

## Nomination of prof. dr. Anneke Brand for the ISBT Presidential Award

Anneke Brand pioneered the field of prevention of immunization caused by blood transfusions. She investigated centrifugation- and filtration-leukoreduced blood components for treatment of hemato-oncology patients, and showed that alloimmunization could be diminished or even prevented when using leukoreduced blood components [Eernisse & Brand, Exp Hematol 1981]. Also, she showed that cytomegalovirus transmission could completely be prevented when all components were leukoreduced. With Leo van de Watering, she evaluated the logistics and cost effectiveness of leukoreduction in a number of randomized clinical trials. Since then, “universal” leukoreduction of all cellular blood components has become an accepted practice in many countries. These developments have greatly improved the quality of life, as well as chances of survival for hemato-oncological patients.

She went on to establish that blood transfusion had a beneficial effect on the outcome of kidney transplantation through immunomodulation. While at the time it was generally accepted that transfusion had a negative effect on cancer recurrence through immunomodulation, she was able to establish that in fact no such effect was present, as shown in a consecutive series of prospective trials by Houbiers, Van de Watering, and Bilgin. In an important paper co-authored with Van de Watering [Circulation 1998], it was shown that transfusion with 4 or more leukocyte-containing red cell concentrates did lead to an increased risk of post-operative infection in cardiac surgery patients.

Her scope is broad. In the 1970s she developed a laboratory test to select suitable blood donors if patients had HLA antibodies. She set up a registry of blood donors that are homozygous for certain HLA alleles, in order to more easily obtain HLA matched platelets for highly immunized patients. She studied the clinical effect of HLA matched platelets, as well as platelets whose HLA was stripped by acid elution, together with Vera Novotny. With Henk Schonewille, they study alloimmunization of red blood cells, which they found was dependent on non-inherited maternal antigens (NIMA) transferred through breast milk. She discovered that HLA-DR sharing between donor and recipient led to induction of tolerance, while a mismatch led to immunization. Together with Humphrey Kanhai they piloted intrauterine transfusions in the Leiden University Medical Center, which now routinely performs the procedure for the entire country. She worked on the optimal conditions of storage and expansion of cord blood for transplantation. She studied double cord transplantations, and how to optimize platelet engraftment after transplantation. In 1994, together with Fred Valkenburg, she founded the cord blood bank in Leiden. She worked on photo sterilization of red blood cells using phthalocyanide-based photosensitizers. With the undersigned, she conducted a trial evaluating the clinical efficacy of platelets that were photo-sterilized with riboflavin, showing no increase in bleeding tendency in hemato-oncology patients.

In 2000 she was the first to become professor of Transfusion Medicine in Leiden. As promotor and co-promotor, she helped over 20 students getting their PhD. She co-authored more than 350 papers. To this date, she is a well-respected specialist in transfusion medicine, and is a frequently asked speaker and teacher, invitations which she preferably accepts when coming from developing countries.

Ultimately, everything that counts for her is the wellbeing of her patients. Until the last day before retirement, she was seeing patients. She was a devoted doctor who was there for her patients 24/7.

As shown from the work above, she is a great colleague and a true collaborator, and is always willing to step aside for someone else to receive credits, despite the sometimes huge effort she puts into designing, performing and reporting of the clinical trials.

Anneke Brand now should be awarded for all her work in the broad field of transfusion medicine, and it is for that reason that I nominate her for the ISBT Presidential Award.

**From another isbt member:**

I know Anneke Brand since my coming to the transfusion medicine environment/business in 1980. In that time, I had a lot of contact with her and dr. George Eernisse concerning the development, improvement and of course very important, the prove of the clinical effectiveness of leukocyte depletion filters (leucocyte depleted red cells) in patients. In all the years thereafter, she has positioned herself as a respected scientist worldwide through original basic and applied research, combined with a significant educational contribution in this field.

May the committee grant her this honorable award.

## **CURRICULUM VITAE**

**Anneke Brand**

1965 - 1973	Training Faculty of Medicine, Vrije Universiteit Amsterdam
1973 - 1978	Training in Transfusion Medicine, University Leiden, head Prof. J.J. van Rood
1979	PhD thesis: Platelet Supportive care, promotor: Prof. J.J. van Rood
1978 - 1982	Training in Internal Medicine, University of Leiden, registration 1982, head Prof. J.J. de Graeff
1982 - 1984	Training in Clinical Hematology; Registration Hematologist 1984 head Prof J.J. Veltkamp
1984 - 1988	Consultant Clinical Hematology, Immunohematology and Blood Bank Leiden University Medical Center
1988 - 1994	Medical Director of the Red Cross Blood Bank Leiden Senior Lecturer Leiden University, Transfusion Medicine
1994 - 2002	Medical Director & R&D, Red Cross Blood Bank Leiden-Haaglanden
1995	Fellow of the Royal College of Pathology
1997	Claes Högman Lecture Award
2002 - 2011	Manager R&D and Education, Sanquin Blood Bank, region South West Professor in Transfusion Medicine, Leiden University
2009	Blundell Award, British Blood Transfusion Society
2011	Emeritus Professor LUMC
2011 – 2014	Medical Director Europdonor
2014 -	Medical Advisor Europdonor

### **Past and present Functions**

Member of the Board Dutch Society for Hematology  
Member of the Board Dutch Society for Immunology and Transfusion Medicine  
Member of the Board European Society Hemapheresis  
Scientific Advisory Board of the Canadian Blood Services  
Vox Sanguinis review editor  
Member ISBT Working Group on Pediatric Transfusion Medicine  
Chairman of Section Education Dutch Society for Blood Transfusion  
Honorary Member of Scientific Board European School for Transfusion Medicine  
Scientific Advisory Board of the Sanquin Dutch Blood Supply  
Member Advisory Board Dutch Health Council  
Member of section Transfusion Medicine of the Dutch society for Internal Medicine  
Member of TRIP board (the Dutch Steering Committee for Hemovigilance)  
Medical Director for NMDP (National Marrow Donor Program) collection center Europdonor, Leiden  
Member of EHA board