Current Topics in Histocompatibility & Transplantation

A Unique Continuing Education Opportunity

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2022 Teleconference Series

An ACHI Approved Continuing Education Program

Sponsored by

Sandra Rosen-Bronson, PhD, F(ACHI)

Georgetown University

Washington, DC

Current Topics in Histocompatibility and Transplantation for Technologists

This series of twenty interactive lectures, moderated by Dr. Sandra Rosen-Bronson, will reach hundreds 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. Additionally, you can ask questions and get immediate answers, as well as listen to other participants' questions. 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 CE credits per lecture.

Frequently Asked Questions

How Does a Teleconference Work? Three to five days before each lecture, all teleconference materials are sent to your site coordinator on a CD via FedEx or by email. The materials will include: the lecture slides in two file formats (PowerPoint and PDF), handouts as a PDF file, and detailed conference instructions. At the scheduled time on the day of the lecture, your site must call the telephone number provided in the instructions. U.S. participants receive a toll-free telephone number. International participants may incur additional telephone charges.

All teleconferences are scheduled to start at 1:00 P.M. (Eastern Time) and last approximately ninety minutes. Once the teleconference has begun, participants view the slide show as they listen to the lecturer. There will be an opportunity to participate in a question and answer sessions.

What If the CD Doesn't Work Properly? If the CD you receive does not function properly, it will be replaced at no charge. As soon as you receive your conference packet, please verify that the CD contains the correct files and it is compatible with your computer system. If you experience any difficulty with the CD or have a problem opening the files, contact us immediately.

What If We Haven't Received the Packet? If you do not receive your conference packet, please contact us as soon as possible so that we can provide you with the materials.

What Equipment Do We Need On Site? You will need a computer with a monitor and a speakerphone.

How Do We Register? Complete the registration form and fax a copy of the form to (202) 944-2343. Send the original registration form with complete credit card information or a check made payable to Georgetown University to:

U.S. Mail:
Sandra Rosen-Bronson
Box 571438
Georgetown University
3900 Reservoir Road NW

Overnight Courier:
Sandra Rosen-Bronson
Preclinical Science Bldg, Room LE8H
Georgetown University
3900 Reservoir Road NW
Washington, DC 20007

To ensure your registration is processed, it is important to send it to the **EXACT NAME and one of the ADDRESSES listed above** and fax it to (202) 944-2343.

Further Questions: If you have any questions, please visit our website at www.ctht.info or contact us at:

Tel: (202) 784-5518

Fax: (202) 944-2343

Email: Andre.Thalberg@georgetown.edu

Thank you for your participation in our program!

2022
Teleconference Schedule

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

May 24, 2022
Rapid High Resolution HLA Typing
presented by Eric Weimer, PhD, F(ACHI)
University of North Carolina at Chapel Hill, Chapel Hill, NC

Participants will learn about novel Oxford Nanopore technologies that allow for high resolution HLA sequencing in approximately 6 hours. Nanopore sequencing is potentially a robust and reliable protocol for deceased donor typing which could allow real-time epitope analysis for assessing compatibility in a deceased donor transplant setting.

June 21, 2022
The Immunopeptidome of Secondary DR Molecules
presented by Saghar Kaabinejadian, PharmD, PhD, Pure MHC, LLC, Austin, TX

Participants will hear about studies aimed at characterizing the repertoire of peptides presented by the DR molecules encoded by DRB3, DRB4, and DRB5. They will learn how deconvolution of peptidomics data reveals a significant contribution of DRB3, 4 and 5 to the total DR immunopeptidome and that the peptide repertoires of the primary and secondary DR alleles are complementary rather than overlapping. In addition, participants will hear about findings that suggest peptides presented by secondary DR molecules may play a role in autoimmunity and disease susceptibility.

July 19, 2022
Histocompatibility Testing for the Novice
presented by Sandra Rosen-Bronson, PhD, F(ACHI), MedStar Georgetown University Hospital
Washington, DC

This basic lecture will be of particular interest to technologists new to the field of histocompatibility and immunogenetics. Participants will be provided with a current 'big picture' look at what the typical HLA laboratory does as well as the history and evolution of key assays and concepts.

July 26, 2022
Engineering Artificial Antigen Presenting Cells (aAPC) for Cancer Immunotherapy: From Bench to Bedside
presented by Jonathan Schneck, MD, PhD, Johns Hopkins School of Medicine, Baltimore, MD

Adoptive Cellular Therapies are promising immunotherapeutic approaches for the treatment of cancer and yet many challenges remain. In this presentation participants will hear about the challenges associated with current approaches. They will learn how aAPC-based approaches help overcome those challenges and may represent an off-shelf, scalable approach to production of clinical scale and grade T cells for adoptive immunotherapy.

August 2, 2022
Diversity, Equity, and Access to Transplant
presented by Edgar Milford, MD, Brigham and Women's Hospital, Boston, MA

Participants will learn how many different factors contribute to an individual's access to organ transplant. They will learn how global aspects such as patient biology, socioeconomic status, and race or ethnicity can affect access to transplant.

August 9, 2022
Acute GVHD in Solid Organ Transplant
presented by Caroline Alquist, MD, PhD, F(ACHI), University of Cincinnati Hoxworth Blood Center Cincinnati, OH

Development of graft-versus-host disease (GVHD) is a rare complication after transfusions or solid organ transplantation. Patients typically present with a skin rash, diarrhea, liver failure, and bone marrow aplasia. A diagnosis of transfusion/transplantation associated-GVHD is made based on the clinical and histologic evidence, yet diagnosis and treatment are often delayed due to nonspecific symptoms attributed to the patient's underlying illness. Through case studies, participants will learn how donor chimerism testing may be informative in assessing patients at risk for developing GVHD after a solid organ transplant.

August 23, 2022
Improved Immunological Risk Stratification of Pediatric Heart Transplant Patients by Combining PIRCHE-II with HLAMatchmaker or HLA-EMMA
presented by Massimo Mangiola, PhD, F(ACHI), Transplant Institute, NYU Langone, New York, NY

The degree of molecular mismatch has been shown to be a powerful biomarker for allograft rejection. Algorithms such as HLAMatchmaker and HLA-EMMA predict B-cell response, whereas PIRCHE II predicts the T-cell help required to achieve a B-cell response. Participants will learn about a study that investigated whether by combining algorithms it is possible to improve predictions of the risk of rejection.

August 30, 2022
HLA Matching for Hematopoietic Cell Transplant: An Evolving Paradigm
presented by Stephen Spellman, MBS, CIBMTR Immunobiology and Observational Research NMDP/Be The Match Campus, Minneapolis, MN

As the HCT field is expanding to include more extensively HLA mismatched donors, there is a paradigm shift evolving concerning optimal donor selection. Participants will hear about current study findings that may guide the selection of the best mismatched unrelated donor.

September 13, 2022
Continuous Distribution Kidney Allocation
presented by
Cathi Murphy Half, PhD, HCLD/CC(ABB), Southwest Immunodiagnostics, Inc, San Antonio, TX
Peter Lalli, PhD, F(ACHI), Carolinas Health System, Huntersville, NC, and
John Lunz, PhD, F(ACHI), LifeLink Transplant Immunology Laboratory, Tampa, FL

Participants will learn about a new kidney allocation system referred to as continuous distribution. The framework of this new allocation system dissolves the hard allocation boundaries that exist in the current classification-based system and will change how patients are prioritized through consideration of all patient factors together to determine the order of an organ offer. The patient factors that will be included as well as the impact of the new system on HLA laboratory practices will be discussed.

September 20, 2022
Virtual Serology: A Strategy for Converting HLA Alleles to Serotypes
presented by Marcelo Fernandez-Vina, PhD, F(ACHI), Stanford University School of Medicine Palo Alto, CA

Advances in molecular HLA typing have led to an exponential increase in HLA alleles. However, the serotype of many new alleles has not been defined based on antibody reactivity. Participants will learn about studies focused on identifying criteria for assigning serologic equivalencies based on amino acid substitutions.

September 27, 2022
Transfusion Medicine and Histocompatibility Laboratory Cooperation: The Case of the Surprise Post-Transplant ABO Titer
presented by Anne Halpin, MSc, CHS, University of Alberta Hospital, Edmonton, AB

Participants will learn about a novel Luminex-based assay that has the potential to be adopted by clinical HLA laboratories for rapid, specific, and sensitive assessment of IgM/IgG ABO subtype-specific antibodies in ABO incompatible (ABOi) transplants. Cases examples will be discussed that demonstrate how this bead-based assay has the potential to serve as a powerful tool for precise assessment of risk and for managing the care of ABOi transplant patients.

October 11, 2022
HLA-Haploidentical Transplantation: The Luxury of Selecting for HLA-Mismatch
presented by Shannon McCurdy, MD, Abramson Cancer Center and the Division of Hematology and Oncology, Hospital of the University of Pennsylvania, Philadelphia, PA

Hematopoietic cell transplantation from HLA-haploidentical related donors is increasingly used to treat hematologic cancers; however, characteristics of the optimal haploidentical donor have not been established. Participants will learn about studies aimed at understanding the role of donor HLA mismatching in graft-versus-host disease (GVHD), disease recurrence, and survival after haploidentical donor transplantation with post-transplantation cyclophosphamide (PTCy). Online tools now available for predicting disease free survival and guiding optimal haploidentical donor selection will be discussed.

October 18, 2022
Characterization of Permissible HLA Allele Mismatches from Unrelated Hematopoietic Cell Transplant Cohorts
presented by Marcelo Fernandez-Vina, PhD, F(ACHI), Stanford University School of Medicine Palo Alto, CA

Patient/Donor HLA mismatch is a critical variable affecting the outcomes of hematopoietic cell transplants (HCT) with most HLA mismatches resulting in adverse clinical outcomes. However, it is known that mismatch between certain the alleles is well tolerated. Participants will learn about studies aimed at characterizing nonimmunogenic HLA mismatches utilizing a research cohort of HCT recipients with matched unrelated donor. They will hear about novel software developed to identify putative permissible HLA mismatches.

November 1, 2022
Correlation of T- and B-Cell Epitope Mismatches with De Novo Donor-Specific Antibody Formation in Renal Transplant Recipients
presented by Elaine Chou-Wu, PhD, F(ACHI), Immunogenetics/HLA, Bloodworks NW, Seattle, WA

The formation of de novo donor-specific antibodies (dnDSA) is a known risk factor for renal allograft rejection and dysfunction. Recent development of HLA molecular mismatch assessment tools has provided more precise measures to define the allo immunogenicity of donor HLA antigens. Participants will learn about a study aimed at evaluating the correlation of T- and B-cell epitope mismatches with the occurrence of dnDSA after kidney transplantation.

November 8, 2022
Epitope Matching and Eplet Analysis: A New Addition to the HLA Toolbox
presented by Ahmed Mostafa, MD, PhD, F(ACHI), Saskatchewan Health Authority - St. Paul's Hospital Saskatoon, SK

Participants will hear about HLA epitopes from a historical perspective and will learn about the identification and mapping of HLA epitopes. Case examples will be used to teach participants how to take advantage of built-in HLAMatchmaker tools in the Fusion software to better understand antibody specificities.

November 22, 2022
Engraftment/Chimerism Monitoring: Fantasy to Reality
presented by Ahmed Mostafa, MD, PhD, F(ACHI), Saskatchewan Health Authority - St. Paul's Hospital
Saskatoon, SK

Participants will hear about myths and legends pertaining to chimerism along with available methods for engraftment monitoring. They will learn how next generation sequencing (NGS) can be used for chimerism testing and how it can be validated for clinical testing. The utility of chimerism testing in hematopoietic stem cell and solid organ transplant will be discussed.

November 29, 2022
Evaluation of Interference from Therapeutic Antibodies on the Flow Cytometry Crossmatch Test
presented by Eszter Lazar-Molnar, PhD, F(ACHI), University of Utah School of Medicine
Salt Lake City, UT

Since 1985, approximately one hundred monoclonal antibodies (mAbs) have been designated as drugs and new approvals continue to accrue. Therapeutic mAbs are directed against many different cell surface antigens and are commonly used for the treatment of immunologic diseases and cancer therapy. Participants will hear about a systematic study aimed at understanding which therapeutic mAbs may interfere with flowcytometric crossmatch results.

December 6, 2022
The Consequences of HLA-DQ Mismatches in Kidney Transplantation
presented by Anat Tambur, DMD, PhD, F(ACHI), Northwestern University, Chicago, IL

Participants will hear about a large retrospective study that investigated which HLA antibody specificities are most prevalent in patients being listed for a second kidney transplant. They will learn about findings that suggest HLA-DQ mismatches lead to more overall sensitization along with increased unacceptable antigens. In addition, participants will learn how DQ mismatches disproportionately disadvantage racial and ethnic minority recipients.

December 13, 2022
A Unified ABO-Adjusted CPRA Metric May Improve Equity in Kidney Allocation
presented by James Lan, MD, FRCP(C), F(ACHI), Vancouver General Hospital
Gordon & Leslie Diamond Health Care Center, Vancouver, BC

In addition to the level of preformed HLA antibody and unacceptable antigens, the likelihood of a patient receiving a deceased donor organ offer varies significantly based on the recipient's ABO blood group. Participants will learn about a proposed alternative ABO-adjusted CPRA calculation aimed at correcting transplant access disparity among blood groups.

December 20, 2022
Revised CPRA Metrics
presented by Loren Gragert, PhD, Tulane University School of Medicine, New Orleans, LA

Calculated Panel Reactive Antibody (CPRA) is a formula used to determine what proportion of deceased donors a potential candidate may be immunologically incompatible with and unable to accept organs from. Participants will learn about recent changes to the UNOS/OPTN CPRA formula that utilize antigen frequencies based on a larger data set and include DQA, DPA, and DPB along with allele specific antibodies in the calculation.

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