RED CELL GENOTYPING 2015: Precision Medicine

Short Description: This symposium will review the laboratory aspects and clinical benefits of red cell genotyping in patients and blood donors.

Audience: Medical and laboratory professionals interested in clinical red cell genotyping applications for immunohematology and transfusion medicine.

Objectives
1. Discuss how advances in molecular immunohematology are changing patient care.
2. Discuss patient care strategies from examples (vignettes) described during case reviews.
3. Review the fundamentals of the molecular basis for blood group antigen expression.
4. Identify red cell genotyping strategies to prevent alloimmunization.
5. Discuss the future of red cell genotyping in personalized transfusion medicine.

ACCME Accreditation Statement:
This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education through the joint providership of The Medical College of Wisconsin and BloodCenter of Wisconsin. The Medical College of Wisconsin is accredited by the ACCME to provide continuing medical education for physicians.

AMA Credit Designation Statement:
The Medical College of Wisconsin designates this Live Activity for a maximum of 6 AMA PRA Category 1 Credit(s)™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

WALS Lecture:
3–4 pm • Masur Auditorium

Pre-Symposium Event September 9, 2015: Peter Agre, MD
Nobel Laureate in Chemistry (2003): Aquaporin – Colton blood group system

With Sponsorship from:
Héma-Québec
OneBlood

Refund policy: Refund requests will not be accepted after September 1, 2015. All refund requests must be received in writing.

Any questions or special needs, please contact Phyllis Kirchner at 414.937.6271 or email at phyllis.kirchner@bcw.edu

Please allow sufficient time to pass through security at NIH. For visitor information about NIH and security, please visit http://www.nih.gov/about/visitorsecurity.htm/. For a listing of hotels in the vicinity go to http://clinicalcenter.nih.gov/about/visitor/hotels.shtml.

Hosted by BloodCenter of Wisconsin, NIH, NIH Clinical Center, NIH Department of Transfusion Medicine, with sponsorship from Héma-Québec and OneBlood.
## Session 1: Making it Happen
8:25 – 10:00

**Moderator:** Willy A. Flegel, MD  
Chief, Laboratory Services Section  
Department of Transfusion Medicine  
National Institutes of Health  
Bethesda, MD

**Welcome/Warm up**  
Willy A. Flegel, MD

**Molecular Immunohematology in the Era of Precision Medicine**  
Lynne Uhl, MD  
Chief, Division of Laboratory Medicine  
Medical Director, Transfusion Medicine  
Beth Israel Deaconess Medical Center  
Associate Professor of Pathology  
Harvard Medical School  
Boston, MA  
AABB President

**Integration of Red Cell Genotyping into the Blood Supply Chain**  
Gregory A. Denomme, PhD, FCSMLS(D)  
Director, Immunohematology & Transfusion Services  
BloodCenter of Wisconsin  
Senior Investigator  
Blood Research Institute  
Milwaukee, WI

**Lunch (provided)**

## Session 2: Benefit to Patients - Clinical Applications  
10:30 – 12:00

**Moderator:** Jerome Gottschall, MD  
Senior Medical Director  
BloodCenter of Wisconsin  
Professor of Pathology  
Medical College of Wisconsin  
Milwaukee, WI

**Genotype “Dry” Matching – A Case Report**  
Razvan Lapadat, MD  
BloodCenter of Wisconsin  
Milwaukee, WI

**Clinical Vignette I**  
TBD - Department of Transfusion Medicine - NIH Clinical Center  
Bethesda, MD

**Clinical Vignette II**  
TBD - Immunohematology Reference Laboratory,  
BloodCenter of Wisconsin, Milwaukee, WI

**External Quality Assessment in the Clinical Immunohematology Laboratory**  
Gregor Bein, MD  
Professor of Immunology and Transfusion Medicine  
Director, Institute for Clinical Immunology and Transfusion Medicine  
Justus-Liebig-University Giessen, Germany

## Session 3: Bench to Bedside - New Technologies  
1:00 – 2:15

**Moderator:** Jay Epstein, MD  
Director, Office of Blood Research & Review  
Food and Drug Administration, CBER  
Silver Spring, MD

**Weak D History and Current Application: the English Perspective**  
Neil Avent, PhD  
Head of School  
School of Biomedical & Healthcare Sciences  
University of Plymouth, UK

**Red Cell Genotyping Assays: FDA Regulations and Development of Reference Reagents**  
Maria Rios, PhD  
Senior Scientist, Principal Investigator  
Food and Drug Administration, CBER  
Silver Spring, MD

## Session 4: Blood Center to Hospital  
2:30 – 4:15

**Moderator:** Gregory A. Denomme, PhD, FCSMLS(D)

**Finding the Needle in the Haystack: Technology Enabling Visibility of Rare/Uncommon Units**  
Lynne B Briggs, BS MBA  
Vice President Information Services & CIO  
Versiti  
Milwaukee, WI

**PCR-Free Blood Group Genotyping Using a Nanobiosensor**  
Maryse St-Louis, PhD  
Adjunct Professor, Department of Biochemistry, Microbiology and Bio-Informatics  
Scientists, Innovation  
Héma-Québec, Quebec

**Molecular Immunohematology and Precision Medicine in the International Perspective**  
Silvano Wendel, MD PhD  
Medical Director  
Hospital Sirio Libanés  
Sao Paulo, Brazil  
Past President, ISBT

**Closing remarks/Evaluation**  
Gregory A. Denomme, PhD, FCSMLS(D)