Pharmacogenomics of the Variability in the *In Vivo* Response to Glucocorticoids

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Institutional Review Board
Informed Consent Document for Research

Principal Investigator: Vivian Kawai **Revision Date: 3/26/18**
Study Title: Pharmacogenomics of the Variability in the In Vivo Response to Glucocorticoids
Institution/Hospital: Vanderbilt University Medical Center

This informed consent applies to adults healthy volunteers

Name of participant: _____ Age: _____

The following is given to you to tell you about this research study. Please read this form with care and ask any questions you may have about this study. Your questions will be answered. Also, you will be given a copy of this consent form.

You do not have to be in this research study. You can stop being in this study at any time. If we learn something new that may affect the risks or benefits of this study, you will be told so that you can decide whether or not you still want to be in this study. Your medical record will contain a note saying you are in a research study. Anyone you authorize to receive your medical record will also get this note.

1. What is the purpose of this study?

You are being asked to take part in this research study because we want to know why some people have a good response to drugs called glucocorticoids (such as prednisone) and why others do not respond or have a bad response to the same drugs. Glucocorticoids are drugs that frequently use to control allergies, inflammation and other health conditions. The purpose of the study is to learn about how your genes may affect the way you respond to glucocorticoids. Forty people will take part in this study.

2. What will happen and how long will you be in the study?

If you agree to be in the study, you will come to Vanderbilt University Medical Center (VUMC) three times. For each visit, you will be asked not to eat or drink, except for water, for at least 10 hours before the visit.

Screening visit:
We will ask you to come to VUMC early in the morning. We will perform a brief physical exam. We will ask you questions about your health and medical history and will look at your medical record. We will take a blood sample from your arm with a needle (about 10 teaspoons). We will ask you for a urine and a stool sample. If you are a woman who could become pregnant, we will do a pregnancy test. If you are pregnant, you will not be allowed to be in the study.

Study Visit 1:
We will ask you to come to VUMC early in the morning. If you are a woman who could become pregnant, we will ask you for a urine sample for a pregnancy test. If you are pregnant, you will not be allowed to continue in the study.

We will ask you to lie down, and we will stick your finger to get blood to check the sugar level in your blood. About 3/12 hours after you arrive, we will place a small tube in the vein in your arm to collect blood, and about 30 minutes later we will take a blood sample. If the sugar level in your blood is too high, we will take blood once more two hours later. If the sugar level in your blood is normal, you will drink a solution of sugar immediately after we collect the blood. We will then take blood from you 6 more times – 10, 20, 30, 60, 90, and 120 minutes after you drink the sugar solution. If your blood sugar drops too much, we will need to stop the study and give you some snacks to raise your blood sugar. If this occurs, we will take you out of the study. If your blood sugar rises too much, we will take you out of the study. At the end of the study, we will give you lunch. The total amount of blood take for this study day will be about 9 1/3 tablespoons.

Study Visit 2:
Within one month after study visit 1, you will come back to VUMC early in the morning. If you are a woman who could become pregnant, we will ask you for a urine sample for a pregnancy test. If you are pregnant, you will not be allowed to continue in the study.

We will ask you to lie down, and we will stick your finger to get blood to check the sugar level in your blood. We will then ask you to swallow 3 tablets of prednisone with a small amount of water. Prednisone is a medication approved by the Food

and Drug Administration to treat inflammation and allergies, among other things, but for this study it is experimental (not approved for this use.)

About 3 ½ hours after you take the tablets, we will place a small tube in the vein in your arm to collect blood. About 30 minutes later, we will take blood from you. If the sugar level in your blood is too high, we will collect blood one more time, about 2 hours later. If the sugar level in your blood is normal you will again drink the sugar solution. We will collect blood at 6 different times – 10, 20, 30, 60, 90, and 120 minutes after you drink the sugar solution. After the last blood sample, you will be finished with the study, and we will give you lunch. The total amount of blood take for this study day will be about 9 1/3 tablespoons.

The purpose of this study is to understand how differences in genes (DNA) might play a role in how patients respond differently to glucocorticoids, such as prednisone. Genes are the instruction manual for your body. The genes you get from your parents decide what you look like and how your body behaves. They can also tell us a person's risk for certain diseases and how they will respond to treatment.

You are being asked to give a blood sample for genetic research. What we learn about you from this sample will not be put in your health record. Your test results will not be shared with you or your doctor. No one else (like a relative, boss, or insurance company) will be given your test results.

A single blood sample will be taken at the same time we take your screening labs. This will not take any extra time.

One risk of giving samples for this research may be the release of your name that could link you to the stored samples and/or the results of the tests run on your samples. This may cause problems with insurance or getting a job.

To prevent this, these samples will be given a code. Only the study staff will know the code. The name that belongs to the code will be kept in a locked file or in a computer with a password. Only Dr. Kawai and members of her study team will have access to your name.

Health insurance companies and group health plans may not use your genetic information when making decisions regarding your eligibility or premiums. Employers with 15 or more employees may not use your genetic information that comes from this research when making a decision to hire, promote, or fire you or when setting the terms of your employment.

Your sample will be used to make DNA that will be kept for an unknown length of time (maybe years) for future research. The sample will be destroyed when it is no longer needed.

Your samples may be used to make new products, tests or findings. These may have value and may be developed and owned by the study staff, Vanderbilt University, Vanderbilt University Medical Center, and/or others. If this happens, there are no plans to provide money to you.

Your samples and information about you may be shared with others to use for research. To protect your privacy, we will not release your name.

You will not receive any benefit as a result of the tests done on your samples. These tests may help us learn more about the causes, risks, treatments, or how to prevent this and other health problems.

At any time, you may ask to have your sample destroyed. You should contact Dr. Kawai at

538 Robinson Research Building
Clinical Pharmacology
Vanderbilt University
Nashville, TN 37232-6602

to have your sample destroyed and no longer used for research. We will not be able to destroy research data that has already been gathered using your sample. Also, if your identity was removed from the samples, we will not be able to locate and destroy them.

There will be no costs to you for any of the tests done on your samples. You will not be paid for the use of your samples.

Please check Yes or No to the questions below:

My blood/tissue sample may be stored/shared for future gene research in drug research.

☐ Yes ☐ No

My blood/tissue sample may be stored/shared for future gene research for other health problems (such as cancer, heart disease, etc).

☐ Yes ☐ No

3. Costs to you if you take part in this study:

There is no cost to you for taking part in this study.

4. Side effects and risks that you can expect if you take part in this study:

Coming to the CRC for the study visits may be inconvenient.

Blood draws: Pain, redness, soreness, bruising, or rarely infection may occur at the needle stick site. Rarely some people faint.

Sugar solution: Some people may feel sick after drinking the sugar liquid and may vomit. If you cannot tolerate the sugar solution on Study Day 1, we will not repeat the test on Study Day 2.

Prednisone: It is rare that any harmful effects will occur with one single dose of prednisone. Most of the side effects reported are with repetitive use and at high doses. These include common side effects such as headache, dizziness, trouble sleeping, mood swings, heartburn, tiredness, muscle weakness, slowed healing, weight gain, and body hair growth. Some serious side effects include: vision problems, eye pain and/or redness, increase risk of infections, loss of contact with reality, irregular heartbeat, increase in blood pressure, involuntary shaking, seizures, confusion, numbness of extremities, shortness of breath, troubles breathing and swallowing, rash, hives, and itching.

We will monitor you closely the next 6 hours after you take the medication at the CRC, and we will contact you the following three consecutive days after to make sure you are OK.

Pregnancy: This treatment may hurt an unborn child. If you take part in this study, you must use approved birth control such as diaphragm or condoms or a hormonal birth control method while you are in this study. We will discuss this with you before you start the study.

If you become pregnant while you are in this study, you must tell your doctor at once. Also, women must not breast feed while in this study. If you are a woman and are able to become pregnant, you will have a urine test to make sure that you are not pregnant before you receive treatment in this study.

5. Risks that are not known:

There may be risks that we do not know about.

6. Payment in case you are injured because of this research study:

If it is determined by Vanderbilt and the Investigator that an injury occurred as a direct result of the tests or treatments that are done for research, then you and/or your insurance will not have to pay for the cost of immediate medical care provided **at Vanderbilt** to treat the injury.

There are no plans for Vanderbilt to pay for any injury caused by the usual care you would normally receive for treating your illness or the costs of any additional care. There are no plans for Vanderbilt to give you money for the injury.

7. Good effects that might result from this study:

a) The benefits to science and humankind that might result from this study. We may learn why some people have a good response to glucocorticoids and others do not.
b) The benefits you might get from being in this study. None

8. Other treatments you could get if you decide not to be in this study:

You may decide not to be in this study at any time and nothing about your healthcare will change.

9. Payments for your time spent taking part in this study or expenses:

If you complete the study, you will be paid $265. If you do not complete the study, you will be paid $125 for each study day you complete and $15 for the screening day. If you travel more than 10 miles to Vanderbilt for the study, we will compensate you at the current University mileage rate.

10. Reasons why the study doctor may take you out of this study:

You may be removed from this study without your consent if:

- Staying in the study would be harmful to you
- You no longer meet the requirements of the study
- You cannot tolerate the sugar solution
- The study is stopped.

If you are taken out of the study, you will be told the reason.

11. What will happen if you decide to stop being in this study?

If you decide to stop being part of the study, you should tell your study doctor.

12. Who to call for any questions or in case you are injured:

If you should have any questions about this research study or if you feel you have been hurt by being a part of this study, please feel free to contact Dr. Vivian Kawai at 615-343-0041 or my Faculty Advisor**,** Dr. Michael Stein at 615-936-3420. If you cannot reach the research staff, please page the study doctor at **615-835-4045**.

For additional information about giving consent or your rights as a person in this study, to discuss problems, concerns, and questions, or to offer input, please feel free to call the Vanderbilt University Institutional Review Board Office at (615) 322-2918 or toll free at (866) 224-8273.

13. Clinical Trials Registry.

A description of this clinical trial will be available on 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.

14. Confidentiality:

Information we collect from you will be stored in a secure, password-protected database. Your samples will be labeled with a code instead of your name. Access to this information and your samples will be granted only to members of the study team.

Dr. Kawai and/or Vanderbilt may share your information, without identifiers, to others or use it for other research projects not listed in this form. Vanderbilt, Dr. Kawai, and her staff will comply with any and all laws regarding the privacy of such information. There are no plans to pay you for the use or transfer of this de-identified information.

15. Authorization to Use/Disclose Protected Health Information

All efforts, within reason, will be made to keep your protected health information (PHI) private. PHI is your health information that is, or has been gathered or kept by Vanderbilt as a result of your healthcare. This includes data gathered for research studies that can be traced back to you. Using or sharing ("disclosure") such data must follow federal privacy rules. By signing the consent for this study, you are agreeing ("authorization") to the uses and likely sharing of your PHI. If you decide to be in this research study, you are also agreeing to let the study team use and share your PHI as described below.

As part of the study, Dr. Vivian Kawai and her study team may share the results of your study and/or non-study linked blood testing as well as parts of your medical record, to the groups named below. These groups may include people from the Federal Government Office for Human Research Protections, the Vanderbilt University Institutional Review Board and the National Institutes of Health. Federal privacy rules may not apply to these groups; they have their own rules and codes to assure that all efforts, within reason, will be made to keep your PHI private.

The study results will be kept in your research record for at least six years after the study is finished. At that time, the research data that has not been put in your medical record will be kept for an unknown length of time. Any research data that has been put into your medical record will be kept for an unknown length of time.

Unless told otherwise, your consent to use or share your PHI does not expire. If you change your mind, we ask that you contact Dr. Kawai in writing and let her know that you withdraw your consent. Her mailing address is:

Dr. Vivian Kawai
538 Robinson Research Building
Clinical Pharmacology
Vanderbilt University
Nashville, TN 37232-6602

At that time, we will stop getting any more data about you. But, the health data we stored before you withdrew your consent may still be used for reporting and research quality.

If you decide not to take part in this research study, it will not affect your treatment, payment or enrollment in any health plans or affect your ability to get benefits. You will get a copy of this form after it is signed.

STATEMENT BY PERSON AGREEING TO BE IN THIS STUDY

I have read this consent form and the research study has been explained to me verbally. All my questions have been answered, and I freely and voluntarily choose to take part in this study.

Date	Signature of patient/volunteer	Time

Consent obtained by:

Date	Signature	
	Printed Name and Title	Time