# RESOURCE GUIDE

## SECTION 2 - ALS Research

EMORY
ALS CENTER *Celebrate Life... Imagine a Cure*

# Research Team

Clinical trials are health-related studies in people that are closely supervised and carefully follow a pre-defined protocol. Each study answers scientific questions and tries to find better ways to prevent, screen for, diagnose or treat a disease. Clinical research studies involve people, but do not involve treatment with an experimental drug or testing of an experimental device. These studies may help doctors, researchers and scientists learn more about the disease, so that they may diagnose, prevent, treat or cure the disease. Our Research Team works with participants in both.

Research Update

EMORY ALS CENTER Celebrate Life... Imagine a Cure

## Fall 2024

Investigations in our laboratory consist of multiple topics using a variety of methods. One example is our search for genetic factors that might "modify" ALS disease activity. Here we are comparing DNA, RNA, and protein expression from people with early vs. late onset disease and slowly progressive vs. rapidly progressive disease. We are also searching the genes of people who are healthy and do not have ALS, but who carry a genetic mutation that typically causes ALS. Why are they "resisting" the onset of disease? Another example is the discovery of "cryptic exons", which are pieces of RNA that normally are not made into protein, but in the context of ALS are "released" to make small pieces of protein (called cryptic peptides). These peptides, if they can be measured, will provide an important biomarker of ALS pathology that might be used for diagnosis, prognosis, or even measures of disease activity during clinical trials. There are several other projects underway using the techniques of genomics, proteomics, cell modeling, and even the creation of animal models.

### Some New Projects:

- In collaboration with investigators at the University of Massachusetts and the NIH, and funded by ALSA, Dr. Glass is working on generating a repository of whole genome sequences collected from ALS patients around the world. This will be a valuable collection of genetic information unprecedented in size and will be made available to any and all investigators who are studying any aspect of ALS.

- The Emory ALS Center is continuing our program titled “Pathobiology Neurodegeneration in C9ORF72 Repeat Expansion”, funded by the NIH. This project, in collaboration with investigators at the Mayo Clinic, Johns Hopkins, and the Massachusetts General Hospital will use animal models and human tissues to identify causative factors in patients with this form of genetic ALS.

### Our Investigators:

**Dr. Jonathan Glass, Director. Professor of Neurology and Pathology.** Dr. Glass actively collaborates with other ALS investigators around the world on multiple projects examining ALS genetics, immunology, neuropathology, and animal and cellular models of ALS. Dr. Glass also continues his work on discovering biomarkers of ALS, which necessitates the participation of PALS and CALS. We are collecting blood and spinal fluid samples from patients for our research. Family members and non-related adults are also important participants in our studies, serving as “controls” that allow us to compare results between people living with and without ALS. Dr. Glass is also a Neuropathologist, and much of his research depends on tissue donations providing a rich source of material for investigations into the causes of ALS. For a presentation by Dr. Glass about the neuropathology of ALS, please see his NEALS webinar.

**Dr. Christina Fournier, Associate Professor of Neurology.** Dr. Fournier is well into her 5-year research grant from the Veterans Administration to develop a new questionnaire to measure the progression of ALS. The first phase of the project is complete with creation and validation of the Rasch-Built Overall ALS Disability Scale (ROADS), a new and improved tool for measuring the degree of disability in PALS. The ROADS is an improvement over the ALS Functional Rating Scale (ALSFRS-R), as it is shown to be more reliable and is expected to be more responsive in capturing smaller changes in disability. It is hoped that this new scale will improve the efficiency of future ALS clinical trials. You can read about ROADS

and be directed to the ROADS webinar here. Many thanks to all the patients who helped by completing the questionnaire and then completing it again from home. We will now be using the ROADS along with the ALSFRS-R in our clinics to help us get a clear picture on how our patients are progressing. Additional opportunities to participate in this important research may be available at your clinic visit. Please consider participating in this important effort, as these efforts help us to design better clinical trials in the future.

**Jane Bordeau, RN** is our Research Director. Jane has been with us since 2010. She has been a nurse coordinator on our research team on many ALS clinical and research trials.

**Ezana Assefa, PhD Student.** Ezana is a new graduate student working with Dr. Glass on the question of why ALS patients are so different in their clinical characteristics. This is even true for those carrying a genetic form of the disease. Ezana has embarked on a project looking at genetic factors (i.e. genetic modifiers) that may underlie this disease heterogeneity using DNA and cells generated from skin biopsy samples from patients with genetic ALS, but with varying clinical features. Ezana is just getting started, but this promises to be an exciting project.

We at the Emory ALS Center understand the dire need for effective treatments for ALS. The only way to help develop new therapies for ALS is through rigorous scientific investigation. This type of investigation requires the efforts of teams of clinicians and scientists around the world, adequate research funding, and time.

***Most importantly, we need the partnership of our patients and their families to study and better understand this disease!***

**Visit our website to learn about upcoming clinical research and trials we are offering:** www.als.emory.edu

**Clinical Trial Opportunities:** (treatment with an experimental drug)

**Biogen ATLAS Study:** ENROLLING—We are attempting to delay or prevent the onset of ALS in healthy people who carry SOD1 mutations. We are enrolling people who are related by blood to individuals who have the SOD1 gene. Initially, participants will be screened for the presence of mutations that put them at risk for developing SOD1 ALS. If present, participants will be monitored monthly for changes in their health indicating that they are in the earliest stages of ALS. Monitoring will also include monthly blood tests that might show that ALS might be coming soon. If either happens, people will transition into another phase of the study where treatment is given hoping to prevent the disease if it has not started or slow it down if it has. For more information, please contact Meraida Polak at 404-778-3807 or mpolak@emory.edu.

## Clinical Research Opportunities: (no experimental drug treatment)

| Research Study | Study Details | Contact Person |
|---|---|---|
| **Pathogenesis in C9ALS (PICALS):** RECRUITING<br><br>For patients with sporadic ALS, Patients with C9ALS, healthy blood relatives of people with C9ALS. | • Three visits over 12 months with the option of ongoing visits. Will have exams, questionnaires and donate blood and spinal fluid.<br>• Relatives of people with C9 ALS will have genetic counseling and testing, at no charge, to learn results. | Jen Taylor<br>404-251-5365<br>jennifer.aran.taylor@emory.edu |
| **PLS Natural History Study**<br>• To improve the current research status of Primary Lateral Sclerosis (PLS) by studying the natural history of the disease<br>• To prepare the research community for future clinical trials in PLS | • Clinic visits every 6 months for assessments<br>Patients must:<br>• Have been diagnosed with Primary Lateral Sclerosis (PLS)<br>• Have symptoms that started within the last 15 years<br>• Be at least 25 years old<br>• Have no family history of ALS or PLS | Jen Taylor<br>404-251-5365<br>jennifer.aran.taylor@emory.edu |
| **Clinical Research in ALS (CRiALS):** RECRUITING<br>• To learn more about neurological disorders<br>• To contribute to Project MinE<br>  | • For ALS patients, blood relatives and healthy unrelated volunteers<br>• Procedures include donation of a blood sample, skin sample and/or spinal fluid and an information questionnaire | Jane Bordeau<br>404-727-1679<br>jrbord@emory.edu<br><br>www.projectmine.com |
| **Emotional Experience of Participating in Observational Research**<br><br>•Purpose is to understand the emotional experience of participants of ALS/FTD observational research, who have undergone genetic testing and been identified as mutation-carriers, or opted out of receiving test results.<br>•In collaboration with Niharika Jadeja, grad student in Genetic Counseling | • For English-speaking adults who are participating in ALS/FTD observational research, including PICALS, Pre-fALS, DIALS, and ALLFTD) and have undergone genetic testing and been identified as mutation carriers, or opted out of receiving test results.<br>• Be at least 18 years old<br>• Fluent in English<br>• 60-90 minute zoom interview | Take recruitment survey if interested in being contacted for an interview:<br><br>CLICK HERE<br><br>If any questions, contact:<br>niharika.jadeja@emory.edu |
| **TRACK ALS: ENROLLMENT CLOSED**<br>The purpose of this study is to see whether we can acquire dependable at-home measurements of breathing, movement, speech and general function, that will allow more people to participate in clinical trials without repeated trips to the clinic. | • You must be between the ages of 18 and 90 years old<br>• You must own a smart device with Bluetooth capabilities<br>• You must have continuous internet access at home<br>• | Katie Terrebonne<br>404-727-5193<br>katherine.cummings@emory.edu |

HAVE YOU ENROLLED IN THE NATIONAL ALS REGISTRY??

https://www.cdc.gov/als/Default.html

EMORY ALS CENTER Celebrate Life... Imagine a Cure

# Is research right for me? Am I right for research?

By Meraida Polak, RN, BSN
*Clinical Research Director, Emory ALS Center*

While most everyone is interested in results of research seeking causes and treatments for ALS, not everyone has the opportunity to personally participate in the process. Progress can only be made with the generosity of patients and families that choose to participate. But research is not for everyone. If the opportunity to participate in a research project arises, here are some things for you to consider.

**There are two types of research that seek participants:**

1. Research that follows patients as they progress through the illness: This might include: surveys, observations over time and/or collection of blood, spinal fluid or tissue. This type of research may provide no benefit to the participant other then the satisfaction of knowing that they helped move science forward. This may include a simple one-time donation of blood, or having blood and spinal fluid taken several times/year, or the donation of your tissue through autopsy after death.

2. Research with experimental treatment: This might be a dietary plan, a pill, an injection, an infusion, an implant or a transplant. Treatment studies are divided into phases. Phase I studies seek to evaluate whether the treatment is harmful and if so, the treatment is abandoned. Phase II seeks to identify a hint that the treatment might work while testing to see what the best dose might be. Phase III determines if the treatment is effective. Phase IV studies are done after the drug or treatment has been approved and marketed. The purpose is to to gather information on the drug's effect in various populations and any side effects associated with long-term use. Most investigational new drug studies include a group of participants who are assigned to a placebo (sugar pill) group for all or part of the study. Neither the participant nor the physician/study team know if the patient is taking a placebo or the actual drug. Some placebo controlled studies will offer participants the opportunity to get active drug after the blinded phase has ended.

**Is it for me? Ask yourself:**
How will I feel if my participation does not help me personally? Is it enough to know that I am helping others?

Am I prepared to accept risk and if so, how will I feel if I am harmed by my participation? All research poses a risk. Even a single donation of blood could result in bruising or discomfort. Experimental treatments have risks small and large up to even causing paralysis or death. And there are risks that no one even knows about yet! It is this participation where the risks are first identified.

Will I feel like a "guinea pig?" The term guinea pig is a derogatory term for test subject that implies exploitation. Research participants are indeed test subjects but the relationship between the investigators and the participants is one of a partnership with both parties sharing a common goal. If you feel like you would be exploited or taken advantage of then research might not be for you. It might go back to the first question, is it enough to know that you are helping others.

Do I clearly understand what I am signing up for? One of the most important responsibilities of the research team is to make sure that you have all of the information that you need to make an informed, educated

decision about joining the research or not. You should always feel free to volunteer or not and always feel free to change your mind and withdraw if you want to.

Research studies are NOT designed to help the participants. They are designed to answer a question, such as, "does this pill work to slow down ALS." Are you OK with that?

**Am I right for research?**
Every study has two sets of requirements. First are the eligibility requirements. When you are learning about the study, you will be able to evaluate yourself and get an idea if you meet the entry requirements. If you think that you might meet the criteria, the research team will determine if you meet the requirements. This might be decided after a casual conversation and review of your records. Or it might be determined after you have volunteered and have been screened for the study. But if you know that you don't qualify, then inform the research team. People who are comfortable being honest with the researchers are right for research.

Second are requirements to do specific things during the ongoing study. This means coming to all your appointments on time, taking the therapy as directed, and keeping a diary or log of how you are doing. Some studies require frequent visits. Others require fewer visits but more diary keeping on how you are tolerating the treatment. People who can get to the clinic and take their medications and keep everything written down are right for research.

One of the most important responsibilities for the investigator is the process of informed consent. This begins with completely informing the potential participant of the study goals, risks, possible benefits, and responsibilities. No research is allowed to take place until the participant has signed a form giving permission. If you consider becoming a research participant, you will be given a written form with enough time to read every word and consider every aspect. You should note your questions or any aspect of the project that you are not crystal clear about.

We all want to know the cause of ALS and we desperately want to find the cure. This cannot be done without people with ALS participating in the research process. But research is not for everyone, and if it is not right for you, there are other ways of helping that may be just as important.