



John R. Hess, MD, MPH, FACP, FAAAS
University of Maryland
School of Medicine, Baltimore
Professor of Pathology and Medicine

Wednesday, June 8, 2011
12:00pm
in LSC3

Life Sciences Centre
2350 Health Sciences Mall

“Better Storage Systems for RBCs”

Red blood cell storage systems for clinical transfusion have been available since 1917, and modern “additive solution” systems in plastic bags since the 1970s. These systems allow storage of red cells for 6 weeks with 82% mean in vivo recovery and 0.4% mean hemolysis. More than a billion such units have been collected and administered world wide in the last 30 years. Better red cell storage has the potential to both reduce the number of units that expire, improving blood system efficiency, and to provide every recipient with better blood and a reduced burden of cells that will not survive and cell breakdown products.

Making a better red cell storage system involves trying to understand why current systems fail and how current systems can be improved in ways that do not hurt any of the people that depend on them. It appeared that most additive solution blood units that store poorly did so because they ran out of energy. This meant that the best available way to improve red cell storage was to manipulate glycolysis by increasing pH, and providing basic nutrients such as sugar, adenine, and phosphate. Safety is best ensured by using only physiologic salts in the system and not increasing volume. We have successfully made such a system and brought it through human testing. Red cells stored in EAS-81 store better, last longer, are compatible with the warm overnight hold and have reduced breakdown under all of these circumstances.

* Dr. Hess will be presenting a seminar at Vancouver General Hospital in the Taylor Fidler Auditorium entitled “Massive Transfusion for Trauma” at 4:00pm.

This Seminar is sponsored by:

Baxter

Host: Dr. Dana Devine, Vice President, Medical, Scientific & Research Affairs, Canadian Blood Services
Host: Dr. Morad Hameed, VGH Trauma Services



Refreshments will be served 10 minutes before the seminar
Seminar information: 604 822 7407

