

Research Subject Information and Consent Form
University of Wisconsin School of Medicine and Public Health -
Department of Allergy & Immunology
Madison, WI

STUDY TITLE: Function of the Isolated Eosinophil in Asthma

PRINCIPAL INVESTIGATOR: Sameer Mathur, MD, PhD

Invitation

You are invited to participate in this study as a volunteer. Should you choose to participate we will isolate eosinophils (white blood cells associated with allergies and asthma) from your blood. The eosinophil can play a key role in asthma worsening. We are looking at the eosinophil function in this study to better understand the effect of eosinophils on asthma and other allergic diseases. You are able to participate in this study because you are 18-55 years of age and have allergies and/or asthma OR neither of these conditions. Your participation is voluntary. There is no expected medical benefit to you for participating in this research study.

Approximately, 800 subjects will participate in this research study.

What is the purpose of the study?

The purpose of this study is to study how eosinophils contribute to airway irritation and changes in asthma.

What Does Study Participation Involve?

If you choose to participate in this study you will be asked to complete a screening visit during which we will collect baseline information about your asthma/allergies, if you have them. You will also have a small blood draw. The blood will be used to see if you are eligible to participate in the study, collect genetic information, and to assess the functional activity of your cells. If you qualify, you will be asked to schedule a characterization visit. During the characterization visit you will be asked about your medical and asthma/allergy history in detail, and medication use. Allergy skin testing and spirometry with reversibility will be done. Exhaled nitric oxide (ENO) will be measured. A doctor may examine you based upon your test results. This information will help Dr. Mathur group your data with other people participating in the study and determine if it is safe for you to continue. The screening and characterization visit will each last approximately 45 minutes. The study staff will discuss the option of combining the screening and characterization visit procedures together on one day. If they are combined, the combined visit will last approximately 1hr and 15 minutes.

If you qualify, you will be asked to return for a blood draw visit, which will last approximately 20-30 minutes. Blood draw visits will be done Monday-Friday and will generally be completed before 8:00 am. A coordinator will call you 2-7 days before to set up your blood draw date. They will ask you about changes in your medications and medical history. They will also make sure you are eligible to come for a blood draw. On the day of the blood draw you will be asked to complete a short questionnaire about your allergy and/or asthma symptoms. You will perform an exhaled nitric oxide breathing test. Blood will be drawn and an optional nasal brushing procedure may be performed. You will be contacted for additional blood draws, up to a maximum of 6 times per year. You may withdraw consent for these additional blood draws at any time.

During this study the following procedures will be performed:

- **Brief Medical History:** We will ask you general questions about your past and present asthma and allergy history.
- **Detailed Medical history:** We will ask you detailed questions about your past and present medical, surgical and medication history, asthma and allergy history, and smoking history.
- **Vital signs:** We will measure your temperature, blood pressure, how fast your heart is beating, and how fast you are breathing. We will put a clip on your finger that will measure your oxygen level in your blood, called pulse oximetry. We will measure your height and weight.
- **Allergy skin test:** Allergy skin testing is a common test to determine what allergies you may have. You will be tested for common allergens and 2 controls will be put on the underside of your forearm. A plastic applicator with drops of extract will be placed on your skin. Light pressure will be placed on the applicator to scratch the surface of your skin. After 10-15 minutes we will look for redness and/or swelling (like a mosquito bite) where the tests were done. You may have localized itching at the site, and it may last for several hours. Historical skin test data completed within 5 years may be used.*
- **Physical exam:** Based upon your test results a study doctor may listen to your heart and lungs, and look at your eyes, ears, nose and throat, and do a general physical exam to ensure you are healthy.
- **Spirometry and reversibility:** This test measures how well your lungs are working. If you have asthma, you will be asked to hold your albuterol for 6 hours if possible before the spirometry test. You will be asked to take a deep breath in and blow your breath out as hard and fast as you can into a machine for at least 6 seconds. This machine measures the amount of air you have in your lungs and how well you can blow the air out. We have you do this 2 or 3 times so we can get an accurate measure of your lung function. After spirometry you will be given 2 -4 puffs from an albuterol inhaler. We will wait 15 minutes and recheck your breathing. Historical spirometry and reversibility data completed within 6 months may be used.*
- **Exhaled nitric oxide (ENO):** Nitric oxide is a chemical that is released from inflammatory cells in the lung. We will have you gently blow air out into a machine for a 10-second period.

- **Blood draw:** Blood will be drawn by wiping your arm with alcohol and placing a needle in the vein. Approximately 4 Tbsp of blood will be drawn at the screening visit to determine how many eosinophils (type of white blood cell) you have, check your hematocrit (red blood cells) to make sure you are not anemic, and provide blood for genetic and whole blood analysis. Historical blood data within 6 months may be used for eligibility purposes only.* On the Blood Draw visits there will be approximately 2-8 ounces of blood (4 to 16 tablespoons) drawn for the isolation of blood cells. You will be contacted for additional blood draws, up to a maximum of 6 times per year.
- **Blood draw for genetics:** The purpose of the **genetic testing** is to take DNA from your blood cells to look at differences in the genes involved in, or related to, asthma and/or inflammation. DNA is the material in human cells that carries genetic (inherited) information. Genetic information directs growth, development and how the body functions. There are many differences in DNA from one person to another. Participation in the blood draw for genetics testing is required to participate in this study. Upon completion of the study, you may choose to allow your leftover genetic sample to be stored for future asthma and/or inflammation research.
- **Blood Draw and Spirometry results:** During the screening or characterization visit, you will have a blood draw to check your hematocrit (red blood cells) and spirometry. If tests are abnormal the principal investigator, Dr. Mathur, or an allergy physician working with the study, will inform you of the results within a week of your visit. Dr. Mathur or the allergy physician will provide you with a suggested plan, depending on the specific finding, on how to address the abnormal finding.
- **Genetic Results:** Results obtained through genetic testing will not be disclosed to you or your representatives, nor will any results be placed in your medical record.
- **Nasal Brushing:** This is an optional procedure. Your participation in this procedure or not will not affect your participation in the rest of the study. If you agree, you will be asked to blow your nose. Nasal cells will be collected by putting a small lighted scope in one side of the nose. A tiny brush (the size of a Q tip) is put in through the scope and moved in and out for 4 seconds. The scope and brush are then removed at the same time from the nose. This procedure will then be repeated with the other side of the nose.

*If you have participated in some previous studies conducted by the asthma and allergy research group, some of the same procedures may have been performed as part of that study. When possible, we will collect the results of these procedures from those studies so you don't have to repeat them now.

Are There Any Risks?

- **Allergy skin tests:** Your arm may itch and burn where the test is done and there may be mild pain from the needle scratch. In very rare cases, you may have an anaphylactic reaction, which is a whole-body allergic reaction that may cause shortness of breath, hives, swelling of the skin or tongue, itchy skin or a drop in

blood pressure. Death occurs only in extremely rare circumstances. Emergency care is available to treat this rare reaction should it occur. You will need to remain in the office 20 minutes after the skin test has completed to make sure that no severe reaction is taking place.

- **Withholding asthma and allergy medication:** Some procedures in the characterization visit require medication holds. If you have taken asthma or allergy medications prior to your visit, these procedures will be completed on a blood draw day. For people with asthma, you may experience a worsening of your asthma symptoms when you stop your asthma medication to prepare for the spirometry tests. If your asthma symptoms worsen, you should take your asthma medication (albuterol, for example) immediately and call the study coordinator.
- **Spirometry:** During spirometry you may feel short of breath during the 6-second exhalation measurement. If this occurs and does not go away on its own, you may be given 2 puffs of an albuterol inhaler.
- **Blood Samples:** You may experience some pain or bruising where the needle enters the skin. You may also feel faint or sick to your stomach while having your blood drawn. There is a rare risk of infection where the needle enters the skin.
- **Risk of disclosure:** Your research samples and data will not be labeled with your name or other personal identifiers. All data will be stored in a password protected, study specific database and will be labeled with a code number. Samples will be stored in one of Dr. Mathur's research laboratories, labeled with a unique study code. There will be very limited access to the link between your name or other personal information and the study code. Because this link will exist, there is a remote risk that your name may become known in association with this research study. Samples and/or data may be shared with collaborators outside the UW, but no information that would directly identify will be included.
- **Risk of disclosure for the genetic sample:** Procedures have been put into place that are designed to make it very difficult for the results from the genetic research to be linked to you. A unique research study number will identify the DNA sample that you donate. It will not be labeled with your name. The link that identifies you to this study code number will be kept completely separate from the study information and will be seen only by the study coordinator who does the study visit. The researchers doing the genetic testing will not be reporting your results individually but rather as a summary of all subjects tested. There is still a very remote chance that this information could accidentally become known to you, your doctor or others. In some cases, a new federal law called the Genetic Information Nondiscrimination Act (GINA) makes it illegal for health insurers and employers to discriminate against you based on your genetic information. But you should know that there are limitations to this law; for example, it does not apply to businesses that employ fewer than 15 people or life insurance, disability insurance or long term care insurance. An abnormal genetic test could result in denial or much higher rates for life insurance, disability insurance, or long term care insurance if your genetic test results were to become known. The results of the genetic analysis will not be reported to you or your physician.

- **Exhaled Nitric Oxide (ENO):** ENO is a breathing test with no known risks.
- **Nasal Brushing:** The risk associated with the nasal brushing procedure include discomfort or pain, temporary nose bleed, sneezing, tearing of the eyes, runny nose or postnasal drip.

Are There Any Benefits?

You are not expected to benefit from participation in this study. Your participation in this research may benefit other people in the future by helping researchers understand the role of eosinophils in asthma and other allergic diseases.

Will there be Compensation for Injury?

In the event that you are physically injured as a result of participating in this research, emergency care will be available. You will, however, be responsible for the charges for the emergency care. There is no commitment to provide any compensation for research-related injury. You should realize, however, that you have not released this institution from liability for negligence. Please contact Dr. Mathur at (608) 262-2804 if you are injured or for further information.

Will I Be Paid For My Participation In The Study?

You will be reimbursed \$15.00 for completion of the pre-screen visit, \$25.00 for completion of the characterization visit and \$30.00 for the blood draw visit(s). If a combined screening and characterization visit is performed, you will receive \$30.00 for the visit. Subjects who participate in the nasal brushing procedure will be reimbursed \$25 for each visit a nasal brushing sample is collected.

Will My Confidentiality be Protected?

Samples and/or data may be shared with collaborators outside the UW. Additionally, the researchers might use information learned from this study in scientific journal articles or in presentations. None of this data will identify you personally. The data will be coded with a study specific identification number and not your name. Paper copies of study related information will be kept in a locked file cabinet in the research coordinators office. All electronic data is password protected and does not contain information that identifies you. The research coordinators will be the only people to have access to personal information.

Research Samples

Use of Samples by Independent Projects

We will use the samples and the clinical study data associated with the sample collected in this study for the scientific investigations described. Occasionally the planned experiments do not use the entire sample collected. There are independent projects conducted by investigators at the UW that are not associated with this study that may be able to use the leftover samples of your blood for additional research on the function of immune cells. It is your choice to allow these projects to use your sample and clinical data. *Please **initial** below next to your preference:*

_____ We may use your sample and the clinical study data for independent projects conducted by investigators at the UW that are not associated with this study.

_____ We may NOT use your sample and the clinical study data for independent projects conducted by investigators at the UW that are not associated with this study.

If you agree to have your leftover samples used by the independent projects, the sample will be stored until data analysis is complete. This may take several months or several years. Your stored samples and data will be labeled with a code number, not your name. This code number is linked to your name in a protected computer file that is readable by only the study investigator and the direct study staff.

Sample Bank

We will use the genetic sample and the nasal brushing sample collected in this study for the research described above. Occasionally the planned experiments do not use the entire sample collected. Let us know whether the study investigator, Dr. Sameer Mathur, may use the leftover (genetic sample and nasal brushings) for future approved research. *Please **initial** below next to your preference:* :

_____ We may use your sample and the clinical study data associated with this sample for other research in our laboratory or share it with other investigators conducting approved research after removing all information linking the sample to you.

_____ We may NOT use your sample and the clinical study data associated with this sample for any future research in our laboratory or share it with other investigators conducting approved research.

If you agree to have your samples used for future research, your sample will be stored until it is gone. This may take several months or several years. Your stored sample and data will be labeled with a randomly generated number, not your name or original study number so there will be no way for researchers to link your samples and data to you and no way for you to remove your sample if you agree to this future use. If you do not agree to the future use of your leftover samples, they will be destroyed.

Nasal Brushing

We will use the nasal brushing collected in this study for the research described above. This is an optional procedure, and your participation or not will not affect your participation in the remainder of the study.

Do you agree to participate in the optional procedure called nasal brushing? *Please **initial** below next to your preference:*

_____ Yes

_____ No

If I Decide To Start The Study, Can I Change My Mind?

If you do decide to participate, you may change your mind at any time without penalty or loss of benefits that you had prior to the study. You will be told of any new and significant findings, which may affect your willingness to continue. Your decision of whether or not to participate in this study will not affect any relationship you might have with the University of Wisconsin or the quality of your medical care at this institution. As a participant in the study, you will be contacted up to 6 times per year to come in and donate blood. If you no longer wish to be contacted, please notify the staff of the Asthma and Pulmonary Clinical Research Division. This may be done by calling (608) 263-0524 or by notifying the staff when they contact you for a repeat visit.

What if I have questions?

If you have questions about this research, please contact the study investigator, Dr. Mathur at 608-262-2804. If you have any questions about your rights as a research subject, contact UWHC Patient Relations Representative at 608-263-8009.

Use of Information for Participation in Future Studies

Occasionally, we may want to contact subjects who did our studies in the past to see if they are interested in new projects. Your name and contact information will be kept in a database at the University of Wisconsin Asthma, Allergy and Pulmonary Research Unit. If you agree to be in this database, you may be contacted in the future to see if you are interested in participating in more studies. The results obtained from blood taken for this study will be included in this database, and this information may be used to see whether you qualify for future research studies. The database is password protected, and only immediate research staff will have access to the information. There is a very small chance that your name, contact information and your screening information could, in error, be made public. Please indicate whether you are willing to have research staff contact you in the future about these future research studies.

Please initial below next to your preference:

_____ I agree to be contacted for a study in the future.

_____ I **DO NOT** agree to be contacted for a study in the future.

ATHORIZATION:

“I, _____, have read the above information and decided to participate in the research project described above. My signature also indicates that I have received a copy of this consent.”

Signature of Subject

Date

Signature of Person Obtaining Consent

Date

	Screening Phase		Blood Draw Phase	
	Screening Visit ^{1,2}	Characterization Visit ^{1,2}	Phone Call (2-7 days prior to blood draw)	Blood Draw (every \geq 8 weeks)
Consent Discussion	X			
Brief or Detailed medical history	X	X		
Detailed asthma and allergy history		X		
Physical exam		X*		
Allergy skin test		X		
Spirometry with reversibility		X		
Asthma/Allergy Questionnaire				X
Blood draw for baseline EOS count, cell function	X			
Blood draw for hematocrit	X			
Blood draw for Genetics	X			
Exhaled nitric oxide		X		X
History and medication review			X	X
Blood draw for peripheral blood EOS				X
Nasal Brushing		X (Optional)		X (Optional)
Adverse Events review		X	X	X

* Physical Examination may be conducted

1. Screening and Characterization procedures may be combined on the same day. The study staff will discuss this option with you.
2. Historical data previously completed may be used for certain screening or characterization visit procedures. The study staff will review this with you as to avoid you having to repeat procedures recently completed.