

*Current Topics
in
Histocompatibility and
Transplantation
for
Technologists
1999 - 2004*



Sponsored by
Sandra Rosen-Bronson, Ph.D., D(ABHI)
and the
Histocompatibility Laboratory
at
Georgetown University Hospital
Washington, DC

*An ABHI Approved Continuing
Education Program*

Current Topics in Histocompatibility and Transplantation for Technologists

This series of 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) 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 at the GUH Histocompatibility Laboratory.

Tel: (202) 784-5518 or (202) 687-8924

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1999-2004
Teleconference Series

April 14, 1999

How to Optimize and Interpret Flow Cytometric PRA Assays

Robert Bray, Ph.D.

Emory University, Atlanta, GA

Howard Gebel, Ph.D.

Louisiana State University, Shreveport, LA

Learn how to optimize and interpret various flow cytometric assays for the detection of HLA antibodies. This lecture covers both cell-based and solid-phased techniques.

January 19, 2000

Beyond HLA-A, -B and -DR

Carolyn Hurley, Ph.D.

Georgetown University Medical Center, Washington, DC

Learn about the role of other non-HLA molecules in transplantation.

June 13, 2001

Immune Suppression: Behind the Scenes, Part I

Robert Bray, Ph.D., Emory University, Atlanta, GA

Howard Gebel, Ph.D., Louisiana State University, Shreveport, LA

Learn about T cell activation pathways and how they are affected by current immunosuppressive agents.

June 27, 2001

Immune Suppression: Behind the Scenes, Part II

Robert Bray, Ph.D., Emory University, Atlanta, GA

Howard Gebel, Ph.D., Louisiana State University, Shreveport, LA

Learn about T cell activation pathways and how they are affected by current immunosuppressive agents.

August 15, 2001

Graft Versus Host Disease

Neal Flomenberg, M.D.

Thomas Jefferson University, Philadelphia, PA

Learn about graft versus host phenomena, current approaches for treatment, and when and how it can be beneficial.

February 20, 2002
**Luminex: An Innovative New Technology that Tests
 Multiple Analytes in a Single Reaction**

James Jacobson, Ph.D.
 Luminex Corporation, Austin, TX

Learn about the Luminex technology that uses color-coded microspheres and reporter molecules for a variety of applications including SSO-based HLA typing, antibody detection, SNP typing and more.

April 17, 2002
Xenotransplantation: The Promise and the Problems

A. Joseph Tector, M.D.
 Indiana University, Department of Surgery, Indianapolis, IN

Learn about the therapeutic potential, immunologic hurdles and infectious risks of xenotransplantation.

May 8, 2002
Ethical Considerations in Hematopoietic Stem Cell Transplantation

Jeffrey Kahn, Ph.D., M.P.H.
 University of Minnesota, Center for Bioethics, Minneapolis, MN

Learn about ethical issues and controversies connected with HSC donation and transplantation.

July 24, 2002
Histocompatibility Testing For Solid Organ Transplantation: Is It Still Important?

Howard Gebel, Ph.D.
 Emory University, Atlanta, GA

Learn about the pros and cons of the current debates concerning the importance of HLA matching and histocompatibility testing in organ transplantation.

August 21, 2002
**VNTR, STR, SNP: What are They?
 How are They Useful in Transplantation and Immunogenetics?**

Sandra Rosen-Bronson, Ph.D.
 Georgetown University Hospital, Washington, DC

Learn about these genetic markers and how they are used to monitor engraftment, detect chimerisms and locate disease genes.

September 4, 2002
The Clinical Significance of Flow Cytometric Crossmatching and Antibody Testing

Peter Nickerson, M.D.
 Canadian Blood Services, Winnipeg, Manitoba, Canada

Learn about the continued clinical significance of HLA antibodies detected by flow cytometric methods in the era of modern immunosuppression.

March 27, 2003

HLA for Beginners

Sandra Rosen-Bronson, Ph.D.

Georgetown University Hospital, Washington, DC

This basic lecture will be of particular interest to technologists new to the field of histocompatibility as well as transplant nurses and coordinators interested in learning more about the HLA system and its role in transplantation.

April 3, 2003

An HLA Nomenclature Update for 2003

Ekkehard Albert, Ph.D.

Laboratory of Immunogenetics, LMU, Munich, Germany

This intermediate level lecture will cover basic concepts of genetic terminology relevant to histocompatibility and immunogenetics. Dr Albert will describe HLA nomenclature and will give an overview of important nomenclature changes and updates recently implemented by the WHO Nomenclature Committee.

April 17, 2003

Non-Myeloablative Hematopoietic Stem Cell Transplant: Theory and Practice

Marcos de Lima, M.D.

Anderson Cancer Center, Houston, TX

This basic lecture will discuss new methods for transplantation that involve the use of non-ablative doses of chemotherapy or radiation therapy prior to stem cell transplant. The speaker will review the theory behind this relatively new approach to stem cell transplantation.

April 24, 2003

Donor Search Strategies: A Systematic Approach

Linda Edwins, CHS, Clearwater, FL

Sandra Rosen-Bronson, Ph.D., Georgetown University Hospital, Washington, DC

This intermediate to advanced level conference will be of particular interest to transplant coordinators and histocompatibility professionals involved in donor selection for hematopoietic stem cell transplantation. This lecture will help you develop a systematic stepwise approach to reviewing difficult patient searches. Tools will be provided to help you develop search strategies and sample cases will be reviewed to help you learn how to apply these strategies to a patient search.

May 8, 2003

DNA for Beginners

Carolyn Hurley, Ph.D.

Georgetown University, Washington, DC

This lecture will review basic molecular biology concepts and provide a basic overview of methodologies used for DNA-based HLA typing methods.

May 15, 2003

**Back to the Basics: Understanding, Optimizing and
Troubleshooting AHG-CDC Assays**

Ann Fuller, CHS

University of Utah, Salt Lake City, Utah

This basic lecture will be of particular interest to technologists new to the field of histocompatibility testing. Although there are many new technologies being employed by histocompatibility laboratories, AHG-CDC-based assays are still critical and routinely used tests in most laboratories. This lecture will review the basic concepts and application of anti-human globulin (AHG) augmented lymphocytotoxicity assays. A discussion of assay optimization and troubleshooting will be included.

May 22, 2003

The ELISPOT Assay: What is it and How Can It Be Useful in Transplantation?

Anat Tambur, D.M.D., Ph.D.

Rush Presbyterian St. Luke's Medical Center, Chicago, IL

This intermediate level lecture will discuss theory, principal and practical applications for the enzyme-linked immuno-spot ELISPOT assay. This assay first described two decades ago as a useful assay for the detection of specific immune responses on a single cell level is being used more and more as a method for post-transplant monitoring.

July 17, 2003

**KIR: What are they? How does one KIR "Type?"
How Might KIR Play an Important Role in Transplantation Outcome?**

Katharine Hsu, Ph.D.,

Memorial Sloan Kettering Cancer Center, New York, NY

This intermediate level lecture will describe killer cell immunoglobulin-like receptors (KIR) and how they may be important in transplantation as well as methods currently used for KIR typing.

July 31, 2003

Cord Blood as a Source of Stem Cells for Transplantation

Lee Ann Baxter-Lowe, Ph.D.

University of California, San Francisco, San Francisco, CA

This lecture will be of general interest to all individuals interested in hematopoietic stem cell transplantation. Dr. Baxter-Lowe will discuss issues concerning cord blood banking as well as review current and emerging data concerning cord blood transplantation.

August 14, 2003

Transfusion Related Acute Lung Injury (TRALI)

Susan Roseff, M.D.

Virginia Commonwealth University School of Medicine, Richmond, VA

This basic lecture will discuss TRALI, an often misdiagnosed, life threatening pulmonary syndrome thought to be caused by HLA specific antibodies of donor origin present in plasma containing blood products.

September 18, 2003

**Pre-transplant Antibody Testing for Renal Transplantation:
A Review of Current Data**

Howard Gebel, Ph.D.

Emory University, Atlanta, GA

This lecture will be of general interest to all individuals interested in renal transplantation. Dr. Gebel will provide an overview of current data concerning the relevance of HLA antibody testing in renal transplantation and the significance of preformed HLA specific antibody to clinical outcome.

September 25, 2003

**HLA Matching Requirements for Hematopoietic Stem Cell Transplantation:
A Review of Current Data**

Marcelo Fernandez-Vina, Ph.D., Georgetown University, Washington, DC

Victoria Turner, Ph.D., St. Jude Hospital, Memphis, TN

Sandra Rosen-Bronson, Ph.D., Georgetown University Hospital, Washington, DC

This intermediate level conference will be of particular interest to transplant coordinators and histocompatibility professionals involved in hematopoietic stem cell transplantation. The lecture will provide an overview of current and emerging data concerning matching requirements for HSC transplantation. The discussion will include evolving data concerning other donor variables such as age and sex matching versus level of HLA match and current information concerning potential differential matching requirements for adults versus pediatric patients.

October 9, 2003

IvIg Desensitization Protocols: The Laboratories Role

Cathi Murphy, CHS, Southwest Immunodiagnostics, San Antonio, TX

Dolly Tyan, Ph.D., Cedars-Sinai Medical Center, Los Angeles, CA

Andrea Zachary, Ph.D., Johns Hopkins University, Baltimore, MD

This basic to intermediate level lecture will cover the different laboratory methods used to evaluate and support IvIg desensitization protocols for transplant patients with donor specific HLA antibodies. The lecture will include description of CDC, ELISA, and flow cytometric methods.

March 2, 2004
Transplant Immunology 101

Mark Grebenau, M.D., Ph.D.
 Director of Medical Information for Transplant Immunology
 Novartis Pharmaceuticals, East Hanover, NJ

This basic lecture will provide an overview of the immune system and the immune response mounted against transplanted cells, tissues and organs. This conference will be particularly useful for technologists studying for the CHT or CHS certification exams.

March 16, 2004
The Ins and Outs of CPT Codes

Pamela Kimball, Ph.D., Medical College of Virginia, Richmond, VA
 Ronald Kerman, Ph.D., University of Texas Medical School, Houston, TX
 William LeFor, Ph.D., LifeLink Foundation Inc, Tampa, FL

This advanced level lecture will be of interest to all individuals involved with billing for histocompatibility testing. Participants will learn how existing CPT codes can be successfully and legitimately used to bill for assays performed in histocompatibility laboratories.

March 23, 2004
An Overview of the Complement System

Norman Kramer, M.D.
 MEDIMMGEN Consultants Inc., Burtonsville, MD

This basic level lecture will review the complement system and its role in the immune response. This conference will be especially useful for those new to the field of histocompatibility and those studying for certification exams.

April 6, 2004
Recent Advances in Stem Cell Therapy for Autoimmune Disorders

Richard Burt, M.D.
 Northwestern Memorial Hospital, Chicago, IL

This intermediate level lecture will discuss how stem cell transplantation is being used as a treatment for an increasing number of autoimmune diseases including lupus, multiple sclerosis, and other debilitating and life threatening diseases.

April 20, 2004
Search Strategies I: Finding the Best Mismatched Donor

Machteld Oudshoorn, Ph.D.
 Europdonor Foundation, Leiden, Netherlands

This intermediate level lecture will discuss the various factors that should be taken into consideration when a patient does not have a perfectly matched donor available for an unrelated stem cell transplant. The conference will address a variety of questions including: How many alleles can be mismatched? What search strategies should be used to find the best mismatch? What non-HLA factors such as age and sex should be considered?

April 27, 2004

Improving the Performance Improvement Process

Barbara Parsons, M.A., M.T.
Johns Hopkins Hospital, Baltimore, MD

This intermediate level lecture will be of interest to anyone interested in performance improvement. Laboratories, donor centers, and transplant centers alike all have accrediting agencies closely scrutinizing their programs for quality assurance and process improvement. This conference will help participants understand the overall principle of performance improvement and learn how a well-designed program can make performance improvement an integral part of their institution's daily operations.

May 4, 2004

Efficient and Effective Assay Validation

Lori Osowski, M.S., C.H.S.
Ashley Hurst, M.T, C.H.T.
American Red Cross, National HLA Laboratory, Baltimore, MD

This basic lecture will teach participants how to design appropriate validation studies to meet the requirements of ASHI and CLIA for accreditation of new assays being implemented in their laboratory. This conference will be particularly useful for technologists studying for the CHT or CHS certification exams.

May 18, 2004

Implementing, Optimizing and Troubleshooting the ELISA Crossmatch

Patrick Adams, M.S., C.H.S.
Ohio State University Hospital, Columbus, OH

This basic lecture will discuss the principle of how the ELISA crossmatch works as well as how to implement and optimize this assay for use in the histocompatibility laboratory. As more and more laboratories introduce solid phase assays into their routine test repertoires, there is a growing interest in and need for an ELISA-based crossmatch. This conference will address the pros and cons of the methodology. It will help participants decide if it is right for their laboratory and if it meets the needs of their transplant program.

May 25, 2004

Chronic Allograft Rejection: What Is It and Why Is It Such a Problem?

Charles Orosz, Ph.D.
Ohio State University Hospital, Columbus, OH

This intermediate level lecture will be of particular interest to individuals working in the area of solid organ transplantation. Participants will learn what is known about the underlying causes of chronic rejection and gain an understanding of why it remains one of the most difficult barriers to long-term graft survival.

June 15, 2004

Emerging Molecular Technologies

Ena Wang, M.D.
Department of Transfusion Medicine, NIH Clinical Center, Bethesda, MD

This advanced lecture will provide an overview of emerging molecular tools such as real time PCR, microarrays, and pyrosequencing. Participants will learn how these techniques can be useful in the HLA laboratory and how they are used for studying immune responsiveness and developing new immunotherapies.

June 22, 2004

Haplotype-Specific Extraction (HSE): An Innovative New Technology

Johannes Dapprich, Ph.D., Generation Biotech, LLC, Lawrenceville, NJ
Nancy Murphy, B.A., GenoVision, Inc., West Chester, PA

This intermediate level lecture will discuss an innovative new technology developed by Dr. Dapprich. Haplotype-Specific Extraction, HSE, was designed to physically separate a diploid sample into its haploid components which can then be separately analyzed by standard DNA typing methods currently used on diploid DNA.

June 29, 2004

Transplantation: Unique Challenges in Transfusion Medicine

Shealynn Harris, M.D.
Transfusion Medicine Service, Department of Pathology
Emory University Hospital, Atlanta, GA

Transplantation patients can present unique problems in transfusion medicine. For example, complications may include TRALI, GVHD, platelet refractoriness, and confusing RBC phenotypes. This intermediate level lecture will provide an overview of transplant patient related issues critical to transfusion medicine.

July 13, 2004

Post Transplant Antibody Testing

Elaine Reed, Ph.D.
UCLA Immunogenetics Center, Los Angeles, CA

HLA antibodies can reoccur or occur de novo post transplant. There is increasing evidence that donor specific antibodies play a role in graft rejection and tissue damage. There is also evidence that the detection of donor specific HLA antibody or C4d deposition can provide early warning of rejection. This intermediate level lecture will discuss various assays that can help monitor and predict transplant rejection.

July 27, 2004

Demystifying the NMDP

Michelle Setterholm, M.T.
National Marrow Donor Program, Minneapolis, MN

This basic lecture will discuss the role of the NMDP in facilitating blood and marrow transplantation. Participants will learn about the mission of the NMDP and how it works. They will also learn how their laboratory or transplant program can more effectively work together with the NMDP to expedite the donor search process.

August 3, 2004

Antigen Presentation

Mark Grebenau, M.D., Ph.D.
Director of Medical Information for Transplant Immunology
Novartis Pharmaceuticals, East Hanover, NJ

This intermediate level lecture will describe how antigens are processed and presented to T cells by HLA molecules. This conference will be particularly useful for technologists studying for certification exams.

August 10, 2004
Implementing, Optimizing, and Troubleshooting the B Cell Crossmatch
 Cathi Murphey, M.T., C.H.S.
 Southwest Immunodiagnostics Inc., San Antonio , TX

As evidence increases that the presences of donor specific HLA class II antibody represents an increased risk to successful transplant outcome, more and more laboratories are routinely performing a B cell crossmatch prior to transplantation. However, this assay can be difficult to standardize and technically challenging. This intermediate to advanced level lecture will discuss ways to optimize and troubleshoot flow cytometric B cell crossmatches.

September 21, 2004
Tumor Vaccines: What are They and How are They Made?
 Francesco Marincola, M.D.
 Department of Transfusion Medicine, NIH Clinical Center, Bethesda, MD

Tumor antigen-specific vaccines used for cancer immunotherapy can generate tumor specific CD8 responses detectable in PBMCs and in turn infiltrating lymphocytes. This intermediate level lecture will discuss how tumor vaccines are developed and why they are useful as therapeutic agents for certain types of cancers.

October 26 , 2004
Search Strategies II: Case Studies
 Sandra Rosen-Bronson, Ph.D.
 Georgetown University Hospital, Washington , DC

This advanced lecture will review a series of BMT case studies which demonstrate how the search strategy principals and tools described in earlier teleconferences can be used to effectively and efficiently identify the optimal donor for a patient.

November 16, 2004
The Role of Alloantibody in Kidney Transplant Deterioration
 Philip Halloran, M.D., Ph.D.
 Director, Division of Nephrology and Immunology
 University of Alberta, Edmonton, Alberta, Canada

This advanced level lecture will discuss how the presence of HLA antibody plays a role in tissue damage and overall deterioration of the transplanted organ. Dr. Halloran will also discuss assays and novel technologies that will enable detection of allograft dysfunction or rejection, monitor responses to therapy, and predict long-term outcomes.
