4th International StKB Future Workshop on Hemo- and Cell Therapy

Paradigm Shifts in Transfusion Medicine

Platelet microRNA Profiles and the Effect of Pathogen Reduction on Platelet Function

April 20th, 2012
Johannes Gutenberg-University
Mainz, Germany

Program

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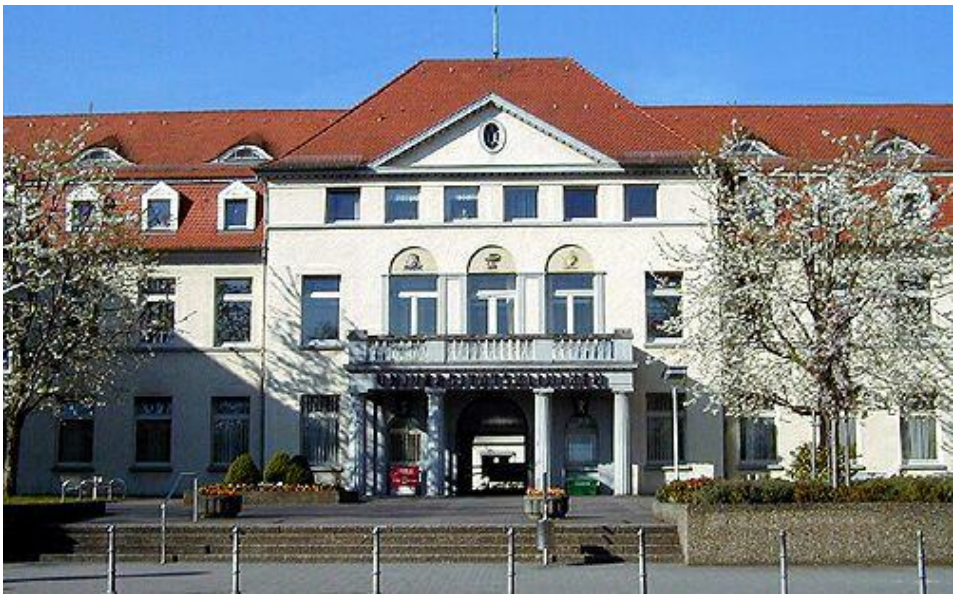
Platelet microRNA Profiles and the Effect of Pathogen Reduction on Platelet Function

Time	April 20th, 2012
Place	Lecture Hall, Building 505H Department of Surgery University Medical Center Johannes Gutenberg-University, Mainz, Germany
Start	13:00 h



Dear Sir or Madam,

Dear Colleagues,

The 4th International StKB Future Workshop on Hemo- and Cell Therapy will present the three currently-debated **paradigm shifts in Transfusion Medicine** and the contrast between component-centric and patient-centric approaches to meeting patient transfusion needs. It will explore how each paradigm shift represents a different philosophy about how we can best meet patients' needs and how the paradigms can eventually complement one another to benefit our patients. Because pathogen reduction (PR) could be the most immediate paradigm shift, the Workshop will also explore whether PR can affect the proteomic equipment of platelets and whether further research is needed in this regard before PR is further adopted for routine use.

1. Paradigm Shifts in Transfusion Medicine

The three currently-debated "paradigm shifts" are: patient blood management (PBM), multicomponent apheresis, and pathogen reduction (PR). PBM minimizes allogeneic-donor exposures and transfusion complications through enforcement of restrictive transfusion guidelines, correction of anemia and minimization of blood loss through various methods (including pharmacologic alternatives to transfusion), as well as recovery of the patient's own blood. Multicomponent apheresis collects red blood cells along with platelets and/or plasma during the same donor apheresis procedure and minimizes allogeneic donor exposures (and transfusion complications) through transfusion of all of the components collected during the same procedure to the same transfusion recipient. PR inactivates transfusion-transmitted pathogens to eliminate the most common transfusion-transmitted infection (platelet transfusion-associated sepsis) and to protect the blood supply from the next major pathogen to emerge in the future. PBM and multicomponent apheresis shift the focus of transfusion medicine from component-centric to patient-centric, concentrating on how to best meet the needs of each *individual* patient rather than a country's *total* supply needs. Thus, they transfer decision-making from centralized blood-*procurement* agencies to decentralized blood-*management* programs that operate close to the patient and the clinician. PR builds upon our existing component-centric infrastructure to minimize the infectious risks of transfusion and to make each component safer for the recipient.

2. Platelet microRNA Profiles and the Effect of Pathogen Reduction on Platelet Function

Data from the last two years have shown that platelet microRNAs—small non-coding RNA species that play a role in the post-transcriptional gene regulation for the majority of human genes—are potential regulators of platelet function. PR intercalates chemicals into DNA and RNA to inhibit cell replication, and it may thus inactivate the double-stranded precursors of platelet microRNAs. If PR really alters platelet microRNA profiles, and if proteins synthesized by platelets during storage affect platelet function, the function of pathogen-reduced platelets might be reduced by PR. Comparisons of platelet microRNA profiles (and ideally the proteome) of pathogen-reduced versus non-pathogen-reduced platelets, over 1-7 days of storage following PR, are needed to show whether this is (or is not) the case.

The invited speakers from the USA, Canada, Sweden, The Netherlands, Switzerland, and Germany will present their views on the paradigm shift(s) currently advocated in Transfusion Medicine, the principles of pathogen reduction of platelets, recent findings on platelet microRNAs, clinical experiences with pathogen-reduced platelets, potential adverse reactions to the treated platelets, and preliminary results of direct comparisons of the microRNA profiles of pathogen-reduced versus non-pathogen-reduced platelets.

We look forward to a stimulating debate.
See you in Mainz on April 20th, 2012!

Walter E. Hitzler
President of the StKB
Professor and Director, Transfusion Center,
Johannes Gutenberg University Mainz, Germany

Eleftherios C. Vamvakas
Co-Chair, 4th StKB Future Workshop
Professor and Vice-Chair, Dept. of Pathology
Cedars-Sinai Medical Center, Los Angeles, USA

4th International StKB Future Workshop Hemo- and Cell Therapy

April 20th, 2012; Lecture Hall, Building 505H, Department of Surgery,
University Medical Center, Johannes Gutenberg University, Mainz, Germany

Paradigm Shifts in Transfusion Medicine

Platelet microRNA Profiles and the Effect of Pathogen Reduction on Platelet Function

Chairs: W.E. Hitzler, Mainz, Germany; E.C. Vamvakas, Los Angeles, USA

13:00 - 13:05 h	**Walter E. Hitzler, Mainz, Germany** Introduction
13:05 - 13:45 h	**Eleftherios C. Vamvakas, Los Angeles, USA** Paradigm Shifts in Transfusion Medicine
13:45 - 14:25 h	**Paul M. Ness, Baltimore, USA** Quality Platelet Transfusion: For the Patient and the Component
14:25 - 15:05 h	**Patrick Provost, Quebec, Canada** Current Status of Platelet microRNAs
15:05 - 15:30 h	**Coffee Break**
15:30 - 15:50 h	**Behrouz Mansouri-Taleghani, Bern, Switzerland** Swiss Experience after Nationwide Implementation of Pathogen Reduction of Platelet Concentrates in July 2011
15:50-16:15 h	**Abdimajid Osman, Linköping, Sweden** Pathogen Reduction and Irradiation of Platelets – preliminary Results of direct Comparisons of the microRNA profiles of treated versus untreated platelets
16:15 - 16:40 h	**Jaroslav G. Vostal, FDA, Bethesda, USA** Ultraviolet B Light–exposed human Platelets mediate acute Lung Injury in a two-event Mouse Model of Transfusion
16:40 – 16:55 h	**Chintamani D. Atreya, FDA, Bethesda, USA** Blood Cell microRNAs: Prospects and Challenges
16:55 -17:15 h	**Pieter van de Meer, Amsterdam, NL** Clinical Effectiveness of pathogen-reduced Platelet Concentrates in Hemato-Oncology Patients.
17:15 -17:30 h	**Hans-Gert Heuft, Hannover, Germany** Patient Blood Management (PBM) – Platelet Concentrates at Hannover Medical School
17:30 - 18:15 h	**Discussion**

Speakers:

C.D. Atreya, Ph.D., Associate Director for Research, Office of Blood Research and Review, Center for Biologics Research and Review, US Food and Drug Administration, 1401 Rockville Pike, HFM-335 Rockville, MD 20852-1448, USA. Email: Chintamani.Atreya@fda.hhs.gov

Hans-Gert Heuft, MD habil., Leitender Oberarzt, Institute of Transfusion, Hannover Medical School, Carl-Neuberg-Str. 1, 30625 Hannover, Germany. Email: heuft.hans-gert@mh-hannover.de

Walter E. Hitzler, MD, Professor, Director, Transfusion Center, University Medical Center of the Johannes Gutenberg University Mainz, Hochhaus Augustusplatz, 55131 Mainz, Germany
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Behrouz Mansouri-Taleghani , MD habil., Leitender Arzt, INSELSPITAL, Universitätsspital Bern, Klinik und Poliklinik für Hämatologie und Hämatologisches Zentrallabor, Bereich Transfusionsmedizin, Freiburgstrasse, CH-3010 Bern, Switzerland. Email: behrouz.mansouri@insel.ch

Pieter van der Meer, PhD, Blood Bank North Holland, Sanquin Plesmanlaan 125, PO Box 9137, 1006 AC Amsterdam, The Netherlands. Email: p.vandermeer@sanquin.nl

Paul M. Ness, MD, Director, Division of Transfusion Medicine, Johns Hopkins Hospital
Professor of Pathology, Medicine and Oncology, Editor, TRANSFUSION, 600 N. Wolfe St./Carnegie 667, Baltimore, USA. Email: pness@jhmi.edu

Abdimajid Osman, PhD, Clinical Biochemist, Division of Clinical Chemistry, Department of Clinical and Experimental Medicine, University of Linköping, Ingång 64, SE-581 85 Linköping, Sweden.
Email: Majid.Osman@lio.se

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Eleftherios C. Vamvakas, MD, PhD, MPH, Professor and Vice-Chair, Department of Pathology and Laboratory Medicine, Cedars-Sinai Medical Center, 8700 Beverly Blvd, Los Angeles, CA, USA.
Email: Eleftherios.Vamvakas@cshs.org

Jaroslav G. Vostal, MD, PhD, Chief, Laboratory of Cellular Hematology, Division of Hematology, Center for Biologics Evaluation and Research, US Food and Drug Administration, 1401 Rockville Pike, HFM-335 Rockville, MD 20852-1448, USA. Email: jaroslav.vostal@fda.hhs.gov

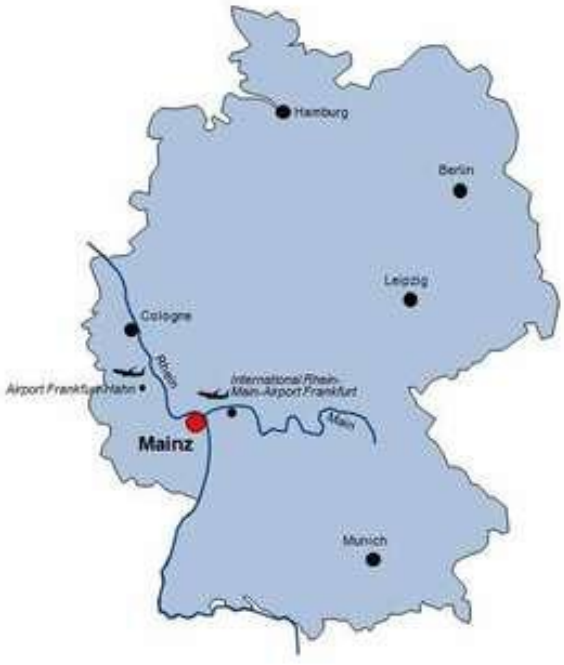
General Information and Registration:

- ✓ **Organization** by the Arbeitsgemeinschaft der Ärzte staatlicher und kommunaler Bluttransfusionsdienste (StKB).
- ✓ As the capacity of lecture hall is limited, the **organizers** of the 4th International StKB Future Workshop Hemo- and Cell therapy **recommend** early registration before February, 1st, 2012.
- ✓ Please enroll to the Workshop per email: **hitzler@uni-mainz.de** or by **Fax 0049 (0)6131 17473211**.
- ✓ **Registration fees:**
  - Before February 1st, 2012:

    20 EURO for StKB members, 50 EURO for non-members
  - After February 1st, 2012:

    40 EURO for StKB members, 100 EURO for non-members.
- ✓ In case of early registration, hotel rooms at a reduced price can be provided.
- ✓ **Die Veranstaltung wird von der LÄK Rheinland-Pfalz als ärztliche Fortbildungsveranstaltung anerkannt.**

How to find the Workshop:



From Frankfurt Airport to Mainz:

At the best **by taxi** (driving time approx. 30 min) or **by train** to the Mainz Central Station (approx. 30 min).

In Mainz:

By taxi to University Medical Center “Universitätskliniken”

By bus from the Mainz Central Station: Take line 67. Get off at the stop called “Universitätsmedizin”.

If you use a car, follow the labeling Center of Town (“Zentrum”) and “Universitätskliniken”.

Site Plan:

- Lecture Hall, Building 505H, Department of Surgery, University Medical Center of the Johannes Gutenberg-University, Mainz, Germany
- Novotel (Hotel)
- Kupferberg

Sponsoring Industry (13.09.2011):

- Abbott GmbH & Co.KG, Max-Planck-Ring 2, 65205 Wiesbaden, Germany
- BAG Health Care GmbH, Amtsgerichtsstraße 1-7, 35423 Lich, Germany
- CaridianBCT, Parkring 6, 85748 Garching, Germany
- Fresenius Kabi Deutschland GmbH, Else-Kröner-Straße 1, 61352 Bad Homburg, Germany
- Immucor Medizinische Diagnostik GmbH, Adam-Opel-Straße 26, 63322 Rödermark, Germany
- Maco Pharma International GmbH, Robert-Bosch-Strasse 11, 63225 Langen, Germany
- Roche Diagnostics Deutschland GmbH, Sandhofer Straße 116, 68305 Mannheim, Germany