

BLOOD LINE

The Voluntary Blood Donation Journal | Issue 65 | 2022

Stem Cell Donation: The need of the hour!

Stem cells are undifferentiated cells having the ability to undergo differentiation to generate specialized mature and differentiated cells, while maintaining capability of self-renewal. They are of great interest because they have potential in the development of therapies to replace defective cells.

In a vast number of patients suffering from blood cancers, blood stem cell transplantation is the only chance for a cure. It can also be employed in conditions like Thalassemia, which is highly prevalent in India. Despite the huge requirement, unfortunately, only about 0.03 per cent of the Indian population are registered as potential blood stem cell donors. This number is significantly lower than in many other countries. Misconceptions and lack of awareness are major causes for this gap between the demand for stem cell transplantation and the supply of stem cell units.

Adult stem cells may be obtained either by peripheral blood stem cell (PBSC) donation or by bone marrow donation. Only about 25-30% of patients requiring stem cell transplantation obtain a suitable match from related donors. Moreover, in the current scenario, due to lesser number of siblings and a decrease in the fertility rates, there is an aggravated shortage of related donors. The remaining patients are totally dependent on matched unrelated donors (MUD).

• How can one become a potential blood stem cell donor?

One can register in any of the blood stem cell donor registries if he/she has general good health and is between 18 to 50 years of age. Enrollment should be done only in a single registry, in order to prevent duplication.

A small amount is generally collected during registration which contributes to the cost of HLA typing. Once a person signs up, a free swabbing kit is sent to them to collect their own cheek swab, which has to be returned back. After HLA typing is done, his/her details are stored in the database. If the registry receives a search request that matches a donor's HLA typing, he/she will be reached out for stem cell donation.

• What is the procedure for stem cell donation?

PBSC donations have gained popularity over bone marrow donation with the rapid boom in apheresis technology. It does not require anesthesia or admission to hospital. For PBSC donation, blood is drawn from a vein into an apheresis machine that collects the stem cells, and the rest of the blood is returned back to the donor. The procedure takes around 4 to 6 hours. It is similar to an apheresis platelet donation. The donor is free to

bring books or anything else to pass time. Once the procedure is over, the donor can go home.

In order to mobilize stem cells into circulation, the growth factor called Granulocyte colony-stimulating factor (G-CSF) is injected subcutaneously to the donor for the five consecutive days leading up to the donation.

Bone marrow donation takes place in a hospital operating room under anesthesia. Liquid marrow is withdrawn from the back of the pelvic bone. Few hours of hospitalization will be required for this modality.

• Are there any side effects?

The PBSC donor may experience some flu-like symptoms like headache, fatigue, bone or muscle aches while they are receiving the G-CSF injections. Donors can take non-aspirin products (such as Paracetamol or Ibuprofen) for relief from the discomfort. These symptoms disappear within a day or two following the donation. Post bone marrow donation, some donors report feeling sore and fatigued for a few days.

• What is the recovery time after stem cell donation?

- o PBSC – within 7 to 10 days post donation
- o Bone marrow – about 20 days

Save someone's life

When a donor joins the local registry, they automatically become a part of the international donor database. Hence, a match can be made with someone anywhere in the world.

If a donor is intimated, he/she might be the only person with the power to save the life of that patient. Being a stem cell donor hence becomes a great responsibility. Within 2 or 3 days after donation, a patient somewhere in the world will receive the healthy cells. The donor will be the reason for their second chance at life.

Meanwhile, the donor can get back to their routine activities and can forever be proud for this noble act of stem cell donation.

Dr. Angel Mary Sam

Junior Resident
MD Transfusion Medicine
Sree Chitra Tirunal Institute for
Medical Sciences and Technology
(SCTIMST), Trivandrum



TERUMO PENPOL celebrated National Blood Donation Day Celebrations in Association with KTU and NSS CET

TERUMO PENPOL in association with Kerala Technology University and NSS CET organized National Blood Donation Day Celebrations as a gala event for two weeks.

The concluding event was organized in October 15 at College of Engineering, Trivandrum. The chief guest for the event was Mr. Hari C S , Assistant Commissioner of Police . Mr. Aneesh ,Poll Blood Coordinator from Kerala Police spoke about the police app. The Pol-App is the official Mobile App of Kerala Police. This platform strives to connect the blood donors and applicants to facilitate the timely availability of blood for medical emergencies. Baby P S, In Charge PR & CSR shared about the Voluntary Blood Donation activities of TERUMO PENPOL and how to promote blood donation among friends and families.



Other activities organized with KTU and NSS CET were:- Flash Mob , Face Painting , Hackathon, Sand designing , Awareness Sessions at colleges , Candle walks , Thalassemic Patients Database collection, Stem cell promotion drive, Blood Donation Camps

Flash Mob

Terumo Penpol employees and students at College of Engineering Trivandrum together conducted a Flash Mob at Lulu Mall, Thiruvananthapuram on September 29th . The team put forward the message of Voluntary blood donation and the awareness to donate blood and save lives. Crew of 40 people danced to the trending songs Kaala chashma, Jorthale, Ra Ra Reddy, Indakki Pattu, Paala Palli, Pathala Pathala, Olluleru, etc. for 8 minutes.



Face Painting

As part of National Blood Donation Day celebrations face painting event was held on September 28th Greenfield Stadium. The event was jointly organized by TERUMO PENPOL at Greenfield stadium in association with NSS CET and Rudhirasena.

Face painting is the activity of covering a person's face with paint, or drawing designs on it as a decoration.

The main objective of the event was to promote voluntary blood donation during the cricket match between India and South Africa which was held on September 29th at Greenfield International Stadium.



Candle walk

A candlelight rally was organized on October 15 night to promote blood donation and to create awareness about blood donation among students.



MASS BLOOD DONATION AWARENESS DRIVE:

A mass blood donation awareness drive was organized in all the colleges under KTU in Kerala from October 3rd to 14th. Through 25 regional coordinators instructions were given to spread the information about blood donation and its scientific aspects to the colleges of each region.

On October 6th, Dr. Amritha Radhakrishnan Nair conducted an awareness session about the health aspects, the criteria and deferral aspects of blood donation at College of Engineering Trivandrum.

Many people are afraid to donate blood for varying reasons such as fear of pain or acquiring a disease. Donating blood, however, is safe as precautions are always taken during donation and there is no reason to fear of getting affected by communicable disease. In general, you will be able to give blood if: You are healthy, fit and not suffering from any illness. Avoid donating blood if you have cold, a cold sore, cough, virus, or an upset stomach. You weigh at least 45 kg. You are of the right age i.e. 18-65 years.



Blood Donation Camps

As part of National Blood Donation Day TERUMO PENPOL in association with the College of Engineering organized a Blood Donation camp at CET. The Blood was collected from 29 Donors by KIMS Hospital.



THALASSEMIA AWARENESS AND DATA COLLECTION:

Blood diseases are a very serious health issue that does not receive accurate awareness. We must be aware of blood diseases to realize how blood donation is essential

On October 8th, the scientific awareness of Thalassemia was brought to more people through a session taken by Dr. Hari Krishnan R, Hematology Professor of Government Medical College, Thiruvananthapuram. More than 100 students and parents participated in the class organized through Google Meet. Awareness about thalassemia disease symptoms, treatment and health care were given focus in the session. Then, thalassemia database collection program was organized online from October 8-20.

SULAIMANI NIGHT:

Apart from awareness classes and blood donation camps, blood donation message was spread through art and cultural programs. On October 14th, many students presented cultural programs in the Sulaimani night organized at the College of Engineering, Trivandrum. More than 700 students participated in the event.

STEM CELL DONATION AWARENESS:

An awareness session was organized on stem cell donation and bone marrow transplantation conducted by Dr. Deepa Susan Joy Philip, a renowned Doctor, and Associate Professor of the Department of Medical Oncology at Thiruvananthapuram Regional Cancer Center. Detailed information about stem cell donation was also shared in the class.



BEACH CLEANING AND SAND ART:

Beach cleaning and sand art program were organized at Kovalam beach on 8th October to preach the relevance of blood donation to common people. About 90 NSS volunteers cleaned the Kovalam beach together and then talked about the significance of blood donation to the people including foreigners who came to the beach and conveyed the message that blood donation is the duty of every healthy citizen. Students entertained the audience through their Cultural programs.



Painting Contest to promote Blood Donation

TERUMO PENPOL in association with TEJUS conducted a sub district painting competition in connection to National Voluntary Blood Donation Day on 01st of October 2022 at Govt. UPS, Venjaramoodu. The main objective is to bring in the importance of voluntary blood donation and to instill the activities and processes associated with Voluntary Blood Donation to kids / students at a much younger age. This will motivate them to take up such activities in their life and to spread the same within their network. Additionally, the involvement of parents will create much value addition to inculcate the importance among their circle too.

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Live Blood Donation Demonstration

As part of the National Blood Donation Day Celebrations a series of events were planned with College of Engineering Trivandrum. A live blood donation program was organized to demonstrate how blood is collected from the donors like what to expect when you visit a Blood Bank or Blood Donation Camp, after blood donation - care for donors ,what tests are done after donating blood .The live blood donation demonstration session was organized by Dr. Pinky Sanooja, Blood Transfusion officer , KIMS Hospital along with Counselor Felix and Blood Bank Technician Shinaz to make the donors aware of the scientific processes that the donated blood goes through, before it reaches the recipient.



What happens after donating blood?

Donor blood is tested for infectious diseases (TTIs) such as HIV, HBs Ag, VDRL & HCV and blood group serology. The screening of Transfusion Transmitted Infectious Marker (TTIs) is done by ELISA Method. Most whole blood donations are spun in centrifuges to separate it into transfusable components: red cells, platelets, and plasma. Plasma may be processed into components such as cryoprecipitate, which helps control the risk of bleeding by helping blood to clot. Blood Banks carefully screen all prospective donors to minimize the potential for transmission of infectious diseases. They also ensure all donated blood undergoes extensive testing for infectious diseases, blood groups and compatibility. The main objective of this initiative was to register more students for blood donation.



National Voluntary Blood donation day celebrations 2022

National Voluntary Blood donation day celebrations 2022 organized at Regional Cancer Center With The Support Of TERUMO PENPOL

The National Voluntary Blood Donation Day was celebrated at Regional Cancer Centre on 1st October 2022. The main agenda was to felicitate and honor the voluntary blood donors of Regional Cancer Centre and the various organizations in the field of voluntary blood donation involved in the care and support of patients in need of blood transfusion.

The function was held at the Conference hall of Regional Cancer Centre between 2:30 PM – 3:30 PM. The chief guest for the function was Sri. Premkumar (Cine Artist and Vice Chairman, Kerala State Chalachithra Academy). Other distinguished guests were Dr. Sajeed A (Additional Director RCC) and Sri Abraham Mathew (Vice President, Blood bag Manufacturing – Terumo Blood & Cell Technologies). The program started with a prayer song by RCC technical staff members. Sri. Jayakumar B (Sr. Technician, Blood Bank) welcomed the guests to the august gathering.

Blood Donation day message was given by Dr. Vijayalakshmi (Additional Professor & HOD). She emphasized on the importance of voluntary blood donation and remembered with gratitude the contributions of one and all in promoting the same.

The Chief Guest Sri. Premkumar (Cine Artist and Vice Chairman, Kerala State Chalachithra Academy) officially inaugurated the function and rendered a heartwarming and thought provoking message to the audience. He emphasized the fact that donation of one's own life blood to fellow beings is the noblest deed of mankind.

Felicitating the gathering, Dr. Sajeed A (Additional Director RCC) and Sri Abraham Mathew (Vice President, Blood bag Manufacturing – Terumo Blood & Cell Technologies) further reiterated the importance of voluntary blood donation. The various voluntary blood donors and organizations were honored by the Chief Guest Sri. Premkumar with a memento. Three members of voluntary blood donation fraternity who have put in significant and relentless efforts for providing blood and platelet support (SDP) to the needy patients of RCC were honored with a 'Ponnada' in addition to a memento.

The meeting ended on a thankful note to all dignitaries and the voluntary donors by Dr. Lekshmi Sudev (Assistant Professor Transfusion Medicine, RCC). On behalf of the Transfusion Medicine Division of Regional Cancer Centre, Dr Lekshmi Sudev whole heartedly thanked the guests for their support to the patients at Regional Cancer Centre all through the years and for taking time from their busy schedule to be part of the celebration. Tea and snacks were served to the guests.



National Voluntary Blood donation day celebrations 2022 organized at SCTIMST With The Support Of TERUMO PENPOL

Every year, Department of Transfusion Medicine at Sree Chitra Tirunal Institute for Medical Sciences and Technology, Tiruvananthapuram celebrates the National Voluntary Blood Donation Day on October 1. This is the birth anniversary of Dr J G Jolly, the father of Voluntary Blood Donation Movement in India.

This year, the function was conducted in the AMCHSS main Auditorium. Around 15 blood donor organisers and 50 regular voluntary blood donors were honoured in this function. The program started with an invocation prayer followed by a minute of silence to remember the departed souls of good Samaritan blood donors, who lost life during the COVID-19 pandemic.

Dr Debasish Gupta, Professor and Head, Transfusion Medicine, SCTIMST gave the welcome speech. This was followed by the lighting of lamp by all the dignitaries. Prof (Dr) Sanjay Behari, Director SCTIMST gave the presidential address. After this the award distribution ceremony took place. Blood donor organisers were given award in three categories – organising maximum number of camps, camps with maximum number of donor registration, camp with best ambience. In addition, there were two special awards given for promoting voluntary blood donation. Around 50 regular voluntary blood donors who had stood with us in all times and donated more than three times in the last one year were honoured. Department of Transfusion Medicine, SCTIMST had also organised a quiz contest to disseminate information regarding voluntary blood donation and good transfusion practices among the senior residents, nursing staff and all other staff. The winners of this quiz were also given prizes.

The chief guest of the day was Dr Rajasree MS, Vice Chancellor, APJ Abdul Kalam Technological University, Kerala. National Voluntary Blood Donation Day Message was given by Ms. Sarada Jayakrishnan, General Manager, Terumo Penpol Pvt Ltd. Dr Kesavadas C, Deputy Director, SCTIMST, and, Dr Rupa Sreedhar, Medical Superintendent, SCTIMST offered felicitation. Dr Amita R, who was awarded the 2022 President's award by AAB (Association for advancement of Blood and Biotherapeutics) was also felicitated in this function by Director and Terumo Penpol Pvt Ltd.

This was followed by recitation of a poem on voluntary blood donation by Mr Kunjiraman, Medical Social Worker, SCTIMST. This poem was written by Ms Preethy Prakash, staff, Department of Transfusion Medicine, SCTIMST. Vote of thanks was proposed by Dr Amita R, Associate Professor, Transfusion Medicine, SCTIMST. The function was followed by tea and light refreshment.



Recognition for TERUMO PENPOL

The Regional Cancer Center recognized TERUMO PENPOL for its outstanding contributions for promoting voluntary blood donation. Abraham Mathew, VP (MFG) along with Govind R, Executive (PR&CSR) received the award.



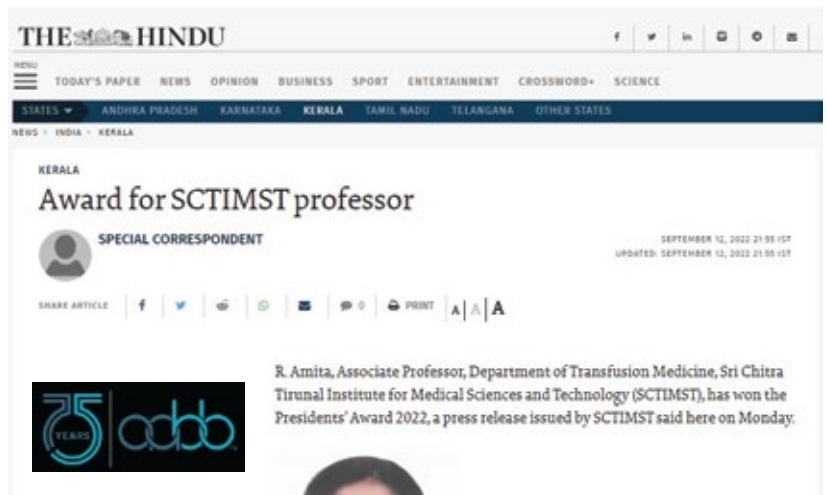
Recognition for TERUMO PENPOL Associates

SCTIMST also recognized Niyas S, Sr. Technician and Santosh Kumar V, working as Technician at BBF on October 1 for regularly donating blood at SCTIMST Blood Bank. Hearty Congratulations! Proud of you Niyas and Santosh. It was a colorful event.



Hearty Congratulations to Dr.Amita R for bagging the 2022 Presidents Award from AABB

Dr Amita R, Associate Professor with the Department of Transfusion Medicine at Sree Chitra Tirunal Institute of Medical Science and Technology (SCTIMST) in Thiruvananthapuram has been selected for 'Association for the Advancement of Blood & Biotherapies (AABB)' President's award this year. The award was conferred to her to honor the extraordinary public service and contributions. Amita is the coordinator of 'Youth Red Cross unit' in SCTIMST. She is a native of Peroorkada. AABB is an international, not-for-profit association representing individuals and institutions involved in the field of transfusion medicine and biotherapies. The association is committed to improve health through various ways, including educational programmes. AABB members are in more than 80 countries. TERUMO PENPOL recognized her on National Blood Donation Day at SCTIMST.



The award has been instituted by the Association for the Advancement of Blood and Biotherapies (AABB) in honour of "extraordinary public service and contributions".

AABB is an international not-for-profit organisation representing individuals

Sisters' birthday party with gift of life

West Burdwan couple, guests turn up for blood donation. Srestha and Nistha with their parents at the blood bank of Durgapur sub-divisional hospital on Tuesday.

Move over, flashy birthday parties at food courts of malls and banquet halls. A couple in West Burdwan's Jhanjra celebrated their two daughters' birthdays at a blood bank. Parents Saugata and Parama Mandal hosted an unusual birthday party for Nistha, 8, and Srestha, 3, at the blood bank of the Durgapur subdivisional hospital on Tuesday where 12 invitees joined the couple to donate blood. Of them, seven guests were first-time donors. Saugata runs a computer shop at Laodoha's Jhanjra, 20km from Durgapur, Parama is a homemaker. Both donate blood regularly and are involved in the blood donation movement in Jhanjra colliery area of West Burdwan.

Nistha turned eight on September 18 and Srestha had turned three on August 22. So, the couple decided to host a joint birthday party with a difference this year as they knew that fewer people were donating blood amid the pandemic. "We decided to celebrate the birthdays of our daughters in a way that would help our fellow citizens who need blood in times of the pandemic," said Parama.

The couple also brought along a pretty birthday cake to the blood bank as they wanted it to be a real party as well. The sisters in colour-coordinated dresses looked happy as the birthday cake was cut before the 12 invitees joined their parents to donate blood.

The couple had invited some of their neighbours and parents of their daughter's friends to donate blood at the camp. Saugata and Parama then distributed fruits and snacks to donors and blood bank employees.

Saugata said the blood donation camp could not have been held without the support of CPM leader Kabi Ghosh, also the state secretary of Federation of Blood Donors' Organisation of India.

"Kabi Ghosh is a veteran activist in the blood donation movement and his organisation helped us organise the blood donation camp," said Saugata who has donated blood over 40 times since 2016.



The hospital's blood bank in-charge Karabi Kundu lauded the couple for their heartfelt gesture and blessed their two daughters. "If other parents come forward like this, many lives can be saved," she said. Ghosh said there was a demand for blood among non-Covid patients but because of the pandemic donors had dwindled. "Before the pandemic, on an average 50 people used to donate blood at the Durgapur subdivisional hospital's blood bank every day. Now it is around 20-30. But the number of people turning up every day to ask for blood here is around 35-40 people. This has created a gap between demand and supply," he added, saying the couple did a great job.

"Donate blood and save life is our campaign. What the couple did would go a long way in generating awareness about donating blood," said Ghosh

Source : The Telegraph



Srestha and Nistha with their parents at the blood bank of Durgapur sub-divisional hospital on Tuesday.

Strengthening India's Blood Transfusion System requires a journey from awareness of voluntary blood donation to supportive policy action By Dr. Kirit P Solanki and Suryaprabha Sadasivan in Voices, India, Lifestyle, TOI

Dr. Kirit P Solanki, Member of Parliament - Lok Sabha, Chairman of the Parliamentary Committee on the Welfare of Scheduled Castes and Scheduled Tribes, and Lok Sabha Panel Speaker Suryaprabha Sadasivan, Vice-President – Public Policy and Healthcare & Social Sector Practice Lead, Chase India

In a first-of-its-kind initiative, India successfully created a world record by encouraging more than 2.5 lakh people to donate blood as part of the fortnight-long 'Raktdaan Amrit Mahotsav,' which began on Prime Minister Narendra Modi's birthday last month and concluded on 1st October 2022, on National Voluntary Blood Donation Day.

This is an eventful moment as, amidst all the conversations about the country's healthcare priorities, voluntary blood donation has taken center stage for the first time. In a country like India, with a shortfall of 1.9 million units of blood annually, as per official data from 2016-17, this commitment to streamlining voluntary blood donation is a much-needed initiative.

The cruciality of blood in any health system cannot be undermined, especially in a country like India where blood sufficiency and timely access for post-partum hemorrhage, emergency surgeries, cancer treatment, and hereditary disorders like thalassemia and hemophilia has been a huge challenge.

One of the biggest constraints to managing the demand-supply gap in access to blood in India has been a general lack of awareness among people on the importance, safety, and process of voluntary blood donation. Unfortunately, even among the most educated people, the concept of blood donation has been demand-led, i.e., to be done when there is a need in your family/friend circle or when asked. Despite the government issuing guidelines against replacement blood donation, most blood banks and hospitals in India have continued to depend on family or friends of the patients donating blood in place of the units given to a patient. Replacement blood donation rarely enables access to an adequate stock of blood groups needed for transfusions, particularly in emergencies.

In addition, blood donation in India is also plagued with several myths which stop people from coming forward to give blood voluntarily. Lastly, a lack of understanding of the process and where to safely donate blood is another reason that deters people from giving blood.

To that end, the 'Raktdaan Amrit Mahotsav' aimed at increasing awareness about regular non-remunerated voluntary blood donations, endorsed by the highest level of political leaders across the country, is a promising step forward. This will help take the message to the households of common people and, thereby, increase the prospects of building a healthy pipeline of voluntary donors for the future.

One of the biggest highlights of India's Covid-19 pandemic response was the creation of the Co-WIN platform and its successful use in managing one of the largest vaccination drives. The customization and linkage of Co-WIN to the already existing E-RaktKosh platform was a great way of using our well-established technology platforms to make the registration process for voluntary blood donors simple and for the blood banks to build a database of potential donors for the future easily. The generation of certificates through the E-RaktKosh portal by a blood bank after the donation and the availability of that certificate to the volunteer through Arogya Setu fosters trust among donors. Moreover, it enables citizens to access the list of nearby blood centers and upcoming blood donation camps on the Co-WIN portal/Arogya Setu app.

This presents us with a fantastic opportunity to work towards a cultural change from replacement blood donation driven by an urgency to a culture based on repeated, voluntary, altruistic donation becoming a social norm. The key here would be to sustain this momentum of awareness building and the continued nudge, especially to the large youth population of this country, to enlist as voluntary blood donors. The government must effectively use social media channels and technology to get more blood donors and keep the existing ones motivated to



become repeat donors. There is merit in partnering with corporate, civil societies, and other stakeholders to create interactive campaigns to sensitize various groups of citizens on the merits and need for voluntary blood donation. The government could also evaluate the prospects of including IEC materials in the education curriculums across schools and colleges to dispel misconceptions about blood donation and inculcate a feeling of pride in saving lives through voluntary blood donation.

Once we can increase the availability of blood units, the next priority of the government needs to be streamlining the blood transfusion system by improving better coordination between blood banks to manage demand-supply gaps efficiently. A hub-and-spoke model or a partial centralization of our transfusion system can enable smaller blood banks, especially in rural areas, to be interlinked to a regional hub with cutting-edge technologies, requisite storage facilities, and a well-trained workforce to competently collect blood and optimally process blood and its components. This will hugely improve the safety of the collected blood and avoid wastage. Further, based on requirements from the spokes or inter-connected smaller blood banks, blood and its components can be safely transported to meet local needs.

In conclusion, multi-pronged efforts must be made to innovate blood donation and delivery mechanisms through technological solutions. This needs to be further supported by a policy framework that creates a conducive ecosystem to ensure the adequacy, timely access, safety, and sustainability of blood across the country. Since blood remains the cornerstone of any healthcare system, India must take a long-term view toward making its blood transfusion system an important element of its healthcare priorities and investments.

LETTERS TO THE EDITOR

Hello Ms Baby,

I'm concerned when reading the headline of your latest journal. It identifies this as the final issue. I hope it doesn't mean that you'll no longer be publishing it.

I always share your journal with the management of the Philadelphia area American Red Cross blood services. I've been reading it since I was added to your mailing list in 2006, after participating in a Rotary International Polio National Immunization event in Agra. I'm thankful that India has now been declared polio free. I wrote an article on the blood donation program sponsored by my Rotary club, which you published on your front page of a past issue. Our club has sponsored about 90 blood drives, starting in 1997.

I've been a blood donor for 70 years. Even at the age of 88, I'm fortunate to be able to donate 5 times every year, with well over 200 donations.

I hope you'll be continuing to publish your journal. I enjoy reading the progress you've made promoting voluntary blood donation in India. Keep up the good and important good work!

Ronald McMahon

Rotary Club of Vineland, New Jersey USA

Thank you very much for publishing and giving space in the journal. Keep up the good work and wishing you all the best in your endeavour.

Regards

Dr. Hughbert Dkhar

Nazareth Hospital Blood Centre
Shillong.

Baby madam,

Received the copy of BLOOD LINE and glimpsed through it. Thanks for sending it regularly without fail. Please continue.

Regards

Jayant Umalkar.

Saral Enterprises



Dear Baby

Thanks for giving space at prestigious side of Bloodline

Regards

Ravinder Dudeja

Founder Gen. Sect.

Foundation Against Thalassaemia Regd.

House No. 137 First Floor Sector 7A Faridabad 121006

Haryana India

Greetings from Nazareth Hospital Blood Center, Shillong, Meghalaya.

Thank you for regularly sending to us the Blood line journal. It is always a pleasure reading through the articles and had been a source of inspiration for us too. I would like to share with you few of our activities during the World Blood Donor Day 2022.

Dr. Hughbert Dkhar

Pathologist and In Charge Blood center

Nazareth Hospital Shillong.

Meghalaya.



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