



# Current Topics in Histocompatibility & Transplantation

A Unique Continuing Education Opportunity

## *2006 Teleconference Series*

Sponsored by  
Sandra Rosen-Bronson, Ph.D., D.(ABHI)  
Georgetown University  
Washington, DC

An ABHI Approved Continuing  
Education Program

## *Current Topics in Histocompatibility and Transplantation for Technologists*

This series of twenty interactive lectures, moderated by Dr. Sandra Rosen-Bronson, will reach scores of individuals through real-time, ninety minute in-depth audio conferences involving organizations and people from around the world. Without ever leaving your laboratory or office, you can listen to expert scientists and key decision makers thousands of miles away. You can ask questions and get immediate answers as well as listen to other participants' questions and discussions. This convenient and cost-effective educational tool will allow you to keep current in the field of histocompatibility testing and transplantation. Each participant will earn ABHI Continuing Education Credit (CEC) equal to 1.5 contact hours or 0.225 CEC per lecture.

All teleconferences are scheduled to start at 1:00 P.M. (Eastern Time) and last approximately ninety minutes. In addition, lecture outlines and slides will be provided to each participating site.

### *Any Questions?*

***How Does a Teleconference Work?*** Three to five days before each lecture, a teleconference packet will be mailed to your site coordinator containing the lecture slides, outline, and dial-in instructions. U.S. participants will receive a toll-free telephone number. International participants may incur additional telephone charges. On the day of the lecture and at the scheduled time, your site will call the telephone number provided in your lecture packet. Once all conference sites have dialed in, participants will follow the slide show with the lecturer. You will have an opportunity to participate in a question and answer discussion session at both the midpoint and at the completion of the lecture.

***What Equipment Do We Need On Site?*** You will need a 35 mm slide or LCD projector with a screen and a telephone set with a speaker (if more than one person will be participating at your site). You may also want to obtain a quality teleconference system for maximum audio reception and clarity. Your organization's telecommunications department may have one available. Alternatively, units can be purchased from companies such as *HELLO Direct* (800/444-3556, [www.hello-direct.com](http://www.hello-direct.com)) or rented from *A.T. Products, Inc.* (800/848-2205).

***How Do We Register?*** Complete the teleconference registration form. Fax the form to: (202) 687-1244. Send the original registration form and a check made payable to Georgetown University to:

**U.S. Mail:**

Sandra Rosen-Bronson  
Box 571438  
Georgetown University  
3900 Reservoir Road NW  
Washington DC 20057-1438

**Overnight Courier:**

Sandra Rosen-Bronson  
Preclinical Science Bldg, Room LE8H  
Georgetown University  
3900 Reservoir Road NW  
Washington DC 20007  
(202) 784-2909

In order to assure your registration, it is important to write our **complete and exact address as listed above.**

***Cancellation Policy:*** Cancellations which occur 21 days or more prior to the date of the first lecture for which your site has registered are fully refundable less a nonrefundable deposit of \$50. For cancellations which occur from 21 to 14 days prior, 50% of the lecture series fee will be forfeited. No refunds are possible after 14 days prior to the starting date. All cancellation requests **must be submitted in writing.**

***Further Questions:*** If you have questions about the registration process or need a registration form, please contact Dr. Rosen-Bronson or Andrey Evseev at:

Tel: (202) 784-2909 or (202) 687-8924  
Fax: (202) 687-1244  
Email: [bronson@gunet.georgetown.edu](mailto:bronson@gunet.georgetown.edu)  
[www.ctht.info](http://www.ctht.info)

**2006**  
**Teleconference Schedule**

All dates are Tuesdays and all lectures begin at 1:00 P.M. (Eastern Time)

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**March 7, 2006**  
**An Overview of Immunology**  
Carolyn Hurley, Ph.D.  
Georgetown University, Washington, DC

This lecture will provide participants with a broad foundation for understanding the immune system in general. Some key components and regulators of immunity will be introduced by Dr. Hurley and will be discussed in detail by subsequent speakers.

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**April 18, 2006**  
**Regulator T-Cells**  
William Burlingham, Ph.D.  
University of Wisconsin, Madison, WI

In recent years there has been much progress in our understanding of the cells and molecules involved in immunoregulation and induction of allograft tolerance. This lecture will review what is currently known about mediators of T-cell-dependent active immune regulation.

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**May 2, 2006**  
**Effector Mechanisms of Antibody and Complement**  
William Baldwin, M.D., Ph.D.  
Johns Hopkins University School of Medicine, Baltimore, MD

This intermediate level lecture will discuss the contribution of antibody and complement to the rejection of organ transplants. Participants will learn about studies that have shown how complement stimulates vascular endothelial cells to express coagulation factors, adhesion molecules, and growth factors. They will learn how complement-mediated activation of endothelial cells may contribute to acute and chronic allograft rejection.

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**May 16, 2006**  
**Significance of Cytokine Polymorphism in Hematopoietic Transplantation**  
Riddish Shah, M.B.B.S, Ph.D.  
Georgetown University, Washington, DC

Cytokine gene polymorphisms have increasingly become a topic of interest in laboratories that traditionally have engaged in histocompatibility testing and transplantation. This interest stems from the fact that certain of these polymorphisms have been shown to correlate with cytokine plasma levels and may contribute to the outcome of both solid organ and hematopoietic stem cell transplantation. This lecture will review current research on the role of cytokine polymorphisms in HSC transplantation.

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**May 23, 2006**  
**Thermal Cycler Quality Control and PCR Validation**  
Mary Span, M.Sc.  
Cyclertest, B.V., Landgraaf, The Netherlands

This basic lecture will discuss innovative options for thermal cycler quality control and troubleshooting. Participants will also learn about effective protocols for validation of PCR-based assays.

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**June 6, 2006**

**The Organ Transplant Breakthrough Collaborative**

Virginia McBride, R.N., M.P.H., C.P.T.C.

Department of Health and Human Services, Health Resources and Services Administration  
Bethesda, MD

From this intermediate level lecture, participants will learn about a new initiative, the Organ Transplantation Breakthrough Collaborative, which is focused on increasing organ utilization. Specifically, the collaborative's aim is to increase the mean number of recipients transplanted per donor from 3.06 to 3.75 or higher. HLA laboratories are being encouraged to get involved and participants will learn how they can help.

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**June 20, 2006**

**Lipid Rafts and B-Cell Activation**

Susan Pierce, Ph.D.

National Institute of Allergy and Infectious Disease, Bethesda, MD

Recent biochemical evidence indicates that an early event in signal transduction by the B-cell antigen receptor (BCR) is its translocation to specialized membrane subdomains known as lipid rafts. These plasma membrane microdomains are implicated in the assembly of diverse signaling pathways. Participants will learn about current research concerning the role of lipid rafts in triggering immune responses.

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**June 27, 2006**

**An Introduction to HapLogic™**

Judy Davis, C.H.T.C.

National Marrow Donor Program, Minneapolis, MN

This advanced lecture will describe Haplogic, the new computer-based donor search algorithm recently introduced by the National Marrow Donor Program. Participants will gain an understanding of the theory behind the program and will learn how to interpret and best use the information provided on the revised search report.

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**July 11, 2006**

**The Role of Innate Immunity in Reproduction**

Danny Schust, M.D.

Boston University School of Medicine, Boston, MA

During human pregnancy, allogenic trophoblast cells are exposed directly to maternal immune effector cells. In recent years, much has been learned about the specialized molecules and cells involved in creating an immunologically privileged site at the maternal-fetal interface. In this lecture, participants will hear about current research and learn how pregnancy may be an informative model for studying transplant tolerance.

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**July 18, 2006**

**Real Time PCR**

Mary Span, M.Sc.

Cyclertest, B.V., Landgraaf, The Netherlands

Real time PCR is commonly used in the research setting and is also becoming routine in the clinical laboratory. This basic lecture will describe the concepts and theory utilized in these assays and will discuss practical issues of assay development, quality control, and troubleshooting.

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**August 1, 2006**  
**DNA Extraction from A to Z**  
 Sandra Rosen-Bronson, Ph.D., D.(ABHI)  
 Georgetown University Hospital, Washington, DC

From this basic lecture, participants will learn about the principles behind different methods of DNA extraction. Quality control and troubleshooting issues will be discussed along with options for automation.

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**August 15, 2006**  
**Standardization of Flowcytometric Assays**  
 Wayne Shumway, C.H.S.  
 LifeLink Foundation, Inc., Tampa, FL

Histocompatibility laboratories everywhere are more and more being asked to develop standardized assays with results that can be meaningfully compared between different laboratories. This lecture will discuss ways that labs can begin to meet this need. It will address quality control issues as well as the pros and cons of using MESF versus channel-shift values for calculating results.

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**August 22, 2006**  
**Population Genetics 101**  
 Richard Single, Ph.D.  
 University of Vermont, Burlington, VT

Haplotype analyses have long been recognized as important in the study of genetic components of human disease. Likewise, as the use of unrelated donors for hematopoietic stem cell transplantation becomes more common, it is increasingly important for those involved in HLA typing and donor search to understand concepts such as allele frequency, haplotype frequency, and linkage disequilibrium. Participants will learn about these and other basic principles of population genetics.

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**August 29, 2006**  
**Calculating the Probability of a Positive Crossmatch**  
 Robert Bray, Ph.D., D.(ABHI) and Howard Gebel, Ph.D., D.(ABHI)  
 Emory University Hospital, Atlanta, GA

Many histocompatibility laboratories are becoming better able to accurately detect and define the HLA specificity of a transplant candidate's antibody through the use of a variety of highly sensitive techniques including solid-phase assays. For this reason, it is now possible to more accurately predict the results of a crossmatch between a transplant candidate and a prospective donor. Participants will learn how such predictions can be made and when and why they may be useful.

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**September 19, 2006**  
**Graft Versus Host Disease: Its Types and Manifestations**  
 Richard Maziarz, M.D.  
 Oregon Health and Science University, Portland, OR

This lecture will provide an overview of what graft versus host disease (GVHD) is and will discuss the difference between acute and chronic GVHD. Participants will learn about the molecular and immunologic interactions involved as well as current research initiatives and advances in preparative regimens and treatment options.

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**September 26, 2006**  
**Sequence-Based Typing**

William Hildebrand, Ph.D., and Steven Cate  
 University of Oklahoma Health Sciences Center, Oklahoma City, OK

This lecture will provide a practical overview of how SBT can be efficiently used for high resolution HLA typing in a clinical laboratory. Participants will learn about innovative interpretation-software and get tips for troubleshooting difficult samples.

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**October 3, 2006**  
**Histocompatibility Testing for Beginners**  
 Sandra Rosen-Bronson, Ph.D., D.(ABHI)  
 Georgetown University Hospital, Washington, DC

This basic lecture will provide a 'big picture' look at what the typical histocompatibility laboratory does. Participants will learn about the history and evolution of standard assays as well as the evolving role of the lab as an integral member of any transplant program.

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**November 7, 2006**  
**An Introduction to Proteomics**  
 James Baraniuk, M.D.  
 Georgetown University Hospital, Washington, DC

The field of proteomics is developing at a rapid pace in the post-genome era. Proteomics as a noninvasive diagnostic tool has been used most extensively in the field of cancer research but the technologies are increasingly applied to clinical studies in transplantation as well. This basic lecture will discuss what proteomics is and how it is potentially useful for monitoring both hematopoietic stem cell and solid organ transplant patients.

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**November 21, 2006**  
**The Future of Kidney Allocation in the U.S..**  
 Mark Stegall, M.D.  
 Mayo Clinic, Rochester, MN

There is an increasing number of people in the United States who are waiting for kidneys from deceased donors. In response to this growing shortage, the OPTN/ UNOS Board initiated a review of the complex formula that has guided kidney allocation for years. A special review group, the Kidney Allocation Review Subcommittee (KARS) chaired by Dr. Stegall, has been reviewing allocation issues and soliciting input from the public for more than a year. Dr. Stegall will describe the process and progress made to date by KARS along with possible allocation changes currently under discussion.

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**November 28, 2006**  
**Viral Infections in the Immunocompromised Host**  
 Robin Avery, M.D.  
 Cleveland Clinic Foundation, Cleveland, OH

Immunocompromised patients have alterations in phagocytic, cellular, or humoral immunity that increase both the risk of infection and the ability to combat infection. In transplant patients, viral infections can be particularly dangerous and difficult to treat. This lecture will provide an overview of the viruses most critical in transplant patients and will discuss current approaches for prevention and treatment.

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