Monday, September 23, 2019

Registration Open
7:00 am – 9:00 pm

ASHI Inspectors Training Workshop
8:00 am – 4:30 pm

Banff Regenerative Medicine
8:00 am – 10:00 am

Banff Digital Pathology, Machine Learning and AI in Transplantation
10:30 am – 12:30 pm

Joint Pre-Meeting: HLA 101 and Pathology 101
2:00 pm – 3:30 pm

2:00 pm – 2:30 pm  Pathology of Solid Organ Allografts and the Banff Classification
2:30 pm – 3:00 pm  HLA Didactic Presentation
3:00 pm – 3:30 pm  Case Presentation

ASHI First Time Attendees & New Members Reception*
5:00 pm – 6:00 pm
*By invitation only

Opening Session: ‘Burden of Genius’ Movie Viewing
6:00 pm – 7:30 pm

Opening Reception with Exhibits Open
7:30 pm – 9:00 pm

Tuesday, September 24, 2019

Registration Open
6:30 am – 8:15 pm

The Paul I. Terasaki Clinical Science Award
8:00 am – 9:00 am

Keynote Address
9:00 am – 10:00 am

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, Exhibit Hall Open
10:00 am – 10:30 am

Plenary I: 50 Years of Humoral Theory of Transplantation: The ASHI-Banff Crosstalk
10:30 am – 12:20 pm

10:30 am – 11:10 am  Is There Evidence for a Causative Role of DSA in Solid Organ Transplant Rejection?
11:10 am – 11:40 am  DSA Testing in Solid Organ Transplantation: A STAR IS BORN
11:40 am – 12:20 pm  DSA Testing in Liver and Thoracic Transplantation: The Banff and ISHLT Perspective
**ASHI User Group Meetings**  
12:30 pm – 2:20 pm

One Lambda Inc., a Thermo Fisher Scientific Brand  
CareDx, Inc.  
Immucor  

**Banff Working Lunch I: Progress Report on Banff Working Groups**  
12:30 pm – 2:20 pm

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>12:30 pm – 12:40 pm</td>
<td>Introduction</td>
</tr>
<tr>
<td>12:40 pm – 12:50 pm</td>
<td>Thrombotic Microangiopathy</td>
</tr>
<tr>
<td>12:50 pm – 1:00 pm</td>
<td>Recurrent GN</td>
</tr>
<tr>
<td>1:00 pm – 1:10 pm</td>
<td>Highly Sensitized</td>
</tr>
<tr>
<td>1:10 pm – 1:20 pm</td>
<td>HIV</td>
</tr>
<tr>
<td>1:20 pm – 1:30 pm</td>
<td>Clinical Trials – Integration Surrogate</td>
</tr>
<tr>
<td>1:30 pm – 1:40 pm</td>
<td>Banff Rules and Dissemination</td>
</tr>
<tr>
<td>1:40 pm – 1:50 pm</td>
<td>TCMR - iIFTA</td>
</tr>
<tr>
<td>1:50 pm – 2:00 pm</td>
<td>Molecular</td>
</tr>
<tr>
<td>2:00 pm – 2:10 pm</td>
<td>EM</td>
</tr>
<tr>
<td>2:10 pm – 2:20 pm</td>
<td>Digital Pathology</td>
</tr>
<tr>
<td>2:20 pm – 2:30 pm</td>
<td>Proposal of New Working Group</td>
</tr>
</tbody>
</table>

**Banff Workshop: Intestinal Transplant Rejection**  
2:30 pm – 6:30 pm

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>2:30 pm – 2:45 pm</td>
<td>Welcome Introduction to the Banff Process</td>
</tr>
<tr>
<td>2:45 pm – 3:00 pm</td>
<td>Clinical Overview of Intestine Transplantation</td>
</tr>
<tr>
<td>3:00 pm – 3:15 pm</td>
<td>Snap Shot of Center Experience</td>
</tr>
<tr>
<td>3:15 pm – 3:55 pm</td>
<td>Review of Literature: Intestine Transplant Pathology</td>
</tr>
<tr>
<td>3:55 pm – 4:25 pm</td>
<td>Follow Up from the Paris Intestine Workshop</td>
</tr>
<tr>
<td>4:25 pm – 4:45 pm</td>
<td>Break</td>
</tr>
<tr>
<td>4:45 pm – 6:30 pm</td>
<td>Working Discussion</td>
</tr>
</tbody>
</table>

**Banff Workshop: Kidney**  
2:30 pm – 6:30 pm

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>2:30 pm – 3:15 pm</td>
<td>Causes of Total-I, i-IFTA and t-IFTA and Prognosis: The Dekaf Experience</td>
</tr>
<tr>
<td>3:15 pm – 3:45 pm</td>
<td>Fine Tuning of Chronic Active TCMR Criteria Enunciated in Banff 2017</td>
</tr>
<tr>
<td>3:45 pm – 4:15 pm</td>
<td>Potential Role for Morphometry, Molecular Diagnosis in Further Refining the Definition of Chronic TCMR</td>
</tr>
</tbody>
</table>
4:15 pm – 4:30 pm   Break
4:30 pm – 5:00 pm   Molecular Phenotype and IFTA
5:00 pm – 5:30 pm   Borderline Lesions in the Banff Classification: How to Eliminate?
5:30 pm – 6:00 pm   BKVAN With and Without Rejection: How to Move Towards Specific Diagnoses
6:00 pm – 6:30 pm   TCMR Survey Proposal

Banff Workshop: Lung
2:30 pm – 6:30 pm

2:30 pm – 2:50 pm   Pathological New Features: Associated with Chronic Lung Dysfunction: Update
2:50 pm – 3:15 pm   Lessons from Explant Pathology
3:15 pm – 3:30 pm   Nanostring & Molecular Diagnostics: Update
3:30 pm – 3:45 pm   Nanostring Technology and CLAD: Successes and Lessons Learned
3:45 pm – 4:00 pm   Evaluation of Immune Parameters in Lung Transplant
4:00 pm – 4:15 pm   Break
4:15 pm – 4:30 pm   Immunobiology: Impact on DSA Pathology
4:30 pm – 4:45 pm   Immunobiology: Impact of Polymorphism on Clinical Outcome and Response to Treatment
4:45 pm – 5:00 pm   Intragraft DSA
5:00 pm – 5:15 pm   Non-HLA DSA in Lung Transplantation
5:15 pm – 5:30 pm   Risk Stratification
5:30 pm – 5:45 pm   New Therapeutics/New Strategies
5:45 pm – 6:30 pm   What Do We Need to Move Forward? Panel Discussion

Banff Workshop: CTA
2:30 pm – 6:30 pm

2:30 pm – 3:05 pm   Chronic Rejection in VCA
3:05 pm – 3:35 pm   Eosinophilia in the Skin as a Predictor of Allograft Rejection in VCA: Insight from Other Organ Transplants
3:35 pm – 4:10 pm   Rejection in Sentinel Flaps: Benefits and Liabilities
4:10 pm – 4:40 pm   Break
4:40 pm – 5:10 pm   Cutaneous GVD and Skin Rejection in VCA: A Clinical and Histopathologic Comparison
5:10 pm – 5:45 pm   Update on a Systematic Pathological Component Score For Skin-Containing VCAs
5:45 pm – 6:30 pm   Working Group on Chronic Rejection: Update and Discussion
ASHI Symposium I: HLAs and Their Role in Immunotherapies
2:30 pm – 4:00 pm

2:30 pm – 3:10 pm CART Therapeutic Approaches Beyond Cancer
3:10 pm – 3:50 pm The Role of HLAs in Developing Vaccine-Based Immunotherapies
3:50 pm – 4:30 pm Patient HLA Class I Genotype Influences Cancer Response to Checkpoint Blockade Immunotherapy

Coffee Break
4:30 pm – 5:00 pm

ASHI Workshop I: Laboratory Automation Selection and Implementation: What You Need to Know
5:00 pm – 6:30 pm

5:00 pm – 5:30 pm Considerations in Selecting and Implementing Laboratory Automation
5:30 pm – 6:00 pm Managing Laboratory Automation Expectations
6:00 pm – 6:30 pm Challenges in Obtaining Laboratory Automation: A Beginner’s Experience

ASHI Workshop II: Developing a Quality QA Program
5:00 pm – 6:30 pm

5:00 pm – 5:30 pm Non-Conforming Events and Root Cause Analysis
5:30 pm – 6:00 pm Tracking Quality Metrics
6:00 pm – 6:30 pm Validation and Verification Documentation

ASHI Workshop III: UNOS IT and ASHI: BFFs!
5:00 pm – 6:30 pm

5:00 pm – 5:30 pm UNOS IT
5:30 pm – 6:00 pm SystemLink/Histotrac
6:00 pm – 6:30 pm HLA Data Systems/mTilda

ASHI Abstract Session I: Solid Organ Pre-Transplant Testing
5:00 pm – 6:30 pm

ASHI Abstract Session II: Immunotherapy/Tolerance/Immunomodulation
5:00 pm – 6:30 pm

ASHI Abstract Session III: The Past, Present, and Future of HLA
5:00 pm – 6:30 pm

Poster Reception with Exhibits Open
6:30 pm – 8:15 pm

7:00 pm – 7:30 pm Poster Awards Ceremony
Sponsored by Immuor

ASHI ARB Inspectors & International Reception*
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**  
8:00 am – 6:00 pm

**Scientific Award Presentation: Rose Payne Award**  
8:30 am – 9:30 am

**Plenary II: Joint Progresses in the Diagnosis and Treatment of Rejection**  
9:30 am – 11:00 am

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:30 am – 9:50 am</td>
<td>TTS Consensus Meeting Update</td>
</tr>
<tr>
<td>9:50 am – 10:12 am</td>
<td>It's Not All about AMR: Fine Tuning of Chronic Active TCMR</td>
</tr>
<tr>
<td>10:12 am – 10:32 am</td>
<td>Molecular Assessments for Precision Diagnostics and Prognostication</td>
</tr>
<tr>
<td>10:32 am – 11:00 am</td>
<td>AMR without DSA: Non-HLA Antibodies and Implication or Pathophysiology and Diagnostics</td>
</tr>
</tbody>
</table>

**Plenary III: Complex Case Study – Allosensitization in HCT and VCA**  
11:30 am – 12:20 pm

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:30 am – 11:55 am</td>
<td>HCT Complex Case</td>
</tr>
<tr>
<td>11:55 am – 12:20 pm</td>
<td>VCA Complex Case</td>
</tr>
</tbody>
</table>

**ASHI User Group Meetings**  
12:30 pm – 2:20 pm

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>12:30 pm – 2:20 pm</td>
<td>One Lambda Inc., a Thermo Fisher Scientific Brand</td>
</tr>
<tr>
<td></td>
<td>GenDx</td>
</tr>
<tr>
<td></td>
<td>BD Biosciences</td>
</tr>
</tbody>
</table>

**Banff Working Lunch II: Kidney: Next Generation Clinical Trials in Transplantation: Towards Integrative Strategies**  
12:30 pm – 2:20 pm

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>12:30 pm – 1:00 pm</td>
<td>FDA Requirements, Qualification Context of Use</td>
</tr>
<tr>
<td>1:00 pm – 1:30 pm</td>
<td>TTC Progress and Overview</td>
</tr>
<tr>
<td>1:30 pm – 2:00 pm</td>
<td>ABMR Related Clinical Trials: The Slippery Slope Into Confusion and Prospect for Improvement</td>
</tr>
<tr>
<td>2:00 pm – 2:20 pm</td>
<td>New Developments and Ongoing Clinical Trials</td>
</tr>
</tbody>
</table>

**Banff Working Lunch III: Liver: Semi-Quantitative and Qualitative Scoring of Fat in Steatotic Donor Liver**  
12:30 pm – 2:20 pm

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>12:30 pm – 2:20 pm</td>
<td>Group Discussion</td>
</tr>
</tbody>
</table>
Banff Workshop: Liver
2:30 pm – 6:00 pm

2:30 pm – 2:45 pm  Introduction and Goals

2:45 pm – 3:30 pm  Introduction, Scoring, and Interpretation of Changes in Long-Surviving Liver Allografts: Scoring Reliability of Important Findings

3:30 pm – 4:15 pm  Combining Molecular Profiling and T-Cell Subset Immunohistochemistry to Understand the Pathogenesis of Liver Allograft Damage

4:15 pm – 4:30 pm  Break

4:30 pm – 5:15 pm  Minimization Immunosuppression and Liver Transplantation: Long-Term Results Including Pathology Findings

5:15 pm – 6:00 pm  Molecular Predictors of Progressive Liver Damage: A Non-Transplant Perspective

Banff Workshop: Pancreas
2:30 pm – 6:00 pm

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

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

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

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

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

Advances in the Diagnosis of Pancreas Rejection
3:45 pm – 4:00 pm  Nanostring Analysis of Pancreas Biopsies

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

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

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

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

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

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

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

Banff Workshop: Heart
2:30 pm – 6:00 pm

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

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

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

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

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

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

3:50 pm – 4:40 pm  Coffee Break

**Quilty Effect in 2018**

4:40 pm – 4:55 am  Definition, Diagnosis, Classification of Quilty Effect

4:55 pm – 5:10 pm  Pathogenesis of Quilty: Is It Rejection? Pros and Cons

5:10 pm – 5:25 pm  Pathogenesis of Quilty: Is It Rejection? Pros and Cons

5:25 pm – 6:00 pm  Roundtable: Project Proposal and Conclusion

**ASHI Workshop Session: Assessment and Management of Post-Transplant DSA in Lung Transplant Patients: A Pro-Con Discussion**

2:30 pm – 4:00 pm

2:30 pm – 3:00 pm  How to Assess and Monitor DSA’s Post Lung Transplantation

3:00 pm – 4:00 pm  To Treat or Not to Treat? What Do I Do With A Positive DSA

**ASHI Workshop Session: Detection of Non-HLA Antibodies – International Experiences with Multiplex Assays**

2:30 pm – 4:00 pm

2:30 pm – 2:53 pm  Analytical and Clinical Experience with a Laboratory Developed, Multiplex Non-HLA Antibody Test

2:53 pm – 3:16 pm  Multicenter Experience with Commercially Available Multiplex Non-HLA Antibody Screening Test – North America

3:16 pm – 3:39 pm  Single Center Experience with Commercially Available Multiplex Non-HLA Antibody Screening Test

3:39 pm – 4:00 pm  Considerations for In House Test Validation, Assay Use and Interpretation

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

2:30 pm – 4:00 pm

2:30 pm – 3:00 pm  Informatics Tools for Precision Histocompatibility Assessments

3:00 pm – 3:30 pm  Describe the Strengths and Weaknesses of Each Algorithm in Predicting Allograft Outcome and De Novo DSA Risk

3:30 pm – 4:00 pm  Machine Learning Strategies for Taking Epistatic and Heterogeneous Associations in Precision Histocompatibility

**ASHI Abstract Session IV: Solid Organ Post-Transplant Testing**

2:30 pm – 4:00 pm

**ASHI Abstract Session V: Bone Marrow, HST, Chimerism**

2:30 pm – 4:00 pm
ASHI Abstract Session VI: Case Studies
2:30 pm – 4:00 pm

ASHI Directors’ and Technologists’ Combined Forum
4:30 pm – 5:15 pm

ASHI Directors’ Forum
5:15 pm – 6:30 pm

ASHI Technologists’ Forum
5:15 pm – 6:30 pm

Thursday, September 26, 2019
Registration Open
6:30 am – 6:00 pm

Women in Transplant Breakfast
7:00 am – 8:00 am

Bernard Amos Distinguished Scientist Award
8:00 am – 9:00 am

ASHI Symposium II: HCT and Cellular Therapy: Almost Everything You Need to Know
9:00 am – 11:00 am

9:00 am – 9:35 am  HCT and Cellular Therapy: A Primer for the Non-Transplanter
9:35 am – 10:10 am  Haplo-Identical HCT
10:10 am – 10:45 am  Advances in Histocompatibility Testing for HCT
10:45 am – 11:00 am  Panel Discussion

Banff Symposium II: Biomarker Guided Strategies in TX: Diagnostic Value, Prognostic Value, Context of Use
9:00 am – 11:00 am

9:00 am – 9:20 am  Donor Derived Cell Free DNA
9:20 am – 9:40 am  Monitoring Alloreactive Memory B Cells in Solid Organ Transplantation
9:40 am – 10:00 am  Individualizing Post-Transplant Immune Monitoring and Consequences for Response to Therapy
10:00 am – 10:45 am  MMDX When, Who and Why Should I Order It?
10:45 am – 11:00 am  Panel Discussion

Coffee Break
11:00 am – 11:30 am

Scholar Award Abstract Session
11:30 am – 12:30 pm

ASHI User Group Meetings
12:30 pm – 2:20 pm

STEMCELL Technologies
Eppendorf
Omixon
Banff Working Lunch IV: Kidney: Discussions and Next Steps from Kidney Working Group Results
12:30 pm – 2:20 pm
12:30 pm – 12:45 pm  Overview of 2017 Banff Changes: The Good, The Bad and The Ugly
12:45 pm – 1:15 pm  Discussion
1:15 pm – 1:30 pm  The BK Classification Update
1:30 pm – 1:45 pm  The BK Classification: Potential New Directions
1:45 pm – 2:20 pm  Discussion

Banff Working Lunch V: Digital Pathology: Digital Liver, Kidney, and Heart Pathology Algorithms
12:30 pm – 2:20 pm
12:30 pm – 2:20 pm  Discussion

Banff Working Lunch VI – Lung: AMR Consensus Discussion
12:30 pm – 2:20 pm
12:30 – 2:20 pm  Discussion

Banff Workshop: Kidney II
2:30 pm – 6:00 pm
2:30 pm – 3:30 pm  Pathologic Assessment of Transplant Glomerulopathy
3:30 pm – 4:00 pm  CG Breaking Heterogeneity by Integrative Approaches
4:00 pm – 4:30 pm  NK For Improving ABMR Activity Stage and Diagnosis
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”
5:15 pm – 5:45 pm  Banff AMR Without Detectable HLA DSA: Phenotype and Outcome
5:45 pm – 6:00 pm  Round Table Discussion

Banff Workshop: Liver II
2:30 pm – 6:00 pm
2:30 pm – 3:15 pm  Interface Hepatitis: A Deep Dive Into The Morphology and Possible Pathogenesis
3:15 pm – 4:00 pm  Molecular Profiling of Rejection and Tolerance: Similarities Across Different Organs
4:00 pm – 4:15 pm  Break
4:15 pm – 5:00 pm  Morphological Characterization of Chronic Liver Allograft AMR
5:00 pm – 5:45 pm  Insight into The Immunopathogenesis of Subclinical Allograft Damage
5:45 pm – 6:00 pm  General Discussion of Consensus Molecular Profiling for Liver Allografts

ASHI Symposium: One Transplant for Life: Clinical Transplant Tolerance
2:30 pm – 4:00 pm
2:30 pm – 3:00 pm  Donor Bone Marrow and Stem Cells as Mediators of Clinical Tolerance
3:00 pm – 3:30 pm  Clinical Transplant Tolerance Trials – Beyond Donor Stem Cells
3:30 pm – 4:00 pm  Biomarkers of Clinical Transplant Tolerance

**ASHI Workshop: Reconciling The HLA Alphabet Soup: IMGT, UNOS, ARB, QAS and Beyond**
2:30 pm – 4:00 pm

2:30 pm – 2:50 pm  WHO HLA Nomenclature
2:50 pm – 3:10 pm  UNOS Viewpoint
3:10 pm – 3:30 pm  ARB Viewpoint
3:30 pm – 3:50 pm  QAS Viewpoint
3:50 pm – 4:00 pm  Panel Discussion

**Coffee Break**
4:00 pm – 4:30 pm

**International Workshop Updates (IHIW/STAR)**
4:00 pm – 5:00 pm

4:00 pm – 4:30 pm  IHIW Update
4:30 pm – 5:00 pm  STAR Update

**Professional Standards Division Updates: PT/QAS/ARB/DTRC**
5:00 pm – 5:30 pm

**ASHI Business Meeting and Committee Updates**
5:30 pm – 6:30 pm

**Closing Reception: Dancing and Desserts**
9:00 pm – 11:00 pm

**Friday, September 27, 2019**

**Banff Summary**
8:00 am – 10:30 am

8:00 am – 8:25 am  Kidney Summary
8:25 am – 8:50 am  Liver Summary
8:50 am – 9:10 am  Lung Summary
9:10 am – 9:30 am  Heart Summary
9:30 am – 9:50 am  Pancreas Summary
9:50 am – 10:10 am  VCA Summary
10:10 am – 10:30 am  Intestinal Summary

**ASHI Symposium IV: Space-Structure-Function**
8:30 am – 10:30 am
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

9:10 am – 9:50 am Chromatin Organizing Principles Through the Lens of the Cell Cycle

9:50 am – 10:30 am The Genome character As Revealed by Complexity Theory

ASHI/Banff Joint Scientific Meeting Summary
11:00 am – 12:00 pm