Clinical Trial Results – Layperson Summary

A study to look at how safe different doses of a new medicine called MTPS9579A were for healthy people to take, and how this medicine was processed through the body

See the end of the summary for the full title of the study.

About this summary

This is a summary of the results of a clinical trial called a "study" in this document. This summary is written for:

- members of the public
- **participants** – these are the healthy people who took part in the study

This summary is based on information known at the time of writing.

The study started in February 2018 and finished in April 2019. This summary was written after the study had ended.

No single study can tell us everything about the risks and benefits of a medicine. Many people volunteer in several studies to help us find out everything we need to know. The results from this study may be different from other studies with the same medicine.

- This means that you should not make decisions based on this one summary.
- Always speak to your doctor before making any decisions about your treatment.

Contents of the summary

Thank you to the people who took part in this study

The people who took part have helped researchers to answer important questions about different doses of the study medicine.

Key information about this study

- This study was done to find out which dose of the study medicine was safe for people.
- In this study, participants were given a new medicine (MTPS9579A) or no medicine (placebo).
- This study included 106 people in Canada.
- Some people got one dose of the medicine and others got several doses.
- This study found that MTPS9579A was safe at the doses tested in this study.
- The number of side effects were similar in groups that got the study medicine or the placebo.
- No one in this study had serious side effects and there were no deaths.
- This report was written after the study was completed.

1. General information about this study

Why was this study done?

Asthma is a disease of the airways leading to the lungs. Patients with asthma may have coughing, wheezing, and difficulty breathing.

Approximately 300 million people in the world have asthma. Many people (about 250,000) die each year because of asthma.

Several different types of medicine are used to control asthma. However, many patients continue to have asthma that cannot be controlled by any available medicine.

MTPS9579A is a new medicine being studied for the treatment of patients with severe asthma. Researchers think that MTPS9579A could reduce symptoms that happens in asthma patients.

MTPS9579A has not been given to humans before this study.

This study investigated the effects of MTPS9579A when taken by healthy people. Some people got the study medicine while others got a placebo. This was done to compare side effects of the treatment with and without the medicine.

Patients with severe asthma are very sick. It is therefore safer to first test MTPS9579A in healthy people starting at a low dose. The results from this study could be used to decide whether the medicine is safe to give to asthma patients.

What was the study medicine?

MTPS9579A is a new medicine.

- MTPS9579A is a medicine given through the skin (injection) or the veins (IV) that may reverse the symptoms of asthma in patients.

MTPS9579A was compared to a "**placebo**".

- Some participants got MTPS9579A while others got a placebo.
- The placebo looked the same as MTPS9579A but did not contain any real medicine.

What did researchers want to find out?

Researchers did this study to compare the study medicine against the placebo.

The main questions that researchers wanted to answer were:

1. What dose of MTPS9579A was safe?
2. What happened to MTPS9579A in the body?
3. What were the side effects (if any) of increasing doses of MTPS9579A?
4. Was there an immune response to MTPS9579A – did the immune system make antibodies to the medicine?
5. Can something be measured in blood to show that MTPS9579A is working?

What kind of study was this?

There are several ways to describe this study.

- **Phase 1 study**
  This was a “Phase 1” study, which means that this was the first study for MTPS9579A in humans. A small number of healthy people got MTPS9579A starting at a low dose.
- **Placebo-controlled study**
  Some people got MTPS9579A while others got a placebo. This was done so that the real effect of the medicine could be compared against the placebo.
- **Randomized study**
  People were randomly assigned by a computer to receive the study medicine or the placebo in every dose group.
- **Blinded study**
  The researchers and volunteers did not know which participants were getting the study medicine and which participants were getting the placebo.

When and where did the study take place?

The study started in February 2018 and finished in April 2019. The study took place in Canada. This summary was written after the study had ended.

2. Who took part in this study?

There were 106 people (healthy volunteers) who took part in this study. The youngest person was 18 years old and the oldest person was 55 years old. There were 36 men and 70 women.

The study consisted of 2 parts.

Part A **Single dose of the treatment** Total = 56 people 95% white 64% women and 36% men Average age = 38 years	**Part B** **Multiples doses of the treatment** Total = 50 people 100% white 68% women and 32% men Average age = 39 years
24 people got injection treatments Group A: **30 mg** 6 people got medicine 2 people got placebo Group B: **100 mg** 6 people got medicine 2 people got placebo Group C: **300 mg** 6 people got medicine 2 people got placebo	**30 people got injection treatments** Group F: **150 mg** 8 people got medicine 2 people got placebo Group G: **300 mg** 8 people got medicine 2 people got placebo Group H: **750 mg** 8 people got medicine 2 people got placebo
32 people got IV treatments Group D: **300 mg** 6 people got medicine 2 people got placebo Group E: **900 mg** 6 people got medicine 2 people got placebo Group I: **1800 mg** 6 people got medicine 2 people got placebo Group J: **3600 mg** 6 people got medicine 2 people got placebo	**20 people got IV treatments** Group L: **1350 mg** 8 people got medicine 2 people got placebo Group M: **3600 mg** 8 people got medicine 2 people got placebo

Two participants did not complete the study. The other 104 participants completed the study.

Requirements for healthy volunteers to participate in this study

1. They had to provide written consents to volunteer in this study.
2. Be between 18 and 55 years old, non-smokers, and have a body mass index of 18 to 32 kg/m^2.
3. Weigh at least 60 kg to participate in some of the groups.
4. Be able and willing to communicate and participate in the study.
5. Agree to use family planning methods to prevent pregnancies while participating in this study.

Conditions that disqualified healthy volunteers from this study

1. History of drug or tobacco use or excessive alcohol use.
2. People without suitable veins for blood draw.
3. Abnormal lab test results.
4. Positive for hepatitis B, C, or for HIV.
5. History of poor health.
6. Mothers who are breast-feeding or intending to get pregnant.

3. What happened during the study?

The participants joined a group and received a "**treatment"** that was either the study medicine or placebo. The treatment was selected for each person at random by a computer.

How was the treatment administered? Some groups got their treatment (MTPS9579A or placebo) as an injection while others got theirs through an IV.

Single ascending dose (SAD): Part A was a "SAD study" where participants received one treatment only. The lowest dose group got their treatment first and were observed. In the absence of side effects exceeding a certain limit, the next higher dose group could start their treatment.
Participants checked into the research center on the day of their treatment and left the day after. They were observed for 81-89 days following treatment. Participants were treated in order from low to high dose groups.

Multiple ascending doses (MAD): Part B was a "MAD study" where participants received multiple treatments. They received 3 treatments once every 4 weeks (on days 1, 29, and 57). The lowest dose group got their treatment first and were observed. In the absence of side effects exceeding a certain limit, the next higher dose group could start their treatment.
Participants checked into the research center one day before their treatment and left one day after treatment. They were observed for 137-145 days following the first treatment. Participants were treated in order from low to high dose groups.

What happened after treatment started? Tests and physical examinations were carried out by researchers at times including before, during, and after the completion of the treatment. Blood samples and fluid from the nose were collected before and after treatments. All side effects were reported.

4. What were the results of the study?

One hundred and four participants completed the study.

Question 1: 1. What dose of MTPS9579A was safe?

Researchers compared side effects of participants who got the study medicine with those who got the placebo.

The number of side effects and how severe they were – these were the same for participants who got the MTPS9579A and those who got the placebo.

Therefore, MTSP9579A was safe at all the doses tested in this study.

Question 2: What happened to MTPS9579A in the body?

Researchers found the blood concentration of MTPS9579A to increase with increasing dose level of the treatment.

The medicine was found at its peak (highest) concentration one day after dosing. From there, it took about 9-35 days for the medicine to fall to half of its highest concentration. This was dependent on the dose given and the route (injection or IV) used.

Question 3: What were the side effects (if any) of increasing doses of MTPS9579A?

The side effects were almost equally distributed in the different dose groups. There was no trend seen in the number of side effects as the dose increased.

Question 4: Was there an immune response to MTPS9579A?

Six participants (4 in Part A and 2 in Part B) who got the medicine developed an antibody to the medicine. One participant who received the placebo also developed an antibody to the medicine.

Question 5: Can something be measured to show that MTPS9579A is working?

Researchers measured a molecule in nose fluid. This marker remained unchanged in participants who got placebo. However, in participants who got MTPS9579A injections, this marker could not be detected after receiving the medicine. Therefore the disappearance of this marker in nose fluid can be used to show that the medicine is working.

5. What were the side effects?

Side effects are unwanted medical problems (such as a headache) that happen during the study and are related to the treatment given during the study.

- Not every participant in a study has all or any of the side effects seen in the study.
- Common side effects and serious side effects are listed in the following sections.

Most common side effects

In Part A (SAD study), 22 participants (52%) reported a total of 41 side effects thought to be related to the study medicine. In addition, 9 participants (64%) reported a total of 18 side effects after getting the placebo, and the side effects here were thought to be related to the treatment (such as, getting injections or IV).

Common side effects in Part A participants who got the study medicine:

- Redness in skin at the injection site (injection site erythema) in 6 participants (14%)
- Headache in 6 participants (14%)
- Inflammation in the nose and throat (nasopharyngitis) in 5 participants (12%)

Common side effects in Part A participants who got the placebo:

- Headache in 5 participants (36%)
- Redness in skin at the injection site (injection site erythema) in 2 participants (14%)
- Back pain in 2 participants (14%)

In Part B (MAD study), 33 participants (83%) reported 203 side effects thought to be related to the study medicine. In addition, 8 participants (80%) reported 42 side effects after getting the placebo, and the side effects here were thought to be related to the treatment.

Common side effects in Part B participants who got the study medicine:

- Injection site reactions in 21 participants (53%)
- Headache in 10 participants (25%)
- Inflammation in the nose and throat (nasopharyngitis) in 5 participants (13%)

Common side effects in Part B participants who got the placebo:

- Injection site reactions in 5 participants (50%)

Serious side effects

A side effect is considered “serious” if it is life threatening, needs hospital care, or causes lasting problems. There were no serious side effects reported in this study.

6. How has this study helped research?

This study was the first time that the study medicine, MTPS9579A, was given to any human. This study helped researchers learn that the study medicine was as safe as the placebo was, at the doses tested.

Researchers also learned how long the medicine stayed in the body.

Researchers were also able to measure a marker that responded to MTPS9579A. The disappearance of this marker after dosing indicated that the medicine was active.

7. Are there plans for other studies?

Other studies can be found at the following websites:

- https://clinicaltrials.gov/ct2/results?cond=&term=MTPS9579A&cntry=&state=&city=&dist=
- https://www.clinicaltrialsregister.eu/ctr-search/search?query=MTPS9579A

8. Where can I find more information?

Who can I contact if I have questions about this study?

If you have any further questions after reading this summary:

- Visit the ForPatients platform and fill out the contact form https://forpatients.roche.com/en/About.html or contact a representative at your local Roche office.

If you took part in this study and have any questions about the results:

- Speak with the study doctor or staff at the study hospital or clinic.

Who organized and paid for this study?

This study was organized and paid for by Genentech, Inc., South San Francisco, CA, USA. Genentech is part of F. Hoffmann-La Roche Ltd., with headquarters in Basel, Switzerland.

Full title of the study and other identifying information

The full title of this study is: “A phase 1, single center, randomized, observer-blinded, placebo-controlled study to evaluated the safety, tolerability, pharmacokinetics, and explore pharmacodynamics effects and immunogenicity of single- and multiple-ascending doses of MTPS9579A in healthy adult subjects”.

- The protocol number for this study is GA40396.