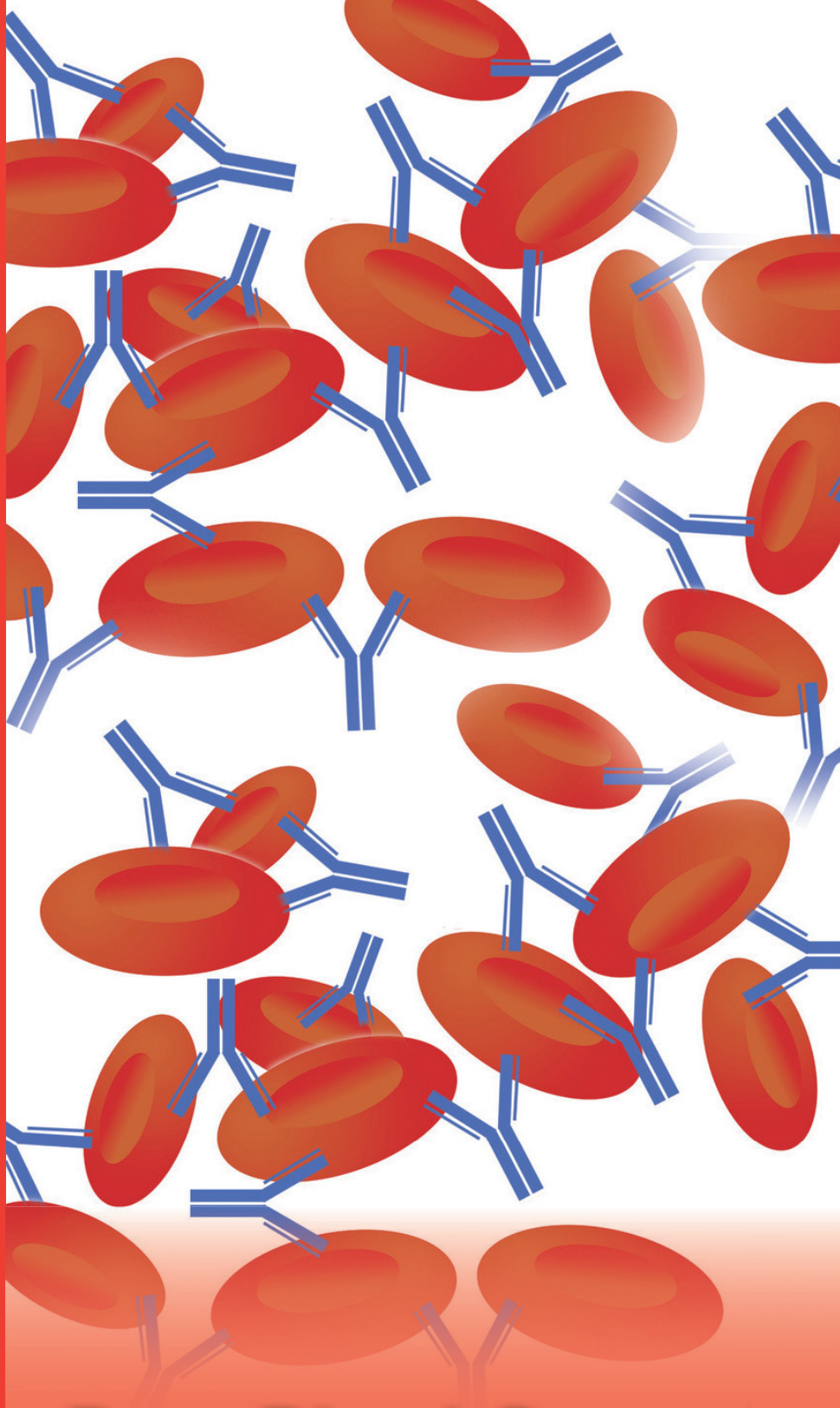
TRANSFUSION TODAY

Transfusion Today | Number 106, March 2016



Rare Blood Groups

Dubai Congress

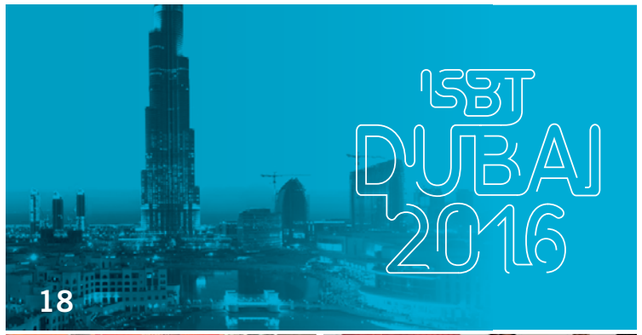
Strategic plan

Membership renewal

Harold Gunson Fellowship - renewed

ISBT

Contents



President Celso Bianco **Secretary General** Roger Dodd **Executive Director** Judith Chapman **Design** drukkerij Teewes **Photography** Transfusion Today **Advertising** Monique van Dorp, communication@isbtweb.org

Send all correspondence to ISBT - Marnixstraat 317, 1016 TB, Amsterdam, the Netherlands.
T + 31 20 7601 760, F + 31 20 7601 761, communication@isbtweb.org.

Gold members

Abbott A Promise for Life · DiaSorin · HAEMONETICS® THE Blood Management Company® · IMMUCOR · Roche

Judith Chapman

Editorial

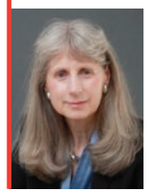
Last week I was in Dubai for discussions at the Dubai World Trade Centre in preparation for the 34th International congress of the ISBT in Dubai.
I am confident that the congress will be a big success. It will be the first time an international congress will be held in the Eastern Mediterranean Region and the local transfusion medicine community are really looking forward to welcoming delegates to the congress.
The congress venue is perfect for ISBT with co-location of the plenary and parallel symposia halls with the exhibition.

Dubai is a great modern location with wide open boulevards and a consistently blue sky. It is of course characterised by its tower blocks of offices, apartments and hotels. When you delve into the old parts of Dubai you will find interesting souks and old buildings scattered in between the modern blocks.

We hope that the scientific programme matches the modern feeling of Dubai. There will be state of the art presentations in the plenary and parallel sessions on a rich variety of topics including presentations on breaking news items such as Zika. The ISBT Academy day on Sunday September 4 is designed as an educational day for delegates to update their knowledge on topics from the donor to the patient. The main scientific programme starts on Saturday September 3 with a local day with speakers from across the Arab world. An outline of the programme can be found in this issue of Transfusion Today which also contains information on two workshops at the congress.

In the Academy section of this issue you will find a report from Bridon Mbaya on a project to refurbish classrooms used for teaching biomedical sciences including blood transfusion at Mzuzu University in Malawi. The funding for the project was provided by the ISBT Academy and included the provision of Audio Visual equipment and books. The ISBT Academy was happy to support this important project which will hopefully help to give blood transfusion a higher profile. The Academy section also includes reports from events held in Italy, Russia and two activities in India. For more information on how you can get ISBT Academy support for an educational activity go to www.isbtweb.org/knowledge-education/

Advancing international collaboration to provide rare blood products to the patient in need



Christine Lomas-Francis
Chairperson ISBT Working Party on Rare Donors

For most patients compatible blood is readily available from a local blood supplier. However, for patients who have erythrocytes that lack a high-prevalence (or 'public') antigen and who have made the corresponding alloantibody, or for patients with multiple alloantibodies, appropriate antigen-negative blood may not be available locally necessitating a national or international search for rare blood. The definition of what constitutes a rare blood type differs among countries; for blood donors lacking a high-prevalence antigen mostly it is a prevalence of 1 in 1000 (or less). Donors who are negative for a combination of alloantigens with a phenotype prevalence from 1 in 100 to 1 in 1000 are also considered rare. The prevalence of some blood types greatly differs and depends on the ethnicity of a population: e.g., D– Fy(a–) blood occurs in 1 in 20 donors with European ancestry whereas in China, Taiwan and South-East Asia in general, only 1 in 10,000 donors would be D– Fy(a–). Certain blood types, such as Rhnull are universally rare with as few as 12 donors registered world-wide. Other universally rare phenotypes include En(a–), Ge:–2,–3, K0, McLeod, p, U–, and Vel–. To fulfill the rare blood requirements of local populations, countries with the resources to do so have established national or regional testing centers to screen for rare donors and compile donor registries; these have expanded into a network of national and international donor registries.

In 1964, as recommended by the ISBT leadership who understood the challenges of providing rare blood, and with international cooperation, the World Health Organization (WHO) International Rare Donor Panel (IRDP) was established. Management of the IRDP was assigned to the International Blood Group Reference Laboratory (IBGRL) in the UK, a role it still holds. Some 20 years later, in 1984, the concept of an ISBT Working Party on Rare Donors (WPRD) was introduced and the inaugural meeting was held in 1985. The main goal of the ISBT WPRD is to increase the number of donors in the IRDP by promoting the growth of rare donor programmes world-wide. Currently, the WPRD has 29 members from 23 countries. All members are actively involved in their respective country's rare donor programmes. Effort is made to include members from countries with newly established or developing rare donor programmes so that these countries have the opportunity to learn from the experience of others and to be supported in their endeavours. This in turn strengthens and supports the functioning of the IRDP with a positive impact on provision of rare blood to the patients who need it. Through regular meetings at ISBT congresses and e-mail communication the WPRD promotes international collaboration and the exchange of information and ideas on the challenges (local/international) related to finding and providing rare blood. Other WPRD activities include: developing educational material for blood providers, donors and patients; preparation and maintenance of guidelines to standardize listing, shipping, testing and reimbursement for rare donor blood; providing information to ISBT members on matters related to rare blood (ISBT website, e-mail, talks). The activity of the WPRD recognizes no political boundaries and is for the common good of all patients around the world.

Through the ISBT WPRD and the IRDP a structure is in place to disseminate the need for blood at a local level to the global community. Working party members have experienced that often the toughest challenge to providing blood in a timely manner is dealing with shipping and customs requirements that differ between nations as currently blood shipments do not receive the same priority afforded to transportation of organs.

The WHO International Rare Donor Panel

Nicole Thornton
Head of Red Cell Reference International Blood Group Reference Laboratory, NHS Blood and Transplant, Bristol, UK

In 1964 Dr. Arthur E. Mourant presented a proposal for the organisation of an international panel of blood donors of rare types, at the General Assembly of the ISBT in Stockholm in 1964[1]. Following this proposal the International Rare Donor Panel (IRDP) was conceived in 1965 under an ISBT initiative, in collaboration with the World Health Organisation (WHO). The purpose of the panel was to locate and facilitate exchange of rare blood between countries for patients who need it. The organisation and maintenance of the panel was allocated to the International Blood Group Reference Laboratory (IBGRL) and the inaugural meeting of the newly formed ISBT Advisory Committee for the IRDP took place on the 9th February 1966 at the IBGRL in London. The first panel was published in 1968 and consisted of almost 300 donors from 10 countries[2]. The panel was typed and copies were distributed by mail. Since then the panel has organically adapted as more and more blood groups have been discovered and advances in technology, in particular the internet, has played a major role in enhancing usability of the panel.

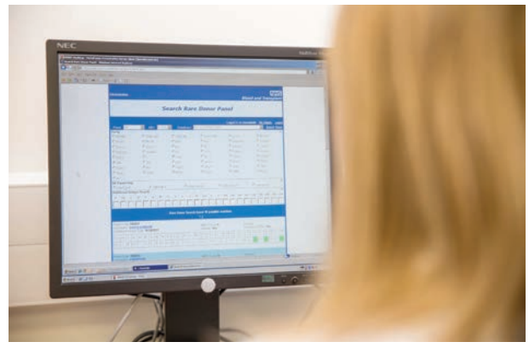
Today the IRDP consists of around 8000 donors from 27 countries and also inventories of frozen rare units from frozen blood banks around the world[3]. The IRDP is only intended for use when blood cannot be sourced nationally; therefore the rarities listed represent those that are the hardest to find in most populations. The panel continues to be administered by the IBGRL which is now located in Bristol at the NHS Blood and Transplant centre. The role of the IBGRL is to collate lists of rare donors who have been identified by blood centers around the world and make that information available in a database which can be accessed by authorised users via the internet (Fig. 1). Most IRDP contributors maintain a national donor registry but in countries where a national registry is not established there may be a number of individual contributing institutions from the same country. Contributors are expected to provide regular rare donor list updates to the IBGRL and also to advise of contributor contact detail amendments, to ensure the panel remains as up-to-date as possible. Once a search has been conducted and possible rare donors identified, the requestor is provided with the contact details for the relevant contributing institutions and it is then the responsibility of the requestor to contact the contributors to discuss donor availability and shipment logistics.

The IBGRL and the ISBT Rare Donor Working Party work closely together to make sure the IRDP continues to develop and adapt and although the classification of a rare donor has changed over the past 50 years, the core purpose of the IRDP has remained the same since it began. The international collaboration ensures that every effort can be made to provide rare blood for those patients who need it.Authorised users can access the IRDP database at: https://rare.blood.co.uk/RareDonor/Login/Default.aspx .

Access requests can be made by medical professionals who may be required to source rare blood for clinical use only. All access requests should be made to the IBGRL by emailing rare.donor@nhsbt.nhs.uk. The staff of the IBGRL Red Cell Reference department is also available to carry out searches when required and search requests should be emailed to the same email address.

References

1. AE Mourant. The Establishment of an International Panel of Blood Donors of Rare Types. Vox Sang 1965;10:129-132.
2. D Anstee et al. Rare Blood. An ISBT working party report on rare blood donors. Vox Sang 1999;77:58-62.
3. S Nance, EA Scharberg, N Thornton, V Yahalom, I Sareneva, C Lomas-Francis. International rare donor panels: a review. Vox Sang 2015.



Searching the IRDP database today

Resolving immunohaematology problems related to rare blood

Thierry Peyrard
Institut National de la Transfusion Sanguine (INTS)
Chair WP Immunohaematology

Definition of rare blood

To date, there are three commonly recognized definitions for rare blood: (i) lack of a high-prevalence antigen in the general population (e.g. Vel-); (ii) lack of multiple common antigens within the same blood group system (e.g. D-c-); (iii) lack of multiple common antigens within different blood group systems (e.g. O, e-, K-, Fy(b-), Jk(a-), s-) [1, 2]. All of those backgrounds may be responsible for technical and challenging difficulties, which can be usually solved in immunohaematology reference laboratories only.

Laboratory technical challenges related to rare blood

Lack of a high-prevalence antigen

a) Serological aspects

Serological investigation of a pan-reactive antibody is a challenge due to two major reasons: (i) availability of reagent red blood cells (RBCs) which lack the putative antigen in order to confirm the specificity of the antibody; (ii) availability of RBC typing antisera which is needed in order to confirm the antibody identification by checking the absence of the corresponding antigen at the red blood cell surface.
Appropriate reagent RBCs are sometimes even more difficult to find after considering the necessity of an ABO compatible blood type for the patient, and a match with possible underlying alloantibodies of common specificities. For example, a few years ago we had to deal with a very difficult case in France: a Vel negative patient, group O, E-c-, K-, S-, Do(a-), with a highly complex mixture of anti-Vel, anti-c, anti-S and anti-Doa. We currently have 100 different Vel negative samples in our reagent RBC cryobank, but only 37 are group O and 3 are group O and E-c-, S-. It is noteworthy that no compatible blood was available in France for this patient suffering from severe and life-threatening anaemia. After consulting the International Donor Panel database, one RBC unit was eventually located in Liverpool (United-Kingdom) and successfully imported in emergency.
The use of enzymes (papain, ficin, trypsin) and chemical reagents (dithiothreitol or DTT 200 mM) may be of great help to solve complex cases related to rare blood, both for characterization antibodies to a high-prevalence antigen and investigation of possible underlying alloantibodies of common specificities. The knowledge of a patient's ethnic origin is also of major interest and may provide essential clues for rapid diagnosis. For example, if an antibody against a high-prevalence antigen appears to be non-reactive to papain- and trypsin-treated RBCs and is present in a patient of North-African descent, the very first antibody which comes to mind is anti-Ge2.

Lack of multiple common antigens

The challenges in this case are comparable to those patients in which an antibody against a high-prevalence antigen is present. Indeed, the presence of multiple alloantibodies usually looks like a pan-agglutination. All RBCs in the test panel are reactive, but a heterogeneous pattern is usually found in such cases, contrary to most antibodies against high-prevalence antigens (homogeneous reactivity). The availability of informative reagent RBCs to confirm antibody specificity is again a major hurdle. For example, a mixture of anti-c anti-e antibodies in a RzRz (D+C+E+c-e-) patient is very challenging to solve.

b) Phenotyping aspects

An available or reliable antisera source to confirm a rare blood type in patients or donors remains an obstacle for many laboratories. Indeed, out of anti-k, anti-Kpb and anti-Lub, a very few reagents used for investigating rare blood types are accessible on the international market. Molecular methods could be very helpful in such cases, but the current genotyping platforms are not able to screen for the diverse molecular bases of the major null types (e.g. Jr(a-), Lan-, etc.).
In order to overcome antisera scarcity, there is a continuous need for developing in-house cryopreserved collections of rare typing reagents in immunohaematology reference laboratories. It is also essential to promote international exchange of rare resources between major immunohaematology reference laboratories in the world. Indeed, some antisera may be scarce in some countries but more common in other parts of the globe (example of anti-Dib, quite common in Brazil but rare in European countries). The SCARF (Serum Cell and Rare Fluids) exchange program was founded in 1972 by John J. Moulds for that purpose [3]. Of note, the development and extension of rare immunohaematology material exchange (antisera and RBCs), as well as education programs and resources for complex serological case solving, correspond to two priority aims of the ISBT Working Party on Immunohaematology in the near future.

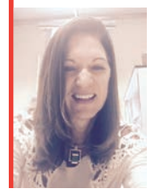
Perspectives

The use of soluble recombinant blood group proteins, acting as inhibitors of antibodies against high-prevalence antigens, will very likely become a helpful routine tool for the investigation of pan reactive sera in the near future [4]. A growing production of new rare monoclonal antibody sources is probably also to be expected, as was recently the case for anti-Vel [5].

References

1 Reesink HW et al. Donors with a rare pheno (geno) type. Vox Sang 2008; 95: 236-53.
2 Peyrard T et al. [The rare blood groups: a public health challenge]. Transfus Clin Biol 2008; 15: 109-19.
3 Nance SJ et al. Tribute to John J. Moulds. Immunohematology 2011; 27: 117-30.
4 Seltsam A et al. Recombinant blood group proteins facilitate the detection of alloantibodies to high-prevalence antigens and reveal underlying antibodies: results of an international study. Transfusion 2014; 54: 1823-30.
5 Danger Y et al. Characterization of a new human monoclonal antibody directed against the Vel antigen. Vox Sang 2015.

Provision of blood for sickle cell and thalassaemia patients



Lilian Castilho
Professor and researcher,
University of Campinas, SP, Brazil

Provision of antigen-matched blood to prevent antibody formation in the transfusion management of patients who require chronic transfusion therapy, in particular patients with sickle cell disease (SCD) and thalassaemia, has been the subject of heated debates. There is still no consensus as to the best and most practical approach, although the goal is to not only provide blood that will survive maximally but also to avoid immunization to blood group antigens whenever possible[1].
While it would be beneficial to always provide extended phenotype-matched RBCs, patient's phenotypes can make donor unit select difficult, potentially resulting in delays and increased cost of multiple antigen-negative red cell units.
In the past years, molecular DNA-based genetic methods have been provided an excellent tool for improved transfusion therapy for chronically transfused patients because they can be used to genotype patients and donors and maintain an inventory of units DNA typed for searching of compatible donors[2,3]. By testing the patient and donors, it is possible to provide more extensively matched blood for patients who are negative for multiple antigens preventing additional alloimmunization.

In previous studies we showed that red cell genotyping is the only way to accurately determine SCD and thalassaemia patient´s RBC antigens[4,5] and provided evidence that molecular typing is superior to serological typing when patients who received genotype-matched RBC units had elevated haemoglobin levels, increased time between transfusions and a lack of newly developed alloantibodies[5,6].

Currently in our institution, 100% of our registered patients with SCD and thalassaemia are genotyped with the HEA BeadChip (Immucor, Warren, NJ). Patients who require multiple transfusions are placed on prophylactic transfusion protocols. According to our experience matching for Rh (D, C, E, c, e), K, S, Fya, Jka and Jkb is cost-effective for the treatment of chronically transfused SCD patients. Although we are able to find a better match for the patients in our extended genotyped/phenotyped units, we verified that matching for Rh (D, C, E, c, e) and K is cost-effective for most of the patients with thalassaemia. Those prophylactic genotype-matching has been associated with a decrease in delayed haemolytic transfusion reaction (DHTR) and antibody formation but we verified that the use of RBC genotyping in the transfusion management of SCD patients is unlikely to eliminate the risk of RBC alloimmunization, especially antibodies to low and high prevalence antigens and Rh antibodies.

The provision of RH genotyped matched units may decrease the rate of Rh alloimmunization and DHTR in SCD patients and even without a perfect match, we could select the units based on RH alleles. Recently, we demonstrated that Rh antibodies in SCD patients with Rh variants can be clinically significant[7] and therefore matching patients based on RH variant alleles should be considered but the number of RH genotyped donors available is limited at present to fulfill the needs of patients with variants and confirmed alloantibodies. This situation is concerning as prophylaxis for maintaining higher haemoglobin levels in patients is restricted, therefore the number of transfusions in such patients is lower and due to the clinical risk, the least incompatible blood is being transfused. This concern prompted us to develop an approach performing molecular testing for common and rare types in selected donors to find combinations of common negative antigens, RH variants and high prevalence negative antigens in order to meet the needs of SCD patients and ensure transfusion safety.
The use of higher-matched blood provided by molecular typing or dry matching using a dry matching inventory for patients with SCD and thalassaemia can reduce transfusion requirements, reducing the risk of other adverse reactions like transfusion-related acute lung injury and potential exposure to infectious disease.

References

1. Castro O et.al. Transfusion 2002; 42: 683-90.
2. Ribeiro KR et.al. Vox Sang 2009; 97: 147-52.
3. Klapper E et.al. Transfusion 2010; 50: 536-46.
4. Castilho L et.al. J Clin Lab Anal 2002; 16: 216-20.
5. Castilho L et.al. Transfusion 2002; 42:232-38.
6. da Costa DC et.al. Rev Bras Hematol Hemoter 2013; 35:35-8.
7. Sippert EA et.al. Blood Transfus 2015; 13: 72-7.

Jill Storry
Assoc/Prof and Chair WP
Red Cell Immunogenetics
and Terminology

Molecular techniques/ challenges around rare donors

The quest to find blood for patients with antibodies to high prevalence antigens remains a challenge for many blood centres large and small. Screening by serological methods, although technically simple, is laborious, time consuming, and carries a higher risk for clerical error since much of the result entry is often manual. Serological reagents are scarce and, when available, extremely expensive and poorly quality-controlled. A recent experience with a commercially available anti-Coa reagent showed, after a complex serological investigation and subsequent contact with the reagents manufacturer, to be knowingly contaminated with anti-Kpa. The rationale behind its continued sales was that the odds of a Co(a–) blood donor being Kp(a+) was very low (1:10000), but in this case, not low enough!

The molecular basis to the majority of high prevalence antigens is known. For those arising from single nucleotide polymorphisms, it has been a simple task to develop PCR-based assays for their detection, and companies producing diagnostic kits and higher throughput platforms for blood group genotyping have included many clinically relevant alleles. Larger laboratories and blood centres have focussed on molecular phenotyping an increasing percentage of their blood donors for a wide array of antigens and thus have captured donors with rare blood types during the process. Such an example is the Blood Center of Wisconsin, which in a pilot study, screened 2831 blood samples for a multitude of common and rare blood group alleles and identified and confirmed 20 different rare high prevalence antigen-negative donors [1]. These included k–, Co(a–), Lu(b–), Hy–, Yt(a–) blood donors among others. Other laboratories have taken a more directed approach and focussed on clinically relevant high prevalence alleles. In one such study, Wagner and colleagues [2] developed a multiplex PCR screening assay targeted to 4 high prevalence alleles (YT*A, CO*A, LU*B, and KP*B) that used a crude whole blood lysate as a source of DNA and successfully screened 3422 donors. Twenty-two blood donors with rare blood types were identified and confirmed. In my laboratory, we have adopted and modified this approach to include VEL and HPA*1A, and among 2907 samples have successfully identified and confirmed 58 HPA-1(a–), 2 Co(a–) and 2 Vel– blood donors. So what are the limitations with a molecular approach for the identification of all rare phenotypes? The primary challenge lies in identifying rare phenotypes for which the molecular basis is more complex. A good example of these are the Jr(a–) and Lan– phenotypes, which can arise from any one of a multitude of different molecular changes in the relevant encoding gene, making it impractical to screen. However, in the case of Jr(a–) at least, there are mutations that are relatively specific to certain folk groups and thus targeted screening of donors can make the testing worthwhile. Another challenge is presented by rare hybrid alleles that do not lend themselves to simple SNP-based analysis, notably RHCE hybrids that give rise to different high prevalence antigen phenotypes in the Rh blood group system. It is possible that the next generation of molecular testing, such as whole genome sequencing will provide an answer to this problem although, it is currently beyond the reach economically of all but a few research laboratories. Another challenge, or perhaps pitfall, that has been discussed often in the context of molecular phenotyping is the existence of silencing mutations for which we do not have assays. These occur not infrequently with the increased use of DNA-based techniques. While they do not pose a threat when typing a blood donor base, since interpretation errs on the side of antigen “positivity”, they present the question of if they should be incorporated into our current testing systems. In general, this will depend on the frequency but silencing and “weakening” mutations not infrequently show themselves to be more common once identified.

Finally, the possibility to identify rare donors by molecular techniques has helped to provide blood in a more timely manner to patients in need. Mass genotyping has in some centres meant that red cell units that otherwise would have been frozen, with all the expense associated with freezing and then subsequent thawing, are now available as fresh liquid units. This has greater implications in patient care, from providing a better product to reducing hospital stay for patients that would otherwise have to wait for a blood transfusion.

References

1. Weber et al. Identifying Rare Blood Donors: A Study in On-Time High Throughput Red Cell Genotyping. Transfusion 2010;50:174A.
2. Wagner et al. Cost-efficient sequence-specific priming-polymerase chain reaction screening for blood donors with rare phenotypes. Transfusion. 2008;48:1169-73.

Celso Bianco

A little bit of history about the International Society of Blood Transfusion and rare blood donors. The proposal for an International Rare Donor Panel that could be accessed by members of ISBT was first presented to the General Assembly of ISBT at the 1964 Congress in Stockholm, Sweden, and published in Vox Sanguinis in 1965 [1]. The coordinating center for this new society endeavor was assigned to the International Blood Group Reference Laboratory, at that time located in London, and currently located in Bristol, UK. At the time of its creation, blood transfusion science had progressed substantially, particularly in the area of genetics of blood groups and immunohematology. ISBT congresses were a perfect forum for exchange of technical and scientific information, but there was a need to address clinical challenges such as finding compatible blood for patients bearing rare blood groups. Some ISBT members in the United States and in Europe had previously established panels of donors with rare blood types and frozen repositories of rare red blood cells. However, fulfilment of patient needs through informal communication channels was insufficient to the needs and respond to urgent requests. This was the opportunity for ISBT to provide concrete patient support, and to facilitate the international procurement and shipment of rare red blood cells between its members.

Many difficulties had to be overcome, including the definition of rare donors, confirmation of the accuracy of the laboratory information, access to the volunteer, non-remunerated rare donors, confidentiality of donors, transport, changes in infectious disease testing over time, expiration date of frozen rare blood units, etc. The first edition of the list was published in 1968. In 1985 a printed list of 500 rare donors from 22 countries was distributed to 110 centers worldwide. In 1999, access to the database through the internet became available [2]. The Rare Donors Working Party always maintained strong connections with the Red Cell Immunogenetics and Blood Group Terminology Working Party, and with the more recently created, Immunohematology Working Party. Today, the WHO International Rare Donor Panel harbors information from many more centers and helps a significant number of patients around the world.

ISBT is very proud of the accomplishments of the members of the Rare Blood Working Party. This issue of Transfusion Today provides us with the opportunity to thank all those that dedicated a portion of their lives to patients in need of rare bloods. Congratulations to the International Rare Donor Panel for it 50 years of service to the blood transfusion community!

1. Mourant AE. The establishment of an international panel of blood donors of rare types. Vox Sang 1965; 10:129-132
2. Anstee D, Levene C, Mallory D et al. Vox Sang 1999; 77:58-62

Celso Bianco
ISBT President

ISBT Strategic Plan 2016 - 2019

First phase
The ISBT Board started on developing the ISBT strategic plan for the period of 2016 -2019 in November 2014 during a dedicated half day at a two day Board meeting held in Rotterdam, the Netherlands.

This session had two goals:

1) Review of the old strategic plan and assess the achievements
2) Exploration of future challenges for ISBT

Previous achievements included:
- Stable membership numbers
- The provision of added value for ISBT members
- Financial health
- Improved communications
- High quality congresses

The ISBT Board identified various trends and developments relevant to ISBT, including:
- Technology developing at a fast pace
- The reduction in demand for blood and its impact on the transfusion medicine field
- Changes within the Corporate sector
- Increasing online use to access (free) information by 'young' people

Second phase
The second phase was a Board retreat held just before the London congress in June 2015. Before the retreat, the Board members were asked to complete a questionnaire on various issues including ISBT's characteristics and values, effectiveness, activities and ambitions.

The two day retreat consisted of plenary and breakout sessions on:
- ISBT's mission and values
- Vision and goals
- The external environment
- Activities required to meet key objectives
- Competencies and resources to be developed
- Construction of an action plan

A draft strategic plan was developed as well as associated actions. This was circulated around the Board for review in September 2015.

Third phase
The third phase which took place at the Board meeting in November 2015 was the finalisation of a mission statement and agreement and sign off of the strategic plan for 2016 - 2019 and associated actions. The main areas of the plan are outlined below.

Six activity domains were identified:

- Two first order domains:
  - Advancing knowledge and education
  - International outreach and coverage
- Four second order domains:
  - Congresses
  - Publications
  - Digital resources
  - Working Parties

The second order domains are the platforms through which the first order (higher) goals are realised. Each domain has its own vision (shown on the next page).

From ISBT Central Office

Domain Visions

Advancing Knowledge and Education
Vision: *Be the global "go to" organisation for transfusion medicine education, training and knowledge sharing.*

International outreach and coverage
Vision: *Engage individuals and institutions in the field of transfusion medicine all around the world in a truly accessible and effective global network.*

Congresses
Vision: *Be the international congress of choice for transfusion professionals, i.e. to organise well attended congresses with high quality innovative scientific content and presentations appealing to a diverse audience*

Publications
Vision: *Generate high quality publications which cover transfusion medicine and related fields*

Digital resources
Vision: *Be an authoritative go-to source for information and a preferred platform for networking on transfusion science and practice*

Working Parties
Vision: *Leverage the activities and output of the Working Parties and ensure alignment with the strategic direction of the Society*

Mission Statement

We are an international community of professionals sharing knowledge to enhance transfusion practice.

We achieve this by:

Providing opportunities for advancing knowledge and education

Advocacy for the welfare of blood donors and transfusion recipients

Membership renewal

We are very happy to invite you to renew your ISBT membership for the new membership year 2016-2017 (April 1, 2016 to March 31, 2017). Continuing your ISBT membership will give you the opportunity to connect and participate in our growing transfusion medicine community.

Also you are entitled to:
- Access to the ISBT Academy ePortal (including congress webcasts and presentations)
- Subscription for Vox Sanguinis (paper + online)*
- Receipt of Transfusion Today (paper + online)*
- Receipt of the monthly E-news
- Registration discount at ISBT congresses
- Online access to Working Party material

* Online access only for 35 years and under fee

How to renew
1. Login (www.isbtweb.org) with your current email address and password.
2. Click on 'My Membership & Payments' to pay your membership fee for 2016/2017.

! To ensure you will benefit from the extra's as mentioned above, it is important that you complete your membership payment for 2016/2017.

Fees
ISBT Membership fees are based on your age and your country. Read more about fees on our website.

35 years and under?
People of 35 years and under can pay a discounted fee of € 55 per year. Please read more on this discounted membership on our website.

Payment methods
Online payments can be made using the following methods:
1. Recurring direct debit*
2. Credit card (no 3D-secure)
3. PayPal
4. IDEAL (Netherlands only)

* Recurring direct debit is available to members resident in most European countries. By using direct debit you authorize ISBT to collect the payment of your annual ISBT membership fee at the start of every new membership year. This saves you renewing your membership every year so we highly recommend it!

If you do not have a credit card or PayPal account you can email membership@isbtweb.org to arrange for a bank transfer

Invoice
An invoice is available after logging in on the Payments page.

Membership card
After payment, your membership card will be available for download (in PDF-format) at your personal profile on our website from April onwards.

Address up-to-date?
To ensure that you continue to receive Vox Sanguinis and Transfusion Today and the monthly E-news, please check that your membership details e.g. postal and email addresses are up-to-date and complete. You can edit your details by logging in and by going to Edit Profile. Make sure you click on "Update profile" on the bottom of the page to safe your changes.

Questions on our website.
Most of the answers you can find at our Frequently Asked Questions. If you have any other questions, please let us know.

We are looking forward to welcoming you again in the new membership year!

Team ISBT

Join ISBT as an exempt member

ISBT has up to 40 places available for exempt membership for the upcoming membership year (April 1, 2016 - March 31, 2017). Applicants should be under 40 years of age and must submit a brief c.v. and a copy of the photo page of their passport. Exempt membership is only valid for one three year term.

What is exempt membership?
Exempt membership is designed to help those people active in the field of transfusion medicine and science who have difficulty with the cost of the membership fee. We offer exempt membership to individuals working in the field of transfusion medicine from low, medium and high development index countries included in the UN Development Programme (UNDP) list.

Exempt members enjoy the rights and privileges of Individual members and the benefits include:

- Access to the ISBT Academy ePortal (including congress webcasts and presentations)
- Subscription for Vox Sanguinis (paper + online)*
- Receipt of Transfusion Today (paper + online)*
- Receipt of the monthly E-news
- Registration discount at ISBT congresses
- Online access to Working Party material
- Voting rights

To apply send an email to membership@isbtweb.org with 'Exempt membership' in the subject heading and make sure to include a brief c.v. and a copy of the photo page of your passport.

Harold Gunson Fellowship - renewed

All Young Investigators who are 40 years or younger can now apply for the Harold Gunson Fellowship. Starting from this year it does not matter in which country you are working.

Before you send your application please make sure that you have read the Harold Gunson Fellowship procedure carefully and that you:

- Are 40 years or younger at the date of the first day of the congress
- Are the first, submitting and presenting author of an abstract which has been submitted for the scientific programme

Download the application form on the Dubai congress website: http://www.isbtweb.org/dubai/abstract-submission/ . Send the completed form to: office@isbtweb.org, together with:

- A brief biography which must include your current position and work and is countersigned by your employer or line manager,
- A statement of motivation for applying for the Fellowship,
- A copy of the photo page of your passport

Don't forget to include the email subject heading "Harold Gunson Fellowship" and your surname.

Closing date for applications is April 28, 2016.

Please note that successful applicants from very high and high HDI countries may only receive the award once and from medium and low HDI countries twice.

Welcome to our new members

(January 2016 - March 2016)

Americas

- **PERU**
  YAHAIRA ORTEGA CHAUCA
- **UNITED STATES**
  THERESA NESTER
  HANNAH HOHENDORF

Eastern Mediterranean

- **PAKISTAN**
  REHAN HAFEEZ
  HAFIZ IRFAN SHABBER
- **IRAN**
  SHARAREH MIZANI
- **OMAN**
  KHALID AL HABSI

Europe

- **ESTONIA**
  TRUUS RENNA
- **UNITED KINGDOM**
  HELEN NEW
- **THE NETHERLANDS**
  RIK HULLEMAN
- **SPAIN**
  MANEL TARIFA CHICANO
- **BELGIUM**
  HENDRIK FEYS
- **GERMANY**
  KRISHNA SWAMY
- **SWITZERLAND**
  PAUL LAMONBY

South East Asia

- **INDIA**
  NAVEEN BANSAL

Western Pacific

- **NEW ZEALAND**
  GRAEME WOODFIELD
- **AUSTRALIA**
  GANDHI PONNIAH
  JACQUELINE COUGHLIN
- **SINGAPORE**
  QI RAYMOND FU

Time	Topic	Presentation	Speaker	Country
08.20 - 08.30		Welcome		
08.30 - 09.00	Donors and donation	Implementation of national vnrbd programme	Abdulla Yetmgeta	Egypt
09.00 - 09.30		Strategies to improve the donor recruitment process	Rana Al Abdulrazak	Kuwait
09.30 - 10.00	**Coffee break**			
10.00 - 10.30	Blood/blood components and products	Automation in blood processing	Magdy Al Aqiabi	Egypt
10.30 - 11.00		Cord blood banking quality aspects	Kareema Al Arrayed	Dubai
11.00 - 11.30		Comparison of whole blood and apheresis platelets	Joseph Sweeney	USA
11.30 - 12.00		Plasma fractionation Morocaan experience	Khadija Lahjouji	Morocco
12.00 - 13.30	**Lunch break**			
13.30 - 14.00	Quality management/ Haemovigilance/TTI	Blood Supply Emergency & Disaster planning	May Raouf	Dubai
14.00 - 14.30		Implementation of national haemovigilance programme	Salwa Hindawi	Saudi Arabia
14.30 - 15.00		Challenges in setting up an accreditation programme	Afaf Ahmed Ali	Egypt
15.00 - 15.30		Is it time to start Hepatitis E testing - donor centre perspective	Gheyath K Nasrallah	Qatar
15.30 - 16.00	**Tea break**			
16.00 - 16.30	Clinical aspects	Appropriateness of Transfusion Service (patient appropriateness)	Irene Sadek	Canada
16.30 - 17.00		Platelet refractoriness - cause and management	Joseph Sweeney	USA
17.00 - 17.30		Transfusion support to bone marrow patients	Mohamed Al Mohamedi	Saudi Arabia

ISBT Academy (Educational Day) Sunday September 4 details are available on the Dubai congress website.

Workshops

Workshop on writing a scientific paper

We will offer a workshop on writing scientific papers for people who are new or relatively new (3 papers or less) to scientific writing and who wish to learn or improve their writing skills. It will consist of an introductory lecture followed by one on one discussion of your draft scientific paper.

Participants will be expected to have prepared a draft of a complete paper by July 31, 2016 ready for review by an expert mentor. The mentor will review the paper prior to the congress. During the workshop the mentor will discuss the paper with you and offer suggestions for revision and improvement.

Conditions of participation in the workshop:

- You should be an early career scientist who is relatively new to scientific writing and you wish to improve your writing skills.
- You should complete the application form for the workshop and submit it by April 1, 2016.
- You should send your draft paper to science@isbtweb.org by July 31, 2016.
- You must register for the congress.
- The workshop is limited to 15 people.

You will hear back from ISBT by April 30, 2016 if you have been selected.
More information:
http://www.isbtweb.org/dubai/scientific-programme/

Workshop on peer reviewing scientific papers

We are looking for early career scientists who are willing to be reviewers for papers in Vox Sanguinis, the ISBT Science Series and submitted congress abstracts. Therefore, we will host a workshop on peer review during the congress.

Peer review is the method by which grants are allocated, papers published and much more. Yet there is very little training in peer review, often it is up to the new reviewer to find their own way around the joys and difficulties of the review process.

Becoming involved in peer review can be very informative, help you with your own scientific writing and be a career enhancing experience. It is an opportunity to get yourself on the map and a good addition to your c.v.

The workshop is open to early career scientists who wish to offer themselves as peer reviewers and to find out how to navigate around the process. It is also open to current reviewers who wish to refresh their reviews or find out more about peer review within ISBT.

To express an interest in attending the workshop, please complete the application form which you can find here: http://www.isbtweb.org/dubai/scientific-programme/ .
Closing date for applications is July 31, 2016.

Young investigators breakfast

A young Investigator breakfast will take place on Monday September 5 at 7 a.m. on the 31st floor of the World Trade Tower adjacent to the convention centre.

Special sessions for Transfusion Practitioners (TP)

There will be sessions focused on Transfusion Practitioners and a TP networking tea. Session details will be available on the Dubai congress website.

Monday September 5				
Global Blood Safety Working Party session	Donor recruitment methods for increasing frequency	Impact of new drugs on transfusion	Implementation of Pathogen Inactivation in Eastern Mediterranean Region (EMR)	Cellular Therapies Working Party session
Refreshment Break and Exhibition				
Plenary session	New insights in mechanisms and consequences of haemolysis			
Lunch, Exhibition and Satellite symposia				
Young scientists selected abstracts	Donor health	Haemostasis factors	Malaria prevention	Sequencing technologies
Refreshment Break and Exhibition				
Haemovigilance Working Party Session	Risk models	TBD	Platelets made HLA deficient	Role of red cells in Thrombosis & Haemostasis
Poster Session				

Tuesday September 6				
Plenary session	Jean Julliard Prize			
Refreshment Break and Exhibition				
Plenary session	ISBT Presidential Award			
Lunch, Exhibition and Satellite symposia				
Blood Supply Management Working Party Session	Plasma donation	Clinical	Emerging infectious diseases - MERS	Antibody mediated red cell clearance
Refreshment Break and Exhibition				
Blood storage	Cost effectiveness of implementing genotyping in immunohaematology	Stem cell transplantation	Dengue and platelets	Platelets

Wednesday September 4				
Quality Management Working Party session	Engineered cells	In vitro evaluation of the hemostatic capacity of platelets	TTID Working Party session	Immunohaematology Abstract session
Refreshment Break and Exhibition				
Plenary session	Emerging Arboviruses and Transfusion with emphasis on Zika virus			
Lunch, Exhibition and Satellite symposia				
Donors and donation Working Party session	Management & Organisation selected abstracts	Sickle Cell Disease	Transfusion Technologies selected abstracts	Complex red cell antibody case studies
Refreshment Break and Exhibition				
IT Working Party session	Rare donor Working Party session	Transfusion and Thalassaemia	Arbo viruses	TRALI mechanisms

Thursday September 8				
Immunohaematology Working Party session		Post partum haemorrhage and maternal mortality	Bacterial detection in blood samples	
Refreshment Break and Exhibition				
Plenary session	Ethics of tissues, artificial and donor cells			
Farewell lunch				

Legend

- Blood Safety
- Clinical/cellular therapy
- Donors or management and organisation
- Immunobiology of blood cells
- Transfusion Technologies
- Working Party sessions
- Plenary sessions

ISBT ACADEMY

ISBT Supports Training of Blood Transfusion Science in Malawi

Bridon M'baya
ISBT Regional Director Africa

The ISBT foundation recently supported the Mzuzu University of Malawi with a 10,000 euro grant to improve the teaching and learning environment for biomedical sciences of which blood transfusion is an important part of.

Malawi is a densely populated low Human Development Index (HDI) Southern African country with an estimated population of 17 million, 85% of whom live in rural areas. In 2009, its Gross Domestic Product (GDP) per capita was US$290 and the proportion of the population that was estimated to live below the poverty line is 39%.

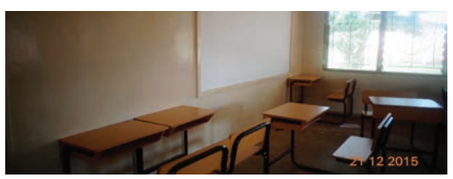
Founded 18 years ago, Mzuzu University is the second government owned university, located in Mzuzu city, 370km north of the capital city, Lilongwe. It has 5 faculties: Information Science and Communications; Environmental Sciences; Tourism and Hospitality Management and Health Sciences. The faculty of Health Sciences has three departments: Biomedical Sciences, Nursing and Midwifery and Optometry. Annually 40 students enrol into biomedical sciences and graduate into blood transfusion affiliated laboratory technologists. It is housed in a former staff house and the classroom walls, windows, furniture, corridors and staff offices were in need of repair. In addition, learning materials were needed.

The state of one of the classrooms before rehabilitation

Project Implementation
Project implementation involved the Malawi Blood Transfusion Service (MBTS) who managed the funds and the procurement processes, ISBT who provided the funds and Mzuzu University involved in the selection and supervision of contractors and the relevant learning materials. It was implemented over a 6 month period from July to December 2015. The rehabilitation works involved painting the interior walls of 2 classrooms, 3 staff offices and another study room, doors and door frames, corridor and all burglar bars in all the windows including those at the main entrance to the department of biomedical sciences. Paint was applied to all window frames and exterior window surfaces of the classrooms including the wooden doors of offices and main entrance to the department of biomedical sciences. Damaged ceiling boards in classrooms, study room and the corridor were replaced and painted. Old torn gauze wire in all the windows, the Secretary's Office and main entrance of the building was replaced. Old and worn out notice boards in both classrooms and at the main entrance were removed and replaced with new notice boards. Fluorescent fittings and bulbs which were not working and old worn out curtains in all the offices were also replaced.

The project procured and supplied an LCD projector, an LCD stand, 60 classroom desks with back rests, two office tables for lecturers, two office chairs and two easy/lobby chairs for visitors. In addition, books on blood transfusion science were provided to the University Library. With help of ISBT support, a sign post has been placed in front of the department of biomedical sciences to show where the department is situated since it is not within the Mzuzu University main campus.

The classrooms after rehabilitation and with some of the newly supplied learning materials



ISBT ACADEMY

4th National conference of Indian Society of Transfusion Medicine

Neelam Marwaha
President Indian Society of Transfusion Medicine
ISBT Regional Director South-East Asia

The 4th National conference of Indian Society of Transfusion Medicine (ISTM, TRANSMEDCON 2015) was organized in Kolkata, India, December 4-6, 2015. Four pre-conference workshops were conducted on the following topics:

- Advanced Immunohaematology
- Granulocyte and Stem Cell Apheresis
- Nucleic Acid Testing for blood safety
- Combating challenges in multi-transfused patients

The workshop programme included lectures and live demonstrations and hands-on experience where possible. The theme was "Blood Banking: The next generation medicine" and the congress was attended by a total of 652 delegates from all across the country. There were 49 invited talks from eminent speakers on a wide range of topics in transfusion medicine covering the 'vein to vein' chain. The scientific sessions were organized into donor motivation and retention, need for a plateletpheresis donor registry, immuno-haematological challenges in patients, transfusion transmissible infections, blood components, apheresis, clinical transfusion, transplantation, cellular therapies and quality management. For the first time a talk on ethical issues was also included in the scientific programme. Two panel discussions were held on challenging issues of national interest – one expert panel discussed the safety aspects of first time voluntary blood donation versus replacement donation and the second panel of experts deliberated on strategies to achieve self sufficiency in plasma derived medicinal products. An exciting and stimulating discussion took place during the panel discussion between the panelists and the audience. Two hundred and thirty-five scientific abstracts were submitted and out of these 27 were accepted for oral presentation, 201 were viewed as 'e-posters'. Another highlight was the short videos by 7 young specialists on special techniques or devices for enhancing transfusion safety. Twenty-six stalls were put up in the scientific exhibition.

The ISTM continued with its association with the ISBT for the fourth consecutive year. The plenary session on the second day of the conference was supported by the ISBT Academy. The session was on "Molecular techniques in Transfusion Medicine." There were two international speakers –Geoff Daniels, from the International Blood Group Reference Laboratory, NHSBT, Bristol, UK and former Secretary General ISBT. He presented "Molecular testing for blood group antigens: Tools and applications". The presentation aroused tremendous interest amongst the delegates and the talk was followed by many questions and comments. The second talk was on "Molecular studies on blood group antigens: the Indian scenario" and was delivered by Kanjaksha Ghosh, former Director of the National Institute of Immunohaematology, Mumbai, India. A 'Meet the expert' session was introduced for the first time in the conference and this was enthusiastically received by all participants.

Postgraduates participated in a quiz and the first three winning teams were awarded prizes and certificates. In addition to all scientific events, a magnificent cultural extravaganza of Indian classical music was organized and followed by a grand conference banquet.

Sankalp Sharma
Assistant Professor,
Dept of Transfusion Medicine and
Blood Bank,
India Institute of Medical Sciences
Raipur, Chhattisgarh, India

CME and workshop AIIMS Raipur

The Department of Transfusion Medicine and Blood bank organised the workshop "CME in Transfusion Medicine" on the 17th of January 2016.

This CME and workshop was intended for the officials of the various blood banks with an objective of disseminating rational transfusion practices and procedures of blood banking among the blood banks of Chhattisgarh and towards coordination with different clinical faculties, especially for transfusion-dependent patients.

The CME and workshop, had guest speakers from the Sanjay Gandhi Post-graduate Institute of Medical Sciences, (SGPGI); Prof. Rajendra Chaudhary, Head of the Dept. Transfusion Medicine (photo 1), Prof. Ratti Ram Sharma from the Post-graduate Institute (PGI) Chandigarh, Dr. Suman Mittal, consultant and Medical Oncologist from Raipur Chhattisgarh and Dr. Sankalp Sharma, Ass./Prof. Dept. Transfusion Medicine and Blood Bank, AIIMS Raipur and organizing secretary of this workshop. (photo 2)

Photo 1: Lighting of lamp during the Inauguration Ceremony

Photo 2: Guest faculty with Director AIIMS Raipur

Sankalp initiated the CME proceedings with a lecture on all needed blood transfusion arrangements for a hospital-based blood bank as well as patients suffering from haemolytic disease of the fetus and new-born (HDFN). Sankalp also spoke about point of care (POC) tests and equipment along with the need to demarcate the satellite laboratories from the main laboratories, regarding the blood transfusion needs and total blood consumption, a relatively new concept in India. Dr. Suman Mittal a medical oncologist followed up the discussion with the comparison of transfusion indications under several prescribed guidelines and reviewed each of the blood component indications including the pharmacological alternatives of blood transfusion for various malignancies. Prof. Chaudhary gave an overview on the "challenges faced by the chronically transfused patients". He gave a brief presentation on the acute and chronic transfusion requirements of haemoglobinopathy patients and the protocol followed for management of such patients within SGPGI. He discussed blood dosage, rate of blood transfusions for haemoglobinopathy patients; time to initialize blood treatment and how to monitor the annual blood requirements. Transfusion related allo-immunisation in multi-transfused patients, a summary on the transfusion transmitted infections and nucleic acid testing in India was also discussed

Photo 3: Workshop on column agglutination

briefly. Prof. Ratti Ram Sharma from the Department of Transfusion Medicine, PGI Chandigarh, spoke to the audience regarding therapeutic apheresis, followed by the indications for the blood transfusion therapy in patients suffering from sickle cell anaemia. Ratti also explained indications for red cell exchange in sickle cell disease related complications and the magnitude of this disorder in India. This lecture was followed by a panel discussion, with questions to the faculty ranging from the formulation of the Blood donor registries, allo-immunisation and haemovigilance in India.

This work-shop was organized in conjunction with Bio-Rad laboratories, tests for detecting common aberrant allo-antibodies were demonstrated to the delegates and they had the opportunity to perform the tests themselves and learn common blood bank techniques. (photo 3)

The delegates also included various representatives from the Chhattisgarh state AIDS control society controlled, NACO blood Banks along with technologists and post-graduate students.

AIIMS Raipur wishes to thank all delegates, blood banking specialists, technical experts, clinicians, the sponsors and International society of Blood Transfusion, (ISBT) for making this CME and work-shop a success.

Sergey Sidorov
Executive Director
Russian Transfusionist Association

Standards and individual approaches in Clinical Transfusion Medicine

The Russian Transfusionist Association and National Pirogov Medical & Surgical Center held their 19th conference "Standards and individual approaches in clinical transfusion medicine," on December 16-18, and was attended by over 150 specialists from Russia, Kazakhstan, Ukraine, Spain, Germany, Belgium and the UK.

The year 2015 actually became revolutionary regarding domestic transplanting haematopoietic stem cells from unrelated donors. Igor Paramonov reported that 10 registers in Russia and Kazakhstan have 46,793 donors who have completed 83 stem cell donation. This raises a simple question: does Russia need their own register if the world register already includes 25 millions stem cells donors? The answer is yes, due to our genetic diversity. Genotyping of 28509 Russian donors revealed 57 new and unique HLA-alleles. These alleles are included in the global database. And if the whole Russia's unique genotype frequency is 1 : 500, in the Chech Republic and Dagestan - 1 : 135. Therefore, the current system of regional blood banks should become the basis of stem cell donor registry.

The modern clinic needs more donor platelets. 67% of platelet concentrates in Russia is harvested by automatic apheresisbut very expensive. At the same time we discard the buffy-coats from whole blood collections. The CEO of the Irkutsk Regional Blood Bank Maxim Zarubin discussed how 4 pooled buffy-coats could generate 2 therapeutic platelet units. The introduction of platelets pooling technology significantly (by 54% or more) reduced the cost of a single platelet concentrate unit.

Olga Zaitseva (Diagnostic systems) presented the results of FDA studies, in which the Russian diagnostic test system, for the detection of antibodies to hepatitis E virus, showed the highest sensitivity and specificity. Martin Gorham explained that the ISBT Foundation has received very active responses from Ukranian colleagues. They asked to support a transfusion event in Kharkov.

Miguel Lozano, as invited ISBT Academy speaker, spent more than 2 hours. His lecture «Platelet processing and platelet alternatives" was followed by dozens of questions. The audience was very interested in platelets additive solutions, which have several advantages:

- More plasma is available for fractionation
- incidence of transfusion reactions are reduced
- Bacterial detection of slow growing bacteria, that grow initially on the surface of the plastic container (biofilm) is facilitated
- pathogen inactivation technologies could be better applied
- amount of plasma transfused in case of minor ABO incompatible platelet transfusion are reduced.

The ISBT speakers participated in two (pre- and post-conference) round-table discussions and visited hospital blood transfusion service to share the practical experience.

Professor Eugene Zhiburt has updated us with the results of 10 years experience of patient blood management implementation in the Pirogov center. Accounting for 1 patient: red blood cell transfusions decreased 1.5 times and plasma transfusions - 20 times. The Transfusion Department successfully implemented distance learning technologies for Russian speaking colleagues.

Next conference will be held in Moscow on the 15th of December, 2016. All colleagues are welcome.

Umberto Rossi
ESTM President
Milano / Italy

Danièle Sondag
Senior Scientific Adviser,
Blood Service/Belgian
Red Cross, Bruxelles / Belgium

Anna Massaro
ESTM Vice-President
Torino / Italy

Patrizia Accorsi
Director, Immunohaematology
and Transfusion Medicine
Service / Haematology Laboratory
Pescara / Italy

José Manuel Cárdenas
President, Spanish Society of
Blood Transfusion and Cellular
Therapy (SETS),
San Sebastián / Spain

Vincenzo Saturn
AVIS President, Varese / Italy

ESTM residential course, Italy

"Learning the best ways for caring for blood donors: significance of safer blood and better European Transfusion Medicine"

was held in Milan, Italy, December 3-5 2015).

The majority of this event was part of an annual project and partially funded by Fondazione Cariplo of Milano (Significato civico e sociale della donazione volontaria: il contributo di Milano al progresso della integrazione europea della Medicina Trasfusionale").

The programme consisted of 6 half-day sessions:

1) Donor care: present situation of blood, plasma, cord blood, stem-cell and/or organ donation in Europe

2) Medical and social importance of donation and donor care

3) Adjustment of blood donor organisations to improve patient blood management

4) Different types of human donation

5) Donation as a powerful contribution to a better European society

6) Donation as a trigger of European integration and social solidarity

In total there were 49 participants from 22 countries: 16 European (Albania, Bulgaria, Croatia, Finland, Georgia, Greece, Israel, Italy, Kosovo, Macedonia, Portugal, Serbia, Slovenia, Spain, Sweden, UK/ India), 3 African, Algeria, Egypt, Nigeria), 1 Asian (Israel, Pakistan), 1 Latin-American (Peru) and 1 was Australian.

Unfortunately, a few other participants (from Ethiopia, Libya, Nigeria, Tanzania, Uganda, Afghanistan and Kazakhstan) were not able to attend due to visa delays. Teachers were from Belgium, Italy, the Netherlands, Romania, Spain and Switzerland.

Five round-table sessions took place. Due to the diversity and high number of participants vivid and constructive discussions were held, knowledge and experience of professionals from different societies, political structures and various countries were exchanged.

The course aimed to discuss the civic and social values of voluntary donation, and how to convince the public and the Authorities that voluntary donation is quite a notable contribution to both social and political progress.

The most significant current issues in donor care were dealt with, in the light of the existing economic circumstances and demographic changes currently affecting most European countries and work results and attitudes towards the main course topics were compared.

The problems discussed at the course have been well perceived in regards to the current situation in many countries at this particular moment, and more importantly for future.

Very essential social aspects of donor Organisations have been discussed, bearing in mind the integration processes of an increasing immigrant numbers, new European citizens, requiring new policies in many European countries regarding to voluntary donation.

This phenomenon is of great importance, not only to better transfuse hospitalized immigrant patients, but immigrants also strong impact the development of voluntary donation whenever they go to their original countries.

EASTERN MEDITERRANEAN

Ahmad Gharehabghain
Professor of Clinical Immunohaematology
Regional Director
Eastern-Mediterenean

Amir Yami and Arezoo Darbandi
Laboratory Hematology and Blood Bank Department, School of Allied Medical Sciences, Shahid Beheshti University of Medical Sciences.

How Medical Laboratory Science education can impact on blood transfusion safety?

As part of health care system, blood transfusion has an undeniably crucial role in patients' care, treatment and survival of patients undergoing major surgery, cancer therapy, organ transplantation, haematological and bleeding disorders 1,2.

The role of medical laboratories is to provide accurate test results of and safe and timely blood product transfusion for the patient. They are also involved in specialized blood group testing. Moreover, blood transfusion relies heavily on health care development and proper training from donor to patient vein, from both sides (blood product and recipient) need properly trained professional staff. Biomedical scientists need to ensure that any patient who require a blood transfusion receive a safe transfusion. They test the patient's blood, firstly determining their blood group, and then perform laboratory tests along with the donated blood to detect for antibodies in the patient. And only when they are completely satisfied that the blood is safe, they issue it for transfusion. On the other hand, they can work at blood transfusion establishments on collecting, testing, preparing and dispatching blood and blood components to hospitals1,2.

Shahid Beheshti University of Medical Sciences is one of the three medical universities in Tehran. It began its mission in 1961 with establishing the Schools of Medicine. Presently, the university benefits from 12 schools admitting students in a wide and varied range of fields from 40 fellowships, 24 sub-specialties, 34 specialties, 43 PhDs, 3 general medical fields (medicine, dentistry, and pharmacy),as well as 63 majors at M.Sc. and B.Sc. level. As part of the Shahid Beheshti's school, the Allied Medical Sciences School was established in 1972 in order to train expert professionals in allied medical sciences. Presently, this school benefits from 60 academic staff members and 940 students in 13 majors fields. There are now about 532 undergraduate students, 300 M.Sc. students and 108 Ph.D. candidates 3.

The Medical Laboratory Sciences students pass about 130 courses including General (22 credits), Basic (31 credits), Special (61 credits), and Training courses (16 credits) during their 4 years of education. Moreover, there are eight and three credits assigned to Haematology and blood bank respectively which include three practical units for Haematology and 1 unit for Immunohaematology. Also, there are 16 credits (one semester) training in teaching hospitals, which students in this course must pass every 2 weeks for each section of the lab and in the end of semester a comprehensive exam, including both theoretical question and practical acts, must be taken.

The question is whether this program will create real knowledge and skills in the field of blood banking laboratories in hospitals. Teaching both theoretical and practical university courses is important for blood bank professionals,

However, hospital staff should pass an extra short-period professional training for each laboratory section. Furthermore, students after four years bachelor of Medical Laboratory Science are required to work for two years in the state hospitals. If the student pursues a Master's Degree, this period could be postponed.

In conclusion, M.Sc. and Ph.D. studies in which "laboratory haematology and blood bank" related subjects are included will create more knowledgeable experts in medical laboratories in Iran 4.

References:

1. Khademi R., Gharehbaghian A., Karimi Gh., Vafaiyan V., Kademi R., Tabrizi M. Frequency & specifity of RBC alloantibodies in patients due for surgery in Iran. Indian J Med Res 138, August 2013.
2. Ahmad Gharehbaghian. Introduction of a program for voluntary blood donations in Iran (blood transfusion status in Iran). VoxSanguinis. 2012, 7, 183-187
3. The Fact Book of Shaihd Beheshti University of Medical Sciences.
4. S. Panzer et.al. Education in transfusion medicine for medical students and doctors. Vox Sanguinus. 2013

EASTERN MEDITERRANEAN

Mahtab Maghsudlu
Vice president for Research and Education and Ass/prof, High Institute for Research and Education in Transfusion Medicine (IRETM)

Gharib Karimi
Research Manager and Ass/prof, High Institute for Research and Education in Transfusion Medicine (IRETM)

3rd International Congress on Transfusion Medicine in Iran

The 3rd International Congress on Transfusion Medicine was organised by the High Institute for Research and Education in Transfusion Medicine (IRETM) and the Scientific Society of Blood Transfusion last December 15-17 2015, Tehran. World Health Organization (WHO-CC), ISBT, Establishment Francais du Sang (EFS), Asian Association of Transfusion Medicine (AATM), European School of Transfusion Medicine (ESTM), and Iran Medical Council were the main international scientific contributors.

The two main themes were (1) evidence based clinical use of blood components and (2) Plasma derived medicines (PDMs).

Irrational over-use of blood is one of the challenges in blood services worldwide. In other words, the administration of blood and blood products in many cases is carried out without considering the scientific evidence, and Policy makers emphasized the production of PDMs and the need to achieve self-sufficiency. Medication derived domestically produced plasma can prevent emerging infections. The capacity of plasma collection for fractionation by Iranian Blood Transfusion Organization (IBTO) has reached 167500 L during 2014. IBTO is planning to increase plasma production and reinforce self-sufficiency in plasma production.

The Congress scientific program covered the following ten themes: Patient Blood Management, Haemovigilance, Thrombosis and Haemostasis, Haematopoietic Stem Cell Donation & Transplantation, Paediatric Transfusion, Perioperative Transfusion, Donor and Donation, Blood Safety, Immunohaematology and Plasma Derived Medicines. Posters were also displayed. The abstract book was published as an issue of The Archives of the Iranian Medicine Journal. The delegates and speakers attended the congress were from different countries including England, France, Germany, Switzerland, the Netherlands, Canada, Lithuania, Pakistan, Tajikistan, Sudan and Bhutan.

In total, the congress hosted around 1300 participants of whom 970 were physicians, experts, students or staff from different parts of the health sector both from blood centres and medical universities across Iran.
In the opening ceremony, Ali Akbar Pourfathollah, IBTO Managing Director and congress president, presented the important achievements of IBTO. The first edition of the book "the Clinical Guidelines for Blood Transfusion in Iran" was launched. Fereydoon Ala, founder of the Iranian Blood Transfusion Organization, was also honoured.

A whole panel of international experts were present, including: Donat Spahn, Pierre Francois Falcou, Peter van den Burg, Anneke Brand, Mickey Koh, Michael Schmidt, Stephan Kießig, Pierre-François Falcou, Meer taher shabani-rad, Siamak Bahram, Jean-Pierre Allain, Hasan Abbas Zaheer, Mahrukh Getshen, Joana Bikulciene, Farrukh Hassan, Behnaz Bayat, Farhad Heshmati, Rachid Djoudi and Djamal Benomar. Ali Akbar Pourfathollah, Mahtab Maghsudlu, Sedigheh Amini Kafiabad and many other Iranian colleagues also delivered interesting lectures.

Furthermore, three educational workshops were held in which participants had the chance to develop practical skills related to plasma, molecular HLA-typing and voluntary donor recruitment. The workshop on blood donation recruitment was conducted as part of WHO Collaborating Centre's activities that attracted participants from Sudan, Pakistan, Tajikistan, and Afghanistan. It should be noted that IBTO has achieved 100% voluntary, non-remunerated blood donors since 2007.

A booth space displaying IBTO publications was also present as well as an exhibition of equipment and supplies in the field of blood transfusion.
At the closing ceremony, the organizers of the 3rd Congress were honoured and on the occasion of the research day the active blood transfusion researchers were recognized.

SOUTH EAST ASIA

Wet Workshop on "Transfusion Serology"

Ashadul Islam
Chairman

The Asian Association of Transfusion Medicine (AATM), Bangladesh chapter and Dept. of Transfusion Medicine, BSMMU in Dhaka, Bangladesh jointly organized a Wet Workshop on "Transfusion Serology" on 31st December Thursday 2015 in the Aphaeresis Unit, in.

In the morning there was an Inaugural Sessionby Prof. Golam Mostofa Khan, Department Head, Anam Medical College was present at the Wet Workshop as Chief Guest; Prof. Mazharul Hoque, Secretary General, from the Blood Transfusion Society of Bangladesh (BTSB) was Special Guest. Profs. Ashadul Islam, Secretary was Guest of Honour and Nittayanada Shil, BSMMU and Treasurer of the AATM- BGD chapter, chaired the session. The session was conducted by Dr. Sheikh Saiful Islam Shaheen.

The Scientific Session was started after the Tea Break and chaired by Profs. Nittayanada Shiland and Mazharul Hoque.

Both Kazi Nowsad Hosain, Ass/Prof. & Department Head, East West Medical College and Dr. Sheikh Saiful Islam Shaheen, Medical Officer, BSMMU, moderated the session.

The scientific session was divided into lectures & panel discussion:
Atiar Rahman, Ass/Prof. from BSMMU as well as Abdul Quader (MBBS, MD-TM) delivered lectures on "ABO Blood Grouping-Backbone Transfusion Service", and "How Compatibility- Protocol Protect Both Donor & Patient from Transfusion Danger" respectively. First Fellow in Transfusion Medicine- Dr. Sonia Shormin (FCPS-TM), Medical Officer, from BSMMU presented: "Rhesus Blood Grouping, Reagent Control and Preparation of Red Cell Suspension". The lectures were found very useful to all the Medical Lab Technologists present & others gained many new insights in ABO & Rhesus Blood Grouping, Cross-matching.

Prof. Golam Mostofa Khan, Department Head at Anam Medical College, Prof. Brindaban Biswas, Department Head, at Ashyian Medical College, Ass/Prof. Ferdous Ara, National Institute of Neuro-Sciences Hospital, Dr. Manjuma Rahman, Associate Consultant, Square Hospital, Dr. Fatema Yeasmin, Medical Officer, BSMMU and Dr. Asifa Jahan, Square Hospital together with all Phase-A & Phase-B- MD, Transfusion Medicine student and other students took all part in various discussions. Medical Officers, Drs. Bepasa, Sheikh Anisul Hoq and other Residents and students, Medical Lab Technologists from BSMMU; Shere Bangla Medical College Hospital, Barisal; Shaheed Ziuar Rahman Medical College Hospital, Bogra; Dinajpur Medical College Hospital, Dinajpur & other Staffs were also present in the Workshop.

Prof. Ashadul Islam, Chairman, Registrar, BSMMU and Secretary, AATM- BGD Chapter, concluded the Workshop with thanks to all attendees, all who contributed & worked hard to make the session into a huge success and hope to organize more of such workshops in the future.

AFRICA

African Paediatric Transfusion Trial

Sophie Uyoga
Research Scientist
KEMRI Wellcome Trust Research Programme, Kilifi, Kenya

Kathryn Maitland
Imperial College London, UK
KEMRI Wellcome Trust Research Programme, Kilifi, Kenya

The TRansfusion and TReatment of severe Anaemia in African Children: a randomised controlled Trial (TRACT ISRCTN84086586) is a randomised controlled trial involving 3954 children aged 2 months to 12 years with severe anaemia (SA) (defined as a haemoglobin (Hb) <6g/dl)1. Recruitment to the TRACT trial started September 2014 and is currently ongoing. Children are enrolled at admission to hospital from 2 countries (Malawi and Uganda) and are followed for 6 months to make sure longer-term outcomes are captured. The trial has been designed to address the poor outcomes following SA in children in sub-Saharan Africa, which is associated with high rates of in-hospital mortality (9-10%), 6-month case fatality (12%) and relapse or re-hospitalisation (6%) indicating that the current recommendations and/or management strategies are not working in practice.

TRACT trial is designed to answer 3 simple questions:

1. **Which children should receive a transfusion?** Current WHO guidelines, designed to avoid overuse of blood, recommend transfusions only in children with a Hb <4g/dl (or <6g/dl if accompanied by complications). These specific recommendations have not been evaluated in clinical trials and thus practice varies across African countries. We don't know if giving blood to all children with Hb <6g/dl would help.
2. **How much blood should be given in a transfusion?** On current recommendations a quarter of children receiving transfusions remain severely anaemic and up to one third get two or more blood transfusions during a single hospital admission. We don't know if giving larger initial volumes of blood would help – this could reducing risks from additional transfusion (which include bad blood matching or blood infections), and the amount of time health personnel spend getting blood ready.
3. **Would long-term support for children after hospital admission help**? The major factors related to poor longer term outcome are multiple vitamin and mineral deficiencies and blood infections caused by bacteria - we don't know if giving vitamin/mineral supplements or antibiotics to prevent infections would improve outcomes.

The TRACT trial will simultaneously look at three ways management of SA might be improved – with the aim of reducing early and late deaths, and anaemia recurrence or readmission to hospital. The trial has 3 simultaneous randomisations (R1, R2 and R3) that compare:
R1: liberal transfusion (30ml/kg whole blood) versus conservative transfusion (20ml/kg) versus no transfusion (control). The control is only for children with uncomplicated severe anaemia (haemoglobin 4-6 g/dl);
R2: post-discharge multi-vitamin multi-mineral supplementation versus routine care (folate and iron) for 3 months;
R3: post-discharge cotrimoxazole prophylaxis for 3 months versus no prophylaxis.

The primary outcome is cumulative mortality to 4 weeks for the transfusion strategy comparisons, and to 6 months for the nutritional support/antibiotic prophylaxis comparisons. Secondary outcomes include mortality at 48 hours, 4 weeks, 3 months and 6 months; development of new profound anaemia (Hb<4g/dl) during the acute admission or development of SA (Hb<6g/dl) post discharge; readmission to hospital; proportion achieving correction of anaemia (Hb>9g/dl); adverse events relating to transfusion.

The design is practical with broad, largely clinical inclusion criteria and if confirmed by the trial, a cheap and widely available 'bundle' of effective interventions, directed at immediate and downstream consequences of SA, could lead to substantial reductions in mortality in African children hospitalised with SA every year if widely implemented.

References

1. Mpoya A, Kiguli S, Olupot-Olupot P, et al. Transfusion and Treatment of severe anaemia in African children (TRACT): a study protocol for a randomised controlled trial. Trials 2015;16(1):593.

2016

27-29 April, 2016
16th WAA/SFH International Joint Congress
Paris, France
http://www.waa-sfh-congress2016.org/welcome!en

04-07 May, 2016
24th Biennial International Congress on Thrombosis
Istanbul, Turkey
http://www.thrombosis2016.org/

25-26 May, 2016
IPFA/PEI 23rd International Workshop
Lisbon, Portugal
http://www.ipfa.nl/events/ipfa-pei-23-international-workshop-lisbon

31 May-03 June, 2016
8th International Congress of AfSBT
Kigali, Rwanda
http://www.afsbt.org/

June 09-11 June, 2016
14th International Cord Blood
SymposiumSan Fransisco, USA
http://events.jspargo.com/icb16/public/enter.aspx

July 13-15, 2016
2nd European Conference on Donor Health and Management 2016
Cambridge, UK
https://goo.gl/LA8gvF

03-08 September, 2016
34th International Congress of the ISBT
Dubai, United Arab Emirates
www.isbtweb.org/dubai

21-24 September, 2016
15th International Congress on Antiphospholipid Antibodies
Istanbul, Turkey
http://www.apsistanbul2016.org/

Meet Marie-Joelle
The Patient

Meet Bernard
The Donor

Meet Luca
The Blood
Centre Director

Meet Behrouz
The Doctor

Meet William
The Politician

Their Health
Your Work
Our System

CERUS

INTERCEPT BLOOD SYSTEM