RESEARCH CONSENT FORM

Generation III Exam 2

H-22762– THE FRAMINGHAM HEART STUDY N01-HC-25195 1910G

Background

You are participating in the Framingham Heart Study Generation III. The Framingham Heart Study (FHS) is an observational study to find relationships between risk factors, genetics, heart and blood vessel disease, and other health conditions over three generations. You are signing this consent form to cover your participation for all future exam cycles of the FHS. You may withdraw your participation from any single exam cycle or the whole study at any time. You will not be required to sign another consent form unless a new procedure is added. At each future exam cycle you will be provided an information sheet containing information about what will occur during that exam cycle.

Purpose

The purpose of this research is to 1) investigate factors related to the development of heart and blood vessel diseases, lung and blood diseases, stroke, memory loss, cancer, and other major diseases and health conditions; and 2) examine DNA and its relationship to the risks of developing these diseases and other health conditions.

THIS EXAMINATION DOES NOT TAKE THE PLACE OF A ROUTINE MEDICAL CHECK UP BY YOUR PHYSICIAN.

Taking part in this study is voluntary. You have the right to refuse to take part in this study. If you choose to take part, you have the right to stop at any time.

What Happens In This Research Study

You will be one of approximately 4010 subjects to be asked to participate in this study.

All or part of the research in this study will take place at the following location(s): Boston University Medical Center.

Your research examination will take place at the FHS at 73 Mt. Wayte Avenue in Framingham, MA, or may take place in your home or other residence. The examination will take approximately 4 hours and will include the following:

1) History: An interview about your past and present medical status including: heart and lung illnesses, hospitalizations, emergency room visits, surgeries, physician visits, reproductive history, personal and family history, and health habits (including diet, exercise, prescription and non-prescription drug use, smoking and alcohol use).

2) Measurements and Procedures: A FHS physician will perform a physical examination. You will be

asked to participate in standard measurements routinely done in your physician's office such as height, weight, blood pressure (including blood pressure in both arms and legs if you are 40 years old or older), and an electrocardiogram to measure your heart rate and regularity. Your lung function will be measured by breathing in and out of a machine. Some participants will be asked to inhale a bronchodilator medication (albuterol) used routinely in lung function testing, and then to repeat some of the tests. You will be asked in a recorded interview questions about your mood, memory, and mobility. Your hand grip strength, balance, and walking speed will be measured. You will also be asked to wear a small accelerometer to count your footsteps and measure your physical activity over the course of a week.

In the event that you may have a stroke, you would be examined during your hospitalization (if applicable) and at 3, 6, 12 and 24 months. The examination would include a neurological evaluation and an assessment of your ability to perform daily activities.

3) Blood and urine specimens: A technician will draw a sample of your blood (110 cc or about 7.5 tablespoons). You will be asked to take a standard glucose tolerance test which involves swallowing a sweet drink and taking a second blood sample two hours later (this test will not be given to anyone known to have diabetes). You will be asked to give a sample of your urine. Both the blood and urine samples will be used to test for risk factors for the diseases and health conditions under investigation. You may choose to withdraw your blood samples from future use and the samples will be destroyed after your request is received. If you choose to withdraw your samples, you should call the lab manager of the FHS at (508) 935-3477.

Genetic Studies: You will be asked if a sample of the blood you have donated may be used to obtain genetic material (for example DNA) for research. Genetic research will include the detailed description of the building blocks of DNA and thus may identify genetic conditions that have important health and treatment implications for you. Neither your name nor clinic number appears on the sample.

Data and DNA will be distributed to the FHS researchers and other qualified researchers interested in the genetics of heart and blood vessel diseases, lung and blood diseases, stroke, memory loss, cancer, and other major diseases and health conditions. The researchers will be given the DNA without any personally identifying information. Knowledge from the research on your DNA may be used to develop new tests or medicines for the diseases and conditions under investigation. Your DNA will not be sold to any person, institution, or company for financial gain or commercial profit. Neither you nor your heirs will gain financially from discoveries made using the information and/or specimens that you provide.

4) Vascular function testing: You will be asked to participate in an experimental test of blood vessel function that takes about 15 minutes. Arterial tonometry tests blood vessel (artery) stiffness by carefully

recording the blood pressure waveform. A technician will perform the arterial waveform evaluation using a tonometer (a flat sensor, which, when pressed lightly on the skin over the artery records a waveform). The blood vessels in the neck (carotid), arm (brachial and radial), and groin (femoral) will be studied by tonometry. You will also be asked to lie on a long, narrow sensor placed between your shoulder blades. The sensor warms your skin and uses infrared light to detect the timing of arrival of blood flow to the skin of your back. We use this information to evaluate the stiffness of your aorta, which is the largest artery in your body. You will also be asked to wear electrocardiographic leads to measure your heart rhythm.

5) Medical Records: You will be asked to sign a release form to allow the FHS staff to obtain and review copies of your hospital, cancer registry, Medicare (CMS) and medical records. These copies will be reviewed by the FHS physician investigators. The medical release form is considered valid to obtain these records, and will be valid until canceled by you.

You may be contacted later to obtain additional health information or be invited to participate in other FHS health-related studies. You will be asked to give your social security number for the purpose of locating you in the future; you may choose to decline this request. You may be asked to come back for another exam. With your permission, a summary letter of routine test results from this exam will be sent to you and your physician. Any questions you have regarding your rights as a research subject can be directed to the Office of the Institutional Review Board of Boston Medical Center at (617) 638-7207. The FHS is a medical research project sponsored by the National Institutes of Health. It is authorized under 42USC 285b-3. The system of records which applies to the Framingham Heart Study is documented in the Federal Register: September 26, 2002 (Vol. 67, No. 1879) pages 60776-60780.

Risks and Discomforts

The tests and their risks and discomforts are listed below:

- The Blood Draw: Minimal bruising, pain, bleeding, or in rare circumstances, an infection may occur.

- The Lung Function test: This involves a very low level of risk. On rare occasions, a person taking a lung function test may feel lightheaded or may faint. The primary risk involved is injury from falling. Participants asked to inhale the medication called albuterol, used during lung function testing, may notice an increase in heart rate (pulse) or symptoms of jitteriness or shakiness (tremors).

Possible general discomforts include headaches or feeling hungry if you have not eaten before the examination and fatigue and chill during the visit. We do not expect any unusual risk or injury to occur as a result of participation. In the unlikely event that during the examination you should require medical care, first aid will be available.

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There may be unknown risks/discomforts involved. Study staff will update you in a timely way on any new information that may affect your health, welfare, or decision to stay in this study

Potential Benefits

You will receive no direct benefit from your participation in this study. However, your participation may help the investigators better understand the causes and prevention of cardiovascular disease and other medical conditions, including the potential of genetic factors..

Alternatives

Your alternative is to not participate in the study.

Subject Costs and Payments

You will not be charged or paid for any part of the examination. If the examination finds medical problems that require tests or treatments, you will be so advised and that information will be provided to the physician or clinic that you choose. If your physician decides that follow up tests or treatments are necessary, payment must be provided by you or a third party payer (for example, health insurance or Medicare). No special arrangement will be made by the Framingham Heart Study for compensation or payment solely because of your participation in this study. This does not waive any of your legal rights. Costs that you may incur the day of your participation include, but are not limited to, loss of work, and transportation (gas, tolls, etc.). You will not receive payment for your participation.

Confidentiality

Information obtained about you will be treated as confidential; a code number will be assigned to you and your data. The codes will only be provided to qualified investigators. The risk in providing this sample is minimal. Your samples will be kept until they are not of scientific value. You will not be routinely informed of results of the research performed upon your genetic samples, although with your permission you may be informed of some findings about genetics, cardiovascular disease or other health conditions generated from DNA analyses, directly or through publication in newsletters. Genetic tests may be developed as a result of the analysis of samples in the FHS.

When study results are published, your name and other identifying information will not be revealed. Information from this study and from your medical record may be reviewed and photocopied by state and federal regulatory agencies, such as the Office of Human Research Protection, as applicable, and the Institutional Review Board of Boston University Medical Center. To help us further protect your

privacy, the investigators have obtained a Confidentiality Certificate from the Department of Health and Human Services (DHHS). With this Certificate, the investigators cannot be forced (for example by court subpoena) to disclose research information that may identify you in any Federal, State, or local civil, criminal, administrative, legislative, or other proceedings. Disclosure will be necessary, however, upon request of DHHS for audit or program evaluation purposes.

A Confidentiality Certificate does not prevent you or a member of your family from voluntarily releasing information about yourself or your involvement in this research. If an insurer or employer obtains your participation, and obtains your consent to receive research information, then the investigator may not use the Certificate of Confidentiality to withhold this information. This means that you and your family must also actively protect your own privacy. Finally, you should understand that the investigator is not prevented from taking steps, including reporting to authorities, to prevent serious harm to yourself or others. Please check the appropriate box above each of the following statements:

1) |___| YES |___| NO (Office Code 0)

I agree to participate in the FHS clinic examination and studies of the factors contributing to heart and blood vessel diseases, lung and blood diseases, stroke, memory loss, cancer, and other major diseases and health conditions.

2) |___| YES |___|NO (Office Code 3)

I agree to provide a blood sample from which genetic material (DNA and other components) can be obtained. I agree to allow my data and blood samples to be used in the genetic studies of factors contributing to heart and blood vessel diseases, lung and blood diseases, stroke, memory loss, cancer, and other diseases and health conditions.

3) |___| YES |___| NO (Office Code 12)

I agree to allow my data and blood samples to be used in genetic studies of reproductive conditions, and mental health conditions such as alcohol use and depressive symptoms.

4) |___| YES |___| NO (Office Code 4)

I agree to allow researchers from commercial companies to have access to my DNA and genetic data which may be used to develop new lab tests or treatments that could benefit many people. (You or your heirs will not benefit financially from this, nor will your DNA be sold to anyone.)

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5) |___| YES |___| NO (Office Code 30)

I agree to allow the FHS to release the findings of non-genetic tests and examinations to my physician, clinic, or hospital.

6) |___| YES |___| NO (Office Code 31)

If a genetic condition is identified that may have important health and treatment implications for me, I agree to allow the FHS to notify me, and then with my permission to notify my physician.

Subject's Rights

By consenting to participate in this study you do not waive any of your legal rights. Giving consent means that you have heard or read the information about this study and that you agree to participate. You will be given a copy of this form to keep.

If at any time you withdraw from this study you will not suffer any penalty or lose any benefits to which you are entitled.

You may obtain further information about your rights as a research subject by calling the Office of the Institutional Review Board of Boston University Medical Center at 617-638-7207. If this study is being done outside the United States you can ask the investigator for contact information for the local Ethics Board.

The investigator or a member of the research team will try to answer all of your questions. If you have questions or concerns at any time, or if you need to report an injury while participating in this research, contact PHILIP A. WOLF, MD, or DANIEL LEVY, MD, at (508) 872-6562.

Compensation for Research Related Injury

If you think that you have been injured by being in this study, please let the investigator know right away. If your part in this study takes place at Boston Medical Center, you can get treatment for the injury at Boston Medical Center. If your part in the study is not at Boston Medical Center, ask the investigator where treatment for injury would be available locally. You and your insurance company will be billed for this treatment. Some research sponsors may offer a program to cover some of the treatment costs which are not covered by your insurance. You should ask the research team if such a program is available.

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Right to Refuse or Withdraw

Taking part in this study is voluntary. You have the right to refuse to take part in this study. If you decide to be in the study and then change your mind, you can withdraw from the research. Your participation is completely up to you. Your decision will not affect your being able to get health care at this institution or payment for your health care. It will not affect your enrollment in any health plan or benefits you can get.

If you choose to take part, you have the right to stop at any time. If there are any new findings during the study that may affect whether you want to continue to take part, you will be told about them as soon as possible.

The investigator may decide to discontinue your participation without your permission because he/she may decide that staying in the study will be bad for you, or the sponsor may stop the study.

Protection of Subject Health Information

N/A

Signing this consent form indicates that you have read this consent form (or have had it read to you), that your questions have been answered to your satisfaction, and that you voluntarily agree to participate in this research study. You will receive a copy of this signed consent form.

_____

Subject (Signature and Printed Name) Date

_____

Legally Authorized Representative (LAR) (Signature and Printed Name) Date

_____

Person Obtaining Consent (Signature and Printed Name) Date