



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**

12:30 pm – 12:40 pm	Introduction
12:40 pm – 12:50 pm	Thrombotic Microangiopathy
12:50 pm – 1:00 pm	Recurrent GN
1:00 pm – 1:10 pm	Highly Sensitized
1:10 pm – 1:20 pm	HIV
1:20 pm – 1:30 pm	Clinical Trials – Integration Surrogate
1:30 pm – 1:40 pm	Banff Rules and Dissemination
1:40 pm – 1:50 pm	TCMR - iIFTA
1:50 pm – 2:00 pm	Molecular
2:00 pm – 2:10 pm	EM
2:10 pm – 2:20 pm	Digital Pathology
2:20 pm – 2:30 pm	Proposal of New Working Group

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

2:30 pm – 2:45 pm	Welcome Introduction to the Banff Process
2:45 pm – 3:00 pm	Clinical Overview of Intestine Transplantation
3:00 pm – 3:15 pm	Snap Shot of Center Experience
3:15 pm – 3:55 pm	Review of Literature: Intestine Transplant Pathology
3:55 pm – 4:25 pm	Follow Up from the Paris Intestine Workshop
4:25 pm – 4:45 pm	Break
4:45 pm – 6:30 pm	Working Discussion

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

2:30 pm – 3:15 pm	Causes of Total-I, i-IFTA and t-IFTA and Prognosis: The Dekaf Experience
3:15 pm – 3:45 pm	Fine Tuning of Chronic Active TCMR Criteria Enunciated in Banff 2017
3:45 pm – 4:15 pm	Potential Role for Morphometry, Molecular Diagnosis in Further Refining the Definition of Chronic TCMR



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	BKVN 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

9:30 am – 9:50 am	TTS Consensus Meeting Update
9:50 am – 10:12 am	It's Not All about AMR: Fine Tuning of Chronic Active TCMR
10:12 am – 10:32 am	Molecular Assessments for Precision Diagnostics and Prognostication
10:32 am – 11:00 am	AMR without DSA: Non-HLA Antibodies and Implication on Pathophysiology and Diagnostics

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

11:30 am – 11:55 am	HCT Complex Case
11:55 am – 12:20 pm	VCA Complex Case

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

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

12:30 pm – 2:20 pm

12:30 pm – 1:00 pm	FDA Requirements, Qualification Context of Use
1:00 pm – 1:30 pm	TTC Progress and Overview
1:30 pm – 2:00 pm	ABMR Related Clinical Trials: The Slippery Slope Into Confusion and Prospect for Improvement
2:00 pm – 2:20 pm	New Developments and Ongoing Clinical Trials

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

12:30 pm – 2:20 pm	Group Discussion
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**Banff Workshop: Liver****2:30 pm – 6:00 pm**

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| 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**

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| 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

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| 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

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| 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**

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

Quality 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
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**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 Beyond2:30 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 Break4:00 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/DTRC5:00 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-Function8:30 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