Clinical Study Results

MedImmune
A member of the AstraZeneca Group

Research Sponsor: MedImmune, LLC
Drugs Studied: MEDI4166
National Clinical Trial #: NCT02524782
Protocol #: D6240C00001
Study Date: October 2015 to April 2017
Short Study Title: A study in participants with type 2 diabetes to see how MEDI4166 affects the blood sugar (glucose) levels and the amount of bad cholesterol (LDLc) in the body and if MEDI4166 is safe to take

Thank you!

Thank you for taking part in the clinical study for the drug MEDI4166. This drug is being developed to lower blood sugar and bad cholesterol in patients with type 2 diabetes. You and all of the participants helped researchers learn how MEDI4166 affects the blood sugar levels and the amount of bad cholesterol in participants and if MEDI4166 causes medical problems.

MedImmune, LLC sponsored this study and thinks it is important to share the results of the study with you and the public. An independent, non-profit organization called CISCRP and a medical writing organization called Synchrogenix helped prepare this summary of the study results. We hope it helps you understand and feel proud of your important role in medical research.

If you participated in the study and have questions about the results, please speak with the doctor or staff at your study site.

What is happening with the study now?

The study had 2 parts: Part A and Part B.

In Part A, participants were in the study for up to 12 weeks and got 1 total dose.

In Part B, participants were in the study for up to 17 weeks and got multiple doses.

The study started in October 2015 and ended in April 2017. The study included 103 participants at 11 study sites in the United States.

Part A included 40 participants. Part B included 63 participants.

When the study ended, the sponsor reviewed the data and created a report of the results. This is a summary of that report.

Why was the research needed?

Researchers are looking for a better way to treat patients with type 2 diabetes and high amounts of bad cholesterol. Before a drug can be approved for patients to take, researchers do clinical studies to find out how it works and how safe it is.

In this study, the researchers wanted to find out if the participants had any medical problems during the study that might be related to MEDI4166. They also wanted to find out how MEDI4166 affected the blood sugar levels and the amount of bad cholesterol in participants.

The study drug, MEDI4166, is being developed to treat type 2 diabetes and high amounts of bad cholesterol. Type 2 diabetes is a disease in which the body does not make enough insulin or can't use insulin normally. Insulin is produced by the body and normally keeps the amount of sugar, or glucose, in the blood at healthy levels. When insulin doesn't work correctly or if there isn't enough, blood sugar in the body becomes too high. People with type 2 diabetes also often have a high amount of bad cholesterol. MEDI4166 is a new drug that helps the body to reduce the blood sugar levels and the amount of bad cholesterol. The main questions researchers wanted to answer in this study were:

- How did MEDI4166 affect the amount of bad cholesterol in participants?
- How did MEDI4166 affect the blood sugar levels in participants?
- What medical problems did participants have after getting MEDI4166?

What kind of study was this?

Your study was a "double-blind" study. This means that none of the participants, researchers, or staff knew what treatment each participant got. Some studies are done this way because knowing what treatment each participant is getting can affect the results of the study. This way, the results are looked at fairly.

In both Part A and Part B of the study, you and the other participants got MEDI4166 or a placebo. A placebo looks like the study drug but contains no real medicine. Researchers use a placebo so that they can compare the results of participants who get study drugs with the results of participants who get no medicine at all. MEDI4166 and the placebo in this study were given in the form of an injection. Which treatment participants got was decided by chance, like rolling dice.

For every 1 participant who got the placebo in Part A, 3 participants got MEDI4166.

For every 1 participant who got the placebo in Part B, about 4 participants got MEDI4166.

Your study included 103 men and women with type 2 diabetes who were 42 to 65 years old.

What happened during the study?

This study had 2 parts: Part A and Part B. If you were in 1 part of the study, you could not be in the other part of the study.

To see if you could join the study, study doctors did a physical examination by checking your height, weight, blood pressure, pulse, and temperature. Study doctors took blood and urine samples and checked your heart health using an electrocardiogram, or ECG. Study doctors also asked about your medical history, how you were feeling, and what medicines you were taking.

Part A

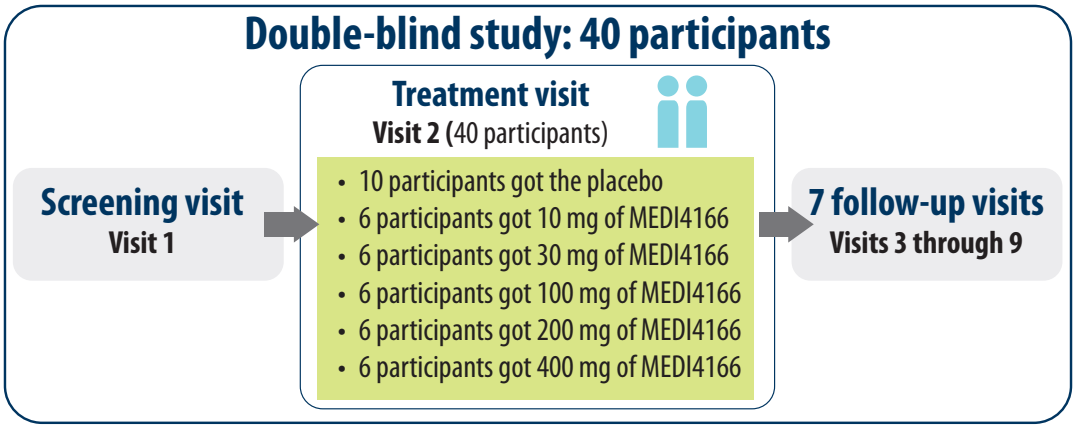
During Part A, all 40 participants visited the study site up to 9 times.

At Visit 1, study doctors did a physical examination by checking your height, weight, and temperature. Study doctors took blood and urine samples and checked your heart health using an ECG. They also asked about your medical history, how you felt, and what medicines you were taking.

At Visit 2, participants got 1 of the 6 treatments shown below. This visit lasted 8 days, and all participants got their treatment on the first day of this visit. Study doctors checked participants' health before they increased MEDI4166 doses during the study.

- 10 participants got the placebo
- 6 participants got 10 milligrams, or mg, of MEDI4166
- 6 participants got 30 mg of MEDI4166
- 6 participants got 100 mg of MEDI4166
- 6 participants got 200 mg of MEDI4166
- 6 participants got 400 mg of MEDI4166

The figure below shows how Part A of the study was done.



Part B

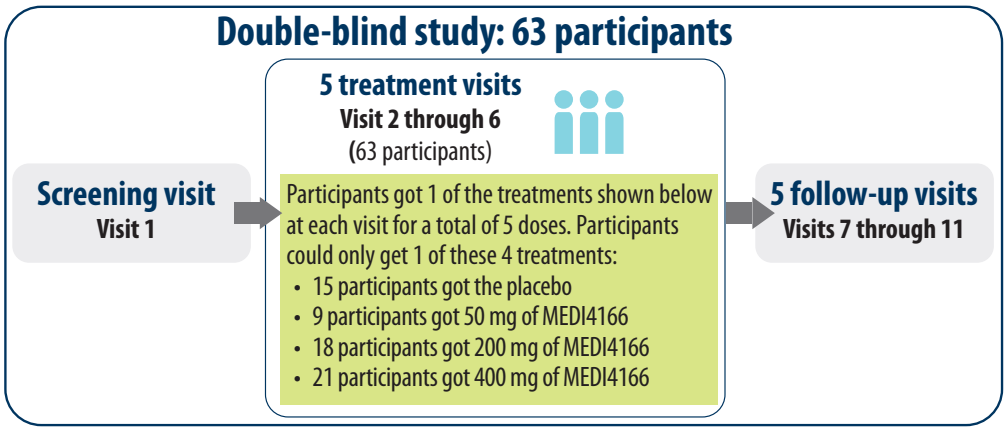
During Part B, all 63 participants visited the study site up to 11 times.

At Visit 1, study doctors did a physical examination by checking your height, weight, and temperature. Study doctors took blood and urine samples and checked your heart health using an ECG. They also asked about your medical history, how you felt, and what medicines you were taking.

At Visits 2 through 6, participants got 1 of the treatments shown below at each visit for a total of 5 doses. Participants could only get 1 of these 4 treatments. Study doctors checked participants' health before they increased MEDI4166 doses during the study.

- 15 participants got the placebo
- 9 participants got 50 mg of MEDI4166
- 18 participants got 200 mg of MEDI4166
- 21 participants got 400 mg of MEDI4166

The figure below shows how Part B of the study was done.



After the last Part A treatment visit, you and the other participants visited your study site up to 7 times so that the study doctors could check your health again.

After the last Part B treatment visit, you and the other participants visited your study site up to 5 times so that the study doctors could check your health again.

What were the study results?

This section is a summary of the main results of the study up to April 2017. The results each participant had might be different and might not be included in this summary. It is important to know that researchers look at the results of many studies to decide which medicines work best and are safest for patients.

A full list of the questions researchers wanted to answer can be found on the website listed at the end of this summary. If a full report of the study results is available, it can also be found on this website.

How did MEDI4166 affect the amount of bad cholesterol in participants?

In Part A and Part B, researchers compared the change in the amount of bad cholesterol in participants from the beginning of the study to Day 36 of the study. When the data were analyzed, researchers found that:

Part A

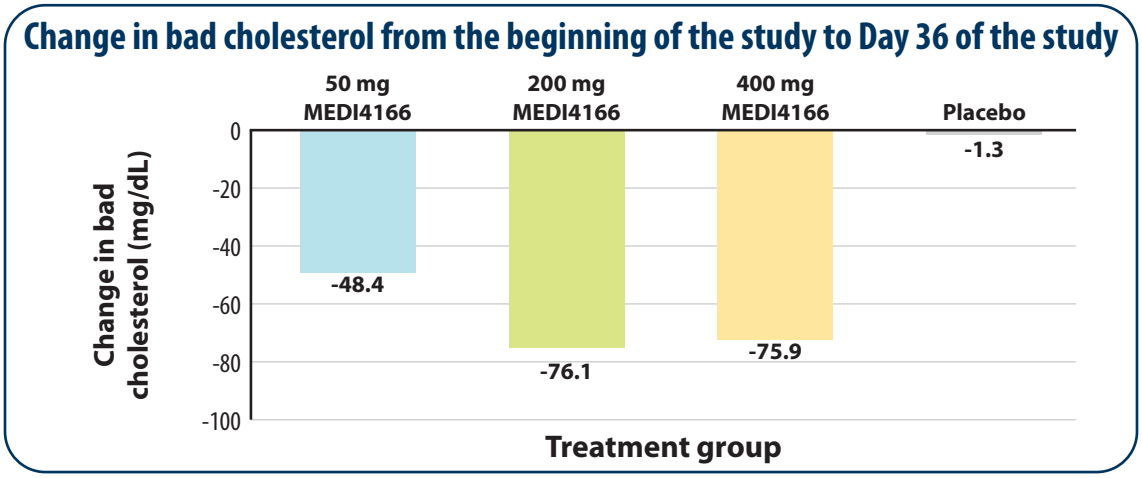
In Part A, participants who got the different MEDI4166 doses had a decrease in their bad cholesterol levels. This decrease got bigger with higher doses of the drug.

Part B

In Part B:

- Participants who got 50 mg of MEDI4166 had an average decrease in bad cholesterol of 48.4 milligrams per deciliter, or mg/dL
- Participants who got 200 mg of MEDI4166 had an average decrease in bad cholesterol of 76.1 mg/dL
- Participants who got 400 mg of MEDI4166 had an average decrease in bad cholesterol of 75.9 mg/dL
- Participants who got the placebo had an average decrease in bad cholesterol of 1.3 mg/dL

The graph below shows the change in bad cholesterol for participants in Part B from the beginning of the study to Day 36 of the study.



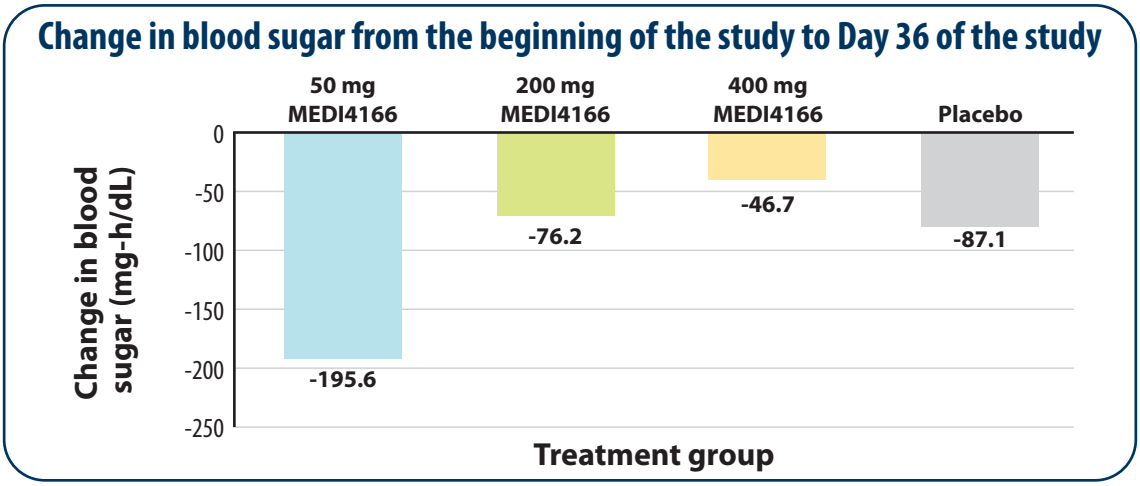
How did MEDI4166 affect the blood sugar levels in participants?
Researchers compared the change in the blood sugar levels of participants from the beginning of the study to Day 36 of the study for both Part A and Part B. When the data were analyzed, researchers found that:

Part A
In Part A, participants who got the different MEDI4166 doses had a decrease in their blood sugar levels, but researchers did not think these results were significant.

Part B
In Part B, participants who got the different MEDI4166 doses had a decrease in their blood sugar levels, but researchers did not think these results were significant.

- Participants who got 50 mg of MEDI4166 had an average decrease in blood sugar of 195.6 milligram hours per deciliter of blood, or mg-h/dL
- Participants who got 200 mg of MEDI4166 had an average decrease in blood sugar of 76.2 mg-h/dL
- Participants who got 400 mg of MEDI4166 had an average decrease in blood sugar of 46.7 mg-h/dL
- Participants who got the placebo had an average decrease in blood sugar of 87.1 mg-h/dL

The graph below shows the change in blood sugar for participants in Part B from the beginning of the study to Day 36 of the study.



What medical problems did participants have during the study?

This section is a summary of the medical problems participants had during the study that the study doctors thought might be related to the study drug. These medical problems are called "adverse reactions". An adverse reaction is considered "serious" when it is life threatening, causes lasting problems, or requires hospital care.

These adverse reactions may or may not be caused by the study drugs. The website listed at the end of this summary may have more information about the adverse reactions that happened in this study. A lot of research is needed to know whether a drug causes an adverse reaction.

How many participants had serious adverse reactions?

No participants had serious adverse reactions in Part A or Part B during the study.

How many participants had adverse reactions?

Part A

In Part A, 60.0% of participants who got MEDI4166 had adverse reactions during the study. This was 18 out of 30 participants. 50.0% of participants who got the placebo had adverse reactions during the study. This was 5 out of 10 participants.

No participants in Part A stopped taking MEDI4166 because of adverse reactions they had during the study.

Part B

In Part B, 79.2% of participants who got MEDI4166 had adverse reactions during the study. This was 38 out of 48 participants. 86.7% of participants who got the placebo had adverse reactions during the study. This was 13 out of 15 participants.

In Part B, 2.1% of participants who got MEDI4166 stopped taking the study drug because of adverse reactions. This was 1 out of 48 participants.

What adverse reactions did the participants have?

Part A

In Part A, researchers thought 26.7% of the adverse reactions were related to the study drug. The most common adverse reactions were nausea and headache.

The adverse reactions in the table below happened in at least 2 participants in any treatment group. There were other adverse reactions, but these happened in fewer participants.

Most common adverse reactions in Part A of this study

	10 mg MEDI4166 (Out of 6 participants)	30 mg MEDI4166 (Out of 6 participants)	100 mg MEDI4166 (Out of 6 participants)	200 mg MEDI4166 (Out of 6 participants)	400 mg MEDI4166 (Out of 6 participants)	Placebo (Out of 10 participants)
Nausea	33.3% (2)	0	16.7% (1)	16.7% (1)	16.7% (1)	50.0% (5)
Vomiting	33.3% (2)	0	0	0	0	10.0% (1)
Hot flush	33.3% (2)	0	0	0	0	0
Headache	0	50.0% (3)	16.7% (1)	0	0	20.0% (2)

Part B

In Part B, researchers thought 54.2% of the adverse reactions were related to the study drug. The most common adverse reactions were reaction at injection site, headache, and diarrhea.

The adverse reactions in the table below happened in at least 3 participants in any treatment group. There were other adverse reactions, but these happened in fewer participants.

Most common adverse reactions in Part B of this study

	50 mg MEDI4166 (Out of 9 participants)	200 mg MEDI4166 (Out of 18 participants)	400 mg MEDI4166 (Out of 6 participants)	Placebo (Out of 10 participants)
Diarrhea	44.4% (4)	11.1% (2)	19.0% (4)	20.0% (3)
Headache	33.3% (3)	5.6% (1)	14.3% (3)	26.7% (4)
Allergic reaction at injection site	11.1% (1)	27.8% (5)	33.3% (7)	26.7% (4)
Nausea	11.1% (1)	0	9.5% (2)	6.7% (1)
Constipation	11.1% (1)	0	0	20.0% (3)
Swelling at injection site	0	22.2% (4)	14.3% (3)	0
Indigestion	0	16.7% (3)	4.8% (1)	6.7% (1)

What is important to know about these results?

In this study, researchers learned how MEDI4166 affected the blood sugar and bad cholesterol levels in participants. Further clinical studies with MEDI4166 are not planned.

Where can I learn more about the study?

You can find more information about this study on the website listed below.

- www.clinicaltrials.gov. Once you are on the website, type **NCT02524782** into the search box called **"Other Terms"**. Then, click **"Search all studies"**.

If you have questions about the results, please speak with the doctor, research nurse, or other team member at your clinic or hospital. Please also refer to the informed consent form you signed before joining this study for more details about your study.

The full title of your study is: A Phase 1, Combined Single- and Multiple-ascending Dose Study to Evaluate the Safety, Tolerability, Pharmacokinetics, and Pharmacodynamics of MEDI4166 in Subjects with Type 2 Diabetes Mellitus

The protocol number of your study is: D6240C00001

MedImmune, LLC is a member of the AstraZeneca Group of companies. MedImmune, LLC sponsored this study and has its headquarters at 1800 Concord Pike, Wilmington, DE 19850.

The phone number for the AstraZeneca Information Center is 1-877-240-9479.

Thank you

Clinical trial participants belong to a large community of people who take part in clinical research around the world. They help researchers answer important health questions and find medical treatments for patients. It takes participants in many studies all around the world to advance medical science.

CISCRP
THE CENTER FOR INFORMATION & STUDY ON CLINICAL RESEARCH PARTICIPATION

The Center for Information & Study on Clinical Research Participation (CISCRP) is a non-profit organization focused on educating and informing the public about clinical research participation. CISCRP is not involved in recruiting participants for clinical trials, nor is it involved in conducting clinical trials.

CISCRP
One Liberty Square, Suite 510 • Boston, MA 02109
1-877-MED-HERO • www.ciscrp.org