



**45<sup>th</sup> ANNUAL CONFERENCE ON SHOCK**  
**Westin Harbour Castle - Toronto, ON, Canada**  
**June 4-7, 2022**  
*(as of 5/31/2022)*

**FRIDAY, JUNE 3, 2022**

**6:30 pm-9:00 pm**      **Strategic Planning Committee Dinner** *(invitation only)*  
*Bay*

**SATURDAY, JUNE 4, 2022**

**7:00 am-11:00 am**      **Council Meeting** *(invitation only)*  
*Bay*

**9:00 am-6:00 pm**      **Speaker Ready Room**  
*Wellington*

**10:00 am-6:30 pm**      **Registration**  
*Metropolitan Foyer*

**11:00 am-12:30 pm**      **Shock Editorial Board Meeting** *(invitation only)*  
*Queen's Quay I*

**1:00 pm-2:20 pm**      **Plenary Session I: Novel Technologies in Sepsis and Injury**  
 Moderator: Basilia Zingarelli, M.D., Ph.D., Cincinnati Children's Hospital Medical Center, Cincinnati, OH, USA  
*Metropolitan Centre*

**1:00 pm-1:20 pm**      **Functional Immune Phototyping of Sepsis Patients Using Organ on Chips**  
 Laurie Kilpatrick, Ph.D., Temple University, Philadelphia, PA, USA

**1:20 pm-1:40 pm**      **Exosomes: An Emerging Tool for Liquid Biopsy in Sepsis**  
 Basilia Zingarelli, M.D., Ph.D., Cincinnati Children's Hospital Medical Center, Cincinnati, OH, USA

**1:40 pm-2:00 pm**      **Regenerative Medicine for the Skin**  
 Marc Jeschke, M.D., Ph.D., Sunnybrook Health Sciences Centre, Toronto, ON, CAN

**2:00 pm-2:20 pm**      **Multimic Analysis of the Circulating Compartment Yields Novel Insights into the Human Response to Injury**  
 Timothy Billiar, M.D., University of Pittsburgh Medical Center, Pittsburgh, PA, USA

**2:20 pm-2:35 pm**      **Refreshment Break**  
*Metropolitan Foyer*

<b>2:35 pm-3:50 pm</b>	<b>Plenary Session II: Top Ranked Abstracts</b> Moderators: Laurie Kilpatrick, Ph.D., Temple University, Philadelphia, PA, USA Ernest “Gene” Moore, M.D., University of Colorado at Denver, Denver, CO, USA <i>Metropolitan Centre</i>
2:35 pm-2:50 pm	<b>Mucosal Innate Immunity of Human Surfactant Protein A Against SARS-COV-2 Infectivity</b> [Abstract # 402] Ikechukwu Jacob, SUNY Upstate Medical Center, Syracuse, NY, USA, <i>presented by Guirong Wang, Ph.D., SUNY Upstate Medical Center, Syracuse, NY, USA</i>
2:50 pm-3:05 pm	<b>Immunosuppressive CD8+ T Cells Are Necessary for Improved Survival During CD28 Agonism in Septic Immunologically Experienced Mice</b> [Abstract # 403] Jerome Anyalebechi, M.D., Emory University, Atlanta, GA, USA
3:05 pm-3:20 pm	<b>Extracellular CIRP Induces Acute Kidney Injury via TREM-1</b> [Abstract # 404] Sara Siskind, M.D., Northwell Health, Astoria, NY, USA
3:20 pm-3:35 pm	<b>MyD88-Dependent Signaling and Macrophage Reprogramming Drive TLR-Mediated Host Resistance to Infection</b> [Abstract # 405] Allison Owen, Ph.D., Vanderbilt University Medical Center, Nashville, TN, USA
3:35 pm-3:50 pm	<b>Two Subsets of Pulmonary Interstitial Macrophages May Contribute to Fibrin Formation and Stabilization During Acute Lung Inflammation</b> [Abstract # 406] Peter Moore, M.D., University of Colorado Anschutz Medical Campus and National Jewish Health, Aurora, CO, USA
<b>3:50 pm-4:05 pm</b>	<b>Break</b>
<b>4:05 pm-5:15 pm</b>	<b>Plenary Session III: Experimental Approaches to Enhance Shock Research</b> Moderators: Scott Brakenridge, M.D., University of Washington, Seattle, WA, USA Charles Wade, Ph.D., The University of Texas Health Science Center at Houston, Houston, TX, USA <i>Metropolitan Centre</i>
4:05 pm-4:25 pm	<b>Basic/Translational Science Research Priorities to Assess Multiple Organ Dysfunction Syndrome</b> Clifford Deutschman, M.D., Feinstein Institute, Halesite, NY, USA
4:25 pm-4:45 pm	<b>Animal Models of Sepsis and Systematic Approaches</b> Marcin Osuchowski, Ludwig Boltzmann Institute for Experimental and Clinical Traumatology, Vienna, AUT
4:45 pm-5:05 pm	<b>Animal Models of Trauma, Hemorrhagic Shock, and Coagulopathy</b> Jessica Cardenas, Ph.D., UTHealth, Houston, TX, USA
5:05 pm-5:15 pm	<b>Panel Discussion</b>
<b>5:15 pm-5:30 pm</b>	<b>Break</b>
<b>5:30 pm-6:45 pm</b>	<b>Presidential Addresses</b> <i>Metropolitan Centre</i> <b>The Shock Society Has Always Been My Scientific Anchor</b> Laurie Kilpatrick, Ph.D., Temple University, Philadelphia, PA, USA <b>The Physician Scientist is an Endangered Species</b> Ernest “Gene” Moore, M.D., University of Colorado at Denver, Denver, CO, USA
<b>6:45 pm-8:00 pm</b>	<b>Welcome Reception</b> <i>Metropolitan West</i>

## SUNDAY, JUNE 5, 2022

7:00 am-8:00 am

### **Committee Meetings**

Membership Committee  
*Bay*

Communications Committee  
*Queen's Quay 1*

Mentorship Committee  
*Queen's Quay II*

Nominating Committee  
*Richmond*

Advocacy Committee  
*Location TBD*

7:00 am-5:00 pm

**Speaker Ready Room**  
*Wellington*

**Registration**  
*Metropolitan Foyer*

7:30 am-9:00 am

**Poster Session I & Continental Breakfast**  
*Metropolitan East*

9:00 am-10:40 am

### **Plenary Session IV: Unlocking the Potential of Stem Cells**

Moderators: Andrew Lautz, M.D., Cincinnati Children's Hospital Medical Center, Cincinnati, OH, USA  
Jessica Cardenas, Ph.D., UTHealth, Houston, TX, USA  
*Metropolitan Centre*

9:00 am-9:20 am

### **Harnessing the Potential of Neural Stem Cells to Promote Neural Repair and Recovery**

Cindi Morshead, Ph.D., University of Toronto, Toronto, ON, CAN

9:20 am-9:40 am

### **Lung Derived Mesenchymal Stem Cells in Pneumonia**

Samithamby (Jey) Jeyaseelan, Ph.D., D.V.M., Louisiana State University, Baton Rouge, LA, USA *presented by Perenlei Enkhbaatar, M.D., Ph.D., University of Texas Medical Center, Galveston, TX, USA*

9:40 am-10:00 am

### **Modeling Sepsis-Associated Myocardial Dysfunction Using Human Tissues and Cell Lines**

Andrew Lautz, M.D., Cincinnati Children's Hospital Medical Center, Cincinnati, OH, USA

10:00 am-10:20 am

### **Tissue Regeneration Defects in Post-Sepsis Skeletal Muscle**

Jason Doles, Ph.D., Mayo Clinic, Rochester, MN, USA

10:20 am-10:40 am

### **Cellular Therapy for Burn Wounds**

Perenlei Enkhbaatar, M.D., Ph.D., University of Texas Medical Center, Galveston, TX, USA

10:40 am-10:55 am

**Refreshment Break**  
*Metropolitan Foyer*

10:55 am-11:50 am

### **Advocacy Workshop**

Moderators: Michaela West, M.D., Ph.D., North Memorial Health, Minneapolis, MN, USA  
Ryan Stark, M.D., Vanderbilt University Medical Center, Nashville, TN, USA  
*Metropolitan Centre*

10:55 am-11:30 am

### **What Can FASEB Do for You?**

Jennifer Zeitzer, Federation of American Societies for Experimental Biology, Rockville, MD, USA

11:30 am-11:50 am

### **How To Get Involved in Advocacy and How To Do It**

Daniel Remick, M.D., Boston University School of Medicine, Boston, MA, USA

**11:50 am-12:20 pm** **Bagged Lunch**  
*Metropolitan Foyer*

**11:50 am-12:20 pm** **Advocacy Breakout**  
*Metropolitan West*

**12:20 pm-1:35 pm** **New Investigator Competition**  
Moderators: Meihong Deng, M.D., The Ohio State University, Columbus, OH, USA  
Anthony Pusateri, Ph.D., Naval Medical Research Unit – San Antonio, San Antonio, TX, USA  
*Metropolitan Centre*

12:20 pm-12:35 pm **Fecal Microbiome Transfer Attenuates Cortical Volume Loss and Preserves White Matter Connectivity After Traumatic Brain Injury in Mice** [Abstract # 408]  
Booker Davis IV, Ph.D., Northwestern University, Chicago, IL, USA

12:35 pm-12:50 pm **H151, a Small Molecule Inhibitor of STING as a Novel Therapeutic in Intestinal Ischemia-Reperfusion Injury** [Abstract # 409]  
Molly Kobritz, M.D., Northwell Health, Brooklyn, NY, USA

12:50 pm-1:05 pm **Soluble Guanylate Cyclase Activation Rescues Hyperoxia-Induced Dysfunction of Vascular Relaxation** [Abstract # 410]  
Eric Mace, M.D., Vanderbilt University Medical Center, Nashville, TN, USA

1:05 pm-1:20 pm **DNase Mediated Dissolution of Neutrophil Extracellular Traps Accelerates In Vitro Thrombin Generation Kinetics in Trauma Patients** [Abstract # 411]  
Julie Goswami, M.D., Mayo Clinic, Rochester, MN, USA

1:20 pm-1:35 pm **Sex-Dependent Effects of Adipocyte STAT3 Inhibition on the Inflammatory Response During Severe Sepsis** [Abstract # 412]  
Xenia Davis, Cincinnati Children's Hospital Medical Center, Cincinnati, OH, USA

**1:35 pm-2:10 pm** **Research Award Presentations**  
Moderators: Meihong Deng, M.D., The Ohio State University, Columbus, OH, USA  
Anthony Pusateri, Ph.D., Naval Medical Research Unit – San Antonio, San Antonio, TX, USA  
*Metropolitan Centre*

1:35 pm-1:55 pm **FACULTY AWARD WINNER 2020**  
**Protein Palmitoylation Regulates Extracellular Vesicle Production and Function in Sepsis**  
Xiaoyuan (Sherry) Yang, Ph.D., University of South Florida Morsani College of Medicine, Tampa, FL, USA

1:55 pm-2:10 pm **PRESIDENTIAL AWARD AT THE JAPAN SHOCK SOCIETY GENERAL MEETING 2021**  
**Near-Infrared Spectroscopy Assessment to Predict Neurological Outcome in a Rat Model of Cardiac Arrest** [Abstract # 413]  
Ryosuke Takegawa, M.D., Ph.D., Feinstein Institute for Medical Research, Manhasset, NY, USA

*Unable to attend* **POST-DOCTORAL AWARD WINNER 2021**  
**Lactate Promotes Vascular Permeability During Sepsis** [Abstract # 414]  
Kun Yang, M.D., Ph.D., Eastern Tennessee State University, Johnson City, TN, USA

*Unable to attend* **PRESIDENTIAL AWARD AT THE JAPAN SHOCK SOCIETY GENERAL MEETING 2021**  
**Accuracy for Mortality Prediction with Additive Biomarkers Including Interleukin-6 in Critically Ill Patients: A Multicenter Prospective Observational Study**  
Ryo Yamamoto

**2:10 pm-2:30 pm** **Refreshment Break**  
*Metropolitan Foyer*

<b>2:30 pm-3:45 pm</b>	<b>Science Isn't All Science – Understanding the Many Career Paths and Opportunities for Scientists</b> Moderator: Melanie Scott, M.D., Ph.D., University of Pittsburgh, Pittsburgh, PA, USA <i>Metropolitan Centre</i>
2:30 pm-2:50 pm	<b>NIGMS Vision for Future Sepsis and Trauma Research</b> Xiaoli Zhao, Ph.D., National Institute of General Medicine Sciences (NIGMS), Bethesda, MD, USA
2:50 pm-3:10 pm	<b>Navigating Science Through Department of Defense Research</b> Sylvain Cardin, Ph.D., Naval Medical Research Unit San Antonio, San Antonio, TX, USA
3:10 pm-3:30 pm	<b>Your Next Career Move: Where Is the Science Actually Leading You?</b> John Younger, M.D., ArgoPond, LLC, Bala Cynwyd, PA, USA
3:30 pm-3:45 pm	<b>Panel Discussion</b>
<b>3:45 pm-4:15 pm</b>	<b>Year In Review: <i>Shock</i> Journal</b> Daniel Remick, M.D., Boston University School of Medicine, Boston, MA, USA Moderator: Craig Coopersmith, M.D., Emory University, Atlanta, GA, USA <i>Metropolitan Centre</i>
<b>4:15 pm-4:40 pm</b>	<b>Break</b>
<b>4:40 pm-5:55 pm</b>	<b>Parallel Session I: Tackling the Biologic Challenges of Viruses</b> Moderators: Scott Brakenridge, M.D., University of Washington, Seattle, WA, USA Wendy Walker, Ph.D., Texas Tech University Health Center at Houston, Houston, TX, USA <i>Metropolitan Centre</i>
4:40 pm-4:55 pm	<b>Viral-Induced ARDS and the Risk of Secondary Bacterial Pneumonia</b> Eric Schmidt, M.D., University of Colorado Denver Anschutz Medical Campus, Aurora, CO, USA
4:55 pm-5:10 pm	<b>Elucidating the Role of Interferon Regulatory Factor 3 in the Pathogenesis of COVID-19</b> Wendy Walker, Ph.D., Texas Tech University Health Center at Houston, Houston, TX, USA
5:10 pm-5:25 pm	<b>COVID Immunosuppression</b> Kenneth Remy, M.D., Case Western Reserve University School of Medicine, Avon Lake, OH, USA
5:25 pm-5:40 pm	<b>Secretome Changes Distinguishing Severe Forms of COVID From Critical Pneumonia Not Related to SARS-COV-2 Infection [Abstract # 431]</b> Angelique Blangy--Ietheule, Nantes University, Nantes, FRA
5:40 pm-5:55 pm	<b>Alteplase for COVID-19-Associated ARDS and Thromboembolism [Abstract # 432]</b> Hong-Long Ji, M.D., Ph.D., University of Texas at Tyler, Tyler, TX, USA
<b>4:40 pm-5:55 pm</b>	<b>Parallel II: The Multifaceted Microvascular Response to Injury and Infection</b> Moderators: Judith Hellman, M.D., University of California San Francisco, San Francisco, CA, USA Lucy Kornblith, M.D., University of California San Francisco, CA, USA <i>Metropolitan West</i>
4:40 pm-4:55 pm	<b>Investigating Platelet Behavior in Response to Physiologic and Pathologic Plasma Environments</b> Lucy Kornblith, M.D., University of California San Francisco, CA, USA
4:55 pm-5:10 pm	<b>Endothelial Nitric Oxide as a Mediator of Permeability and Vascular Reactivity in Acute Inflammation</b> Ryan Stark, M.D., Vanderbilt University Medical Center, Nashville, TN, USA

- 5:10 pm-5:25 pm **COVID-19-Associated Endotheliopathy**  
Judith Hellman, M.D., University of California San Francisco, San Francisco, CA, USA
- 5:25 pm-5:40 pm **Perioperative Endothelial Dysfunction Is Independently Associated with Kidney Injury Following Cardiac Surgery** [Abstract # 433]  
Marcos Lopez, M.D., Vanderbilt University Medical Center, Nashville, TN, USA
- 5:40 pm-5:55 pm **Caspase-11 Contributes to Coagulopathy in a Murine Polytrauma Model** [Abstract # 434]  
Joud Mulla, University of Pittsburgh, Pittsburgh, PA, USA
- 6:10 pm-8:00 pm** **Mentoring Workshop & Dinner** (*pre-registration required*)  
*Queen's Quay*



## MONDAY, JUNE 6, 2022

**6:00 am-7:30 am** **Presidential Fun Run**  
*Westin Harbour Castle Lobby*

**7:00 am-5:00 pm** **Speaker Ready Room** **Registration**  
*Wellington* *Metropolitan Foyer*

**7:30 am-9:00 am** **Poster Session II & Continental Breakfast**  
*Metropolitan East*

**9:00 am-10:45 am** **Parallel Session III: Military Medicine & Science**  
Moderators: Martin Schreiber, M.D., Oregon Health & Science University, Portland, OR, USA  
Linda Benavides, M.D., Madigan Army Medical Center, Steilaicoom, WA, USA  
*Metropolitan Centre*

9:00 am-9:18 am **Research Priorities for the Future Battlefield**  
Travis Polk, M.D., United States Army Medical Research and Development Command (USAMRDC)/Combat Casualty Care Research Program, Frederick, MD, USA

9:18 am-9:36 am **Capabilities of Single Surgeon and Austere Surgical Teams**  
Linda Benavides, M.D., Madigan Army Medical Center, Steilaicoom, WA, USA

9:36 am-9:54 am **Blood Transfusion on the Modern Battlefield**  
Daniel Darlington, Ph.D., United States Army Institute of Surgical Research, San Antonio, TX, USA

9:54 am-10:12 am **Adjuncts to Hemorrhage Control on the Battlefield**  
Martin Schreiber, M.D., Oregon Health & Science University, Portland, OR, USA

10:12 am-10:27 am **Effects of Hypotensive Resuscitation with Ethynylestradiol-3-Sulfate in Pigs with Severe Traumatic Hemorrhage** [Abstract # 435]  
Wenjun Martini, Ph.D., United States Army Institute of Surgical Research, San Antonio, TX, USA

10:27 am-10:42 am **Characterization of Non-Human Primate Whole Blood Cold Storage Coagulation Function** [Abstract # 436]  
Alejandra Lorenzen, Naval Medical Research Unit San Antonio, San Antonio, TX, USA

**9:00 am-10:30 am** **Parallel Session IV: Mitochondria - The Powerhouse in Critical Illness**  
Moderators: Basilia Zingarelli, M.D., Ph.D., Cincinnati Children's Hospital Medical Center, Cincinnati, OH, USA  
Craig Porter, Ph.D., University of Arkansas for Medical Sciences, Little Rock, AR, USA  
*Metropolitan West*

9:00 am-9:20 am **Mitochondrial Peptides in Sepsis and Trauma**  
Basilia Zingarelli, M.D., Ph.D., Cincinnati Children's Hospital Medical Center, Cincinnati, OH, USA

9:20 am-9:40 am **The Role of Mitochondria in Metabolic Stress Response to Burn Trauma**  
Craig Porter, Ph.D., University of Arkansas for Medical Sciences, Little Rock, AR, USA

9:40 am-10:00 am **Macrophage Metabolic Reprogramming: A Driver of Trained Immunity**  
Edward Sherwood, M.D., Ph.D., Vanderbilt University, Nashville, TN, USA

10:10 am-10:15 pm **Mitochondrial Protection Ameliorates Post-Sepsis Chronic Skeletal Muscle Weakness** [Abstract # 437]  
Meagan Kingren, University of Kentucky College of Medicine, Lexington, KY, USA

10:15 am-10:30 am **Mitochondrial Transplantation Attenuates In Vivo Murine Liver Ischemia-Reperfusion Injury** [Abstract # 438]  
Avinash Mukkala, Keenan Research Centre for Biomedical Science, St. Michael's Hospital, Unity Health, Toronto, ON, USA

10:30 am-11:00 am **Refreshment Break**  
*Metropolitan Foyer*

**11:00 am-12:00 pm Keynote Address: Imaging of Host Response to Pathogens to Understand Clinical Problems**  
**Paul Kubes, Ph.D.**  
Professor, Department of Physiology & Pharmacology  
Head, University of Calgary's Research Strategy for Infections, Inflammation, and Chronic Disease in the Changing Environment  
Canada Research Chair, Leukocyte Recruitment in Inflammatory Disease  
Snyder Institute for Chronic Diseases  
Cumming School of Medicine  
University of Calgary, Calgary, AB, CAN  
*Metropolitan Centre*

**12:00 pm-1:00 pm Shock Society Business Meeting**  
*Metropolitan Centre*

**1:15 pm-2:15 pm Committee Meetings**  
Preparedness Committee  
*Bay*  
  
Development Committee  
*Queen's Quay II*

Awards + Honors Committee  
*Queen's Quay I*

Publications Committee  
*Richmond*

**Free Afternoon/Evening**



## TUESDAY, JUNE 7, 2022

7:00 am-8:00 am

### **Committee Meetings**

Diversity Committee  
*Bay*

Finance Committee  
*Queen's Quay I*

Scientific Program 2022 & 2023  
Committee  
*Queen's Quay II*

Lab Animal Issues Committee  
*Richmond*

International Committee  
*Location TBD*

7:00 am-5:00 pm

**Speaker Ready Room**  
*Wellington*

**Registration**  
*Metropolitan Foyer*

7:30 am-9:00 am

**Poster Session III & Continental Breakfast**  
*Metropolitan East*

9:00 am-10:40 am

### **Parallel Session V: Burn and Heat Stroke**

Moderators: Abdikarim Abdullahi, Ph.D., Sunnybrook Research Institute, Toronto, ON, CAN  
Tina Palmieri, M.D., University of California, Davis, CA, USA  
*Metropolitan Centre*

9:00 am-9:15 am

#### **Optimizing Survival After Burn Injury**

Tina Palmieri, M.D., University of California, Davis, CA, USA

9:15 am-9:30 am

#### **Burn Trauma and the Adipose Tissue: What Have We Learned So Far?**

Abdikarim Abdullahi, Ph.D., Sunnybrook Research Institute, Toronto, ON, CAN,

9:30 am-9:45 am

#### **Tranexamic Acid Suppresses the Release of Mitochondrial DAMPs and Reduces Lung Inflammation in a Murine Burn Model**

Damien Carter, M.D., Maine Medical Center, Portland, ME, USA

9:45 am-10:00 am

#### **Mechanisms of Exertional Heat Stroke**

Orlando Laitano, Ph.D., Florida State University, Tallahassee, FL, USA

10:00 am-10:15 am

#### **Alcohol Intoxication Impairs Initial Systemic Inflammatory Response in Burn Injured Patients [Abstract # 440]**

Kevin Choy, M.D., University of Colorado, Denver, CO, USA

10:15 am-10:30 am

#### **Aging Impairs Immunometabolic Adaptation in the Stromal Vascular Fraction and Response to Burn [Abstract # 441]**

Lauar Monteiro, Ph.D., Sunnybrook Research Institute, Toronto, ON, CAN

9:00 am-10:40 am

### **Parallel Session VI: Biologic Variables in Critical Illness**

Moderators: Marlene Starr, Ph.D., University of Kentucky, Lexington, KY, USA  
Juan-Pablo Idrovo, M.D., University of Colorado, Aurora, CO, USA  
*Metropolitan West*

9:00 am-9:15 am

#### **Old Age and Obesity in Sepsis**

Marlene Starr, Ph.D., University of Kentucky, Lexington, KY, USA

9:15 am-9:30 am

#### **Obesity and Temperature Control in Systemic Inflammation**

Alexandre A. Steiner, Ph.D., University of San Paulo, San Paulo, BRA

9:30 am-9:45 am

#### **Advance Age After Burn Injury**

Juan-Pablo Idrovo, M.D., University of Colorado, Aurora, CO, USA

9:45 am-10:00 am

#### **Young Exosomes Restore Adipose Tissue Immunometabolic and Mitochondrial Function in Older Mice**

Ayesha Aijaz, Ph.D., Sunnybrook Research Institute, Toronto, ON, CAN

10:00 am-10:15 am	<b>T-Cell Infiltrates and Microglia Adopt Long-term Gene Signature Changes Leading to Age-Specific Responses to Traumatic Brain Injury in Mice</b> [Abstract # 442] Zhangying Chen, Northwestern University, Chicago, IL, USA
10:15 am-10:30 am	<b>Sex-Related Differences in Response to Anti-platelet Drug Therapies Targeting Purinergic Signaling Pathways in Sepsis</b> [Abstract # 443] Elisabetta Liverani, Ph.D., North Dakota State University, Fargo, ND, USA
10:30 am-10:45 am	<b>Refreshment Break</b> <i>Metropolitan Foyer</i>
10:45 am-12:00 pm	<b>Parallel Session VII: Shock-Induced Alterations in Metabolism/Catabolism</b> Moderators: Steve Standage, M.D., Cincinnati Children's Hospital Medical Center, Cincinnati, OH, USA Julia Bohannon, Ph.D., Vanderbilt University Medical Center, Nashville, TN, USA <i>Metropolitan Centre</i>
10:45 am-11:00 am	<b>Functional Ramifications of Altered Kidney Metabolism in Sepsis</b> Steve Standage, M.D., Cincinnati Children's Hospital Medical Center, Cincinnati, OH, USA
11:00 am-11:15 am	<b>Altering Leukocyte Metabolism as a Means of Enhancing Immune Function After Burn</b> Julia Bohannon, Ph.D., Vanderbilt University Medical Center, Nashville, TN, USA
11:15 am-11:30 am	<b>Impact of Diabetes and Obesity on Metabolism in Severe Injury</b> Matthew Delano, M.D., Ph.D., University of Michigan, Ann Arbor, MI, USA
11:30 am-11:45 am	<b>Gut Microbiome Depletion Leads to Altered Neural Dynamics and Metabolism in the Hippocampus</b> [Abstract # 444] Joshua Glynn, Feinstein Institutes for Medical Research, Northwell Health, Manhasset, NY, USA
11:45 am-12:00 pm	<b>Lactate After Burn Trauma: From Metabolic Waste to Inducer of White Adipose Browning</b> [Abstract # 445] Dalia Barayan, University of Toronto, Toronto, ON, CAN
10:45 am-12:00 pm	<b>Parallel Session VIII: Thromboinflammation After Injury</b> Moderators: Jessica Cardenas, Ph.D., UTHealth, Houston, TX, USA Patricia Davenport, M.D., Harvard Medical School, Boston, MA, USA <i>Metropolitan West</i>
10:45 am-11:00 am	<b>Nuclear and Mitochondrial Antigen Effects on Coagulation After Trauma</b> Matthew Kutcher, M.D., University of Mississippi Medical Center, Jackson, MS, USA
11:00 am-11:15 am	<b>Cross-Talk Between Complement and Coagulation/Fibrinolysis After Trauma</b> Christopher Barrett, M.D., University of Nebraska Medical Center, Walpole, MA, USA
11:15 am-11:30 am	<b>Inflammasome Effects in Platelets and on Coagulation: Implications for Organ Damages</b> Melanie Scott, M.D., Ph.D., University of Pittsburgh, Pittsburgh, PA, USA
11:30 am-11:45 am	<b>Endothelial-Specific Ablation of the TMEM16F Scramblase Reduces In Vivo Clot Formation in Mice</b> [Abstract # 451] Aaron Lambert, M.D., University of Vermont Medical Center, Burlington, VT, USA
11:45 am-12:00 pm	<b>MMP25-Mediated Glycocalyx Damage in Ischemia/Reperfusion Is Caused by an Increase in Endothelial Membrane Lysophospholipids</b> [Abstract # 446] Olan Jackson-Weaver, Ph.D., Tulane University, New Orleans, LA, USA
12:00 pm-1:15 pm	<b>Bagged Lunch</b> <i>Metropolitan Foyer</i>

<b>12:10 pm-1:10 pm</b>	<b>Oral Presentations By and For Young Investigators</b> <b><i>Young Investigators Only – Bring Your Lunch into the Room</i></b> Moderator: John Alverdy, M.D., University of Chicago, Chicago, IL, USA <i>Metropolitan Centre</i>
12:10 pm-12:20 pm	<b>HMBG1 Mediates Disruption of Spatial Coding in the Hippocampus of Sepsis-Surviving Mice</b> [Abstract # P-231] Joshua Strohl, Ph.D., Feinstein Institute for Medical Research, Northwell Health, Manhasset, NY, USA
12:20 pm-12:30 pm	<b>Inhibition of FLI-1 Attenuates Brain Pericyte MCP-1 in Sepsis Associated Encephalopathy</b> [Abstract # P-233] Yan Wu, Medical University of South Carolina, Charleston, SC, USA, <i>presented by Hongkuan Fan, Ph.D., Medical University of South Carolina, Charleston, SC, USA</i>
12:30 pm-12:40 pm	<b>IRG1 and Itaconate in Innate Immune Memory</b> [Abstract # P-213] Margaret McBride, Vanderbilt University School of Medicine, Nashville, TN, USA
12:40 pm-12:50 pm	<b>CD103 Blockade increases Sepsis Mortality Through a CD8+ T Cell and TREG-Dependent Mechanism</b> [Abstract # P-232] David Swift, M.D., M.P.H., Emory University, Atlanta, GA, USA
12:50 pm-1:00 pm	<b>Administration of the Humanin Analogue, Humanin-G, Decreases Lung Inflammation in Aging Male and Female Mice in an AMPKa1-Dependent Manner</b> [Abstract # P-105] Allison Ammann, M.D., University of Cincinnati Department of Surgery, Cincinnati, OH, USA
1:00 pm-1:10 pm	<b>Transition of Kupffer Cells Modulates Hepatic Immune Environment After Ischemia/Reperfusion Injury Revealed by Single-Cell Transcriptomes</b> [Abstract # P-134] Hongji Zhang, M.D., Ph.D., The Ohio State University, Columbus, OH, USA
<b>1:15 pm-2:45 pm</b>	<b>Plenary Session V: Diversity, Equity, and Inclusion in Research Panel Discussion</b> Moderators: Alicia Mohr, M.D., University of Florida, Gainesville, FL, USA Jason Vaught, M.D., Johns Hopkins University, Baltimore, MD, USA <i>Metropolitan Centre</i>
1:15 pm-1:35 pm	<b>Incorporating Diversity, Equity, and Inclusion in Grants</b> Shakira Nelson, Ph.D., M.P.H., National Institutes of Health (NIH), Bethesda, MD, USA
1:35 pm-1:55 pm	<b>Enhancing Diversity in Training Programs</b> Charles Wade, Ph.D., The University of Texas Health Science Center at Houston, Houston, TX, USA
1:55 pm-2:15 pm	<b>Diversity in Science</b> Jason Vaught, M.D., Johns Hopkins University, Baltimore, MD, USA
2:15 pm-2:35 pm	<b>Gender in Science</b> Michaela West, M.D., Ph.D., North Memorial Hospital, Minneapolis, MN, USA
2:35 pm-2:45 pm	<b>Panel Discussion</b>
<b>2:45 pm-3:00 pm</b>	<b>Refreshment Break</b>
<b>3:00 pm-4:30 pm</b>	<b>Parallel Session IX: Beyond Shock: Persistent Immunosuppression and Chronic Critical Illness</b> Moderators: Vanessa Nomellini, M.D., Ph.D., University of Cincinnati, Cincinnati, OH, USA Phil Efron, M.D., University of Florida, Gainesville, FL, USA <i>Metropolitan Centre</i>
3:00 pm-3:15 pm	<b>Role of MDSCs/PICS</b> Phil Efron, M.D., University of Florida, Gainesville, FL, USA
3:15 pm-3:30 pm	<b>Immune Dysfunction in Chronic Critical Illness</b> Vanessa Nomellini, M.D., Ph.D., University of Cincinnati, Cincinnati, OH, USA

3:30 pm-3:45 pm	<b>Post-trauma/Sepsis Immunosuppression</b> Alfred Ayala, Ph.D., Brown University Department of Surgery, Providence, RI, USA
3:45 pm-4:00 pm	<b>Gut Integrity in Sepsis</b> Craig Coopersmith, M.D., Emory University, Atlanta, GA, USA
4:00 pm-4:15 pm	<b>ATP Release by Monocytes Could Cause Immunosuppression in Sepsis Patients</b> [Abstract # 447] Koichiro Sueyoshi, M.D., Ph.D., Juntendo Daigaku Igakubu Fuzoku Urayasu Byion, Tomioka, Urayasu-shi, Chiba, JPN
4:15 pm-4:30 pm	<b>The Role of Muscle Stem Cells in Long-term Recovery in a Murine Surgical Model of Sepsis</b> [Abstract # 448] Rebecca Schmitt, Ph.D., Mayo Clinic, Rochester, MN, USA
<b>3:00 pm-4:30 pm</b>	<b>Parallel Session X: New Horizons: Artificial Intelligence, Bioinformatics and Computational Biology</b> Moderators: Yoram Vodovtz, Ph.D., University of Pittsburgh, Pittsburgh, PA, USA Elaheh Rabhar, Ph.D., Wake Forest University, Winston-Salem, NC, USA <i>Metropolitan West</i>
3:00 pm-3:20 pm	<b>Systems Biology in Critical Illness: Integrating Datasets, Toolsets, and Mindsets</b> Yoram Vodovtz, Ph.D., University of Pittsburgh, Pittsburgh, PA, USA
3:20pm-3:40 pm	<b>Exploiting Computational Modeling to Optimize Design and Implementation of Endovascular Hemorrhage Control Devices</b> Elaheh Rabhar, Ph.D., Wake Forest University, Winston-Salem, NC, USA
3:40 pm-4:00 pm	<b>What It Will Take to Cure Sepsis: Integrating Mechanistic Simulations with Artificial Intelligence Through Digital Twins of Critical Illness</b> Gary An, M.D., University of Vermont, Burlington, VT, USA
4:00 pm-4:15pm	<b>Artificial Intelligence to Anticipate Sepsis in Critically Ill Trauma Patients</b> [Abstract # 449] Katherine Stern, M.D., University of Washington, Seattle, WA, USA
4:15 pm-4:30 pm	<b>Heart Rate Interval Based Rapid Alert (HIRA) Score to Characterize Autonomic Dysfunction Among Patients with Sepsis-Related Acute Respiratory Failure</b> [Abstract # 450] Preethi Kirhnan, M.S., Emory University, Atlanta, GA, USA, <i>presented by Rishikesan Kamaleswaran, Ph.D., Emory University School of Medicine, Atlanta, GA, USA</i>
<b>4:30 pm-4:45 pm</b>	<b>Break</b>
<b>4:45 pm-6:25 pm</b>	<b>Plenary VI: Bringing Precision Medicine to Critical Illness</b> Moderators: Scott Brakenridge, M.D., University of Washington, Seattle, WA, USA Jillian Richter, Ph.D., University of Alabama at Birmingham, Birmingham, AL, USA <i>Metropolitan West</i>
4:45 pm-5:05 pm	<b>Precision Medicine in Sepsis</b> Isaiah Turnbull, M.D., Ph.D., Washington University School of Medicine, St. Louis, MO, USA
5:05 pm-5:25 pm	<b>Biomarkers to Predict Multiple Organ Dysfunction Syndrome in Septic Shock</b> Mihir Atreya, M.D., M.P.H., Cincinnati Children's Hospital Medical Center, Cincinnati, OH, USA
5:25 pm-5:45 pm	<b>Novel Biomarkers for Venous Thromboembolism Following Major Trauma</b> Myung Park, M.D., Mayo Clinic, Rochester, MN, USA
5:45 pm-6:00 pm	<b>Identifying Neutrophil Phenotypes in Sepsis Patients with Organ-on-Chip and Proteomic Analysis</b> [Abstract # 407] Qingliang Yang, Temple University, Philadelphia, PA, USA, <i>presented by Mohammad Kiani, Ph.D., Temple University, Philadelphia, PA, USA</i>
6:00 pm-6:15 pm	<b>Understanding Critical Illness Through Host Transcriptional Endotyping</b> [Abstract # 408] Scott Brakenridge, M.D., University of Washington, Seattle, WA, USA

<b>6:30 pm-7:00 pm</b>	<b>Reception</b> <i>Metropolitan Foyer &amp; East</i>
<b>7:00 pm-9:30 pm</b>	<b>Awards Banquet</b> Travel Awards New Investigator Competition Award Scientific Achievement, Distinguished Service and Mentoring Awards <i>Metropolitan Centre</i>