UNIVERSITY OF CALIFORNIA, SAN FRANCISCO
ARAVIND EYE HOSPITAL, MADURAI
CONSENT TO PARTICIPATE IN A RESEARCH STUDY

Study Title: Cross-Linking for Corneal Ulcers Treatment Trial

This is a medical research study. Your study doctor(s), Dr. Jennifer Rose-Nussbaumer from the University of California and Dr. NV Prajna from the Aravind Eye Hospital will explain this study to you.

Medical research studies include only people who choose to take part. Take your time to make your decision about participating. You may discuss your decision with your family and friends and with your health care team. If you have any questions, you may ask your study doctor.

You are being asked to take part in this study because you have a corneal ulcer.

Why is this study being done?

The purpose of this study is to determine the effect that corneal cross-linking has on corneal ulcers. Cross-linking is a procedure where a special type of light is applied to the front of the eye to try to clear the eye infection and make your eye stronger. The cross-linking device is called the UV-X, and is not yet approved in India. We want to find out what effects, good and/or bad, it has on you and your corneal infection.

For corneal infections caused by fungus, there are two standard of care topical medications used for treatment: natamycin and amphotericin B. Amphotericin B has been shown to be effective when used with cross-linking in non-human studies. We would also like to find out what effects, good and/or bad, the combination of these topical medications with collagen cross-linking has on you and your corneal infection, and learn whether there are differences between these two medications when used with cross-linking.

How many people will take part in this study?

About 266 people will take part in this study.

What will happen if I take part in this research study?

If you take part in this study, we will first record your vision and take pictures of the front of your eye. You will be "randomized" into one of the study groups described below. Randomization means that you are put into a group by chance. A computer program will place you in one of the groups. Neither you nor your doctor can choose the group you will be in. Regardless of which group you are placed in, you will receive standard of care topical medications that are routinely used in the treatment of your infection. Collagen cross-linking is not currently standard of care.

If you have a corneal ulcer caused by bacteria, you will be randomized into one of two groups:

- **Group 1:** You will receive standard of care eye drops called moxifloxacin and the corneal cross-linking procedure. During this procedure a blue-colored light will be

directed toward your eye for 30 minutes. As part of the procedure, your cornea will be gently scraped to test for bacteria, fungus, and acanthamoeba after the procedure has been completed.

- **Group 2:** You will receive standard of care eye drops called moxifloxacin and the mock corneal cross-linking procedure. During this procedure a blue-colored light will be directed near your eye for 30 minutes. As part of the procedure, your cornea will be gently scraped to test for bacteria, fungus, and acanthamoeba after the procedure has been completed.

If you have a corneal ulcer caused by fungus, you will be randomized into one of four groups:

- **Group 1:** You will first receive standard topical antifungal eye drops call amphotericin B. You will then receive another type of eye drops called riboflavin and the corneal cross-linking procedure. During this procedure a blue-colored light will be directed toward your eye for 30 minutes. As part of the procedure, your cornea will be gently scraped to test for bacteria, fungus, and acanthamoeba after the procedure has been completed.
- **Group 2:** You will first receive standard topical antifungal eye drops call natamycin. You will then receive another type of eye drops called riboflavin and the corneal cross-linking procedure. During this procedure a blue-colored light will be directed toward your eye for 30 minutes. As part of the procedure, your cornea will be gently scraped to test for bacteria, fungus, and acanthamoeba after the procedure has been completed.
- **Group 3:** You will first receive standard topical antifungal eye drops call amphotericin B. You will then receive another type of eye drops and the mock corneal cross-linking procedure. During this procedure a blue-colored light will be directed near your eye for 30 minutes. As part of the procedure, your cornea will be gently scraped to test for bacteria, fungus, and acanthamoeba after the procedure has been completed.
- **Group 4:** You will first receive standard topical antifungal eye drops call natamycin. You will then receive another type of eye drops and the mock corneal cross-linking procedure. During this procedure a blue-colored light will be directed near your eye for 30 minutes. As part of the procedure, your cornea will be gently scraped to test for bacteria, fungus, and acanthamoeba after the procedure has been completed.

If you have a corneal ulcer caused by acanthamoeba, you will be randomized into one of two groups:

- **Group 1:** You will receive standard of care eye drops called polyhexamethylene biguanide (PHMB) and the corneal cross-linking procedure. During this procedure a blue-colored light will be directed toward your eye for 30 minutes. As part of the procedure, your cornea will be gently scraped to test for bacteria, fungus, and acanthamoeba after the procedure has been completed.
- **Group 2:** You will receive standard of care eye drops called polyhexamethylene biguanide (PHMB) and the mock corneal cross-linking procedure. During this procedure a blue-colored light will be directed near your eye for 30 minutes. As part of the procedure, your cornea will be gently scraped to test for bacteria, fungus, and acanthamoeba after the procedure has been completed.

These procedures will all occur in the operating theater.

After the cross-linking procedure, you will receive the normal, standard of care treatment for your eye infection.

Three days after the procedure, your cornea will be gently scraped once more to test for bacteria, fungus, and acanthamoeba.

You will have two follow-up study visits, one at 3 weeks and one at 3 months after the procedure. At these visits, you will have photographs taken of your eye and your vision checked.

How long will I be in the study?

Participation in the study will take a total of about six hours over a period of three months. The first study visit will last approximately four hours, and the follow-up study visits will last approximately one hour each.

Can I stop being in the study?

Yes. You can decide to stop at any time. Tell the study doctor if you are thinking about stopping or decide to stop. He or she will tell you how to stop your participation safely.

The study doctor may stop you from taking part in this study at any time if he/she believes it is in your best interest, if you do not follow the study rules, or if the study is stopped.

What side effects or risks can I expect from being in the study?

You may have side effects while on the study. Everyone taking part in the study will be watched carefully for any side effects. However, doctors don't know all the side effects that may happen. Side effects may be mild or very serious. Your health care team may give you medicines to help lessen side effects. Many side effects go away soon after you complete the cross-linking procedure. In some cases, side effects can be serious, long lasting, or may never go away.

You should talk to your study doctor about any side effects you experience while taking part in the study.

Cross-linking is a commonly used procedure worldwide and is thought to be very safe. Possible risks include secondary infections including corneal infection and corneal edema. If you experience one of these side effects, you will be treated with standard of care treatments. The experimental treatments may have side effects that no one knows about yet. The researchers will let you know if they learn anything that might make you change your mind about participating in the study. For more information about risks and side effects, ask your study doctor.

Are there benefits to taking part in the study?

Taking part in this study may or may not make your health better. While doctors hope corneal crosslinking in addition to use of topical antibiotic, antifungal, or antiamoebic eye drops will be more effective than the standard (usual) treatment, there is no proof of this yet.

There will be no direct benefit to you from participating in this study. However, this study will help doctors learn more about corneal crosslinking and it is hoped that this information will help in the treatment of future patients with corneal ulcers.

What other choices do I have if I do not take part in this study?

Your other choices may include:

- Getting no treatment
- Getting standard treatment for your condition with medications, without being in a study.

Please talk to your doctor about your choices before deciding if you will take part in this study.

How will information about me be kept confidential?

Participation in research involves some loss of privacy. We will do our best to make sure that information about you is kept confidential, but we cannot guarantee total privacy. Some information from your medical records will be collected and used for this study. People involved with your future care may become aware of your participation and of any information added to your medical record as a result of your participation. Study tests that are performed by research labs, and information gathered directly from you by the researchers will be part of your research records and will also be added to your medical record. Your personal information may be given out if required by law. If information from this study is published or presented at scientific meetings, your name and other personal information will not be used.

Organizations that may look at and/or copy your medical records for research, quality assurance, and data analysis include:

- Aravind Eye Care System
- University of California
- Government agencies involved in keeping research safe for people.

What are the costs of taking part in this study?

You will not be charged for any of the study activities.

Will I be paid for taking part in this study?

You will not be paid for taking part in this study.

What happens if I am injured because I took part in this study?

It is important that you tell your study doctor, Dr. Prajna, if you feel that you have been injured because of taking part in this study. You can tell the doctor in person or call him at +91 452 435 6100. If you are injured as a result of being in this study, the costs of the treatment may be billed to you or your insurer just like any other medical costs, or covered by Aravind Eye Hospital, depending on a number of factors. The University and the study sponsor do not normally provide any other form of compensation for injury.

What are my rights if I take part in this study?

Taking part in this study is your choice. You may choose either to take part or not to take part in the study. If you decide to take part in this study, you may leave the study at any time. No matter what decision you make, there will be no penalty to you and you will not lose any of your regular benefits. Leaving the study will not affect your medical care. You can still get your medical care from our institution.

We will tell you about new information or changes in the study that may affect your health or your willingness to continue in the study.

In the case of injury resulting from this study, you do not lose any of your legal rights to seek payment by signing this form.

Who can answer my questions about the study?

You can talk to your study doctor about any questions, concerns, or complaints you have about this study. Contact your study doctor Dr. Prajna at +91 452 435 6100.

If you wish to ask questions about the study or your rights as a research participant to someone other than the researchers or if you wish to voice any problems or concerns you may have about the study, please call the Aravind Medical Research Foundation at +91-452-435 6550.

CONSENT

PARTICIPATION IN RESEARCH IS VOLUNTARY. You have the right to decline to participate or to withdraw at any point in this study without penalty or loss of benefits to which you are otherwise entitled.

If you wish to participate in this study, you should sign below.

Date	Participant's Signature for Consent
Date	Person Obtaining Consent