

# PLASMA DONOR APPLICATION

## ABSTRACT

The world is suffering from the COVID 19 crisis and no vaccine has been found yet.. But there is another scientific way in which we can help reduce mortality or help people affected by COVID19 by donating plasma from recovered patients. In the absence of an approved antiviral treatment plan for a fatal COVID19 infection, plasma therapy is an experimental approach to treat COVID19-positive patients and help them faster recovery. Therapy is considered competent. In the recommendation system, the donor who wants to donate plasma can donate by uploading their COVID19 certificate and the blood bank can see the donors who have uploaded the certificate and they can make a request to the donor and the hospital can register/login and search for the necessary things. plasma from a blood bank and they can request a blood bank and obtain plasma from the blood bank.

**Keywords:** Donor Module; Blood Bank Module; Hospital Module; Covid-19 Recovery Certificate.

## • INTRODUCTION

The main goal of our project is to design a user-friendly web application that is like a scientific vehicle from which we can help reduce mortality or help those affected by COVID19 by donating plasma from patients who have recovered without approved antiretroviral therapy planning for a deadly COVID19 infection, plasma therapy is an experimental approach to treat those COVID-positive patients and help them recover faster. Therapy, which is considered reliable and safe. If a particular person has fully recovered from COVID19, they are eligible to donate their plasma.

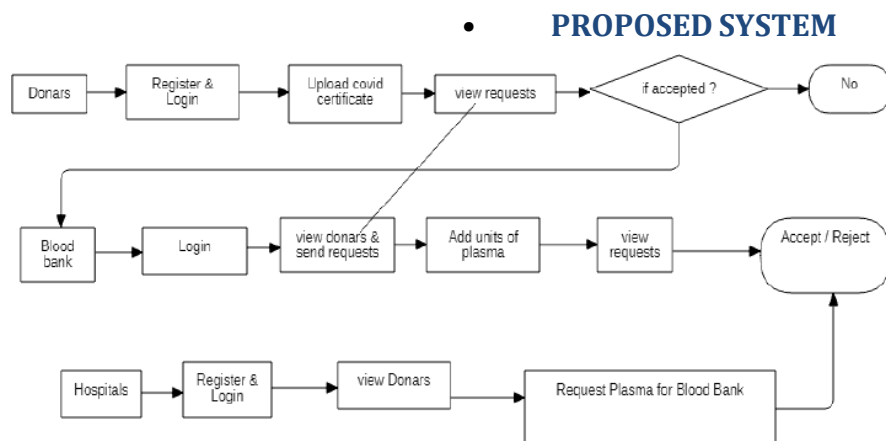
As we all know, the traditional methods of finding plasma, one has to find out for oneself by looking at hospital records and contacting donors have been recovered, sometimes may not be available at home and move to other places. In this type of scenario, the health of those who are sick becomes disastrous. Therefore, it is not considered a rapid process to find plasma. The main purpose of the proposed system, the donor who wants to donate plasma can simply upload their covid19 traced certificate and can donate the plasma to the blood bank, the blood bank can apply for the donor and once the donor has accepted the request, the blood bank can add the units they need and the hospital can also send the request to the blood bank that urgently needs the plasma for the patient and can take the plasma from the blood bank.

## • LITERATURE SURVEY

Several experiments have been carried out over the years by different groups of researchers. Here are some of the following groups:

- Denuis O'Neil (1999). "Blood component" Archived from the original on June 5, 2013. Normally, certain amount of human body weight comes from blood. For adults, it is 4-6 litres of blood. This essential liquid plays an important role in transporting oxygen and nutrients to cells and removing carbon dioxide, ammonia and other waste products. Blood is a very common tissue composed of over 4000 different types of components.
- ways to keep your plasma healthy, Original Archived November 1, 2013, Accessed November 11, 2011. Plasma donation is one of the most accepted practices for saving lives, while earning a few dollars. The whole process can take some time, but it's well worth it once you experience it a few times. Accepting money in exchange for plasma is welcome. It's a move when you feel like you're not just a hero, but you're adding value to yourself. The term "healthy" does not mean only in the absence of disease. It also means that you are healthy enough.
- Ripathis S, Kumar V, Prabhakar A, Joshi S, Agarwal A (2015). "Microscale Passive Plasma Separation: A Review of Design Principles and Microdevices," J. Micromech Micro 25 (8): 083001; Plasma separation is

of great importance in the fields of diagnosis and healthcare. Due to the lagging transition to microscale, these recent trends are a rapid shift towards shrinking complex macro processes.



In this proposed system, a donor who wants to donate plasma can simply upload their recovered covid19 certificate and can donate the plasma to a blood bank. The blood bank after checking the donor certificate can make a request to the donor when the donor accepts the request, they can add the required number of units they need. The hospital can send a request to the blood bank that needs the patient's emergency plasma and to get the plasma from the blood bank.

**Figure 3.1:** Architecture of the Model.

## **• RESULT**

After running the code, the URL is displayed and the user needs to paste the URL into the browser. At the end of the URL, you need to add the donorlogin to open the donor page, b-banklogin for the blood bank page, and h- login for the hospital page. Donors who wish to donate plasma can donate by uploading their COVID19 recovery certificate on the donor's page. If the donor is new, they must register before log in. If the donor is an existing user they need to login. Username and e-mail provided at the time of registration. After the donor login to the page, the website will display as below.

**Fig 4.1:** Donor COVID-19 Recovery Certificate Upload Page

Here as a sample, we have uploaded Sneha's certificate, viewing the profile will show its details like certificate, name, age, blood type as shown below.

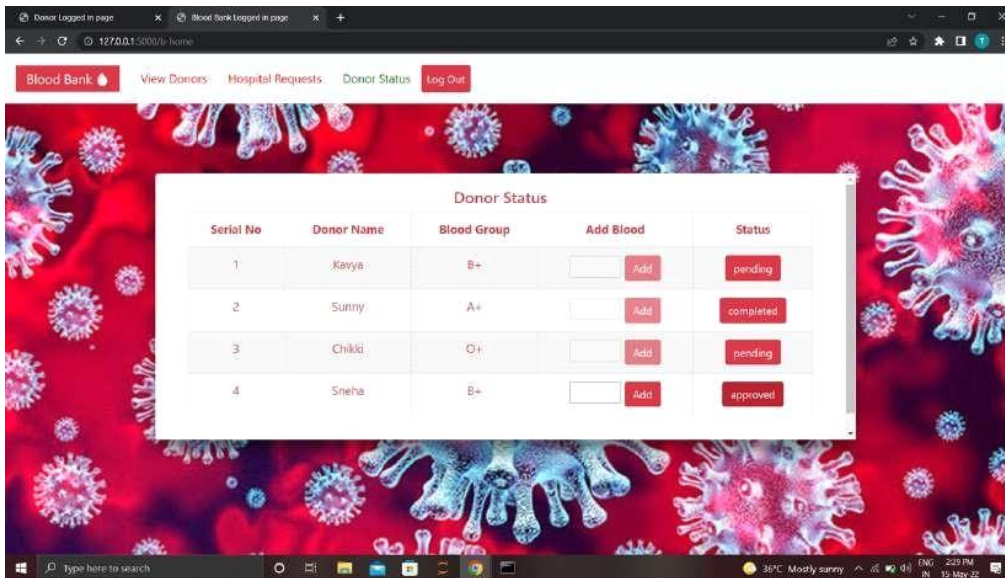
**Fig 4.2:** Donor View Profile Page

Only one admin for blood bank after admin login to the page he can see the existing donors in the blood donor view page. Donors who have uploaded a certificate of recovery can be seen on this page, blood banks can view their details and make requests to specific donors. Here, as we took the example of Sneha, we send a request to Sneha.

**Fig 4.3:** Blood Bank View Donor Page

Once the request is sent to a donor from the blood bank, Donor can see the requests in the donor view requests page.

**Fig 4.4:** Donor View Requests Page



Blood banks can check the status of donors on the donor status page. If the donor does not respond, the status is displayed as pending, and if accepted, it is displayed as approved. Once approved, the blood bank can add the required blood units. After this process, the status will be displayed as completed.

**Fig 4.5:** Blood Bank Donor Status Page.

Hospitals can log in to the site using access data such as hospital name and password. The blood bank acts as an interface between the hospital and the donor, and there is no direct communication between the donor and the hospital. Hospitals can send a request to the blood bank for required blood group.

**Fig 4.6:** Hospital View Available Donors From Blood Bank Page.

The blood bank can see the hospital's request and the blood bank can approve or reject the request.

**Fig 4.7:** Blood Bank Can View Hospital Requests Page.

The hospital can see the status of the blood bank. If the blood bank approves the hospital's request, after the request is approved, The status will show as completed and the hospital can also send a response to the blood bank through feedback.

**Fig 4.8:** Hospital View Status Page

## • CONCLUSION

Plasma is a liquid portion of blood; it is a mixture of water, proteins and salts. Antibodies are proteins made by the body in response to an infection. People fully rescued from COVID19 are encouraged to donate plasma, which can help to increase the lifespan of other patients because their plasma contains antigens which helps the affected person to recover faster. These immunoglobulin give your immune system a way to fight the virus when you are sick, so your plasma can be used to help others fight off illness. Individuals must fully resolve symptoms for at least 14 days prior are eligible to donate.

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