

AMERICAN SOCIETY FOR HISTOCOMPATIBILITY AND IMMUNOGENETICS
BANFF FOUNDATION FOR ALLOGRAFT PATHOLOGY

ASHI/BANFF

JOINT SCIENTIFIC MEETING

September 23–27, 2019
David L. Lawrence Convention Center
PITTSBURGH, PA



2019.ashi-hla.org

PROGRAM



Monday, September 23, 2019

Registration Open

Room: Regional Gallery, Level Three

7:00 am – 9:00 pm

ASHI Inspectors Training Workshop

Room: 301-305, Level Three

8:00 am – 4:30 pm

Banff Regenerative Medicine

Room: Spirit of Pittsburgh Ballroom, Level Three

8:00 am – 10:00 am

Moderator: Kim Solez, MD, University of Alberta, Edmonton, AB, CAN and Andrew Malone, MD, Washington University, St. Louis, MO, USA

8:00 am – 8:25 am

General Comment and Overview

Kim Solez, MD
University of Alberta
Edmonton, AB, CAN

8:25 am – 8:50 am

Heart and Lungs

Joshua Gershlak, PhD
Massachusetts General Hospital
Boston, MA, USA

8:50 am – 9:15 am

Kidneys

Ryuji Morizane, MD, PhD
Brigham and Women's Hospital
Boston, MA, USA

9:15 am – 9:40 am

Creating a Functional 3-Dimensional Liver

Stephen Badylak, DVM, PhD, MD
University of Pittsburgh
Pittsburgh, PA, USA

9:40 am – 10:00 am

Panel Discussion

Banff Digital Pathology, Machine Learning and AI in Transplantation

Room: Spirit of Pittsburgh Ballroom, Level Three

10:30 am – 12:30 pm

Moderators: Anthony Demetris, MD, University of Pittsburgh Medical Center, Pittsburgh, PA, USA and Mark Stegall, MD, Mayo Clinic, Rochester, MN, USA

10:30 am – 10:55 am

Deep Learning and Renal Transplant Pathology

Jesper Kers, MD, PhD
Amsterdam UMC, Pathology
Amsterdam, Netherlands

10:55 am – 11:20 am

Single Cells and Human Cells Atlas Towards Banff Implementation

Andrew Malone, MD
Washington University
St. Louis, MO, USA

11:20 am – 11:45 am

Banff Interfacing AI Natural Language Processing and Virtual Biopsy Systems

Alexandre Loupy, MD, PhD
Paris Transplant Group
Paris, France

**11:45 am – 12:30 pm Discussion and Proposal for a Digital Pathology White Paper**

Yukako Yagi, PhD
Memorial Sloan Kettering Cancer Center
New York, NY, USA

Kim Solez, MD
University of Alberta
Edmonton, AB, CAN

Joint Pre-Meeting: HLA 101 and Pathology 101**Room: Spirit of Pittsburgh Ballroom, Level Three****2:00 pm – 3:30 pm**

Moderators: Adriana Zeevi, PhD, D(ABHI), University of Pittsburgh, Pittsburgh, PA, USA and Jan Ulrich Becker, MD, Institute of Pathology, University Hospital of Cologne, Cologne, North-Rhine Westfalia, Germany

2:00 pm – 2:30 pm Pathology of Solid Organ Allografts and the Banff Classification

Anthony Demetris, MD
University of Pittsburgh Medical Center
Pittsburgh, PA, USA

2:30 pm – 3:00 pm HLA Didactic Presentation

Annette Jackson, PhD, D(ABHI)
Duke University
Durham, NC, USA

3:00 pm – 3:30 pm**Case Presentation**

Anat Tambur, DMD, PhD, D(ABHI)
Northwestern University
Chicago, IL, USA

Candice Roufosse, MD, PhD
Imperial College
London, United Kingdom

ASHI First Time Attendees & New Members Reception***Room: East Atrium, Level Three****5:00 pm – 6:00 pm****By invitation only***Opening Session: 'Burden of Genius' Movie Viewing****Room: Spirit of Pittsburgh Ballroom, Level Three****5:45 pm – 7:30 pm****Open Panel Discussion to Follow***Opening Reception with Exhibits Open****Room: Hall A, Level Two****7:30 pm – 9:00 pm****Tuesday, September 24, 2019****Registration Open****Room: Regional Gallery, Level Three****6:30 am – 8:15 pm****Women in Transplantation Breakfast****Room: 315-316, Level Three****7:00 am – 8:00 am**

**The Paul I. Terasaki Clinical Science Award****Room: Spirit of Pittsburgh Ballroom, Level Three****8:00 am – 9:00 am***Moderator: Patricia Campbell, MBChB, FRCP, University of Alberta Hospitals, Edmonton, AB, CAN***Immune Monitoring in Solid Organ Transplantation Pittsburgh Experience: Passion, Perseverance and Collaboration**Adriana Zeevi, PhD, D(ABHI)
University of Pittsburgh
Pittsburgh, PA, USA**Exhibit and Poster Hall Open****Room: Hall A, Level Two****9:00 am – 12:30 pm****Keynote Address****Room: Spirit of Pittsburgh Ballroom, Level Three****9:00 am – 10:00 am***Moderator: John Schmitz, PhD, D(ABMLI, ABHI), UNC Chapel Hill, Chapel Hill, NC, USA***What Has Been and What Will Be: A Transplant Odyssey**Robert Montgomery, MD, D.Phil, FACS
NYU Langone Transplant Institute
New York, NY, USA**Coffee Break with Exhibits and Posters****Room: Hall A, Level Two****10:00 am – 10:30 am****Plenary I: 50 Years of Humoral Theory of Transplantation: The ASHI-Banff Crosstalk****Room: Spirit of Pittsburgh Ballroom, Level Three****10:30 am – 12:20 pm***Moderators: Patricia Campbell, MBChB, FRCP, University of Alberta Hospitals, Edmonton, AB, CAN***10:30 am – 11:10 am **Is There Evidence for a Causative Role of DSA in Solid Organ Transplant Rejection?****Robert Colvin, MD
Massachusetts General Hospital
Boston, MA, USA**11:10 am – 11:40 am **DSA Testing in Solid Organ Transplantation: A STAR IS BORN****Anat Tambur, DMD, PhD, D(ABHI)
Northwestern University
Chicago, IL, USA**11:40 am – 12:20 pm **DSA Testing in Liver and Thoracic Transplantation: The Banff and ISHLT Perspective****Adriana Zeevi, PhD, D(ABHI)
University of Pittsburgh
Pittsburgh, PA, USA**ASHI User Group Meetings****12:30 pm – 2:20 pm****Innovative Molecular Solutions for Today's HLA Laboratory****Room: 403 - 405, Level Four**

Sponsored by One Lambda Inc., A Thermo Fisher Scientific Brand

Latest Innovation in Transplantation to Impact Patient Care*CareDx Announces New Launches to Help Improve Patient Outcomes***Room: 408 - 410, Level Four**

Sponsored by CareDx, Inc.

**Seeing Beyond Limits in Transplant Diagnostics****Room: 413 – 415, Level Four**

Sponsored by Immucor

Banff Working Lunch I: Progress Report on Banff Working Groups**Room: 401 – 402, Level Four****12:30 pm – 2:20 pm**

Moderators: Michael Mengel, MD, University of Alberta, Edmonton, AB, CAN and Mark Haas, MD, PhD, Cedars-Sinai Medical Center, Los Angeles, CA, USA

12:30 pm – 12:40 pm**Introduction**

Michael Mengel, MD
University of Alberta
Edmonton, AB, CAN

12:40 pm – 12:50 pm**Thrombotic Microangiopathy**

Marjan Afrouzian, MD
University of Texas Medical Branch
Galveston, TX, USA

12:50 pm – 1:00 pm**Recurrent GN**

Nada Alachkar, MD
Johns Hopkins University
School of Medicine
Baltimore, MD, USA

Serena Bagnasco, MD
Johns Hopkins University School of
Medicine
Baltimore, MD, USA

1:00 pm – 1:10 pm**Highly Sensitized**

Lynn Cornell, MD
Mayo Clinic
Rochester, MN, USA

1:10 pm – 1:20 pm**HIV**

Serena Bagnasco, MD
Johns Hopkins University School of Medicine
Baltimore, MD, USA

1:20 pm – 1:30 pm**Clinical Trials – Integration Surrogate**

Alexandre Loupy, MD, PhD
Paris Transplant Group
Paris, France

1:30 pm – 1:40 pm**Banff Rules and Dissemination**

Jan Ulrich Becker, MD
Institute of Pathology, University Hospital of Cologne
Cologne, North Rhine-Westfalia, Germany

1:40 pm – 1:50 pm**TCMR - iIFTA**

Parmjeet Randhawa, MD
University of Pittsburgh
Pittsburgh, PA, USA

Volker Nickeleit, MD
UNC
Chapel Hill, NC, USA

1:50 pm – 2:00 pm**Molecular**

Michael Mengel, MD
University of Alberta
Edmonton, AB, CAN

2:00 pm – 2:10 pm**EM**

Candice Roufousse, MD, PhD
Imperial College
London, United Kingdom

Harsharan Singh, MD
The University of North Carolina
Chapel Hill, NC, USA



- 3:45 pm – 4:15 pm** **Potential Role for Morphometry, Molecular Diagnosis in Further Refining the Definition of Chronic TCMR**
 Enver Akalin, MD
 Montefiore Medical Center, Albert Einstein College of Medicine
 New York, NY, USA
- 4:15 pm – 4:30 pm** **Break**
- 4:30 pm – 5:00 pm** **Molecular Phenotype and IFTA**
 Barbara Murphy, MB, BAO, BCh, FRCPI
 Icahn School of Medicine at Mount Sinai
 New York, NY, USA
- 5:00 pm – 5:30 pm** **Borderline Lesions in the Banff Classification: How to Eliminate?**
 Marian Clahsen-van Groningen, MD PhD
 Erasmus Medical Center
 Rotterdam, Netherlands
- 5:30 pm – 6:00 pm** **BKVAN With and Without Rejection: How to Move Towards Specific Diagnoses**
 Benjamin Adam, MD, FRCPC
 University of Alberta
 Edmonton, AB, USA
- 6:00 pm – 6:30 pm** **TCMR Survey Proposal**
 Mark Haas, MD, PhD
 Cedars-Sinai Medical Center
 Los Angeles, CA, USA

Banff Workshop: Lung***Room: 408 – 410, Level Four******2:30 pm – 6:30 pm****Moderators: David Hwang, BSc, MD, PhD, FRCPC, Sunnybrook Health Sciences Centre, Toronto, ON, CAN and Elizabeth Pavlisko, MD, Duke University Hospital, Durham, NC, USA*

- 2:30 pm – 2:50 pm** **Pathological New Features: Associated with Chronic Lung Dysfunction: Update**
 Fiorella Calabrese, MD
 University of Padova
 Padova, Italy
- 2:50 pm – 3:15 pm** **Lessons from Explant Pathology**
 Jan von der Thusen, MD, PhD
 Erasmus Medical Center
 Rotterdam, Netherlands

Moderators: Antoine Roux, MD, PhD, Foch Hospital, Suresnes, France and Benjamin Adam, MD, FRCPC, University of Alberta, Edmonton, AB, CAN

- 3:15 pm – 3:30 pm** **Nanostring & Molecular Diagnostics: Update**
 Benjamin Adam, MD, FRCPC
 University of Alberta
 Edmonton, AB, CAN
- 3:30 pm – 3:45 pm** **Nanostring Technology and CLAD: Successes and Lessons Learned**
 Jamie Todd, MD, MHS
 Duke University Medical Center
 Durham, NC, USA
- 3:45 pm – 4:00 pm** **Evaluation of Immune Parameters in Lung Transplant**
 Laurie Snyder, MD
 Duke University
 Durham, NC, USA

**4:00 pm – 4:15 pm Break**

Moderators: Ramsey Hachem, MD, Washington University in St. Louis, St. Louis, MD, USA and Adriana Zeevi, PhD, D(ABHI), University of Pittsburgh, Pittsburgh, PA, USA

4:15 pm – 4:35 pm Immunobiology: Impact on DSA Pathology

Adriana Zeevi, PhD, D(ABHI)
University of Pittsburgh
Pittsburgh, PA, USA

4:35 pm – 4:55 pm**Intragraft DSA**

Jean-Luc Taupin, PharmD, PhD
Hopital Saint-Louis
Paris, France

4:55 pm – 5:15 pm**Non-HLA DSA in Lung Transplantation**

Duska Dragun, MD
Charite Universitätsmedizin Berlin
Berlin, Germany

Moderators: Ramsey Hachem, MD, Washington University in St. Louis, St. Louis, MD, USA and Deborah Levine, MD, University of Texas Health Science Center San Antonio, San Antonio, TX, USA

5:15 pm – 5:30 pm**Risk Stratification**

Deborah Levine, MD
University of Texas Health Science Center San Antonio
San Antonio, TX, USA

5:30 pm – 5:45 pm**New Therapeutics/New Strategies**

Christopher Ensor, PharmD, BCPS, FCCP, FAST
AdventHealth Orlando
Orlando, FL, USA

5:45 pm – 6:30 pm**What Do We Need to Move Forward? Panel Discussion****Banff Workshop: VCA**

Room: 413 – 415, Level Four

2:30 pm – 6:30 pm

Moderators: Cinthia Drachenberg, MD, University of Maryland Medical Center, Baltimore, MD, USA and Alton Farris, MD, Emory University, Atlanta, GA, USA

2:30 pm – 2:50 pm**Chronic Rejection in VCA**

Jean Kanitakis, MD
Hospices Civils de Lyon
Lyon, France

2:50 pm – 3:10 pm**Eosinophilia in the Skin as a Predictor of Allograft Rejection in VCA: Insight from Other Organ Transplants**

Cinthia Drachenberg, MD
University of Maryland Medical Center
Baltimore, MD, USA

3:10 pm – 3:30 pm**Rejection in Sentinel Flaps: Benefits and Liabilities**

Hatem Amer, MD
Mayo Clinic
Rochester, MN, USA

3:30 pm – 3:50 pm**Acute Cellular Rejection in Uterus Transplantation**

Atin Agarwal, MD
Baylor University Medical Center
Dallas, TX, USA



- 3:50 pm – 4:10 pm** **Break**
- 4:10 pm – 4:30 pm** **Cutaneous GVD and Skin Rejection in VCA: A Clinical and Histopathologic Comparison**
Lawrence Gibson, MD
Mayo Clinic
Rochester, MN, USA
- 4:30 pm – 4:50 pm** **Update on a Systematic Pathological Component Score For Skin-Containing VCAs**
Ivy Rosales, MD
Massachusetts General Hospital
Boston, MA, USA
- 4:50 pm – 6:30 pm** **Working Group on Chronic Rejection: Update and Discussion**
Christina Kaufman, PhD
Christine M. Kleinert Institute
Louisville, KY, USA

ASHI Symposium I: HLAs and Their Role in Immunotherapies

Room: Spirit of Pittsburgh Ballroom, Level Three

2:30 pm – 4:30 pm

Moderator: Dimitri Monos, PhD, University of Pennsylvania/Children's Hospital of Philadelphia, Philadelphia, PA, USA and William Hildebrand, PhD, University of Oklahoma HSC, Edmond, OK, USA

- 2:30 pm – 3:10 pm** **CART Therapeutic Approaches Beyond Cancer**
Vijay Bhoj, MD, PhD
University of Pennsylvania
Philadelphia, PA, USA
- 3:10 pm – 3:50 pm** **The Role of HLAs in Developing Vaccine-Based Immunotherapies**
Derin Keskin, PhD
Translational Immunogenetics Lab, Dana Farber Cancer Institute
Boston, MA, USA
- 3:50 pm – 4:30 pm** **Patient HLA Class I Genotype Influences Cancer Response to Checkpoint Blockade Immunotherapy**
Timothy Chan, MD, PhD
Memorial Sloan Kettering Cancer Center
New York, NY, USA

Coffee Break, Exhibit Hall Open

Room: Hall A, Level Two

4:30 pm – 5:00 pm

ASHI Workshop I: Laboratory Automation Selection and Implementation: What You Need to Know

Room: 306 – 307, Level Three

5:00 pm – 6:30 pm

Moderator: Ping Rao, PhD, D(ABHI), Duke University, Durham, NC, USA and Reut Hod Dvoria, PhD, D(ABHI), SUNY Upstate Medical Center, Syracuse, NY, USA

- 5:00 pm – 5:30 pm** **Considerations in Selecting and Implementing Laboratory Automation**
Brian Iglehart, MS
Johns Hopkins University
Baltimore, MD, USA
- 5:30 pm – 6:00 pm** **Managing Laboratory Automation Expectations**
Lynn Kilheaney
UPMC Presbyterian Shadyside
Pittsburgh, PA, USA



6:00 pm – 6:30 pm **Challenges in Obtaining Laboratory Automation: A Beginner's Experience**
 Lois Regen, MS, CHS(ABHI)
 Seattle Cancer Center Alliance
 Seattle, WA, USA

ASHI Workshop II: Developing a Quality QA Program

Room: 310 – 311, Level Three

5:00 pm – 6:30 pm

Moderators: Peter Lalli, PhD, D(ABHI), Carolinas Pathology Group, Charlotte, NC, USA and Daniel Graziano, PhD, D(ABHI), Allegheny General Hospital, Pittsburgh, PA, USA

5:00 pm – 5:30 pm **Non-Conforming Events and Root Cause Analysis**
 Mary Libby, MT(ASCP), CHS(ABHI)
 Cleveland Clinic Allogen Laboratories
 Cleveland, OH, USA

5:30 pm – 6:00 pm **Tracking Quality Metrics**
 Anh Dinh, MD
 Children's Hospital of Philadelphia
 Philadelphia, PA, USA

6:00 pm – 6:30 pm **Validation and Verification Documentation**
 Jean Garcia-Gomez, CHS(ABHI)
 City of Hope Medical Center
 Duarte, CA, USA

ASHI Workshop III: UNOS IT and ASHI: BFFs!

Room: 315 – 316, Level Three

5:00 pm – 6:30 pm

Moderator: Michael Gautreaux, PhD, D(ABHI), Wake Forest School of Medicine, Winston-Salem, NC, USA and Walter Herczyk, MT(ASCP), CHS(ABHI), Gift of Life Michigan, Ann Arbor, MI, USA

5:00 pm – 5:30 pm **UNOS IT**
 Alex Tulchinsky Bonnie Felice
 United Network for Organ United Network for Organ Sharing
 Sharing Richmond, VA, USA
 Richmond, VA, USA

5:30 pm – 6:00 pm **SystemLink/Histotrac**
 K. Nicole Court, MSLA, CHS(ABHI), CHT(ABHI)
 SystemLink
 Reston, VA, USA

6:00 pm – 6:30 pm **HLA Data Systems/mTilda**
 Michael Reardon, PhD
 HLA Data Systems
 Houston, TX, USA

ASHI Abstract Session I: Solid Organ Pre-Transplant Testing

Room: 317 – 318, Level Three

5:00 pm – 6:30 pm

Moderator: Sara Dionne, PhD, D(ABHI), VRL-Eurofins, Centennial, CO, USA

5:00 pm – 5:12 pm **OR1: IMPACT OF CLASS II INVARIANT CHAIN PEPTIDE (CLIP) IN HLA ALLOANTIBODY RECOGNITION**
 Robert Bray
 Emory University Hospital
 Atlanta, GA, USA



- 5:12 pm – 5:24 pm** **OR2: FLOW CYTOMETRY CROSSMATCH (FCXM) CUTOFF CALCULATION SURVEY: DO WE NEED A BETTER FOUNDATION?**
Daniel Ramon
Mayo Clinic
Phoenix, AZ, USA
- 5:24 pm – 5:36 pm** **OR3: HLA-DP PROTEIN EXPRESSION LEVEL AND ITS IMPACT ON FLOW CYTOMETRY CROSSMATCH (FXM)**
Lin Wang
Stanford Blood Center, Stanford Histocompatibility & Immunogenetics Laboratory
Palo Alto, CA, USA
- 5:36 pm – 5:48 pm** **OR4: ASSESSING CORRELATION AND DIFFERENCES BETWEEN AMINO ACID AND EPLET MISMATCHES**
Mengkai Shieh
Children's Hospital of Philadelphia
Philadelphia, PA, USA
- 5:48 pm – 6:00 pm** **OR5: DSAs IN THE KIDNEY PRE TRANSPLANT SETTING. FOUR YEARS FOLLOW UP.**
Juliana Montagner
Santa Casa Hospital
Porto Alegre, Brazil
- 6:00 pm – 6:12 pm** **OR6: ANALYSIS OF DONOR SPECIFIC HLA ANTIBODY (DSA) IGG SUBCLASS ANALYSIS COMPLEXITY TO PREDICT DSA REBOUND AND PERSISTENCE**
Carly Callender
Johns Hopkins University
Baltimore, MD, USA
- 6:12 pm – 6:24 pm** **OR7: THE IMPACT OF EPLET MISMATCHES ON *DE NOVO* DSA OCCURRENCE AND GRAFT FAILURE AFTER KIDNEY TRANSPLANTATION**
Aleksandar Senev
KU Leuven
Leuven, Belgium

ASHI Abstract Session II: Immunotherapy/Tolerance/ Immunomodulation

Room: 301 – 302, Level Three

5:00 pm – 6:30 pm

Moderator: Myra Coppage, PhD, University of Rochester, Rochester, NY, USA

- 5:00 pm – 5:12 pm** **OR8: NOVEL MECHANISM BY WHICH ANTIBODIES TO HLA MOLECULES RESULT IN ALLOGRAFT REJECTION: INDUCTION AND RELEASE OF IMMUNE-ACTIVATING, CIRCULATING EXOSOMES**
Ranjithkumar Ravichandran
St. Joseph's Hospital & Medical Center
Phoenix, AZ, USA
- 5:12 pm – 5:24 pm** **GENERATION OF IMMUNOLOGICALLY INVISIBLE TRANSGENIC PORCINE PANCREATIC ISLET CELL CLUSTERS AFTER SINGLE CELL ENGINEERING AND POST-TRANSDUCTION ISLET REASSEMBLING TO SUPPORT XENOGRAFT SURVIVAL**
- 5:24 pm – 5:36 pm** **OR10: MHC ENGINEERING OF CORNEAS PREVENTS ALLOGENEIC REJECTION**
Constanca Figueiredo
Hannover Medical School
Hannover, Germany



- 5:36 pm – 5:48 pm** **OR11: AKI-INDUCED MEMBRANE TRANSLOCATION OF MDM2 INCREASES THE IMMUNOGENICITY OF TUBULAR EPITHELIUM VIA PD-L1 UBIQUITINATION**
Hua Su
Union Hospital, Tongji Medical School, Huazhong University of Science and Technology
Wuhan, China
- 5:48 pm – 6:00 pm** **OR12: EXPANSION CONDITIONS AFFECT HUMAN LEUKOCYTE ANTIGENS (HLA) CLASS II EXPRESSION ON THYMIC REGULATORY T CELLS (TREGS)**
Esme Dijke
University of Alberta
Edmonton, AB, Canada
- 6:00 pm – 6:12 pm** **OR13: INCREASED EXPRESSION OF CEACAM1 IN HUMAN LIVER TRANSPLANTATION IS CYTOPROTECTIVE DURING ISCHEMIA-REPERFUSION INJURY**
Rebecca Sosa
UCLA David Geffen School of Medicine
Los Angeles, CA, USA
- 6:12 pm – 6:24 pm** **OR14: REDUCED INTENSITY INDUCTION THERAPY IN PATIENTS UNDERGOING REPEAT KIDNEY TRANSPLANTS**
Kamilla Linhares
Hospital do Rim
Sao Paulo, Brazil

ASHI Abstract Session III: The Past, Present, and Future of HLA

Room: 304 – 305, Level Three

5:00 pm – 6:30 pm

Moderator: Sam Ho, PhD, D(ABHI), Gift of Hope Organ & Tissue Donor Network, Itasca, IL, USA

- 5:00 pm – 5:12 pm** **OR15: MULTI-MIRNAS REGULATION OF <i>HLA-DPB1</i> EXPRESSION AND ITS ASSOCIATION WITH GRAFT-VERSUS-HOST DISEASE**
Yuxin Yin
UCLA Immunogenetics Center, Department of Pathology & Laboratory Medicine
Los Angeles, CA, USA
- 5:12 pm – 5:24 pm** **OR16: COMBINING NGS LONG AND SHORT READS TO FULLY PHASE AND UNAMBIGUOUSLY DEFINE NEW ALLELES FOR HLA AND KIR**
Erik Rozemuller
GenDx
Utrecht, Netherlands
- 5:24 pm – 5:36 pm** **OR17: BINDING OF HYBRID INSULIN PEPTIDES TO HLA-DRB1, DRB3/4/5, AND DQ ALLELES**
Elizabeth Sunderhaus
ClinImmune Labs
Aurora, CO, USA
- 5:36 pm – 5:48 pm** **OR18: THE ROAD TO PERSONALIZED HISTOCOMPATIBILITY: TELLING FRIEND FROM FOE**
David Pinelli
Northwestern University
Chicago, IL, USA
- 5:48 pm – 6:00 pm** **OR19: CRISPR SWITCHING OF HLA CLASS II PHENOTYPES**
Steven Cate
University of Oklahoma Health Science Center
Oklahoma City, OK, USA



- 6:00 pm – 6:12 pm** **OR20: NHLBI-SPONSORED PROSPECTIVE STUDY TO VALIDATE THE USE OF DONOR-DERIVED CELL-FREE DNA TO DETECT LUNG-TRANSPLANT REJECTION - INTERIM RESULTS**
Sean Agbor
Genomic Research Alliance for Transplantation (GRAFT) – National Institutes of Health
Bethesda, MD, USA
- 6:12 pm – 6:24 pm** **OR21: DETECTION OF DE NOVO DONOR SPECIFIC ANTIBODY RESPONSE BY NEXT GENERATION SEQUENCING B CELL RECEPTOR**
Xiaohai Zhang
HLA & Immunogenetics Laboratory Cedars-Sinai Health System
Los Angeles, CA, USA

Poster Reception with Exhibits Open*Room: Hall A, Level Two***6:30 pm – 8:15 pm**

- 7:00 pm – 7:30 pm** **Poster Awards Ceremony**
Sponsored by Immucor

ASHI ARB Inspectors & International Reception**Room: East Atrium, Level Three***7:00 pm – 9:00 pm****By invitation only*

Wednesday, September 25, 2019

The Tulip Run: 5K Run/1 Mile Walk*Offsite: Three Rivers Heritage Trail***6:30 am – 8:00 am**Registration Open*Room: Regional Gallery, Level Three***8:00 am – 6:00 pm**Scientific Award Presentation: Rose Payne Award*Room: Spirit of Pittsburgh Ballroom, Level Three***8:30 am – 9:30 am***Moderator: John Schmitz, PhD, D(ABMLI, ABHI), UNC Chapel Hill, Chapel Hill, NC, USA***Immunogenetics of Hematopoietic-Cell Transplantation**

Effie Wang Petersdorf, MD

Fred Hutchinson Cancer Research Center

Seattle, WA, USA

Exhibit and Poster Hall Open*Room: Hall A, Level Two***9:00 am – 12:30 pm**Plenary II: Joint Progresses in the Diagnosis and Treatment of Rejection*Room: Spirit of Pittsburgh Ballroom, Level Three***9:30 am – 11:00 am***Moderators: Alexandre Loupy, MD, PhD, Paris Transplant Group, Paris, France*

- 9:30 am – 9:50 am** **TTS Consensus Meeting Update**
Carmen Lefaucher, MD, PhD
Saint-Louis Hospital
Paris, France



- 9:50 am – 10:12 am** **It's Not All about AMR: Fine Tuning of Chronic Active TCMR**
 Parmjeet Randawa, MD
 University of Pittsburgh
 Pittsburgh, PA, USA
- 10:12 am – 10:32 am** **Molecular Assessments for Precision Diagnostics and Prognostication**
 Michael Mengel, MD
 University of Alberta
 Edmonton, AB, USA
- 10:32 am – 11:00 am** **AMR without DSA: Non-HLA Antibodies and Implication on Pathophysiology and Diagnostics**
 Elaine Reed, PhD, D(ABHI)
 UCLA
 Los Angeles, CA, USA

Coffee Break with Exhibits and Posters

Room: Hall A, Level Two

11:00 am – 11:30 am

Plenary III: Complex Case Study – Allosensitization in HCT and VCA

Room: Spirit of Pittsburgh Ballroom, Level Three

11:30 am – 12:20 pm

Moderators: Medhat Askar, MD, PhD, D(ABHI), Baylor University Medical Center, Dallas, TX, USA

- 11:30 am – 11:55 am** **HCT Complex Case**
 Stefan Ciurea, MD
 The University of Texas MD Anderson Cancer Center
 Houston, TX, USA
- 11:55 am – 12:20 pm** **VCA Complex Case**
 Anil Chandraker, MD
 Brigham and Women's Hospital
 Boston, MA, USA

ASHI User Group Meetings

12:30 pm – 2:20 pm

Comprehensive Antibody Detection: New Concepts in Single Antigen Technology

Room: 403 – 405, Level Four

Sponsored by One Lambda Inc., A Thermo Fisher Scientific Brand

Advances in NGS Typing: From HLA to KIR and Beyond

A Closer Look at Innovations With GenDx

Room: 408 – 410, Level Four

Sponsored by GenDx

Collaborative Crossmatch: Connecting Labs with Improved Standardization and Efficiency Using Flow Cytometry and Data Integration

Room: 413 – 415, Level Four

Sponsored by BD Biosciences

Banff Working Lunch II: Kidney: Next Generation Clinical Trials in Transplantation: Towards Integrative Strategies

Room: 406, Level Four

12:30 pm – 2:20 pm

Moderators: Peter Nickerson, MD, FRCPC, University of Manitoba, Winnipeg, MB, CAN and Barbara Murphy, MB, BAO, BCh, FRCPI, Icahn School of Medicine at Mount Sinai, New York, NY, USA



- 12:30 pm – 1:00 pm** **Regulatory Requirements and The Process Towards Acceptance of Surrogate Endpoints: The European Perspective**
Maarten Naesens, MD, PhD
KU Leuven
Leuven, Belgium
- 1:00 pm – 1:30 pm** **Using Histology as Surrogate Endpoint: Revamping Banff with Computer Assisted Morphometry**
Mark Stegall, MD
Mayo Clinic
Rochester, MN, USA
- 1:30 pm – 2:00 pm** **ABMR Related Clinical Trials: The Slippery Slope Into Confusion and Prospect for Improvement**
Robert Montgomery, MD, D.Phil, FACS
NYU Langone Transplant Institute
New York, NY, USA
- 2:00 pm – 2:20 pm** **New Developments and Ongoing Clinical Trails**
Sindhu Chandran, MBBS
University of California, San Francisco
San Francisco, CA, USA

Banff Working Lunch III: Liver: Semi-Quantitative and Quatitative Scoring of Fat in Steatotic Donor Liver

Room: 407, Level Four

12:30 pm – 2:20 pm

Moderators: Delsey Neil, MBBS, PhD, FRCPath, Queen Elizabeth Hospital Birmingham, Birmingham, United Kingdom

12:30 pm – 2:20 pm **Group Discussion**

Banff Workshop: Liver

Room: 403 – 405, Level Four

2:30 pm – 6:00 pm

Moderators: Heather Stevenson-Lerner, MD, PhD, University of Texas Medical Branch at Galveston, Galveston, TX, USA and Stefan Hubscher, FRCPath, University of Birmingham, Birmingham, United Kingdom

- 2:30 pm – 2:45 pm** **Introduction and Goals**
Anthony Demetris, MD
University of Pittsburgh Medical Center
Pittsburgh, PA, USA
- 2:45 pm – 3:30 pm** **Introduction, Scoring, and Interpretation of Changes in Long-Surviving Liver Allografts: Scoring Reliability of Important Findings**
Stefan Hubscher, FRCPath
University of Birmingham
Birmingham, United Kingdom
- 3:30 pm – 4:15 pm** **Combining Molecular Profiling and T-Cell Subset Immunohistochemistry to Understand the Pathogenesis of Liver Allograft Damage**
Richard Taubert, MD
Hannover Medical School
Hannover, Lower Saxony, Germany
- 4:15 pm – 4:30 pm** **Break**
- 4:30 pm – 5:15 pm** **Minimization Immunosuppression and Liver Transplantation: Long-Term Results Including Pathology Findings**
Jan Lerut, MD, PhD, FACS
IREC UCLouvain
Brussels, Belgium



5:15 pm – 6:00 pm **Molecular Predictors of Progressive Liver Damage: A Non-Transplant Perspective**
 Yujin Hoshida, MD, PhD
 University of Texas Southwestern
 Dallas, TX, USA

Banff Workshop: Pancreas

Room: 408 – 410, Level Four

2:30 pm – 6:00 pm

Moderators: Cinthia Drachenberg, MD, University of Maryland School of Medicine, Baltimore, MD, USA and Raja Kandaswamy, MD, FACS, MBA

Duodenal Cuff and Pancreas

2:30 pm – 2:45 pm **Development of Banff Schema for Duodenal Cuff Biopsies**

Danni Holando, MD
 University of Iowa
 Iowa City, IA, USA

2:45 pm – 3:00 pm **Histopathological Criteria for Diagnosis of T-Cell Mediated Rejection in Allograft Intestinal Biopsies**

Marta Minervini, MD
 UPMC
 Pittsburgh, PA, USA

3:00 pm – 3:15 pm **Experience with Duodenal Cuff Biopsies**

Krzysztof Grzyb, MD
 Rikshospitalet, Oslo University Hospital
 Oslo, Norway

3:15 pm – 3:30 pm **Experience with Duodenal Cuff Biopsies**

Jens G. Brockmann, Prof, MD, FRCS
 University Hospital Munster
 Munster, Germany

3:30 pm – 3:45 pm **Antibody Mediated Rejection in Intestinal Biopsies**

Marion Rebant, MD, PhD
 Necker Hospital
 Paris, France

Advances in the Diagnosis of Pancreas Rejection

3:45 pm – 4:00 pm **Nanostring Analysis of Pancreas Biopsies**

Candice Roufosse, MD, PhD
 Imperial College
 London, United Kingdom

4:00 pm – 4:15 pm **Transcriptome Profile of Pancreas Transplant Rejection Using Blood and Tissue Samples**

Surya Seshan, MD
 Weill Cornell Medicine
 New York, NY, USA

4:15 pm – 4:30 pm **Lessons from Concurrent Pancreas and Kidney Biopsies**

Pablo Uva, MD
 ITAC – Nephrology
 Buenos Aires, Argentina

4:30 pm – 4:45 pm **Chronic Active Rejection in the Pancreas?**

Maria Fernanda Toniolo, MD
 ITAC
 Buenos Aires, Argentina

4:45 pm – 5:00 pm **Break**

**Islet Dysfunction After Beta Cell Replacement****5:00 pm – 5:15 pm****Delayed Graft Function After Pancreas Transplantation**

Raja Kandaswamy, MD, FACS, MBA
 University of Minnesota
 Minneapolis, MN, USA

5:15 pm – 5:30 pm**Primary Islet Dysfunction, Morphological Studies**

John Papadimitriou, MD, PhD
 University of Maryland School of Medicine
 Baltimore, MD, USA

5:30 pm – 5:45 pm**Islet Cell Studies on Drug Interactions**

Esteban Porrini, MD, PhD
 University of La Laguna
 La Laguna, Spain

5:45 pm – 6:00 pm**Islet Engraftment and Inflammatory Reaction**

Alton Farris, MD
 Emory University
 Atlanta, GA, USA

Banff Workshop: Heart***Room: 413 – 415, Level Four*****2:30 pm – 6:00 pm**

Moderators: Gerald Berry, MD, Stanford University, Palo Alto, CA, USA and Jean Paul Duong-Van Huygen, MD, PhD, Necker Hospital, Paris, France

2:30 pm – 2:35 pm**Introduction to the Session**

Patrick Bruneval, MD
 Hopital Europeen Georges Pompidou
 Paris, France

How Can We Improve EMB Accuracy For The Diagnostic of Rejection?**2:35 pm – 2:50 pm****Digitalized Image Analysis for the Diagnosis of Heart Transplant Rejection**

Eliot Peyster, MD
 University of Pennsylvania
 Philadelphia, PA, USA

2:50 pm – 3:05 pm**Molecular Assessment As A Companion to Histopathology**

Jean Paul Duong-Van Huyegn, MD, PhD
 Necker Hospital
 Paris, France

3:05 pm – 3:20 pm**Phenotyping of the Inflammatory Cells**

Patrick Bruneval, MD
 Hopital Europeen Georges Pompidou
 Paris, France

3:20 pm – 3:35 pm**Evolution of Endothelium, Capillary and Small Vessel Damage**

Marny Fedrigo, MD, PhD
 University of Padua
 Padova, Italy

3:35 pm – 3:50 pm**What Should Be Called “Cardiac Injury” on EMB?**

Ornella Leone, MD
 Sant’Orsola University Hospital
 Bologna, Italy

3:50 pm – 4:40 pm**Coffee Break**

**Quality Effect in 2018**

Moderators: Annalisa Angelini, MD, University of Padua, Padova, Italy and Dylan Miller, MD, Intermountain Central Laboratory, Salt Lake City, UT, USA

- 4:40 pm – 4:55 am** **Definition, Diagnosis, Classification of Quality Effect**
 Charles Marboe, MD
 Columbia University Vagelos College of Physicians & Surgeons
 New York, NY, USA
- 4:55 pm – 5:10 pm** **Pathogenesis of Quality: Is It Rejection? Pros and Cons**
 Desley Neil, MBBS, PhD, FRCPath
 Queen Elizabeth Hospital Birmingham
 Birmingham, United Kingdom
- 5:10 pm – 5:25 pm** **Pathogenesis of Quality: Is It Rejection? Pros and Cons**
 Gregory Fishbein, MD
 UCLA
 Los Angeles, CA, USA
- 5:25 pm – 6:00 pm** **Roundtable: Project Proposal and Conclusion**

[ASHI Workshop IV: Assessment and Management of Post-Transplant DSA in Lung Transplant Patients: A Pro-Con Discussion](#)

Room: 317 – 318, Level Three

2:30 pm – 4:00 pm

Moderators: Medhat Askar, MD, PhD, FRCPath, Baylor University Medical Center, Dallas, TX, USA and Annette Jackson, PhD, D(ABHI), Duke University, Durham, NC, USA

- 2:30 pm – 3:00 pm** **How to Assess and Monitor DSA's Post Lung Transplantation**
 Deborah Levine, MD
 University of Texas Health Science Center San Antonio
 San Antonio, TX, USA
- 3:00 pm – 4:00 pm** **To Treat or Not to Treat? What Do I Do With A Positive DSA**
- Con*
 Deborah Levine, MD
 University of Texas Health Science Center San Antonio
 San Antonio, TX, USA
- Pro*
 Ramsey Hachem, MD
 Washington University in St. Louis
 St. Louis, MO, USA

[ASHI Workshop V: Detection of Non-HLA Antibodies – International Experiences with Multiplex Assays](#)

Room: 301 – 302, Level Three

2:30 pm – 4:00 pm

Moderator: Walter Herczyk, MT(ASCP), CHS(ABHI), Gift of Life Michigan, Ann Arbor, MI, USA and Michelle Hickey, PhD, D(ABHI), UCLA Immunogenetics, Los Angeles, CA, USA

- 2:30 pm – 2:35 pm** **Introduction**
 Michelle Hickey, PhD, D(ABHI)
 UCLA Immunogenetics
 Los Angeles, CA, USA
- 2:30 pm – 2:53 pm** **Analytical and Clinical Experience with a Laboratory Developed, Multiplex Non-HLA Antibody Test**
 Henny Otten, PhD
 University Medical Center Utrecht
 Utrecht, Netherlands



- 2:53 pm – 3:16 pm** **Evaluation of LABScreen Autoantibody Panel: US and Canadian Multi-Centre Experience**
 Anne Halpin, MSc, CHS
 University of Alberta
 Edmonton, AB, CAN
 Mary Carmelle Philogene, PhD, D(ABHI)
 Johns Hopkins School of Medicine
 Baltimore, MD, USA
- 3:16 pm – 3:39 pm** **Single Center Experience with Commercially Available Multiplex Non-HLA Antibody Screening Test**
 Elaine Reed, PhD, D(ABHI)
 UCLA
 Los Angeles, CA, USA
- 3:39 pm – 4:00 pm** **Considerations for In House Test Validation, Assay Use and Interpretation**
 John Lunz, PhD, D(ABHI)
 LifeLink Foundation
 Tampa, FL, USA

ASHI Workshop VI: Next Generation Epitope-Based HLA Matching: Where Do We Stand?

Room: 304 – 305, Level Three

2:30 pm – 4:00 pm

Moderator: Malek Kamoun, MD, PhD, University of Pennsylvania, Philadelphia, PA, USA and Peter Nickerson, MD, FRCPC, University of Manitoba, Winnipeg, MB, CAN

- 2:30 pm – 3:00 pm** **Informatics Tools for Precision Histocompatibility Assessments**
 Loren Gragert, PhD
 Tulane University School of Medicine
 New Orleans, LA, USA
- 3:00 pm – 3:30 pm** **Describe the Strengths and Weaknesses of Each Algorithm in Predicting Allograft Outcome and De Novo DSA Risk**
 Chris Wiebe, MD
 University of Manitoba
 Winnipeg, MB, CAN
- 3:30 pm – 4:00 pm** **Machine Learning Strategies for Taking Epistatic and Heterogeneous Associations in Precision Histocompatibility**
 Ryan Urbanowicz, PhD
 University of Pennsylvania
 Philadelphia, PA, USA

ASHI Abstract Session IV: Solid Organ Post-Transplant Testing

Room: 306 – 307, Level Three

2:30 pm – 4:00 pm

Moderator: Eric Weimer, PhD, D(ABHI, ABMLI), UNC Chapel Hill, Chapel Hill, NC, USA

- 2:30 pm – 2:42 pm** **OR22: USE OF DONOR-DERIVED CELL-FREE DNA (CFDNA) AND DONOR-SPECIFIC HLA ANTIBODY (DSA) TESTING AS COMPANION DIAGNOSTICS FOLLOWING HLA INCOMPATIBLE KIDNEY TRANSPLANTATION**
 Carly Callender
 Johns Hopkins University
 Baltimore, MD, USA
- 2:42 pm – 2:54 pm** **OR23: THE IMPACT OF DONOR SPECIFIC ANTIBODY IN ANTIBODY MEDIATED REJECTION AND ACUTE CELLULAR REJECTION OF KIDNEY ALLOGRAFTS AFTER SIMULTANEOUS LIVER-KIDNEY TRANSPLANTATION**
 Aiwen Zhang
 Allogen Laboratories, Cleveland Clinic
 Cleveland, OH, USA



- 2:54 pm – 3:06 pm** **OR24: ALLOANTIBODY TESTING IN TRANSPLANTATION: TO BIND OR NOT TO BIND COMPLEMENT?**
Alin Girnita
University of Cincinnati Academic Health Center
Cincinnati, OH, USA
- 3:06 pm – 3:18 pm** **OR25: DE NOVO THIRD PARTY HLA ANTIBODIES SYNERGIZE WITH DE NOVO DONOR SPECIFIC HLA ANTIBODIES TO NEGATIVELY IMPACT LUNG ALLOGRAFT OUTCOME**
Aiwen Zhang
Allogen Laboratories, Cleveland Clinic
Cleveland, OH, USA
- 3:18 pm – 3:30 pm** **OR26: SPECIFICITY, STRENGTH AND EVOLUTION OF PRETRANSPLANT DONOR-SPECIFIC HLA ANTIBODIES DETERMINE OUTCOME AFTER KIDNEY TRANSPLANTATION**
Aleksandar Senev
Belgian Red Cross – Flanders
Mechelen, Belgium
- 3:30 pm – 3:42 pm** **OR27: IMMUNOHISTOCHEMICAL STUDIES TO EXAMINE HLA-DPA AND HLA-DPB ANTIGEN EXPRESSION IN POST-MORTEM TISSUES SHOWS A VARIED, TISSUE SPECIFIC LANDSCAPE**
Jesse Cox
University of Nebraska Medical Center
Omaha, NE, USA
- 3:42 pm – 3:54 pm** **OR28: ARE ALL DONOR -SPECIFIC HLA ANTIBODIES EQUALLY ASSOCIATED WITH INCREASED RISK OF CHRONIC LUNG ALLOGRAFT DYSFUNCTION?**
Carlo Iasella
University of Pittsburgh
Pittsburgh, PA, USA

ASHI Abstract Session V: Bone Marrow, HST, Chimerism**Room: 310 – 311, Level Three****2:30 pm – 4:00 pm***Moderator: Jennifer Schiller, PhD, D(ABHI), Versiti Blood Center of Wisconsin, Milwaukee, WI, USA*

- 2:30 pm – 2:42 pm** **OR29: ESTABLISHMENT OF AN ASSAY TO ASSESS THE THYMIC FUNCTION RECOVERY AND B-CELL NEOGENESIS FOR ALLOGENIC HAEMATOPOETIC STEM CELL TRANSPLANT RECIPIENTS**
Janette Siu-Yin
Queen Mary Hospital
Hong Kong, Hong Kong
- 2:42 pm – 2:54 pm** **OR30: GENETIC MATCHING FOR TRANSPLANTATION USING CAPTURE PROBES: COMPREHENSIVE AND FLEXIBLE TARGETED GENE SEQUENCING METHODOLOGY FOR HUMAN LEUKOCYTE ANTIGEN GENES AND BEYOND**
Christopher Newbound
CareDx
Fremantle, Australia
- 2:54 pm – 3:06 pm** **OR31: HLA EXPRESSION ON CORD BLOOD CD34+ STEM CELLS**
Maria Bettinotti
Johns Hopkins University
Baltimore, MD, USA



- 3:06 pm – 3:18 pm** **OR32: MODIFIED CHIMERISM APPROACH FOR PREDICTING ACUTE MYELOID LEUKEMIA RELAPSE AFTER ALLOGENEIC HEMATOPOIETIC CELL TRANSPLANTATION**
 Poonam Dharmani-Khan
 University of Calgary
 Calgary, AB, Canada
- 3:18 pm – 3:30 pm** **OR33: A FLOW CYTOMETRY BASED ABO-BLOOD GROUP ANTIBODY ASSAY (FABO-Ab) FOR PREDICTING HEMOLYSIS IN ABO-MISMATCHED BONE MARROW TRANSPLANTATION (BMT)**
 Ge Chen
 Histocompatibility & Immunogenetics Laboratory, Stanford Blood Center
 Palo Alto, CA, USA
- 3:30 pm – 3:42 pm** **OR34: DYNAMIC CHANGES OF HLA ANTIBODY STATUS IN PATIENTS PRIOR TO HEMATOPOIETIC STEM CELL TRANSPLANTATION**
 Heather Casey
 Penn State Hershey Medical Center
 Hershey, PA, USA
- 3:42 pm – 3:54 pm** **OR35: CORRELATION BETWEEN ENGRAFTMENT OF CD71+ ERYTHROID PROGENITORS AND T CELL MIXED CHIMERISM FOLLOWING ALLOGENEIC TRANSPLANTATION FOR SICKLE CELL DISEASE**
 H Holly Jiang
 Columbia University Medical Center
 New York, NY, USA

ASHI Abstract Session VI: Case Studies

Room: 315 – 316, Level Three

2:30 pm – 4:00 pm

Moderator: Peter Lalli, PhD, D(ABHI), Carolinas Pathology Group, Charlotte, NC, USA

- 2:30 pm – 2:40 pm** **OR36: AT1R BLOCKADE MITIGATES ENIGMATIC, ACUTELY RECURRENT, VASCULAR STENOSIS IN A PEDIATRIC LIVER TRANSPLANT RECIPIENT**
 Kelley Hitchman
 University of Texas Health San Antonio
 San Antonio, TX, USA
- 2:40 pm – 2:50 pm** **OR37: FOLLOW-UP ON AN UNUSUAL CROSSMATCH RESULT REVEALS IMMUNODEFICIENCY IN DONOR**
 Eszter Lazar-Molnar
 University of Utah School of Medicine
 Salt Lake City, UT, USA
- 2:50 pm – 3:00 pm** **OR38: UNUSUAL HLA A LOCUS RESOLUTION FOR A PATIENT WITH PARTIAL TRISOMY 6p SYNDROME**
 Andrew Carlson
 University of Minnesota Health
 Minneapolis, MN, USA
- 3:00 pm – 3:10 pm** **OR39: PUBLIC SOLICITATION FOR A LIVING KIDNEY DONOR: EFFECTS ON THE TRANSPLANT WAITING LIST AND HLA LABORATORY WORKLOAD**
 Alison Gareau
 Alberta Public Laboratories
 Calgary, AB, Canada



- 3:10 pm – 3:20 pm** **OR40: AUTOLOGOUS STEM CELL TRANSPLANT: A METHOD OF DESENSITIZATION IN THE HIGHLY SENSITISED PATIENT AWAITING RENAL TRANSPLANT**
 Bruce Young
 McMaster University, St. Joseph's Healthcare Hamilton
 Hamilton, ON, Canada
- 3:20 pm – 3:30 pm** **OR41: NOVEL HLA ALLELES IDENTIFIED BY NEXT GENERATION SEQUENCING USING BLOOD-DERIVED DNA OF PATIENTS WITH HEMATOLOGIC DISEASE MAY INFLUENCE THE SEARCH PROCESS FOR THE APPROPRIATE DONOR IN HEMATOPOIETIC STEM CELL TRANSPLANTATION**
 Jamie Duke
 The Children's Hospital of Philadelphia
 Philadelphia, PA, USA
- 3:30 pm – 3:40 pm** **OR42: HLA HAPLOTYPE LOSS IN POST-HAPLOIDENTICAL TRANSPLANT RELAPSE OF PEDIATRIC ACUTE MYELOID LEUKEMIA**
 Paula Arnold
 St. Jude's Children's Research Hospital
 Memphis, TN, USA
- 3:40 pm – 3:50 pm** **OR43: UNUSUAL HLA-DRB1 AND DRB3/4/5 TYPING ASSOCIATION: A CASE STUDY EMPHASIZING THE NEED FOR A RIGOROUS QA/QC PROTOCOL TO CONFIRM ASSIGNMENT**
 Nebila Abdulwahab
 Clinical Histocompatibility Laboratory, The Ohio State University Wexner Medical Center
 Columbus, OH, USA

Coffee Break with Exhibits and Poster*Room: Hall A, Level Two*

4:00 pm – 4:30 pm

ASHI Directors' and Technologists' Combined Forum*Room: Spirit of Pittsburgh Ballroom, Level Three*

4:30 pm – 5:15 pm

ASHI Directors' Forum*Room: 301 – 302, Level Three*

5:15 pm – 6:30 pm

ASHI Technologists' Forum*Room: 304 – 305, Level Three*

5:15 pm – 6:30 pm

Thursday, September 26, 2019Registration Open*Room: Regional Gallery, Level Three*

6:30 am – 6:00 pm

Industry Sponsored Symposium: Natera*Room: 407, Level Four*

7:00 am – 8:00 am

Industry Sponsored Symposium: Novartis*Room: 406, Level Four*

7:00 am – 8:00 am

**Bernard Amos Distinguished Scientist Award****Room: Spirit of Pittsburgh Ballroom, Level Three****8:00 am – 9:00 am***Moderator: John Schmitz, PhD, D(ABMLI, ABHI), UNC Chapel Hill, Chapel Hill, NC, USA***HLA Presentation of Viral and Tumor Neoantigens**

William Hildebrand, PhD
 University of Oklahoma HSC
 Edmond, OK, USA

Exhibit and Poster Hall Open**Room: Hall A, Level Two****9:00 am – 2:30 pm****ASHI Symposium II: HCT and Cellular Therapy: Almost Everything You Need to Know****Room: Spirit of Pittsburgh Ballroom, Level Three****9:00 am – 11:00 am***Moderator: Medhat Asker, MD, PhD, FRCPath, Baylor University Medical Center, Dallas, TX, USA and Marcelo Fernandez-Vina, PhD, D(ABHI), Stanford Medical School, Stanford, CA, USA***9:00 am – 9:35 am****HCT and Cellular Therapy: A Primer for the Non-Transplanter**

Navneet Majhail, MD, MS
 Cleveland Clinic
 Cleveland, OH, USA

9:35 am – 10:10 am**Haplo-Identical HCT**

Stefan Ciurea, MD
 The University of Texas MD Anderson Cancer Center
 Houston, TX, USA

10:10 am – 10:45 am**Advances in Histocompatibility Testing for HCT**

Katharina Fleischhauer, MD
 Essen University Hospital
 Essen, Germany

10:45 am – 11:00 am**Panel Discussion****Banff Symposium II: Biomarker Guided Strategies in TX: Diagnostic Value, Prognostic Value Context of Use****Room: 301 – 303, Level Three****9:00 am – 11:00 am***Moderator: Maarten Naesens, MD, PhD, KU Leuven, Leuven, Belgium***9:00 am – 9:20 am****Donor Derived Cell Free DNA**

Edmund Huang, MD
 Cedars Sinai Medical Center
 Los Angeles, CA, USA

9:20 am – 9:40 am**Monitoring Alloreactive Memory B Cells in Solid Organ Transplantation**

Oriol Bestard, MD, PhD
 Bellvitge University Hospital
 Barcelona, Spain

9:40 am – 10:00 am**Individualizing Post-Transplant Immune Monitoring and Consequences for Response to Therapy**

Peter Nickerson, MD, FRCPC
 University of Manitoba
 Winnipeg, MB, CAN



10:00 am – 10:45 am **MMDX When, Who and Why Should I Order It?**
 Philip Halloran, PhD, MD
 University of Alberta
 Edmonton, AB, CAN

10:45 am – 11:00 am **Panel Discussion**

Coffee Break with Exhibits and Posters

Room: Hall A, Level Two

11:00 am – 11:30 am

Scholar Award Abstract Session

Room: Spirit of Pittsburgh Ballroom, Level Three

11:30 am – 12:30 pm

Moderators: Peter Lalli, PhD, D(ABHI), Carolinas Pathology Group, Charlotte, NC, USA and Eric Weimer, PhD, D(ABHI, ABMLI), UNC Chapel Hill, Chapel Hill, NC, USA

11:30 am – 11:40 am **Banff: GENE EXPRESSION ANALYSIS IN RENAL TRANSPLANT BIOPSIES: COMPARISON OF SPLIT SAMPLES AND DIFFERENT TECHNIQUES**

Frederic Toulza, PhD
 Imperial College London
 London, UK

11:40 am – 11:50 am **Banff: MOLECULAR CHARACTERIZATION OF IMMUNE CHECKPOINT INHIBITOR-ASSOCIATED RENAL ALLOGRAFT REJECTION: OVERLAP WITH NATIVE KIDNEY ACUTE INTERSTITIAL NEPHRITIS**

Graeme Reid
 University of Alberta
 Edmonton, AB, CAN

11:50 am – 12:00 pm **ASHI: THE ASSOCIATION OF NON-HLA AUTOANTIBODY TO ANTIBODY MEDIATED REJECTION AND CHRONIC LUNG ALLOGRAFT DYSFUNCTION AFTER LUNG TRANSPLANTATION**

Aiwen Zhang
 Cleveland Clinic
 Cleveland, OH, USA

12:00 pm – 12:10 pm **ASHI: INFLUENCE OF NK CELL RECEPTORS ON RITUXIMAB-MEDIATED ADCC AGAINST DIFFERENT TYPES OF LYMPHOMAS**

Yacine Berka
 Khan-Stroke Lab, University of Calgary
 Calgary, AB, CAN

12:10 pm – 12:20 pm **ASHI: EFFECT OF AUTOANTIBODIES ON LONG-TERM SURVIVAL OF LIVER RE-TRANSPLANT**

Qingyong Xu, PhD, D(ABHI)
 London Health Science Center
 London, ON, CAN

12:20 pm – 12:30 pm **ASHI - International: PRE-TRANSPLANT DONOR-SPECIFIC B CELL MEMORY FOR PREDICTION OF ANTIBODY MEDIATED REJECTION-A PILOT STUDY**

Gonca Emel Karaham, PhD
 Leiden University Medical Center
 Leiden, Netherlands

ASHI User Group Meetings

12:30 pm – 2:20 pm

Validation of Automated Cell Isolation for Everyday Use in the HLA Laboratory

Room: 403 – 405, Level Four

Sponsored by STEMCELL Technologies

**HLA Typing Applications Beyond Transplantation: Disease Associations, Clinical Trials and Pharmacogenetics****Room: 408 – 410, Level Four**

Sponsored by Omixon

Pipette Like A Pro**Room: 413 – 415, Level Four**

Sponsored by Eppendorf

Banff Working Lunch IV: Kidney: Discussions and Next Steps from Kidney Working Group Results**Room: 406, Level Four****12:30 pm – 2:20 pm***Moderators: Agnes Fogo, MD, Vanderbilt University Medical Center, Nashville, TN, USA and Parmjett Randawa, MD, University of Pittsburgh, Pittsburgh, PA, USA***12:30 pm – 12:45 pm Overview of 2017 Banff Changes: The Good, The Bad and The Ugly**Mark Haas, MD, PhD
Cedars-Sinai Medical Center
Los Angeles, CA, USA**12:45 pm – 1:15 pm Discussion****1:15 pm – 1:30 pm The BK Classification Update**Volker Nickenleit, MD
UNC
Chapel Hill, NC, USA**1:30 pm – 1:45 pm The BK Classification: Potential New Directions**Yassine Bouatou, MD, PhD
Saint Louis Hospital – Paris Transplant Group
Paris, France**1:45 pm – 2:20 pm Discussion****Banff Working Lunch V: Digital Pathology: Digital Liver, Kidney, and Heart Pathology Algorithms****Room: 407, Level Four****12:30 pm – 2:20 pm***Moderators: Alton Farris, MD, Emory University, Atlanta, GA, USA and Andrew Lesniak, BS, University of Pittsburgh, Pittsburgh, PA, USA***12:30 pm – 2:20 pm Discussion****Banff Working Lunch VI: Lung: AMR Consensus Discussion****Room: 401 – 402, Level Four****12:30 pm – 2:20 pm***Moderators: Antoine Roux, MD, PhD, Foch Hospital, Suresnes, France***12:30 pm – 2:20 pm Discussion****Exhibit Hall Closed****Room: Hall A, Level Two****2:30 pm****Banff Workshop: Kidney II****Room: 406, Level Four****2:30 pm – 6:00 pm***Moderators: Maarten Naesens, MD, PhD, KU Leuven, Leuven, Belgium and Candice Rouffosse, MD, PhD, Imperial College, London, United Kingdom*



- 2:30 pm – 3:30 pm** **Pathologic Assessment of Transplant Glomerulopathy**
Robert Colvin, MD
Massachusetts General Hospital
Boston, MA, USA
- 3:30 pm – 4:00 pm** **CG Breaking Heterogeneity by Integrative Approaches**
Olivier Aubert, MD, PhD
Paris Translational Center for Organ Transplantation
Paris, France
- 4:00 pm – 4:30 pm** **NK For Improving ABMR Activity Stage and Diagnosis**
Luis G. Hidalgo, PhD
University of Wisconsin – Madison
Madison, WI, USA
- 4:30 pm – 4:45 pm** **Break**
- 4:45 pm – 5:15 pm** **The Continuous Process of AMR: Implementation of a DAMAGE Index – Elimination of the Term “Chronic”**
Mark Haas, MD, PhD
Cedars-Sinai Medical Center
Los Angeles, CA, USA
- 5:15 pm – 5:45 pm** **Banff AMR Without Detectable HLA DSA: Phenotype and Outcome**
Maarten Naesens, MD, PhD
KU Leuven
Leuven, Belgium
- 5:45 pm – 6:00 pm** **Round Table Discussion**
- Banff Workshop: Liver II**
Room: 407, Level Four
2:30 pm – 6:00 pm
Moderators: Maxwell Smith, MD, Mayo Clinic Arizona, Scottsdale, AZ, USA and Stefan Hubscher, MD, University of Birmingham, Birmingham, United Kingdom
- 2:30 pm – 3:15 pm** **Interface Hepatitis: A Deep Dive Into the Morphology and Possible Pathogenesis**
Christopher Bellamy, MBBS, FRCPath, PhD
University of Edinburgh
Edinburgh, Scotland
- 3:15 pm – 4:00 pm** **Molecular Profiling of Rejection and Tolerance: Similarities Across Different Organs**
Valeria Mas, PhD, FAST
Transplant Research Institute, UTHSC
Memphis, TN, USA
- 4:00 pm – 4:15 pm** **Break**
- 4:15 pm – 5:00 pm** **Morphological Characterization of Chronic Liver Allograft AMR**
Jacqueline O’Leary, MD, MPH
Dallas VA Medical Center
Dallas, TX, USA
- 5:00 pm – 5:45 pm** **Insight into The Immunopathogenesis of Subclinical Allograft Damage**
Alberto Sanchez-Fueyo
King’s College London
London, United Kingdom
- 5:45 pm – 6:00 pm** **General Discussion of Consensus Molecular Profiling for Liver Allografts**

**ASHI Symposium III: One Transplant for Life: Clinical Transplant Tolerance****Room: 319 – 321, Level Three****2:30 pm – 4:00 pm**

Moderator: James Mathew, PhD, Northwestern University, Feinberg School of Medicine, Chicago, IL, USA and Thalachallour Mohanakumar, PhD, St. Joseph's Hospital and Medical Center, Norton Thoracic Institute, Phoenix, AZ, USA

2:30 pm – 3:00 pm Donor Bone Marrow and Stem Cells as Mediators of Clinical Tolerance

Joseph Leventhal, MD, PhD
Northwestern University
Chicago, IL, USA

3:00 pm – 3:30 pm Clinical Transplant Tolerance Trials – Beyond Donor Stem Cells

Sindhu Chandran, MBBS
University of California, San Francisco
San Francisco, CA, USA

3:30 pm – 4:00 pm Biomarkers of Clinical Transplant Tolerance

James Mathew, PhD
Northwestern University
Chicago, IL, USA

ASHI Workshop VII: Reconciling The HLA Alphabet Soup: IMGT, UNOS, ARB, QAS and Beyond**Room: 301 – 303, Level Three****2:30 pm – 4:00 pm**

Moderator: Marcelo Fernandez-Vina, PhD, D(ABHI), Stanford Medical School, Stanford, CA, USA and Robert Bray, PhD, D(ABHI), HCLD/CC(ABB), Emory University Hospital, Atlanta, GA, USA

2:30 pm – 2:50 pm WHO HLA Nomenclature

Steven Marsh, BSc, PhD
Anthony Nolan Research Institute
London, United Kingdom

2:50 pm – 3:10 pm UNOS Viewpoint

Cathi Murphey, PhD
Southwest Immunodiagnostics, Inc.
San Antonio, TX, USA

3:10 pm – 3:30 pm ARB Viewpoint

John Gerlach, PhD, D(ABHI)
Michigan State University
East Lansing, MI, USA

3:30 pm – 3:50 pm QAS Viewpoint

Marcelo Pando, PhD, D(ABHI)
Baylor, Scott & White
Temple, TX, USA

3:50 pm – 4:00 pm Panel Discussion**Coffee Break****Room: Ballroom Gallery ABC, Level Three****4:00 pm – 4:30 pm****International Workshop Updates (IHIW/STAR)****Room: Spirit of Pittsburgh Ballroom, Level Three****4:00 pm – 5:00 pm**

Moderator: Peter Nickerson, MD, FRCPC, University of Manitoba, Winnipeg, MB, CAN



4:00 pm – 4:30 pm **IHIW Update**
 Sebastiaan Heidt, PhD
 Leiden University Medical Center
 Leiden, Netherlands

4:30 pm – 5:00 pm **STAR Update**
 Anat Tambur, DMD, PhD, D(ABHI)
 Northwestern University
 Chicago, IL, USA

Professional Standards Division Updates: PT/QAS/ARB/DTRC

Room: 305, Level Three

5:00 pm – 5:30 pm

ASHI Business Meeting and Committee Updates

Room: Spirit of Pittsburgh Ballroom, Level Three

5:30 pm – 6:30 pm

Closing Reception: Dancing and Dessert

Room: Spirit of Pittsburgh Ballroom, Level Three

9:00 pm – 11:00 pm

Friday, September 27, 2019

Registration Open

Room: Regional Gallery, Level Three

7:30 am – 12:00 pm

Banff Summary

Room: 319 – 321, Level Three

8:00 am – 10:30 am

Moderators: Michael Mengel, MD, University of Alberta, Edmonton, AB, Canada and Alexandre Loupy, MD, PhD, Paris Transplant Group, Paris, France

8:00 am – 8:25 am **Kidney Summary**
 Mark Haas, MD, PhD
 Cedars-Sinai Medical Center
 Los Angeles, CA, USA

8:25 am – 8:50 am **Liver Summary**
 Anthony Demetris, MD
 University of Pittsburgh Medical Center
 Pittsburgh, PA, USA

8:50 am – 9:10 am **Lung Summary**
 Elizabeth Pavlisko, MD
 Duke University Medical Center
 Durham, NC, USA

9:10 am – 9:30 am **Heart Summary**
 Patrick Bruneval, MD
 Hopital European Georges Pompidu
 Paris, France

9:30 am – 9:50 am **Pancreas Summary**
 Cinthia Drachenberg, MD
 University of Maryland School of Medicine
 Baltimore, MD, USA



9:50 am – 10:10 am **VCA Summary**
 Alton Farris, MD
 Emory University
 Atlanta, GA, USA

10:10 am – 10:30 am **Intestinal Summary**
 George Mazariegos, MD
 UPMC Children's Hospital of Pittsburgh
 Pittsburgh, PA, USA

ASHI Symposium IV: Space-Structure-Function

Room: 301 – 303, Level Three

8:30 am – 10:30 am

Moderator: Medhat Askar, MD, PhD, FRCPath, Baylor University Medical Center, Dallas, TX, USA and Dimitri Monos, PhD, University of Pennsylvania/Children's Hospital of Philadelphia, Philadelphia, PA, USA

8:30 am – 9:10 am **The Three-Dimensional Gene Regulatory Architecture of Human T Follicular Helper Cells Implicates Casual Variants and Reveals Novel Drug Targets at SLE GWAS loci**
 Andrew Wells, PhD
 University of Pennsylvania
 Philadelphia, PA, USA

9:10 am – 9:50 am **Chromatin Organizing Principles Through the Lens of the Cell Cycle**
 Gerd Blobel, MD, PhD
 Children's Hospital of Philadelphia
 Philadelphia, PA, USA

9:50 am – 10:30 am **The Genome character As Revealed by Complexity Theory**
 Dimitri Monos, PhD
 University of Pennsylvania Children's Hospital of Philadelphia
 Philadelphia, PA, US

Coffee Break

Room: Ballroom Gallery ABC, Level Three

10:30 am – 11:00 am

ASHI/Banff Joint Scientific Meeting Summary

Room: 301 – 303, Level Three

11:00 am – 12:00 pm

Moderator: John Schmitz, PhD, D(ABHI, ABMLI), UNC Chapel Hill, Chapel Hill, NC, USA

Peter Nickerson, MD, FRCPC
 University of Manitoba
 Winnipeg, MB, CAN