



## Questions and answers for participants in the Antibody Mediated Prevention (AMP) Studies: HVTN 703/HPTN 081 and HVTN 704/HPTN 085

Version 1 – Last updated October 16, 2020

### 1. What are the AMP studies?

AMP stands for Antibody Mediated Prevention. Scientists are doing the AMP studies to see if a broadly neutralizing antibody against HIV can prevent people from getting HIV.

The human body makes antibodies as one natural way to fight infection. Doctors have also been giving antibodies to people to fight infections for more than 100 years. For example, doctors give people antibodies to prevent infections like hepatitis A and B, chicken pox, and a respiratory infection that affects infants.

In the AMP studies, scientists are testing an antibody called VRC01. VRC01 is a “monoclonal antibody,” which means that scientists made it in a lab, instead of it being made naturally in a human body. In the laboratory, VRC01 stops several different kinds of HIV from getting into human cells. That is why it is also called a “broadly neutralizing antibody.” VRC01 also prevents laboratory animals from getting some HIV infections. The AMP studies are the first studies to test whether this antibody can prevent people from getting HIV, including the kinds of HIV scientists thought would be preventable based on what they saw in the lab.

These studies tested two amounts of VRC01. The study doctors gave participants the smaller amount of VRC01 (10mg/kg), the larger amount of VRC01 (30 mg/kg), or the placebo, which was salt water (saline). The study doctors gave the participants the smaller amount, the larger amount, or the placebo at random, like flipping a coin. Neither the study doctor nor the participants were able to choose what they got. Also, neither the participants nor almost all of the study staff will know what participants received until the end of the study. The study pharmacists are the only ones who know this.

The HIV Vaccine Trials Network (HVTN) and HIV Prevention Trials Network (HPTN) did the AMP studies to try to answer the following research questions:

- Is the VRC01 antibody safe to give to people?
- Are people able to get the antibody without becoming too uncomfortable?
- Does the antibody lower people’s chances of getting HIV?
- If the antibody does lower people’s chances of getting HIV, how much of it is needed?
- If someone gets HIV, how does VRC01 make a difference in their infection?

### 2. Who joined the two AMP studies?

The AMP studies are two studies that are almost the same as one another. They are being done at the same time and they are trying to answer the same research questions. They both enrolled people who were 18 to 50 years old and who were at risk for getting HIV. All participants were in good general health. What makes them different from one another is where they were done and who was enrolled. HVTN 703/HPTN 081 enrolled women who have sex with men. Participants were in Botswana, Kenya, Malawi, Mozambique, South Africa, Tanzania, and Zimbabwe. This study is also called AMP Africa.

HVTN 704/HPTN 085 enrolled men and transgender people who have sex with men and transgender people. The participants were in Brazil, Peru, Switzerland, and the United States. This study is also called AMP Americas.

**3. How many people enrolled in these studies and what product(s) did they receive?**

The AMP Africa study enrolled 1,924 women. The study doctors enrolled participants from May 2016 to September 2018. Of these participants, 642 received the smaller amount of VRC01, 645 received the larger amount of VRC01, and 637 received the placebo.

The AMP Americas study enrolled 2,699 men and transgender people. About 90% identified as male, 5% as transgender female, about 2% as female, and about 1% each as gender queer, gender non-conforming, or transgender male. The study doctors enrolled participants from April 2016 to October 2018. Of these participants, 899 received the smaller amount of VRC01, 897 received the larger amount of VRC01, and 903 received the placebo.

**4. Have the AMP studies been completed?**

Study doctors gave participants their last infusions in the AMP studies in April 2020. Since then, data scientists have been looking at the data, and now we can share some of the results with you. Study doctors are still seeing some participants to check on their safety and to test them for HIV. Study doctors will finish these activities in early 2021. Study doctors will not be able to tell participants whether they received VRC01 or the placebo until 2021, after all participants have finished those activities.

**5. What have we learned about VRC01's safety from the studies?**

Even though study doctors are still seeing some participants to check on their safety and to test them for HIV, we have learned that people were able to take VRC01 with little or no discomfort. When participants had side effects, they were usually mild to moderate and they lasted a few hours to a few days after the IV infusion. Participants had headaches, tiredness or feeling unwell, body aches, nausea, fever, chills, and pain or tenderness where they got the infusion. Some participants had symptoms that were severe enough to interfere with their normal daily activities. A small percentage of participants had itching, a rash, or shortness of breath during or immediately after the infusion. These reactions did not last long. The participants who had these reactions recovered without problems. Study doctors often see these side effects in monoclonal antibody and vaccine studies. They even happen with other monoclonal antibodies and vaccines that have been approved to give to people to treat or prevent other diseases. Since study doctors are still seeing some participants to check on their safety, we will learn more in 2021.

**6. What have we learned about whether broadly neutralizing monoclonal antibodies like VRC01 can prevent HIV?**

There are several kinds of HIV. Scientists call them strains. Through the AMP studies, we have learned that VRC01 can prevent some strains of HIV, but not others. In the AMP studies, people who got VRC01 were less likely to get HIV if they were exposed to what scientists call "sensitive" strains. But people who got VRC01 were not protected from getting HIV if they were exposed to what scientists call "resistant" HIV strains. The resistant HIV strains were able to sneak by the VRC01 and cause people to get HIV. Scientists call this a "breakthrough" infection.

We have learned that we probably need more than one antibody to fight different strains of HIV. This is similar to medicines that people take to treat HIV. Some people living with HIV need to take 2 or more medicines to keep them healthy. We have also learned about the amounts of antibody that may be needed to prevent the many strains of HIV around the world.

**7. How do the results from the AMP studies fit into the bigger picture of HIV prevention?**

The AMP studies showed that a broadly neutralizing monoclonal antibody can prevent people from getting HIV. They also taught us that we need other antibodies that can block more HIV strains. We also need antibodies that are powerful even in small amounts. Like medicines to treat people with HIV, we will probably need more than just one antibody to fully prevent HIV over a long period of time. The good news is that we are already doing research studies testing other antibodies that may be able to do these things, alone and in combinations.

The AMP studies also showed us that by studying an antibody in a laboratory, we can predict how well it will prevent HIV, even before we give it to people. We can also use what we learn in a lab to predict how much antibody will be needed. Through AMP, our laboratory and data scientists have found a test that can tell which antibodies may prevent HIV, even before we give them to people. This helps us do studies more efficiently. This is a big deal because it means we may be able to use antibodies to prevent HIV sooner. We are always looking for tools to add to the HIV prevention toolbox!

**8. Will there be any future testing of VRC01 by the HVTN and HPTN?**

When the AMP studies began in 2016, laboratory and animal studies suggested that VRC01 could prevent HIV in people. At that time, VRC01 was the only antibody ready for testing this question in people. Through the AMP studies, VRC01 proved that such an antibody can prevent HIV. But it did not prevent enough people from getting HIV, especially those that were exposed to “resistant” strains. Because of this, there are no plans to test this antibody for HIV prevention in the future.

Since the AMP studies started, scientists have found other antibodies that prevent more HIV strains, even “resistant” ones. Scientists have also found antibodies that are powerful in small amounts to prevent HIV in animals. The HVTN and HPTN are testing these other antibodies in people.

**9. Can I participate in another antibody study?**

You may be able to participate in another antibody or another HIV prevention study. If you are interested, we can tell you if there are other studies we are doing here that you may be able to join.

**10. Who should I contact if I have questions or problems?**

If you have additional questions, please ask us.

You can contact:

**Thank you for your participation in the AMP studies! You have made a major contribution to move HIV prevention options forward around the world.**