UNIVERSITY OF PENNSYLVANIA HEALTH SYSTEM

Gilead Sciences, Inc. GS-US-337-0115, 25-NOV-2013

A Phase 3, Multicenter, Open-Label Study to Investigate the Efficacy and Safety of Sofosbuvir/Ledipasvir Fixed-Dose Combination for 12 Weeks in Subjects with Chronic Genotype 1 or 4 Hepatitis C Virus (HCV) and Human Immunodeficiency Virus (HIV)-1 Co-infection

CONSENT TO PARTICIPATE IN AN OPTIONAL PHARMACOGENOMIC RESEARCH SUBSTUDY

Your contacts for this study are:

Site address: 502 Johnson Pavilion, Philadelphia, PA 19104

Principal Investigator:	Pablo Tebas, MD	(215) 349-8092
Project Manager:	Joseph Quinn, RN, BSN	(215) 349-8092
Study Nurses:	Yan Jiang, RN, BSN	(215) 349-8092

24 Hour Emergency Number (215) 662-6059 Ask for the Immunodeficiency Program Doctor on call

INTRODUCTION

You have already agreed to take part in a research study, GS US-337-0115, involving a new investigational fixed-dose combination (FDC) pill, called Sofosbuvir/Ledipasvir FDC for the treatment of chronic Hepatitis C virus (HCV) for subjects who are co-infected with Human Immunodeficiency Virus (HIV).

The purpose of this consent form is to give you information about an **optional** Pharmacogenomic Substudy that will be conducted with some of the subjects who are enrolled in the GS-US-337-0115 main study. This consent form is an addition to the Subject Information and Informed Consent Form for the main study that you have already signed.

Your Study Doctor or Study Nurse will go over this consent form with you and answer any questions you may have regarding this substudy. Before you agree to take part, ask your Study Doctor or Study Nurse to explain any words or information in this consent form you do not clearly understand. You should understand the purpose of the optional blood sampling, how your participation may help you, any potential risks to you, and what is expected of you during the substudy.

If you agree to take part in this Pharmacogenomic Substudy, you will be asked to sign and date this consent form and will be given a signed and dated copy to keep. No one can force you to take part in this substudy. Even if you agree to participate, you are free to change your mind and stop at any time without penalty or loss of benefits which you would otherwise have. You can still continue to participate in the main study even if you do not agree to participate in this substudy. You must have reviewed and signed the main study consent before signing this consent. This consent form is not meant to replace the main study consent, and the contents of the main study consent apply to this substudy.

When this form talks about "Biomarker Research" it refers to research on DNA as well as other molecules. This substudy's scientific goal will require looking at human genes and genetic information (i.e., human DNA sequences), and/or other molecules (like RNA and proteins) to understand how they connect with other medical information (such as health or physical traits) in a way so that such data may be used for research and other scientific, patient care or commercial purposes.

PURPOSE OF THE SUB-STUDY

"Biomarkers" are any biological markers that are associated with a disease, a treatment or an outcome. They may predict who is most likely to be helped by a medicine or who is at risk for a bad reaction to a

medicine. They can also help doctors and scientists understand which patients need a certain treatment, which patients may not, and why. There are many different types of biomarkers that doctors and scientists can use. Some of these can be looked at in blood samples.

Some biomarkers are found in molecules like DNA (which is what your genes are made of), and some are in other types of molecules (like "RNA" or "Proteins"). DNA contains the instructions for making all of our parts. These instructions are called "Genes." The study of genes is called genetics. We inherit our genes from parents, and the genes affect things such as the color of our hair or eyes. Understanding the relationship between biomarkers (such as genes) and diseases requires special research. This is called "biomarker discovery research."

This research is important to doctors like yours because it can help them understand why some people (like you) might benefit differently from some medicines while others do not. Sometimes this research can also help explain why some patients are more likely to have a bad reaction to medicines. And--just as importantly-- biomarker discovery research can help doctors understand Hepatitis C virus (HCV) infection better so they can find better medicines.

PROCEDURES

A single blood sample will be collected at the Baseline/Day 1 visit. You will have an extra 6 mL (approximately 1 teaspoon) of blood drawn. If a blood sample is not collected at the Baseline/Day 1 visit, then a sample may be taken at any time during the study following your consent.

What will happen to your blood sample?

Your blood sample will be used for research to better understand markers of health and disease, and responses to medicine used to treat disease. Because this sample will be stored for up to 10 years, we cannot say today what tools will be used to test it. This is because we expect that during the next 10 years, new tools will be developed for understanding medically important questions. For example, we may look at one gene or at all genes in a sample. However, even if the technology changes, your personal information will not be attached to the sample. Your sample will be labeled with a code. Your identity will be protected and your name will not be attached to the sample. The sample will be prepared and stored in a freezer for biomarker discovery research for up to 10 years. After 10 years, the sample will be destroyed.

RISKS

There will be no additional risks or discomforts beyond those of the main study.

BLOOD DRAWS

Drawing blood from a vein may cause local pain, bruising, occasional lightheadedness, fainting, and very rarely, infection at the site of the blood draw.

POSSIBLE BENEFITS

There is no direct benefit to you from participating in the substudy. Your participation in the substudy may benefit the community, scientists, and doctors who work with Hepatitis C by providing increased knowledge and information about the treatment of your disease and SOF/LDV FDC or medicines like it.

WITHDRAWAL FROM STUDY AND REFUSAL TO PARTICIPATE

Like your participation in the main research study, the substudy is completely voluntary. **You may participate in the main research study EVEN IF YOU ARE NOT PART OF THE SUBSTUDY.** Your decision will not affect future treatment you may receive or your rights as a research subject.

The results of your tests from this sub-study will NOT be available to you or your Study Doctor and you will not be notified of any findings related to your sample since the testing is completely for research.

If you consent to the substudy and decide at a later date that you would like to withdraw your consent, you will need to do so in writing to your Study Doctor.

Withdrawing consent will result in destruction of your substudy sample(s). However, if you withdraw your consent after the sample has been tested, the test results and research study/sample-related information must remain in any database(s) that were created for the research study. The reason for this is to comply with regulations that require us to make data available for review by the United States Food and Drug Administration (FDA) or other appropriate regulatory authorities, or if this research is used to support an application for FDA approval to market the study drug.

If you withdraw consent for participation in the main study or are discontinued from the main study, the sample you provided for biomarker research testing will continue to be available for testing unless you also withdraw your consent for the substudy as stated above.

PAYMENT FOR PARTICIPATION

You will be paid $25.00 for this one time blood draw.

STATEMENT ABOUT PRIVACY

Records identifying you will be kept confidential and, to the extent permitted by applicable laws and/or regulations, will not be made publicly available. Your personal information may be given out if required by law. In the event of any publication regarding this study, your identity will remain confidential.

Representatives from government agencies, including the U.S. Food and Drug Administration ("FDA"), institutional review boards, the Sponsor and/or the Sponsor's authorized representatives may need access to your original medical records and study records for the purpose of checking data collected for the study. By signing this consent form, you authorize this access.

Your coded study information and samples may also be used for additional unanticipated medical and/or scientific research projects in the future relating to HCV (but at all times in compliance with applicable law and regulation).

AUTHORIZATION TO USE AND DISCLOSE RECORDS

The authorization part of the consent gives more detailed information about how your personal health information may be used and disclosed by the University of Pennsylvania Health System (UPHS), the School of Medicine and the individual Principal Investigator, subject to University of Pennsylvania procedures.

What personal health information is collected and used in this study and might also be disclosed?
The following personal health information will be collected, used for research, and may be disclosed during your involvement with this research study:

- Name, address, telephone number, date of birth, email addresses, MRN
- Social Security Number (if you receive more than $600 for participating in studies at PENN, we will need your SSN for the W-9)

- Personal and family medical history
- Current and past medications or therapies
- Results of physical exams, laboratory tests and procedures you will undergo during this research study

Why is your personal contact and health information being used?
Your personal contact information is important for the research team to contact you during the study. Your personal health information and results of tests and procedures are being collected as part of this research study. In some situations, your personal health information might be used to help guide your medical treatment.

Which of our personnel may use or disclose your personal health information?
The following individuals may use or disclose your personal health information for this research study:

- The Principal Investigator and the Investigator's study team
- Authorized members of the workforce of the UPHS and the School of Medicine, and University of Pennsylvania support offices, who may need to access your information in the performance of their duties (for example: for research oversight and monitoring, to provide treatment, to manage accounting or billing matters, etc.).

Who, outside of UPHS and the School of Medicine, might receive your personal health information?
As part of the study, the Principal Investigator, the study team and others listed above, may disclose your personal health information, including the results of the research study tests and procedures. This information may be disclosed to those listed below:

Individuals or organizations responsible for administering the study:

- Pharmaceutical sponsor (Gilead Sciences): This is the company that supplies drugs for the study. Information regarding safety and adverse effects needs to be collected and monitored.
- Contract Research Organization: Monitors will visit the site on a regular basis to review data and assure accuracy and completeness of information before the data are analyzed.

Regulatory and safety oversight organizations

- The Food and Drug Administration and regulatory agencies in other countries
- The Office of Human Research Protections
- The Study Monitoring Committee

Once your personal health information is disclosed to others outside of UPHS or the School of Medicine, it may no longer be covered by federal privacy protection regulations. Data are reported to the sponsor on Case Report Forms that identify you by your unique study number and not your name or medical record number. Information regarding your health, such as side effects of the study medications you experience will be reported only by code number. All samples collected for analysis will be labeled with your study number, visit number and date of your visit.

The Principal Investigator or study staff will inform you if there are any additions to the list above during your active participation in the trial. Any additions will be subject to University of Pennsylvania procedures developed to protect your privacy.

How long may UPHS and the School of Medicine be able to use or disclose your personal health information?

Your authorization for use of your personal health information for this specific study does not expire.

Your information may be held in a research repository (database). However, UPHS and the School of Medicine may not re-use or re-disclose information collected in this study for a purpose other than this study unless:

- You have given written authorization to do so
- The University of Pennsylvania's Institutional Review Board grants permission after ensuring that appropriate privacy safeguards are in place
- As permitted by law

Will you be able to access your records?
Since this is an open-label study, you will be able to access some or all of your medical records after the study is over. The Principal Investigator is not required to release research information to you that is not part of your medical record.

Can you change your mind?
Yes, at any time you may withdraw your approval to allow the use and disclosure of your personal health information as described here. You must do so in writing to the Principal Investigator at the address on the first page. Even if you withdraw your permission, your personal health information that was collected before we received your written request may still be used and disclosed, as necessary for the study. If you withdraw your permission to use your personal health information, you will also be withdrawn from the research study.

If you withdraw your permission to use any blood or tissue obtained for the study, the Sponsor may need to retain and use any samples that have already been collected to comply with its legal obligations and to maintain the scientific integrity of the study.

You will be given a copy of this Research Subject HIPAA Authorization describing your confidentiality and privacy rights for this study. You will also be given the UPHS and School of Medicine's Notice of Privacy Practices that contains more information about the privacy of your personal health information.

Commercial Issues
The University of Pennsylvania receives compensation from the Sponsor, Gilead Sciences, Inc., for having subjects take part in this substudy. You should also know that the Sponsor and other researchers who may study your genetic, biomarker, and medical information have an economic interest in developing new drugs and medical tests. The results of this research may lead to a commercial product for the diagnosis, cure, mitigation, treatment, or prevention of disease. You understand and agree that by signing this consent form you authorize the use of your sample, the by-products of the sample, and any products developed from the sample as described in this form. The Sponsor or other researchers or research companies may patent or sell discoveries that result from this research. Neither the Sponsor nor the Study Doctor has any plans to compensate you if this happens.

WHO CAN I CALL WITH QUESTIONS, COMPLAINTS OR IF I'M CONCERNED ABOUT MY RIGHTS AS A RESEARCH SUBJECT?
If you have questions, concerns or complaints regarding your participation in this research study or if you have any questions about your rights as a research subject, you should speak with the Principal Investigator listed on page one of this form. If a member of the research team cannot be reached or you want to talk to someone other than those working on the study, you may contact the Office of

Regulatory Affairs with any question, concerns or complaints at the University of Pennsylvania by calling (215) 898-2614.

AGREEMENT TO BE IN THE STUDY

By signing this informed consent form, I acknowledge that:

1. I agree to provide a blood sample to be used for biomarker research testing.
2. I understand that my DNA in this sample may be studied.
3. I agree to have my substudy sample(s) stored up to 10 years.
4. I understand that I will not receive results from this substudy nor will the Study Doctor in charge of the main research study.
5. I understand that the Study Doctor and Gilead Sciences, Inc., the Sponsor of this research study, do not have any plans to compensate me in the event that a commercial product is developed by this substudy research.

CONSENT FOR OPTIONAL BIOMARKER RESEARCH TESTING:

Subject

Subject Printed Name	Signature	Date

Person Obtaining Consent

Printed Name & Title	Signature	Date

Witness (if applicable)

Witness Printed Name	Signature	Date