As for the Past, as for 2010

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Volume 36 of TRANSFUSION MEDICINE AND HEMOTHERAPY of 2009 was framed by two highly valuable compilations of knowledge for clinicians and specialists dealing with blood safety and blood supply in Germany. Issue 1 presented recommendations of the German Advisory Committee Blood (Arbeitskreis Blut) concerning various blood-borne pathogens [1]. And the volume was completed by publishing the 'Cross-Sectional Guidelines for Therapy with Blood Components and Plasma Derivates' of The Board of the German Medical Association on the Recommendation of the Scientific Advisory Board in its 4th revised edition [2]. The summer issues of TRANSFUSION MEDICINE AND HEMOTHERAPY have given a comprehensive oversight on the chances and enterprises that come along with Molecular Blood Group Diagnostics [3] and Molecular Diagnostics in the Whole Genome Age [4] which may contribute to significant changes in routine blood group testing in the near future. These rather research-oriented issues and the above mentioned compilations also reflect the multifariousness of transfusion medicine and its importance for national health. In the upcoming year the Editor-in-Chief and the Associate Editors aim to continue their efforts to further improve the scientific expertise and clinical relevance of both original articles and reviews published in TRANSFUSION MEDICINE AND HEMOTHERAPY. In this context we also would like to invite you and your colleagues to consider a publication of your ongoing scientific work in TRANSFUSION MEDICINE AND HEMOTHERAPY.

In the current issue of TRANSFUSION MEDICINE AND HEMOTHERAPY there are two original articles dealing with blood safety especially of platelets concentrates (PCs). Philipp et al. [5] reported about the challenge to increase the lower limit of detection concerning a broad range of bacteria by optimizing PCR technology. Picker et al. [6] compared two different pathogen inactivation systems in regard to the in vitro function of platelets during storage while focusing to annexin V

release and the mitochondrial transmembrane potential. Furthermore, Edel et al. [7] highlighted an important topic of therapeutic hemotherapy. They described their single-center experience for using pooled SD-plasma instead of single fresh frozen plasma (FFP) in patients with thrombocytic thrombocytopenic purpura to replace ADAMTS-13 activity more consistently.

Moreover, the Paul-Ehrlich-Institut (Henseler et al.) gives an overview on the annual production, release, consumption and decay of traditional blood components, stem cell transplants and plasma derivatives for a follow-up period of 8 years (2000–2007) [8]. The article illustrates that, in accordance to the goal of the German Transfusion Act ensuring a national blood supply of highest quality and safety, the degree of national self-sufficiency is near a 100% level for red blood cell concentrates (RBCs), FFP and PCs. Whole blood and platelets were donated on the one hand by volunteers in non-commercial blood donation services such as charitable organizations (German Red Cross, university and local hospital) and institutions of the German Army, or, on the other hand, in private, profit-oriented donation centers. According to the authors, 55 RBC units were available per 1,000 inhabitants in Germany in 2007 (37/1,000 throughout Europe in 2005) corresponding to near to 4,600,000 RBCs per year that allow for bridging short-term gaps in blood supply on summer holiday or pandemic such as pandemic influenza (H1N1), particularly by prioritizing the use reasonable. This significant difference in favor of Germany might provoke one to state enough 'space' to save blood units applied to patients by more rigorous decision making concerning appropriate indications for transfusion or right safeguards to ensure an optimal blood support and a good quality of life. Voluntary blood donation is a vital component of health care and continuously supported by the 58th World Health Assembly by the announcement of a World Blood Donor Day held each year on June 14,

to create significant awareness of the importance of voluntary blood donations, to encourage more and especially young people to become regular donors, and to thank all donating their blood.

As mentioned above, the trend analysis by the Paul-Ehrlich-Institut expels the number of stem cell transplantation units manufactured from different sources (*expressis verbis* peripheral blood and umbilical cord blood) – however without considering stem cell products generated from bone marrow since this entity is subordinated to the German Tissue Act, and not to the German Transfusion Act. In 2007, the manufacture of allogeneic peripheral blood stem cells was more than twice as high as in 2000 (4,682 vs. 2,153 individual doses for a transplant), whereas autologous peripheral blood stem cells were produced on a nearly constant high level (6,737 vs. 7,393 per year). Nearly 40% of the allogeneic stem

cells could be exported to the patients' benefit worldwide. This reflects the enormous efforts done in Germany in the last two decades to inspire millions of the German population to become registered and HLA-typed as volunteer stem cell donor for altruistic reasons. Also the manufacturing of autologous stem cell preparations from cord blood becomes more popular, resulting in 10,313 units of collected, processed and cryopreserved cord blood samples in 2007. This phenomenon might reflect the belief that cord blood-derived stem cells or other cord blood cells may increasingly become the potential to cure patients from hematological malignancies or to replace diseased or injured tissues. In this way, cord blood banking is a growing market, not only for economic reasons but also for research purposes. Therefore, cord blood banking should become an integral part of GMP-guided blood banking and accompanied by transfusion specialists.

References

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- 6 Picker SM, Oustianskaia L, Schneider V, Gathof B: Annexin V release and transmembrane mitochondrial potential during storage of apheresis-derived platelets treated for pathogen reduction. *Transfus Med Hemother* 2010;37(1):7–12.
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