Informed Consent Cover Page for FDAAA consent posting:

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PRINCIPAL INVESTIGATOR: Michael N. Sack, MD, Ph.D.

STUDY TITLE: The Effect of Chronic Inflammation on Myocardial Perfusion and Function

STUDY SITE: NIH Clinical Center

Cohort: Standard – Adult Patient or Healthy Volunteer

Consent Version: 06/13/2022

WHO DO YOU CONTACT ABOUT THIS STUDY?

Principal Investigator: Michael N. Sack, MD, Ph.D., 301-402-9259, sackm@nih.gov

Study Coordinator: Tania Machado, RN, 301-661-1505, tania.machado@nih.gov

KEY INFORMATION ABOUT THIS RESEARCH

This consent form describes a research study and is designed to help you decide if you would like to be a part of the research study.

You are being asked to take part in a research study at the National Institutes of Health (NIH). This section provides the information we believe is most helpful and important to you in making your decision about participating in this study. Additional information that may help you decide can be found in other sections of the document. Taking part in research at the NIH is your choice.

This is a research study to understand if chronic inflammation affects the heart and if taking a biologic medication for psoriasis helps improve how the heart works.

This consent form is to advise you of what will happen in this study and to obtain your permission to perform the tests described below.

Please note, that being in a research study does not take the place of routine physical exams or visits to your own doctor and should not be relied on to diagnose or treat medical problems.

All participants in this protocol will be adults, like you. There will be up to 336 people taking part in this study.

Each visit in this study will take 1-3 days based on how many stress tests are performed. PET scan and MRI will be done on 2 separate days since you will only have one stress test a day.

If you have psoriasis, we will ask you to return in approximately one year for another study visit. Once you have signed the consent, you will be asked to undergo a series of medical tests to evaluate how blood flows to the heart, how the heart pumps blood and relaxes and how the heart is structured.

Most of the tests are low risk and are similar to things that your home doctor might order. Others are designed specifically for research. They are described later in the document. Specific risks we want you to be aware of are:

1. There is the risk related to radiation exposure in PET/CT scans. We have worked to decrease the amount of radiation with our tests to the lowest levels possible and at this time the risk from radiation in this study is thought to be slight.

2. There is the risk related to stress testing performed at the time of PET/CT and MRI testing.
3. People with metal in their bodies should not participate in MRI scans because of the magnets involved. Please let the research team know if you have any metal implants or devices.

You might not benefit from this study. However, it might be helpful for future treatment/testing for people with psoriasis.

You will be offered compensation for participation in this research study for your time and inconvenience.

You can discuss with your doctor to see if there are other alternative studies that you can participate in if you decide not to participate in this one.

The remaining document will now describe the research study in more detail. This information should be considered before you make your choice. Members of the study team will talk with you about the information in this document. Some people have personal, religious, or ethical beliefs that may limit the kinds of medical or research treatments they would want to receive (such as blood transfusions). Take the time you need to ask any questions and discuss this study with NIH staff, and with your family, friends, and personal health care providers.

IT IS YOUR CHOICE TO TAKE PART IN THE STUDY

You may choose not to take part in this study for any reason. If you join this study, you may change your mind and stop participating in the study at any time and for any reason. In either case, you will not lose any benefits to which you are otherwise entitled. However, to be seen at the NIH, you must be taking part in a study or are being considered for a study. If you do choose to leave the study, please inform your study team to ensure a safe withdrawal from the research.

WHY IS THIS STUDY BEING DONE?

In this study, we want to know if chronic inflammation affects the heart and if taking a biological medication for chronic inflammation helps improve how the heart works. To do that, we need to study people with diseases associated with chronic inflammation, such as psoriasis, and people without the disease. We are asking you to participate in this study because you fall into one of these 2 groups of people. We will use standard medical tests/procedures and some research tests to help better understand how blood flows to the heart, how the heart pumps blood and relaxes and how the heart is structured.

WHAT WILL HAPPEN DURING THE STUDY?

The following tests will be done on all participants; however, if you are a healthy volunteer, you will only need to come once for tests. If you have psoriasis, we will ask you to return a year after the initial tests, which will be done before you start standard biological therapy.

To make sure you are eligible for this study, we will review your medical history and if you are a woman of childbearing age, we will need to check your pregnancy status to make sure you are not pregnant before having certain procedures. You will have a pregnancy test before the following procedures: cardiac MRI and/or PET/CT scan radiology studies.

You may be asked to have some or all of the following tests and procedures:

a) **Blood collection:** We will take blood from a vein in your arm using a needle. The amount of blood drawn is considered a safe amount for adults per NIH guidelines, which will not exceed 10.5 ml/kg or 550 ml (approximately 2 cups), whichever is smaller, over any 8-week period.

b) **Electrocardiogram:** Electrocardiogram, also called an EKG or ECG, is a simple, painless test that records the heart's electrical activity. We may also ask you to use a different version of an EKG monitor that is battery-operated and that you can use for 24 hours. This type of EKG monitor can detect heart changes over time.

c) **Echocardiogram:** This test involves holding a small probe against your chest to allow the sonographer to obtain pictures of the heart. The echocardiogram uses sound waves (ultrasound) to take pictures. A complete baseline examination will be performed by the sonographer and evaluated by the physician. An FDA approved contrast agent (drug) may be given to you by injecting it into your vein.

d) **PET/CT radiology studies:** These carry the risks of radiation exposure but would be performed to help us to understand your disease. A specific consent form may need to be completed prior to undergoing a Cardiac MRI-CMR scan or PET scan. These specific radiology tests that will be performed on you will only be undertaken to help us understand this disease process.

We may ask you to undergo some or all of these PET/CT radiology studies:

^{13}N-Ammonia PET/CT scan with stress test: The ^{13}N-ammonia PET/CT scan can be used to determine blood flow in the heart at rest and with pharmacologic stress. ^{13}N-ammonia is a radioactive drug that is given through an IV for PET scanning. The radioactive ^{13}N-ammonia that you receive is administered under Investigational New Drug (IND) approvals from the U.S. Food and Drug Administration (FDA), with the NIH Clinical Center as the Sponsor. A stress medication, (Regadenoson, adenosine, or dobutamine), will be given to increase blood flow through your heart to mimic what happens during exercise stress. If you have a history of seizures, dobutamine will be used. If you start biology therapy for psoriasis, you will have 2 planned ^{13}N-Ammonia PET/CT scans during this study (1 baseline and 1 follow up). However, if you start biologic therapy more than 90 days after the first ^{13}N ammonia PET/CT, you may undergo an additional ^{13}N ammonia PET/CT for a total of 3 scans over the course of the study.

On the day of the scan, we will ask you to not eat or drink for at least 4 hours prior to the scan. You will also be asked to not eat or drink caffeine-containing drinks (e.g., tea, coffee, soda, and pop) or food (e.g., chocolate) for 24 hours prior to the study, and theophylline-containing medications (e.g., aminophylline) for at least 24 hours prior to the test.

One or two intravenous IVs catheters will be inserted into your arm in order to inject ^{13}N-ammonia and the vasodilator. During the test, you will lie on your back on a padded table with your arms straight overhead. A strap may be placed across your body to prevent movement so that the PET/CT picture will be clear. Your heart rate, blood pressure, and 12-lead ECG (heart rhythm) will be monitored during the procedure and at least 5 minutes after. A drug called aminophylline will be given after the test if you have symptoms related to the vasodilator medication (severe headache, nausea or vomiting, or the physician determines that you have heart related symptoms.

The entire procedure can last about 1.5 hours.

^{11}C-Acetate PET/CT scan (optional): After you undergo the ^{13}N-ammonia PET/CT to determine blood flow to the heart, ^{11}C- acetate PET/ CT scan may be used to determine oxygen consumption of the heart muscle. ^{11}C- acetate is a radioactive drug that is given through an IV for PET scanning. The radioactive ^{11}C- acetate that you receive is administered under Investigational New Drug (IND) approvals from the U.S. Food and Drug Administration (FDA), with the NIH Clinical Center as the Sponsor. A vasodilator medication, (Regadenoson, adenosine), will be given to increase blood flow through your heart to mimic what happens during exercise stress. If you have a history of seizures, dobutamine will be used.

On the day of the scan, we will ask you to not eat or drink for at least 4 hours prior to the scan. You will also be asked to not eat or drink caffeine-containing drinks (e.g., tea, coffee, and pop) or food (e.g., chocolate) for 24 hours prior to the study, and theophylline-containing medications (e.g., aminophylline) for at least 24 hours prior to the test.

One or two intravenous IVs catheter will be inserted into your arm in order to inject ^{11}C- acetate and the vasodilator. During the test, you will lie on your back on a padded table with your arms straight overhead. A strap may be placed across your body to prevent movement so that the PET/CT picture will be clear. Your heart rate, blood pressure, and 12-lead ECG (heart rhythm) will be monitored during the procedure. Your heart rate, blood pressure, and 12-lead ECG (heart rhythm) will be monitored during the procedure and at least 5 minutes after. A drug called aminophylline will be given after the test if you have symptoms related to the vasodilator medication (severe headache, nausea or vomiting, or the physician determines that you have heart related symptoms).

The entire procedure can last about 1 hour

e) **<u>CMR (Cardiac MRI) imaging:</u>** You may undergo an MRI test to examine your heart, and/or blood vessels. The MRI scanner is a large hollow tube. You will lie flat on a table that can slide in and out of the tube to take your pictures. While the scanner makes pictures, you will hear a knocking sound. Since the heart moves as you breathe, we will ask you to hold your breath on-and-off for about 5-20 seconds if the MRI is being done to look at your heart.

Stress medications may be given to you through a catheter in your vein (IV) as part of the MRI test. We may take pictures of your heart before, during, and after giving you the stress medicine. The stress medicine is needed to detect areas of the heart with inadequate blood supply. You may experience chest pain or other side effects while the medicine is given. These symptoms do not usually last very long. Other medicines may be given to relieve these symptoms. During part of the MRI, you will receive another medicine in your vein called "gadolinium contrast." This medicine brightens up the heart allowing us to see where blood flows. You will be in the MRI scanner for about 45-90 minutes. You can notify the person performing the MRI if you need to come out of the scanner at any time during the study.

An EKG may be used to monitor your heart during the procedure. A flexible belt may be used to monitor your breathing. We may intermittently measure your blood pressure. There are microphones so you can talk with us.

Investigational use of MRI (machine, sequences, and/or coils)

We will be using the MRI for investigational research. This means that the way the MRI is generating the images may be different than what is normally done in a routine clinical scan. However, all

studies done under this protocol will be performed within FDA safety guidelines. We also plan to use research coils (antennae). These are parts of the machine that help generate the image. This use of research tools in the MRI has not been approved by the FDA and is considered investigational. Additionally, some of the MR machines that we use are considered investigational (not yet approved by the FDA for this use) but are used within the FDA safety guidelines.

If you have recently participated in another NIH study and have already had one of the tests listed above, data collected from these studies may be used under this study.

HOW LONG WILL THE STUDY TAKE?

If you are a healthy volunteer, your participation in the study will last one to two days. If you have psoriasis, your participation in the study will last approximately 18 months. You may be asked to come to the NIH Clinical Center as an outpatient at least 2 times (during screening/baseline and at the end of the study). Screening and baseline visits will range from 1-2 hours in length each and may be combined. Procedure visits usually take about 3 hours but will take no longer than 5 hours. If you agree to complete all three stress tests, you will need to come back up to 2 additional days to complete all procedures.

If you start biologic therapy more than 90 days after the first ^{13}N-ammonia PET/CT or cardiac MRI, you may undergo an additional ^{13}N ammonia PET/CT and/or cardiac for a total of 3 ^{13}N-ammonia PET/CT or cardiac MRIs over the course of the study.

The study team will contact you over the phone 14 days after the procedure visit to follow up with you.

HOW MANY PEOPLE WILL PARTICIPATE IN THIS STUDY?

We plan to have up to 336 people participate in this study at the NIH (224 people with psoriasis and 112 healthy volunteers).

WHAT ARE THE RISKS AND DISCOMFORTS OF BEING IN THE STUDY?

Intravenous catheter:

An IV catheter may result in discomfort at the site where the IV is placed. There is about a 1% chance of arm discomfort due to injury to the vein during the injection.

Blood collection:

There may be some physical discomfort when we collect your blood with a needle. There is a small chance that you will develop a bruise, feel lightheaded, faint, or develop an infection at the needle site.

Electrocardiogram (EKG):

You may develop a rash or redness where the EKG patches were attached. This mild rash often goes away without treatment.

Echocardiogram:

There are no known harmful effects from the ultrasound waves alone. A slight pressure can be felt on the skin where the probe is placed to look at your heart. An external echocardiogram poses no risks, as it is noninvasive and does not use radiation. Some people may feel uncomfortable having

to lie in one position for the test. If the administration of a contrast drug called (DEFINITY) is needed for improved visualization of the heart, this is associated with minimal risk. Side effects are usually minor and do not require any intervention. The overall incidence of treatment-related adverse events with DEFINITY is 8.4%; those reported most frequently included headache, back or renal pain, flushing, nausea, chest pain, and dizziness.

PET/CT scans:

An IV catheter may result in discomfort at the site where the IV is placed. There is about a 1% chance of arm discomfort due to injury to the vein during the injection. You will be exposed to 0.54 rem(cSv) of radiation from the stress and rest ^{13}N-ammonia PET/CT scans and the associated CT attenuation scans. If you start biology therapy for psoriasis, you will have 2 planned ^{13}N-ammonia PET/CT scans during this study (1 baseline and 1 follow up). However, if you start biologic therapy more than 90 days after the first ^{13}N ammonia PET/CT, you may undergo an additional ^{13}N ammonia PET/CT for a total of 3 scans over the course of the study. If you choose to participate, you will also be exposed to 0.84 rem(cSv) of radiation from the optional stress and rest ^{11}C-Acetate PET/CT scans and the associated CT attenuation scans. The only discomfort associated with this procedure consists of potential discomfort from remaining still for a few minutes during the scan. Some people may experience mild claustrophobia from the PET scan apparatus. This radiation exposure is not required for your medical care and is for research purposes only.

The risks associated with this procedure are those related to the amount of radiation the subject is exposed to. Additional minimal risks include bleeding or bruising at the venous site of ^{13}N ammonia or ^{11}C-acetate administration. Details of the risks associated with stress test using stress medicine with PET/CT imaging will be discussed in the Stress Medication section.

If you choose to do both PET/CT scans, they will be done on separate days to minimize the side effects of the stress medications (medications to mimic stress).

MRI:

MRI has been used for over 20 years in hospitals around the world. There are no known long-term risks or consequences of MRI scans. Since you may feel extra warmth from the scanner, please report any sensation of heat during the test. During the scan, it is possible that you may experience something called "peripheral nerve stimulation." This usually takes the form of a mild sensation in the skin like a vibration. If you feel pain or a twitch in the muscle, you should report it to the person performing the scan. Some individuals may feel claustrophobic (confined) in the scanner.

There are risks if you have any metallic implants in your body. For this reason, you will be screened for the presence of any metallic implants both at the time of recruitment and just prior to MR imaging and will be excluded from the study. There will be loud noises while you are in the scanner. You can wear earplugs to minimize exposure to excessively loud noises. Some people feel claustrophobic in the scanner. The staff can speak with you throughout the procedure and can remove you from the scanner at your request. If you have great difficulty remaining still, we will not do the scan. If you are a female, you cannot participate in this study if you are pregnant. Therefore, you will be given a pregnancy test prior to MRI scanning. Although there are no known risks associated with MRI during pregnancy, we cannot scan someone who is pregnant.

If you are undergoing a stress cardiac MRI using vasodilator medicine, this test will be done on a day when you will not have any other stress testing scheduled to minimize the side effects of the stress medications on the same day. Please see the risks associated with stress medicines below.

Contrast agents. Gadolinium is an injected medication used to improve MRI images. Most patients experience a metallic taste when gadolinium contrast is injected. Some (<2%) report mild symptoms such as headache, nausea or vomiting, or a rash near the injection site. Rarely (<0.1%) patients experience severe symptoms such as wheezing, shortness of breath, and low blood pressure as part of an allergic reaction that may require emergency medical treatment.

In a few cases per million, usually in patients with severe kidney disease, gadolinium contrast can cause a rare, debilitating or even fatal, skin disease called Nephrogenic Systemic Fibrosis (NSF) that causes thickening of the skin and other organs. Since physicians became aware of this, they have begun screening patients at risk of kidney disease and switched to safer ("macrocyclic") forms of gadolinium contrast. Since then, new reports of NSF are much rarer.

There are also reports of gadolinium retained in the brain, bone, and skin. It is not known whether this is important to health. We use "macrocyclic" forms of gadolinium contrast, such as gadobutrol, that are thought to reduce this risk. A Gadobutrol Medication Guide will be provided to you if you receive gadolinium. Gadolinium is FDA approved for all parts of the body.

Stress Medications:

- Overall, stress medications are widely used for the evaluation of heart disease in medical practice and serious side effects are uncommon. The risks associated with each stress medication is detailed separately.
- Adenosine:
- Risks related to IV adenosine (categorized by frequency of occurrence):

• ≥20% or at least one in every 5 persons	• ≥10% or at least one in every 10 persons	• ≥1% or at least one in every 100 persons
• Shortness of breath • Flushing • Chest discomfort	• Headache • Throat, neck, or jaw discomfort • Gastrointestinal discomfort • Lightheadedness/dizziness	• First-and Second-degree Heart block • Upper extremity discomfort • Numbness • Low blood pressure • Nervousness • Arrhythmias
• <1% or less than one in every 100 persons		• <0.1% or less than one in every 1000 persons
• Third-degree Heart block • Lower extremity and back discomfort • Weakness • Myocardial infarction • Slow heart rate • Palpitation • Sweating • High blood pressure	• Drowsiness • Emotional instability • Tremors • Vaginal pressure • Cough • Blurred vision • Dry mouth, metallic taste • Nasal congestion • Tongue and ear discomfort	• Heart attack

- Regadenoson:
- Risks related to IV Regadenoson (categorized by frequency of occurrence):

• ≥20% or at least one in every 5 persons	• ≥10% or at least one in every 10 persons	• ≥1% or at least one in every 100 persons
• Shortness of breath • Headache • Flushing • Chest Discomfort • Arrhythmias	• Dizziness • Chest Pain • Nausea • Abdominal Discomfort • Loss of taste • Feeling Hot	• First-degree Heart block • Wheezing
• <1% or less than one in every 100 persons		• <0.1% or less than one in every 1000 persons
• N/A	•	• Second degree Heart block

- **Dobutamine**: given if you are unable to safely take adenosine or Regadenoson.
- Risks related to IV Dobutamine Hydrochloride in 5% Dextrose (categorized by frequency of occurrence):

• ≥20% or at least one in every 5 persons	• ≥10% or one at least in every 10 persons	• ≥1% or at least one in every 100 persons
• N/A	• Increased in heart rate	• Palpitation • Nausea • Headache • Chest pain • Skin rash • Fever • Eosinophilia • Irregular heart beats • Low blood pressure • Swelling, pain, redness around the vein • Shortness of breath • Increased in systolic blood pressure
• <1% or less than one in every 100 persons		• <0.1% or less than one in every 1000 persons
• Allergic reactions • Low level of potassium in blood •		• Life-threatening anaphylactic symptoms

Aminophylline medication:

- If you develop chest pain, severe headache, nausea, or vomiting during the response to the stress medication, aminophylline may be given.

Risks of taking cardiovascular medication on the stress test day:

Beta-blocker medication: Beta-blockers may cause low heart rates, low blood pressure, dizziness, breathing problems, or an allergic reaction. We will watch you for any of these effects. If you have any history of lung problems or asthma, please let us know.

Calcium-channel blocker medication: If you are unable to safely take beta-blocker medications due to lung problems, you may be given calcium-channel blocker medications. Calcium-channel blockers may cause low heart rates, low blood pressure, or an allergic reaction.

Nitroglycerin: Nitroglycerin may cause flushing, headache, or temporarily low blood pressure. Please let us know if you have taken medications such as sildenafil(Viagra), vardenafil (Levitra), or tadalafil (Cialis) in the past 48 hours.

What are the risks related to pregnancy?

- You cannot participate in this study if you are pregnant. If you become pregnant over the course of the study, please contact the study team.

Overall radiation exposure risk:

During your participation in this research study, you may be exposed to radiation from the PET/CT scans (including ^{13}N-Ammonia and ^{11}C-Acetate). The amount of radiation exposure you will receive from these procedures will vary from 0.54 rem to 3.3 rem, depending on the number of ^{13}N-ammonia scans you receive. No more than 2 ^{13}N-ammonia PET/CT scans will be administered per year. A rem is a unit of absorbed radiation.

Every day, people are exposed to low levels of radiation that come from the sun and the environment around them. The average person in the United States receives a radiation exposure of 0.3 rem per year from these sources. This type of radiation is called "background radiation." No one knows for sure whether exposure to these low amounts of radiation is harmful to your body.

The PET/CT scans (13N-Ammonia and ^{11}C-Acetate) that you may get in this study will expose you to roughly the same amount of radiation as 9-11 years' worth of background radiation depending on the number of ^{13}N-ammonia scans you receive. Most of the time, this amount of extra radiation is not harmful to you. However, scientists believe that being exposed to too much radiation can cause harmful side effects. This could include getting new cancer. We estimate that this could happen in about 1 out of every 1000 people who get a very large amount of extra radiation.

WHAT ARE THE BENEFITS OF BEING IN THE STUDY?

You will not benefit from being in this study.

Are there any potential benefits to others that might result from the study?

In the future, other people might benefit from this study because that may inform further clinical testing and treatment.

WHAT OTHER OPTIONS ARE THERE FOR YOU?

You can choose not to participate in this study, or to participate in a different study. If you choose not to participate in this study and have psoriasis, you can choose to be treated for your psoriasis by your local doctor.

DISCUSSION OF FINDINGS

New information about the study

If we find out any new information that may affect your choice to participate in this study, we will get in touch with you to explain what we have learned. This may be information we have learned while doing this study here at the NIH or information we have learned from other scientists doing similar research in other places.

Return of research results

At the end of the study, the results will be summarized, published, and available to the public.

By agreeing to participate in this study, you do not waive any rights that you may have regarding access to and disclosure of your records.

EARLY WITHDRAWAL FROM THE STUDY

If you decide to stop participating in this study, you may request this by either informing the investigators or by writing to the research team at the address at the end of this consent (under problems and questions on the last page of the consent). You will not be asked for further information or samples.

STORAGE, SHARING AND FUTURE RESEARCH USING YOUR SPECIMENS AND DATA

Will your specimens or data be saved for use in other research studies?

As part of this study, we are obtaining specimens and data from you. We will remove all the identifiers, such as your name, date of birth, address, or medical record number, and label your specimens and data with a code so that you cannot easily be identified. However, the code will be linked through a key to information that can identify you. We plan to store and use these specimens and data for studies other than the ones described in this consent form that are going on right now, as well as studies that may be conducted in the future. These studies may provide additional information that will be helpful in understanding heart failure, or other diseases or conditions. This could include studies to develop other research tests, treatments, drugs, or devices, that may lead to the development of a commercial product by the NIH and/or its research or commercial partners. There are no plans to provide financial compensation to you if this happens. Also, it is unlikely that we will learn anything from these studies that may directly benefit you.

I give permission for my coded specimens and data to be stored and used for future research as described above.

_____ Yes _____ No

Initials Initials

Will your specimens or data be shared for use in other research studies?

We may share your coded specimens and data with other researchers. If we do, while we will maintain the code key, we will not share it, so the other researchers will not be able to identify you. They may be doing research in areas that are similar to this study or in other unrelated areas. These researchers may be at NIH, other research centers and institutions, or commercial entities.

I give permission for my coded specimens and data to be shared with other researchers and used by these researchers for future research as described above.

_____ Yes _____ No

Initials Initials

If you change your mind and do not want us to store and use your specimens and data for future research, you should contact the research team member identified at the top of this document. We will do our best to comply with your request but cannot guarantee that we will always be able to destroy your specimens and data. For example, if some research with your specimens and data has already been completed, the information from that research may still be used. Also, for example, if the specimens and data have been shared already with other researchers, it might not be possible to withdraw them.

In addition to the planned use and sharing described above, we might remove all identifiers and codes from your specimens and data and use or share them with other researchers for future research at the NIH or other places. When we or the other researchers access your anonymized data, there will be no way to link the specimens or data back to you. We will not contact you to ask your permission or otherwise inform you before we do this. We might do this even if you answered "no" to the above questions. If we do this, we would not be able to remove your specimens or data to prevent their use in future research studies, even if you asked, because we will not be able to tell which are your specimens or data.

NIH policies require that your clinical and other study data be placed in an internal NIH database that is accessible to other NIH researchers for future research. Usually, these researchers will not have access to any of your identifiers, such as your name, date of birth, address, or medical record number; and your data will be labeled with only a code. We cannot offer you a choice of whether your data to be placed in this database or not. If you do not wish to have your data placed in this database, you should not enroll in this study.

How long will your specimens and data be stored by the NIH?

Your specimens and data may be stored by the NIH possibly indefinitely.

Risks of storage and sharing of specimens and data

When we store your specimens and data, we take precautions to protect your information from others that should not have access to it. When we share your specimens and data, we will do everything we can to protect your identity, for example, when appropriate, we remove information that can identify you. Even with the safeguards we put in place, we cannot guarantee that your identity will never become known or someone may gain unauthorized access to your information. New methods may be created in the future that could make it possible to re-identify your specimens and data.

COMPENSATION, REIMBURSEMENT, AND PAYMENT

Will you receive compensation for participation in the study?

Some NIH Clinical Center studies offer compensation for participation in research. The amount of compensation, if any, is guided by NIH policies and guidelines.

There is no compensation for routine diagnostic tests, however, you will receive compensation to cover the time and inconvenience for the research tests performed to understand your condition. The compensation amount will be dependent on the research tests performed. Reimbursement for protocol travel, food, and lodging will be consistent with NIH guidelines. You will be compensated for car mileage, and train/bus/taxi costs.

If you are unable to finish the study, you will receive compensation by check or direct deposit for the parts you completed.

With few exceptions, study compensation is considered taxable income that is reportable to the Internal Revenue Service (IRS). A “Form 1099-Other Income” will be sent to you if your total payments for research participation are $600 or more in a calendar year. If you have an unpaid debt to the federal government, please be aware that some or all your compensation may be automatically reduced to repay that debt on your behalf.

Description of tests or procedures	Compensation
Cardiac MRI Study*	Yes - $125
^{13}N Ammonia PET CT*	Yes - $150
^{11}C Acetate PET CT*	Yes - $150
Research blood draws	Yes - $50 per draw (can include multiple tubes)

*Requires pregnancy testing prior to performing these procedures.

Will taking part in this research study cost you anything?

NIH does not bill health insurance companies or participants for any research or related clinical care that you receive at the NIH Clinical Center.

CONFLICT OF INTEREST (COI)

The NIH reviews NIH staff researchers at least yearly for conflicts of interest. This process is detailed in a COI Guide. You may ask your research team for a copy of the COI Guide or for more information. Members of the research team who do not work for NIH are expected to follow these guidelines or the guidelines of their home institution, but they do not need to report their personal finances to the NIH.

No NIH investigator involved in this study receives payments or other benefits from any company whose drug, product, or device is being tested.

CLINICAL TRIAL REGISTRATION AND RESULTS REPORTING

A description of this clinical trial will be available on http://www.ClinicalTrials.gov, 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.

CONFIDENTIALITY PROTECTIONS PROVIDED IN THIS STUDY

Will your medical information be kept private?

We will do our best to make sure that the personal information in your medical record will be kept private. However, we cannot guarantee total privacy. Organizations that may look at and/or copy your medical records for research, quality assurance, and data analysis include:

- The NIH and other government agencies, like the Food and Drug Administration (FDA), which are involved in keeping research safe for people.
- National Institutes of Health Intramural Institutional Review Board

The researchers conducting this study and the NIH follow applicable laws and policies to keep your identifying information private to the extent possible. However, there is always a chance that, despite

our best efforts, your identity and/or information about your participation in this research may be inadvertently released or improperly accessed by unauthorized persons.

In most cases, the NIH will not release any identifiable information collected about you without your written permission. However, your information may be shared as described in the section of this document on sharing of specimens and data, and as further outlined in the following sections.

Further, the information collected for this study is protected by NIH under a Certificate of Confidentiality and the Privacy Act.

Certificate of Confidentiality

To help us protect your privacy, the NIH Intramural Program has received a Certificate of Confidentiality (Certificate). With this certificate, researchers may not release or use data or information about you except in certain circumstances.

NIH researchers must not share information that may identify you in any federal, state, or local civil, criminal, administrative, legislative, or other proceedings, for example, if requested by a court.

The Certificate does not protect your information when it:

1. is disclosed to people connected with the research, for example, information may be used for auditing or program evaluation internally by the NIH; or
2. is required to be disclosed by Federal, State, or local laws, for example, when information must be disclosed to meet the legal requirements of the federal Food and Drug Administration (FDA),
3. is for other research
4. is disclosed with your consent.

The Certificate does not prevent you from voluntarily releasing information about yourself or your involvement in this research.

The Certificate will not be used to prevent disclosure to state or local authorities of harm to self or others including, for example, child abuse and neglect, and by signing below you consent to those disclosures. Other permissions for release may be made by signing NIH forms, such as the Notice and Acknowledgement of Information Practices consent.

Privacy Act

The Federal Privacy Act generally protects the confidentiality of your NIH medical information that we collect under the authority of the Public Health Service Act. In some cases, the Privacy Act protections differ from the Certificate of Confidentiality. For example, sometimes the Privacy Act allows the release of information from your record without your permission, for example, if it is requested by Congress. Information may also be released for certain research purposes with due consideration and protection, to those engaged by the agency for research purposes, to certain federal and state agencies, for HIV partner notification, for infectious disease or abuse or neglect reporting, to tumor registries, for quality assessment and medical audits, or when the NIH is involved in a lawsuit. However, NIH will only release information from your medical record if it is permitted by both the Certificate of Confidentiality and the Privacy Act.

Policy Regarding Research-Related Injuries

The NIH Clinical Center will provide short-term medical care for any injury resulting from your participation in research here. In general, no long-term medical care or financial compensation for research-related injuries will be provided by the NIH, the NIH Clinical Center, or the Federal Government. However, you have the right to pursue a legal remedy if you believe that your injury justifies such action.

Problems or Questions

If you have any problems or questions about this study, or about your rights as a research participant, or about any research-related injury, contact the Principal Investigator, Michael N. Sack, MD, Ph.D., 301-402-9259, sackm@nih.gov

Other researchers you may call are: Tania Machado, RN, 301-661-1505, tania.machado@nih.gov

You may also call the NIH Clinical Center Patient Representative at 301-496-2626, or the NIH Office of IRB Operations at 301-402-3713 if you have a research-related complaint or concern.

Consent Document

Please keep a copy of this document in case you want to read it again.

Adult Research Participant: I have read the explanation about this study and have been given the opportunity to discuss it and to ask questions. I consent to participate in this study.

Signature of Research Participant	Print Name of Research Participant	Date

Investigator:

Signature of Investigator	Print Name of Investigator	Date

Witness to the oral short-form consent process only:

Signature of Witness*	Print Name of Witness	Date

***NIH ADMINISTRATIVE SECTION TO BE COMPLETED REGARDING THE USE OF AN INTERPRETER:**

____An interpreter, or other individual, who speaks English and the participant's preferred language facilitated the administration of informed consent and served as a witness. The investigator obtaining consent may not also serve as the witness.

____An interpreter, or other individual, who speaks English and the participant's preferred language facilitated the administration of informed consent but did not serve as a witness. The name or ID code of the person providing interpretive support is: _____.