RESEARCH SUBJECT INFORMATION AND CONSENT FORM

TITLE:	Study Comparing Prandial Insulin Aspart vs. Technosphere Insulin in Patients with Type 1 Diabetes on Multiple Daily Injections: Investigator-Initiated A Real-life Pilot Study—STAT Study
PROTOCOL NO.:	STAT2017 WIRB® Protocol #20171148 IRB #17-0427
SPONSOR:	Mannkind Corporation
CO-INVESTIGATORS:	Satish K. Garg, MD A-140 1775 Aurora Court Aurora, Colorado 80045 United States Halis Kaan Akturk, MD 1775 Aurora Court A140 Aurora, Colorado 80045 United States
SITE(S):	University of Colorado Denver Barbara Davis Center for Diabetes A-140 1775 Aurora Court Aurora, Colorado 80045 United States
STUDY-RELATED PHONE NUMBER(S):	Satish K. Garg, MD 303-724-6713 303-908-2132 (24 hours) Halis Kaan Akturk, MD 303-724-0467 402-996-0040 (24 hours) Christie Beatson, RD, CDE 303-724-6761
SUB-INVESTIGATOR(S):	Sarit Polsky, MD Hal Joseph, PA-C Micaela Marker, PA-C

Rachel Garcetti, PA-C

STUDY COORDINATOR(S): Christie Beatson, RD, CDE
303-724-6761

This consent form may contain words that you do not understand. Please ask the study doctor or the study staff to explain any words or information that you do not clearly understand. You may take home an unsigned copy of this consent form to think about or discuss with family or friends before making your decision.

Purpose of the Study

The purpose of this study is to find out of there is an improvement in glucose variability measured by continuous glucose monitoring (CGM) and comparing the effects of inhaled technosphere insulin with injectable insulin aspart on A1c and blood sugar in people with type 1 diabetes (T1D). This study will investigate if using inhaled technosphere insulin with meals and after meals for corrections is helpful to achieve your target in diabetes care compared to using injected insulin.

All of the medications and devices that will be used in this study are already approved by the U.S. Food and Drug Administration (FDA) to be used in patients with T1D. There is no investigational device or medication in this study.

Technosphere insulin (Afrezza®) is a rapid acting inhaled insulin indicated to improve glycemic control in adult patients with T1D. It will be mentioned as inhaled insulin in this consent form.

Aspart insulin (Novolog®) is a rapid acting injectable insulin indicated to improve glycemic control in patients with T1D. It will be mentioned as injectable insulin in this consent form.

Afrezza® and Novolog® are both approved medications by the U.S. Food and Drug Administration (FDA) for the treatment of Type 1 diabetes. Using any of these medications previously will not change your eligibility status for the study.

This multi-center study will enroll up to 75 patients with T1D with A1c values between 6.5 to 10%. You will be randomized (similar to flipping a coin) in 1:1 fashion to either inhaled or injectable insulin. If you are randomized into the injectable insulin group, you will continue using your usual insulin dose before meals. If you are randomized into the inhaled insulin group, you will be instructed to dose before meals and take necessary corrections at 1- and 2-hours after meals. There will be a total of 7 study visits (screening visit, randomization visit, 2 clinic, and 3 phone visits). There will be a 4-week treatment comparison between the two groups and a 1-week post-study follow-up phone call. You will have blood drawn for standard lab tests (A1c, complete metabolic panel {CMP}, complete blood count {CBC}) at the screening visit.

You will be asked to use a real-time continuous glucose monitor (CGM) (Dexcom G5®, San Diego, CA), which will be provided at the randomization visit for your day-to-day diabetes care. CGM data will be downloaded at every clinic visit on a secured computer. The data will be

analyzed after the study. You will be allowed to keep the CGM after the study is over for your day-to-day diabetes care.

Medications and device(s) that will be used in this study

Technosphere insulin (Afrezza®)

Technosphere insulin (*TI*), inhaled insulin, (MannKind Corporation, Valencia, CA) is a dry powder formulation of regular human insulin adsorbed onto technosphere micro particles for oral inhalation. Inhaled insulin is currently approved for the treatment of Type 1 and 2 diabetes. Hypoglycemia is a potential risk of taking any insulin including inhaled insulin therapy. Typical symptoms of mild/moderate hypoglycemia include: cold sweats, cool pale skin, nervousness or tremor, anxious feeling, unusual tiredness or weakness, confusion, difficulty concentrating, drowsiness, excessive hunger, and/or transient vision changes.

Using inhaled insulin in patients with chronic lung disease such as asthma or chronic obstructive pulmonary disease (COPD) is not recommended by the FDA. Using inhaled insulin in patients with asthma and COPD may cause worsening of respiratory symptoms. Patients with a chronic lung problem will not be allowed to participate in the study. While using inhaled insulin, it is recommended to check lung function with a small device called a spirometry every 6 months. However, as a precaution for your safety, you will have 3 spirometry tests during the 6-week period study (at screening, at 2-weeks of treatment, and at the end of the study). If there is more than a 20% decrease in your lung function, you will be excluded from the study and advised to stop using inhaled insulin as recommended by FDA and return to your previous insulin regimen. Inhaled insulin causes a small decline (about 40 ml per drug label based on previous studies) in lung function over time during therapy as measured by spirometry tests. For comparison, you will receive spirometry tests regardless of the group that you are assigned. The most common side effect is a temporary cough after inhaling the medication as seen with all inhaler medications.

Insulin aspart (Novolog®)

Insulin aspart is an injectable rapid acting human insulin analog. It is currently approved for the treatment of Type 1 and 2 diabetes. It is injected subcutaneously within 5-10 minutes before a meal into the abdominal area, thigh, buttocks, or upper arm.

Novolog® 100 units per mL (U-100) is available as a clear and colorless solution for injection in: Novolog® FlexPen®. Injection site side effects may occur such as redness, tenderness, and very rarely infection.

Continuous glucose monitor (Dexcom®)

Continuous glucose monitor is a device that monitors your blood sugar 24/7. The CGM includes a receiver, a transmitter, and a sensor. It is a small attachment to your body with a small needle insertion. This device requires calibration with finger stick blood sugar checks at least twice a day. Every 7 days, the sensor of this device will need to be changed. The CGM will be inserted by study staff, and you will be instructed on how to use the CGM and insert these sensors yourself. This educational session may take 3-4 hours. You will also be instructed on completion

of any medications, in an insulin diary which you will need to record with your meals and after-meals. You will need to write down all insulin that you had per day in your diary. Diaries will be provided at the initial visit.

The study protocol is registered with the NCT Government website: ClinicalTrials.Gov. NCT03143816

Research Study Selection

You have been asked to participate in this research study because you are between 18-70 years of age, you have type 1 diabetes that is moderately controlled, and you require both basal and mealtime insulin to control your diabetes. You must meet additional requirements in order to be eligible for this study.

If you are a woman, you must not be pregnant or breast feeding. If you are a woman of childbearing potential, you must also use adequate birth control methods or abstinence (no sexual intercourse) during your participation in this study.

It is important that you answer all of the screening questions completely. You must disclose all past and present diseases, allergies and all medications that you are taking, including prescription and non-prescription drugs.

Study Design

You will be asked to participate in a 1-2 hour screening visit. In the same week, you will be randomized into one of the two treatment groups during the baseline visit 2. The treatment group will only use inhaled insulin for rapid acting insulin for meals and corrections. The control group will only use injectable rapid-acting insulin for meals. If you are assigned to the control group, you will be asked to continue to use your respective treatments for four weeks with no predetermined change in dosage or titration. If you are assigned to the inhaled insulin group, you will be asked to use inhaled insulin for meal coverage and for after-meal corrections at 1- and 2-hours after your main meals. Three main meals should be at least 4 hours apart from each other. Because the duration of action of inhaled insulin is shorter than ultra-rapid insulin in onset compared to injectable insulin, patients in the treatment group can use inhaled insulin for correction dose(s) at 1-hour and 2-hour after the meal dose, if blood glucose (BG) is over 150 mg/dl. All patients in the treatment group will use a dose-conversion chart that will be provided at the randomization for meals according to their baseline insulin calculation. All patients in the treatment group will be given the option of using correction if BG at 1-hour after the meal is between 150-200 mg/dl by 4 units of inhaled insulin, and if BG is over 200 mg/dl by 8 units of inhaled insulin. If BG does not decrease more than 50 mg/dl, and/or still over 200 mg/dl at 2-hour after the meal, they will be given the option of using 4 units of inhaled insulin. All patients in the treatment group will be instructed on proper use of inhaled insulin. Dose conversion from injectable insulin to inhaled insulin and recommended after-meal correction doses will be provided to you as a table.

Other people in this study

Up to 20 people from your area will participate in the study.

Up to 75 people around the United States will be in the study because this study is being conducted at multiple sites.

The Barbara Davis Center for Diabetes (BDC), primarily a leading T1D clinical and research center equipped for large-scale clinical research, will enroll approximately 15-20 patients (Halis Kaan Akturk, MD). The other four sites are: Atlanta Diabetes Associates (Bruce Bode, MD), USC Westside Center for Diabetes (Anne Peters, MD), AMCR Institute (Timothy Bailey, MD), and Rainier Clinical Research Center (Leslie Klaff, MD, and Ronald Brazg, MD).

What happens if I join this study?

If you join the study, you will be asked not to use acetaminophen or any acetaminophen-containing products during the continuous glucose sensor insertion period and for at least 24-hours before sensor insertion. Use of acetaminophen-containing medications like Tylenol® during sensor wear may affect device performance. You will insert a sensor at least four times during this study.

Medications that affect blood sugar, including oral anti-diabetic medications and systemic steroids also may not be used through the duration of the study.

What are the study groups?

There are two treatment groups. Beginning the day after visit 2, week 1, if you are in the inhaled insulin treatment group, you will use only inhaled insulin for meals and after-meal corrections. If you are in the control group, you will be using injectable insulin for meals as you use it in real life. You will be provided with inhaled or injectable insulin and insulin for the duration of the study. All basal insulin (Toujeo®, Lantus®, Basaglar®, Tresiba®) except NPH and detemir (Levemir®) are allowed before and during the study as a part of MDI regimens. Basal insulin will not be provided throughout the study period.

You will be assigned into either the inhaled or injectable insulin group. You will be provided with a CGM (Dexcom G5®, San Diego, CA) and six sensors for the duration of the study. You will be allowed to keep the CGM system for your personal use after the study. The CGM data will be downloaded and analyzed at all clinical visits.

If you are a current smoker or have any other significant pulmonary disease, you will not be allowed to participate in the study. No marijuana consumption will be allowed during the study (since the effects of acute marijuana inhalations on inhaled insulin absorption are unknown).

All oral anti-diabetic medications and other forms of insulin and injectable medications other than mentioned in the protocol should not be taken in the last three months. Medications that affect blood sugar, including oral anti-diabetic medications, are not to be used for the duration of the study. You must not be taking inhaled or oral systemic corticosteroids.

Screening, Visit 1

A screening visit: Visit 1 Informed consent will be obtained before starting any study-related activities,

During this visit, you will undergo a physical exam, EKG (heart rhythm test), vital signs, and medical history, demographics, and any concomitant medications you take will be recorded. A blood draw will be performed to assess for A1c (point of care preferred), CMP, and CBC. A urine pregnancy test will be administered for females of childbearing potential. If you had a qualified A1c done in the last two weeks, it will not be repeated at the screening visit unless the study doctor deems it necessary. You will also receive a spirometry test for screening.

This visit is expected to take 1-2 hours.

You will be trained on study paperwork (food, glucose, and insulin diaries) during this visit. You will be asked to continue checking blood glucose in the way you did before the study.

Baseline/Randomization, Visit 2 (Week 0) ± 3 days:

You will be randomized into one of two study groups and necessary study medication will be dispensed. Instructions will be given on how to use the study medication, inhaled insulin, starting the day following this visit with meals and corrections with doses recommended, and to basal insulin regimen throughout the study without any dose change. However, the study doctor may make necessary changes in your insulin dosages for your safety. Any changes that are done by the study doctor out of the protocol for your safety will be recorded and considered in statistical analysis.

You will have your vital signs, weight, any adverse events, and current medications recorded. You will start real-time CGM (Dexcom G5®, San Diego, CA) at that visit. You will be asked to wear the CGM throughout the study. You will be allowed to keep the CGM after the study. You will be trained to use the CGM, if you do not know how or if it is not part of your current treatment plan. You will be trained on study paperwork (food, glucose and insulin diaries). You will continue to check your blood glucose levels via finger stick as necessary. However, as approved by the FDA, Dexcom G5® data may be used to take necessary action, but you must calibrate the sensor two times a day per the label.

If you are in the treatment group, you will be given the option of using correction if BG at 1-hour after the meal is between 150-200 mg/dl by 4 units of inhaled insulin and if BG is over 200 mg/dl by 8 units of inhaled insulin. If BG does not decrease more than 50 mg/dl and/or still over 200 mg/dl at 2-hours after the meal, you will be given the option of using 4 units of inhaled insulin. You will be asked to use the recommended conversion when you calculate your meal-time insulin based on your own insulin use. Since this is a real-life study, you will be instructed to use inhaled insulin for after-meal correction for hyperglycemia; however, it will not be mandated. If you are in the control group, you will be asked to continue your current injectable insulin meal dose 15 minutes before meals according to your insulin dose. If you use the correction, you will correct; however, you will not change your routine meal and after-meal management.

Telephone Visits (Visits 3, 5, and 7) ± 3 days

The study site staff will make a phone call to you at visits 3, 5, and 7. Although the window is ± 3 days, call time will be arranged in advance during your clinic visits. At these visits, study staff will review any adverse events and changes in medications. Compliance to study protocol rules and CGM use will be reviewed.

Visit 4 (Week 2) ± 3 days:

This visit will occur at Week 2. At Visit 4, study site staff will record your vitals, weight, review of CGM data, and any adverse events and concomitant medications. Glucose download, insulin use/dose, and sensor glucose data will be discussed with the study doctor or the study staff.

You will remain in the same treatment or control group. Basal, bolus, and total daily dose of insulin will be recorded. You will receive necessary refills for CGM supplies and study medications. You will be reminded about the study protocol and insulin conversion and correction doses. You will get a spirometry test. If your lung function declined more than 20% after 2-weeks of treatment, you will be excluded and stop using inhaled insulin if you are in inhaled insulin group.

End of study, Visit 6 (Week 4) or Early Termination Visit ± 3 days:

If you withdraw at any point during the study period, this visit will also be offered as an early termination visit (ETV).

If you have completed treatment, you will schedule an end of study visit. This will be Visit 6 at Week 4. During this visit, a physical exam will be conducted. Vitals, weight, review of CGM data, adverse events, and concomitant medications will be recorded. Additional blood will be drawn for A1c or point of care A1c will be done. Unused medication will be returned. Active treatment with inhaled insulin will end at this visit.

Basal, bolus, and total daily dose of insulin will be recorded. After the study, you will be expected to continue your previous therapy. You will receive a spirometry test.

What are the possible discomforts or risks?

Lung Function Test (Spirometry): The Lung Function test requires you to blow hard into a device. Some individuals may feel light-headed, dizzy, or short of breath after blowing hard. These symptoms usually disappear without any treatment within a few minutes and can be minimized or avoided if testing is done while subjects are in a sitting position.

This test is a mechanical test and does not require any chemicals, radiation, or any other possible hazardous material.

All insulins lower blood sugar. Like all insulins, inhaled insulin may lower your blood sugar too much. This is known as **hypoglycemia.** Hypoglycemia may happen if too much insulin is taken or you eat too little food and exercise too much compared to the amount of food you have eaten. Low blood sugar may also happen when you drink alcohol, vomit and/or have diarrhea, or change the type of your insulin. If you have low blood sugar during the study, you may need to

take oral glucose (such as orange juice) or receive an intravenous (IV–through a vein) glucose injection, which will cause your blood sugar to return to a safe level.

Early warning signs of low blood sugar may be different from person to person or may be less pronounced under certain conditions, such as a long history of diabetes; presence of diabetic nerve disease; use of certain medicines such as beta-blockers; a change in insulin preparations; or in some cases of improved control of diabetes.

Signs of mild to moderate low blood sugar levels may happen suddenly and can include:

- Sweating; dizziness; fast heart rate; shakiness; hunger; restlessness; tingling in the hands, feet, lips or tongue; lightheadedness; feeling confused or unable to think; headache; sleepiness or sleep problems; nervousness; unclear vision; unclear speech; sadness; bad temper; unusual manners; shaky movement; and mood changes.

Low blood sugar can make it hard to think or react. You should not drive or use mechanical equipment if you have a low blood sugar level. If you do, you may harm yourself or others.

Low blood sugar can affect your heart and brain. Severe low blood sugar can be dangerous and may cause temporary or permanent harm to your heart or brain. It may even cause unconsciousness, seizures, or death.

You may want to tell your family and friends that you are taking insulin and that there is a risk of severe low blood sugar. You may also want to tell them what the symptoms of severe low blood sugar are, to help them recognize the symptoms if you develop them. You may want to tell your family and friends that they may need to give you oral (by mouth) glucose (such as orange juice) or a glucagon injection. In some cases, they may need to call for medical help to give you a glucose injection to increase your blood sugar to a safe level.

There is also the risk of high blood sugar called **hyperglycemia**. High blood sugar may occur when you have diabetes, even while you are on insulin. It may happen when you have too much sugar in your blood because you don't have enough insulin. High blood sugar can happen with:

- Taking too little insulin or missing one or more doses.
- Too much carbohydrate intake (includes starchy foods, fruits and sweet foods and drinks). This can happen if you 1) eat larger meals 2) eat more often or 3) increase the amount of carbohydrates in your meals.
- Some medicines may also change the effects of insulin. Do not start any new medicines until you speak with your own doctor to find out if they may affect your insulin dose.
- Certain medical conditions can affect insulin effects. These medical conditions include fever, infections, heart attacks, and stress. These conditions usually require a temporary increase in your insulin dose but you must discuss any changes in insulin dose with your study doctor before increasing or decreasing the dose.

High blood sugar can be mild to severe. When your blood sugar is extremely high it can cause very serious problems that need treatment right away. Very high blood sugar can result in unconsciousness and death.

Often, high blood sugar does not show symptoms at all. When high blood sugar does show symptoms, they may include:

- Confusion or sleepiness
- Increased thirst
- Decreased appetite, nausea, or vomiting
- Rapid heart rate
- Frequent urination and dryness in the mouth (too little fluid in your body)
- Fruity smelling breath
- Fast, deep breathing
- Pain in the stomach area.

You may use inhaled insulin even when you are sick, including upper respiratory infections, such as a common cold. You should check your blood sugar more often when you are sick. You may need to change your insulin dose or you may be told to use injected insulin for a short time during sickness.

Risks of Having Blood Taken By Finger stick

In this study you will need to get a few drops of blood from your finger. To do this, you will make a small prick on your finger and draw the blood onto a blood glucose meter test strip. You will feel a slight pain when the lancet pricks your finger. Your fingertip may be sore for a day or two.

Risks of Having Blood Taken

Over 6 weeks of this study (4-weeks of treatment, up to a week of screening, and a week later follow up for possible side effects), we will need to get about 4 tablespoons of blood from you. We will get blood by putting a needle into one of your veins and letting the blood flow into a glass or plastic tube. You may feel some pain when the needle goes into your vein. A day or two later, you may have a small bruise where the needle went under the skin.

Risks of Wearing a Dexcom G5 CGM Sensor

When the needle and G5 sensor are inserted, you might experience a sensation similar to an insulin injection or the insertion of a pump infusion set. After insertion, you may feel some tenderness, but you should not feel any large amount of pain.

Inflammation or redness, swelling, minor infection, and minor bleeding at the G5 sensor insertion site are possible risks with use of the device. In extremely rare cases, an infection might spread to other parts of the body.

Redness may occur where the adhesive pads are placed. This will occur in most subjects and will clear up on its own in about one to two days. You may develop an allergic reaction to one or more parts of the study device. This is similar to allergies that occur due to medical tape or jewelry. Severe allergic reactions might involve swelling of the throat or tongue. Severe allergic

reactions can be life threatening. If you have an allergic reaction, seek emergency medical care and call the study doctor as soon as possible.

There is a chance that the G5 sensor or needle may break if not inserted right. This would require a minor procedure similar to removing a splinter. If this happens, you should notify your study coordinator as soon as possible.

The radio waves that the study device puts out will not hurt you and you will not be aware of them.

The study may include risks that are unknown at this time.

Only you can take the study drug. It must be kept out of the reach of children and persons who may not be able to read or understand the label.

Your condition may not get better or may become worse during this study.

Women who are pregnant or nursing a child may not participate in this study. You must confirm that, to the best of your knowledge, you are not now pregnant, and that you do not intend to become pregnant during the study. Before entering the study, you and the study doctor must agree on the method of birth control you will use during the entire study. If you suspect that you have become pregnant during the study, you must notify the study doctor immediately. Pregnant women will be withdrawn from the study because the risks to the unborn fetus from the study drug are not known.

What are the possible benefits of the study?

You may or may not benefit from being in this study. This study is designed for the researcher to learn more about the effects of the study insulins on your Type 1 diabetes and blood sugar control.

Will I have to pay for anything?

You will not be charged for the study drug/device or any of the study procedures or office visits.

Ask your study doctor to discuss the costs that will or will not be covered by the sponsor. This discussion should include the costs of treating possible side effects. Otherwise, you might have unexpected expenses from being in this study.

Will I be paid for being in this study?

You will be paid $50.00 each for visits 1, 2, 4 and 6. If you leave the study early, or if we have to remove you from the study, you will be paid only for the visits you have completed. You will be paid $15.00 each for the telephone visits (Visits 3, 5, 7) for a total of up to $245.00.

You will also be able to keep the Dexcom® G5® CGM receiver and transmitter units if you complete the study. Study medications Afrezza® and Novolog ® will be provided free of charge to you during the study. All CGM supplies with the device will be provided free of charge.

Payment for participation in a study is taxable income.

Are there alternative treatments?

There may be other ways of treating your Type 1 diabetes. These other ways include your standard care regimen, such as different insulin products including the two study agents.

You should talk to your doctor about your choices. Make sure you understand all of your choices before you decide to take part in this study. You may leave this study and still have these other choices available to you.

Who is paying for this study?

This research is being paid for by Mannkind Corporation., the manufacturer of the Technosphere inhaled insulin.

Is my participation voluntary?

Taking part in this study is voluntary. You have the right to choose not to take part in this study. If you choose to take part, you have the right to stop at any time. If you refuse or decide to withdraw later, you will not lose any benefits or rights to which you are entitled.

If you leave this study, you will still receive your normal medical care. The only medical care that you will lose is the medical care you are getting as part of this study. You might be able to get that same kind of medical care outside of the study. Ask your study doctor if you would like more information.

What if there are new findings?

You will be told if there are any new findings during the study that may affect whether you want to continue to take part in the study. You may be asked to sign a new consent form if this occurs.

Can I be removed from this study?

The study doctor may decide to stop your participation without your permission if the study doctor thinks that being in the study may cause you harm, or for any other reason. Also, the sponsor may stop the study at any time. As a subject, you are free at any time to stop participating in the study.

What happens if I am injured or hurt during the study?

If you have an injury while you are in this study, you should call Satish K. Garg, MD or Halis Akturk, MD, immediately. Their phone numbers are: (Garg) 303-724-6713 or 303-908-2132 (24 hours) and (Akturk) 303-724-0467.

We will arrange to get you medical care if you have an injury that is caused by this research. However, you or your insurance company will be billed for that care.

If you are injured as a result of this study, you do not give up your right to pursue a claim through the legal system.

Who do I call if I have questions?

Contact Satish K. Garg, MD at 303-724-6713 or 303-908-2132 (24 hours); Halis Akturk, MD at 303-724-0467 or 402-996-0040 (24 hours); for any of the following reasons:

- If you have any questions about your participation in this study
- If at any time you feel you have had a research-related injury or a reaction to the study drug

Contact Christie Beatson, RD, CDE, study coordinator, at 303-724-6761 if you have questions, concerns, or complaints about the research.

If you have questions about your rights as a research subject or if you have questions, concerns, or complaints about the research, you may contact:

Western Institutional Review Board® (WIRB®)
1019 39th Avenue, SE
Puyallup, Washington 98374-2115
Telephone: 1 -800-562-4789 or 360-252-2500
E-mail: Help@wirb.com

OR

Colorado Multiple Institutional Review Board (COMIRB) office at 303-724-1055.

WIRB is a group of people who perform independent review of research under contract with the University of Colorado Health Sciences Center.

WIRB will not be able to answer some study-specific questions, such as questions about appointment times. However, you may contact WIRB if the research staff cannot be reached or if you wish to talk to someone other than the research staff.

Do not sign this consent form unless you have had a chance to ask questions and have received satisfactory answers to all of your questions.

If you agree to be in this study, you will receive a signed and dated copy of this consent form for your records.

Who will see my research information?

The University of Colorado Denver and the hospital(s) it works with have rules to protect information about you. Federal and state laws including the Health Insurance Portability and

Accountability Act (HIPAA) also protect your privacy. This part of the consent form tells you what information about you may be collected in this study and who might see or use it. The institutions involved in this study include:

Barbara Davis Center for Childhood Diabetes.

Both the records that identify you and the consent form signed by you may be looked at by others who have a legal right to see that information.

- Federal offices such as the Office of Human Research Protection and the Food and Drug Administration (FDA) that protect research subjects like you.
- People at the Colorado Multiple Institutional Review Board (COMIRB).
- People at the Western Institutional Review Board (WIRB).
- The study doctor and his/her team of researchers.
- Mannkind Corporation, who is the company paying for this research study.
- Officials at University of Colorado Denver, and officials at other institutions involved in this study who are in charge of making sure that we follow all of the rules for research.
- An external trial observer center (CRO)

Your information may be used and disclosed, to do the research, to study the results, and to make sure that the research was done right.

We might talk about this research study at meetings. We might also print the results of this research study in relevant journals. But we will always keep the names of the research subjects, like you, private.

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.

You have the right to request access to your personal health information from the investigator. To ensure proper evaluation of test results, your access to these study results may not be allowed until after the study has been completed.

We cannot do this study without your permission to see, use, and give out your information. You do not have to give us this permission. If you do not, then you may not join this study.

We will see, use and disclose your information only as described in this form and in our Notice of Privacy Practices; however, people outside the University of Colorado Denver and its affiliate hospitals may not be covered by this promise and your information may be disclosed without your permission.

We will do everything we can to keep your records confidential. It cannot be guaranteed.

The use and disclosure of your information has no time limit. You can cancel your permission to use and disclose your information at any time by writing to the study's Principal Investigator, at the name and address listed below. If you do cancel your permission to use and disclose your

information, your part in this study will end and no further information about you will be collected. Your cancellation would not affect information already collected in this study.

Satish Garg, MD
University of Colorado Denver
Barbara Davis Center for Diabetes
1775 Aurora Court, MS A140
Aurora, CO 80045

If you agree to be in this study, you will receive a signed and dated copy of this consent form for your records.

The investigator (or staff acting on behalf of the investigator) will also make all or some of the following health information about you available to: Mannkind Corporation and the CRO.

Information about you that will be seen, collected, used and disclosed in this study:

- Name and Demographic Information (age, sex, ethnicity, address, phone number, etc.
- Portions of your previous and current Medical Records that are relevant to this study, including but not limited to Diagnosis(es), History and Physical, laboratory or tissue studies, radiology studies, procedure results
- Research Visit and Research Test records

What happens to Data, Tissue, Blood and Specimens that are collected in this study?

Scientists at the University of Colorado Denver and the hospitals involved in this study work to find the causes and cures of disease. The data, tissue, blood and specimens collected from you during this study are important to this study and to future research. If you join this study:

The data, or the tissue, blood, or other specimens are given by you to the investigators for this research and so no longer belong to you.

Both the investigators and any sponsor of this research may study your data, tissue, blood, or other specimens collected from you.

If data, tissue, blood, or other specimens are in a form that identifies you, UCD or the hospitals involved in this study may use them for future research only with your consent or IRB approval.

Any product or idea created by the researchers working on this study will not belong to you.

There is no plan for you to receive any financial benefit from the creation, use or sale of such a product or idea.

You have the right to request access to your personal health information from the investigator. To ensure proper evaluation of test results, your access to these study results may not be allowed until after the study has been completed.

If you agree to be in this study, you will receive a signed and dated copy of this consent form for your records.

Agreement to be in this study:

I have read this consent form. All of my questions have been answered. I choose to be in this study.

By signing this consent form, I have not given up any of my legal rights.

_____

Subject Name (printed)

CONSENT SIGNATURE:

_____ _____

Signature of Subject Date

_____ _____

Signature of Person Conducting Informed Consent Discussion Date