reanalyze the data from this study in the future or combine it with data from other studies for analysis. In addition, both the sponsor and the study doctor may use the information to prepare reports or publications of the study results. However, when results of the research study are reported in medical journals or at scientific meetings, the people who were in the study are not named and identified. Therefore, your names would not be disclosed in any presentation or publication.

You need to understand that once your information has been released, it may no longer be protected by US federal regulations relating to data privacy and could be used or re-disclosed in ways other than those listed in this section of the consent form.

You have the right to see and copy your medical records but information relating to this study may be withheld until the end of this study.

What happens to information about me after the study is over or if I cancel my permission?

If you stop participating in this study, you also have the right to revoke (withdraw) your authorization to disclose and use your information. Revoking your authorization means taking back the permission you gave the study doctor to send information about you to the sponsor or other people and entities. If you revoke your authorization, your doctor will not use or release any more information about you after receiving your request, except to tell the sponsor that you have stopped early and have revoked your authorization. However, the sponsor and the study doctor can still keep and use any information that it has already received to the extent necessary to preserve the integrity of the research study. To revoke this authorization, contact the research team. The research team will accept either a written or verbal request.

When does my permission expire?

Because this information is being disclosed for research use, there is no expiration date for the authorization to disclose and use this information. The sponsor may keep and continue to use your study information for many years. Your study doctor may need to add to or correct information about you even after your study participation is over; including providing updates of your health status if that is important to the purpose of the study. The review of your medical records may also take place after the study is over. This authorization will remain in effect unless you revoke it.

Authorization– By signing this consent form, you authorize use and disclosure of personal information to, and review of your medical records by, the people and entities described above. You do not have to authorize this disclosure of information. However, if you do not, you will not be able to participate in this study.

What are my rights in this study?

Taking part in this study is your choice. No matter what decision you make, and even if your decision changes, there will be no penalty to you. You will not lose medical care or any legal rights.
For questions about your rights as a research participant, or if you have complaints, concerns, or questions about the research, please contact Susan M. Miller, M.D., M.P.H., Chair, Houston Methodist Research Institute Institutional Review Board for the Protection of Human Subjects, at 713-441-2750 or Ethan Natelson, MD, Chair, Houston Methodist Research Institute Institutional Review Board for the Protection of Human Subjects, at 713-441-5154. You may also contact the Director, HMRI Office of Research Protections at HMRI Office of Research Protections, 1130 John Freeman, MGJ6-016, Houston, Texas 77030. Ph: 713-441-7548
The research team will take proper precautions to ensure that any information regarding your identity obtained in connection with this research will remain confidential. A separate form will need to be signed by you to give authorization for the disclosure and use of your private health information.

Where can I get more information?

If you have any questions regarding your participation in this study, please ask us. If you have any additional questions later, please contact the researchers listed below to:

Principal Investigator: David Chiu, M.D.
Mailing Address: 6560 Fannin St., Suite 802, Houston, Texas 77030
Telephone: 713-441-5066

Study Coordinator: David McCane, CCRC Telephone: 713-441-5801

Signature of Study Participant:

Signature:_____ Date:_____ Time: _____

Name (Print Legal Name): _____

Person Obtaining Consent:

I have given this research subject (or his/her legally authorized representative) information about this study that I believe is accurate and complete. The subject has indicated that he or she understands the nature of the study and the risks and benefits of participating.

Name: _____ Title: _____

Signature: _____ Date of Signature: _____

Translation Service: I verbally translated the informed consent process and the conversation between the investigator and the study participant.

Name: _____ Organization: _____

Signature: _____ Date of Signature: _____

Witness *(if 'short form' used for translation, or when participant physically unable to read, write, talk or see):*
I was present as an impartial witness (not a member of the research team or family) for the informed consent process. I observed the above subject (or his/her legally authorized representative, if applicable) indicate consent.

If applicable participant unable to sign, how did he or she indicate consent: _____

Name: _____

Signature: _____ Date of Signature: _____