Resuscitation Science Symposium 2016

Final Program
November 12–14 | Ernest M. Morial Convention Center | New Orleans, Louisiana

Sponsored by the American Heart Association Emergency Cardiovascular Care Committee and the Council on Cardiopulmonary, Critical Care, Perioperative and Resuscitation

Register online at scientificsessions.org/ress
<table>
<thead>
<tr>
<th>Time</th>
<th>Friday, Nov. 11</th>
<th>Saturday, Nov. 12</th>
<th>Sunday, Nov. 13</th>
<th>Monday, Nov. 14</th>
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<tbody>
<tr>
<td>8:00 AM</td>
<td>8:00-8:15 Symposium Opening Welcome and Introduction</td>
<td>8:00-9:30 ReSS Poster Session</td>
<td>8:00-9:30 ReSS Poster Session</td>
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<td>8:15 AM</td>
<td>8:15-9:30 Future of Trauma and Resuscitation Trial Design</td>
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<td>9:30 AM</td>
<td>9:30-10:15 2016 Awards for Lifetime Achievement in Cardiac and Trauma Resuscitation Science and the Ian G. Jacobs Award for International Group Collaboration to Advance Resuscitation Science</td>
<td>9:30-10:30 Year in Review</td>
<td>9:30-10:45 Pro-Con Debate on EMS Resuscitation Strategy</td>
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<tr>
<td>10:15 AM</td>
<td>10:15-10:30 Break/Networking/Exhibits</td>
<td>10:30-10:45 Break/Networking/Exhibits</td>
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<td>10:30 AM</td>
<td>10:30-11:15 Best of the Best Oral Abstract Presentations</td>
<td>10:30-10:45 Break/Networking/Exhibits</td>
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<td>11:00 AM</td>
<td>11:15-12:15 Lunch Break</td>
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<td>11:45-12:15 Lunch Break</td>
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<td>1:00 PM</td>
<td>Concurrent Sessions</td>
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<td>12:00-1:15 Preparing for and Executing Team Resuscitation</td>
<td>12:15-1:15 Concurrent Sessions</td>
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<td>1:15 PM</td>
<td>Women in Resuscitation Networking Meeting <em>(Brown Bag Session)</em></td>
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<td>1:00-3:00 Lunch Break/Scientific Sessions Opening Session</td>
<td>Funding Organizations Report</td>
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<td>1:30 PM</td>
<td>Joint AHA/Japanese Circulation Society Session</td>
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<td>EMS Clinical Science Workshop</td>
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<td>2:45 PM</td>
<td>2:45-4:00 Long-Term Outcomes: What Matters to Patients</td>
<td>3:00-4:00 Concurrent Sessions</td>
<td>2:45-3:15 Break/Networking/Exhibits</td>
<td>3:15-4:30 Brain Directed Resuscitation</td>
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<td>3:00-4:00 Concurrent Sessions</td>
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<td>4:00-4:30 Break/Networking/Exhibits</td>
<td>4:00-4:30 Break/Networking/Exhibits</td>
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<td>4:30-5:30 Oral Abstracts: Post-arrest Management</td>
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<td>4:30 PM</td>
<td>4:30-5:45 Late-Breaking Resuscitation Science</td>
<td>4:30-5:45 Inhalation Therapies in Resuscitation</td>
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<td>5:00 PM</td>
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<td>4:30-5:45 Inhalation Therapies in Resuscitation</td>
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<td>5:30-6:15 CV Seminar, PCI and the Cardiac Arrest Patient</td>
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<tr>
<td>6:30 PM</td>
<td>6:30-9:30 Young Investigator Networking Event and Presentation of the Young Investigator Awards</td>
<td>5:45-6:45 CV Seminar, PCI and the Cardiac Arrest Patient</td>
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Program Committee

The American Heart Association thanks the members of the Program Committee for their dedication and leadership in planning the program.

Benjamin S. Abella, MD, MPhil, FACEP, FAHA, Symposium Co-Chair, University of Pennsylvania, Philadelphia, Pennsylvania
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Irshad H. Chaudry, PhD, University of Alabama at Birmingham, Birmingham, Alabama
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Samuel A. Tisherman, MD, FACS, FCCM, University of Maryland, Baltimore, Maryland
Sandra Wanek, MD, Legacy Emanuel Medical Center, Portland, Oregon
Demetris Yannopoulos, MD, University of Minnesota, Minneapolis, Minnesota
Invited Speakers

Monique L. Anderson, Durham, North Carolina
Lance Becker, Manhasset, New York
Diane Bild, Washington, D.C.
Christopher Bonafide, Philadelphia, Pennsylvania
Karim Brohi, London, United Kingdom
Eileen Bulger, Seattle, Washington
Clifton W. Callaway, Pittsburgh, Pennsylvania
Pierre Carli, Paris, France
Drew Carlson, Bethesda, Maryland
Brendan G. Carr, Philadelphia, Pennsylvania
Marina Del Rios, Chicago, Illinois
Cameron Dezfulian, Pittsburgh, Pennsylvania
Dana Edelson, Chicago, Illinois
Tomoyuki Endo, Sendai, Japan
Bryan Fischberg, New Brunswick, New Jersey
David Gaieski, Philadelphia, Pennsylvania
Kirstie Haywood, Coventry, United Kingdom
Catherine Hill, Washington, D.C.
Elizabeth A. Hunt, Baltimore, Maryland
E. Brooke Lerner, Milwaukee, Wisconsin
Michael Levy, Anchorage, Alaska
Linda Mattirsch, Milwaukee, Wisconsin
Stephan A. Mayer, New York, New York
Mervyn Maze, San Francisco, California
Maureen McCunn, Baltimore, Maryland
Bryan McVerny, Pittsburgh, Pennsylvania
Joseph Minei, Dallas, Texas
Niklas Nielsen, Lund, Sweden
Jerry Nolan, Bath, United Kingdom
Marcus Ong, Singapore, Singapore
Joseph P. Ornato, Richmond, Virginia
Sam Parnia, Stony Brook, New York
Gavin D. Perkins, Warwick, United Kingdom
Thomas Rea, Seattle, Washington
Matthias Riehs, Nashville, Tennessee
Gaylan Rockswold, Minneapolis, Minnesota
Kelly N. Sawyer, Pittsburgh, Pennsylvania
Robert Silberglied, Ann Arbor, Michigan
Mark Smyth, Coventry, United Kingdom
George Sopko, Rockville, Maryland
Daniel Spaita, Tucson, Arizona
Lynn J. White, Columbus, Ohio
Demetris Yannopoulos, Minneapolis, Minnesota

Moderators

Benjamin S. Abella, Philadelphia, Pennsylvania
Tom P. Aufderheide, Milwaukee, Wisconsin
Jason A. Bartos, Minneapolis, Minnesota
Robert Berg, Philadelphia, Pennsylvania
Abhishek Bhardwaj, Aldan, Pennsylvania
Audrey L. Blewer, Philadelphia, Pennsylvania
Steven C. Brooks, Kingston, Ontario, Canada
David Buckler, Philadelphia, Pennsylvania
Maaret Castrén, Helsinki, Finland
Paul Chan, Kansas City, Missouri
Cameron Dezfulian, Pittsburgh, Pennsylvania
Michael Fries, Limburg, Germany
Raul Gazmuri, North Chicago, Illinois
Saket Girotra, Iowa City, Iowa
Anne V. Grossestreuer, Boston, Massachusetts
Carolina Hansen, Durham, North Carolina
Michael Holzer, Vienna, Austria
Matthew Huei-Ming Ma, Taipei, Taiwan
Ahamed H. Idris, Dallas, Texas
Jesper Kjaergaard, Copenhagen, Denmark
Rudolph W. Koster, Amsterdam, Netherlands
Michael C. Kurz, Birmingham, Alabama
Joshua Lampe, Philadelphia, Pennsylvania
Andrew Lockey, Halifax, United Kingdom
Bryan McNally, Atlanta, Georgia
Graham Nichol, Seattle, Washington
Hiroshi Nonogi, Shizouka, Japan
Theresa Olasveengen, Oslo, Norway
Mary Ann Peberdy, Richmond, Virginia
Sarah M. Perman, Aurora, Colorado
Sten Ruedbodsson, Uppsala, Sweden
Kelly N. Sawyer, Pittsburgh, Pennsylvania
Carrie Sims, Philadelphia, Pennsylvania
Kjetil Sunde, Oslo, Norway
Yoshio Tahara, Osaka, Japan
Samuel A. Tisherman, Maryland
Terry Vanden Hoek, Chicago, Illinois
Henry Wang, Birmingham, Alabama
Abstract Graders

Benjamin S. Abella
Kenton Anderson
Mark G. Angelos
Dianne L. Atkins
Tom P. Aufderheide
Marc Berg
Audrey L. Blewer
Bentley Bobrow
Clifton W. Callaway
Alain Cariou
Pierre Carli
Drew E. Carlson
Maaret Castrén
Nisha Chandra
Irshad H. Chaudry
Allan de Caen
Marina Del Rios
Michael Donnino
Florence Dumas
Sharon Einav
Judith Finn
Raul J. Gazmuri
Romerergyko Geocadin
Zachary Goldgerger
Christopher B. Granger
Francis X. Guptete
Henry R. Halperin
Fei Han
Kei Havashida
John B. Holcomb
Sung-Oh Hwang
Ahamed H. Idris
Taku Iwami
Jeffrey D. Kerby
Marion Leary
Jing Li
Bo Lofgren
Sarah B. Murthi
Vinay Nadkarni
Robert W. Neumar
Graham Nichol
Marko Noc
Jerry Nolan
Theresa Olasveengen
Brian O’Neil
Joseph P. Ornato
Melissa J. Parker
Mary Ann Peberdy
Gavin D. Perkins
Sarah M. Perman
Thomas Rea
Joshua C. Reynolds
Matthias Riess
John Rittenberger
Kelly N. Sawyer
Michael Sayre
David Seder
Sang Do Shin
Jasmeet Soar
Stub, Dion
Kjetil Sunde
Wanchun Tang
Samuel A. Tisherman
Renaud Tissier
Nathan J. White
Demetris Yannopoulos
Scott Youngquist

Poster Professors

Benjamin S. Abella
Tom P. Aufderheide
Lance Becker
Katherine Berg
Robert Berg
Janet Bray
Steven Brooks
Clifton W. Callaway
Pierre Carli
Maaret Castrén
Cameron Dezfulian
Jonathan Elmer
Dana Edelson
David Gaieski
Asger Granfeldt
Karl Kern
Michael Kurz
Mark Link
Laurie W. Morrison
Vinay Nadkarni
Robert Neumar
Graham Nichol
Jerry Nolan
Theresa Olasveengen
Brian O’Neil
Sam Parnia
Gavin D. Perkins
John Rittenberger
Kelly N. Sawyer
Willard Sharp
Jasmeet Soar
Kjetil Sunde
Robert Swor
Samuel A. Tisherman
Terry Vanden Hoek
Demetris Yannopoulos
Information for Presenters

On-Site Registration
Registration for Scientific Sessions (attendees, invited speakers, exhibitors and groups) will be in Hall D. Hours for on-site registration are:

- Saturday, November 12: 7:00 AM–6:00 PM
- Sunday, November 13: 7:00 AM–5:30 PM
- Monday, November 14: 7:00 AM–5:30 PM
- Tuesday, November 15: 7:30 AM–5:30 PM
- Wednesday, November 16: 7:30 AM–1:00 PM

Speaker Resource Room
All speakers must submit their presentations, and moderators must submit their disclosure slide, at least three hours before their session is scheduled to begin. Please note that no personal laptops will be permitted.

The Speaker Resource Room is located in the Hall F and will be open during the following times:

- Saturday, November 12: 7:00 AM–5:30 PM
- Sunday, November 13: 7:00 AM–5:30 PM
- Monday, November 14: 7:00 AM–5:30 PM
- Tuesday, November 15: 7:30 AM–5:30 PM
- Wednesday, November 16: 7:30 AM–11:00 AM

Abstract Presentations
Abstracts from ReSS and Scientific Sessions 2016 are available on USB (visit Hall C, Jenssen Booth #1825, for a complimentary copy), Circulation online (circ.ahajournals.org), the Scientific Sessions Program Planner (professional.heart.org/programming), Mobile Meeting Guide (professional.heart/mobile), ePosters and other online attendee resources.

Abstracts and presentations are embargoed for release at the date and time of presentation or the time of the AHA news event. Written embargoed information can’t be shared with anyone, but one-on-one embargoed media interviews can be conducted as long as the reporter agrees to abide by the embargo policy. Failure to honor embargo policies will result in the abstract being withdrawn and barred from presentation.

Oral abstracts The following oral abstracts will be presented on Saturday, Sunday and Monday:

**The Great Hall A, Saturday, November 12**
- Best of the Best, abstracts 1-4
- Late Breaking Resuscitation, abstracts 87-91

**The Great Hall A, Monday, November 14**
- The Mitochondrion and Resuscitation, abstracts 25-28
- Post-arrest Management, abstracts 29-32

**Rooms 203-205 (level 2 above The Great Hall A), Sunday, November 13**
- Concurrent Session: Basic Science/Translational, abstracts 9-12
- Concurrent Session: Cardiac Arrest Epidemiology, abstracts 17-20

**Rooms 206-207 (level 2 above The Great Hall A), Sunday, November 13**
- Concurrent Session: Clinical, abstracts 13-16
- Concurrent Session: Trauma, abstracts 21-24

Poster abstracts will be presented in The Great Hall C-D. The poster hall will be available for set-up beginning at 7:30 AM on Saturday, November 12. To maximize the poster viewing time for attendees, all posters will be available for viewing throughout all three days of ReSS (Saturday, Sunday and Monday). Attendees are encouraged to visit the posters during breaks and lunch.

Poster abstract presenters will be available for questions and discussion during the dates/times specified below.

- Saturday, Nov. 12: 1:15-2:45 PM Abstracts 92-99a (late-breaking science) and 100-178
- Sunday, Nov. 13: 8:00-9:30 AM Abstracts 200-279
- Monday, Nov. 14: 8:00-9:30 AM Abstracts 300-389

**ePosters**
In addition to the traditional poster format, poster abstract presenters were invited to upload their posters electronically. During the meeting, ePosters are available only to attendees and may be viewed from the Communication Centers throughout the convention center and the sciencesessions.org website.

**QR Codes**
QR codes enable attendees with smart phones to view ePosters and, if applicable, the author’s narration of the poster. QR codes for all ReSS posters will be displayed on the poster boards.
ReSS Highlights & Awards

Women in Resuscitation Science Networking Meeting
The sixth annual Women in Resuscitation Science Networking Meeting begins at 12:15 PM Saturday in rooms 201-202, on the second level of the Ernest M. Morial Convention Center (above Hall A). During this session, we will be streaming live using the Periscope app. This app is available for iOS and Android. We invite you to join us in an informal setting for networking with leaders in resuscitation. Food for purchase is available outside Hall A on level 1.

Japanese Circulation Society/ReSS Joint Session
Join us in rooms 206-207 at 12:15-1:15 PM Saturday for a session on Extracorporeal CPR. Lunch will be available for purchase through vendors located outside The Great Hall A.

Late-Breaking Abstracts in Resuscitation Science
Late-breaking resuscitation abstracts were evaluated on the basis of their impact and the novelty of the science. These oral and poster abstracts are innovative and provide the latest breakthroughs in basic or clinical science, presenting cutting-edge, exciting and pivotal research results. Oral abstracts will be presented in The Great Hall A at 4:30-5:45 PM Saturday. Poster abstracts will be presented in The Great Hall C-D at 1:15-2:45 PM Saturday. Late-breaking resuscitation science abstracts will be published in Circulation Research and will be available online at http://circres.ahajournals.org/.

Lifetime Achievement Awards
The Lifetime Achievement Awards in Cardiac and Trauma Resuscitation Science were established by the AHA Committee on Emergency Cardiovascular Care in 2003 to honor scientists for their outstanding contributions in cardiac and trauma science. The 2016 Awards for Lifetime Achievement will be presented at 9:30 AM Saturday. Plan to join us to celebrate and recognize these giants in cardiac and trauma resuscitation science.

The 2016 Award for Lifetime Achievement in Cardiac Resuscitation Science will be presented to Jerry P. Nolan, FRCA, FRCR, FFICM, FCSEM (Hon). Professor Nolan is a consultant in anaesthesia and intensive care medicine at the Royal United Hospital, Bath, United Kingdom, and honorary professor of resuscitation medicine at the University of Bristol, United Kingdom. He trained at Bristol Medical School and undertook anaesthesia and critical care training in the United Kingdom in Plymouth, Bristol, Bath and Southampton, and at the Shock Trauma Center in Baltimore, Maryland. He is editor-in-chief of the journal Resuscitation and Chairman of the United Kingdom National Cardiac Arrest Audit Steering Group. Jerry is vice-chairman of the European Resuscitation Council (ERC) and the immediate past co-chairman of the International Liaison Committee on Resuscitation (ILCOR) and was co-editor for the 2015 International Consensus on CPR Science with Treatment Recommendations. He was honoured as an ILCOR “Resuscitation Giant” in 2015. Professor Nolan is an elected member of Council of the Royal College of Anaesthetists in the United Kingdom and his research interests are in cardiopulmonary resuscitation, airway management and post-cardiac arrest treatment. He has authored about 300 original papers, reviews and editorials on these topics. He is currently a co-investigator for two ongoing randomized controlled trials in out-of-hospital cardiac arrest in the United Kingdom: PARAMEDIC-2 – adrenaline versus placebo and AIRWAYS-2 – igel versus tracheal intubation.

The 2016 Award for Lifetime Achievement in Trauma Resuscitation Science will be presented to Karim Brohi, BSc, MBBS, FRCS, FRCA, professor of trauma services at Barts and the London School of Medicine, and consultant in Trauma & Vascular Surgery at the Royal London Hospital Major Trauma Centre. He attended medical school at University College London and has trained in London, Oxford, Cape Town and San Francisco. Dr. Brohi is a Fellow of the Royal College of Surgeons of England and Fellow of the Royal College of Anaesthetists of Great Britain and Ireland. He leads an active research program at Queen Mary University of London and is the director of the Centre for Trauma Sciences. He has particular academic interests in acute translational trauma care, and in particular the pathophysiology of trauma-induced coagulopathy and management of severe bleeding. Dr. Brohi is the director of the London Major Trauma System, which provides injury care for a population of more than 15 million people. He chaired the guideline development group for the NICE Major Trauma Guidelines, and is also the founder of the Trauma.org website and Trauma-list email discussion group.
ReSS Awards (continued)

Previous winners of the Lifetime Achievement Awards

**Cardiac Resuscitation Award Recipients**

2003  Myron L. Weisfeldt, MD, FAHA  
2004  Max Harry Weil, MD, PhD  
2005  Petter Steen, MD, PhD  
2006  Robert Berg, MD, FAHA, FAAP  
2007  Joseph P. Ornato, MD, FAHA, FACP, FACC, FACEP  
2008  Douglas Chamberlain, CBE, DSc (Hon), FRCP, FRCA, FACC, FESC  
2009  Mickey S. Eisenberg, MD, PhD  
2010  G. Guy Knickerbocker, PhD, and James R. Jude, MD  
2011  Fritz Sterz, MD, PhD  
2012  Lance Becker, MD, FAHA  
2013  Michael K. Copass, MD  
2014  Leonard A. Cobb, MD  
2015  Mary Fran Hazinski, MSN, FAAN, FAHA, FERC

**Trauma Resuscitation Award Recipients**

2003  James Atkins, MD  
2004  G. Tom Shires, MD  
2005  Irshad H. Chaudry, PhD  
2006  David B. Hoyt, MD, FACS  
2007  Ronald V. Maier, MD, FACS  
2008  John B. Holcomb, MD, FAHA, FACS  
2009  Samuel A. Tisherman, MD  
2010  Donald Trunkey, MD  
2011  Thomas M. Scalea, MD  
2012  Ernest Moore, MD  
2013  Demetrios Demetriades, MD, PhD, FACS  
2014  Kenneth L. Mattox, MD  
2015  Ellen MacKenzie, PhD

**2016 Ian G. Jacobs Award for International Group Collaboration to Advance Resuscitation Science**

This award was established in 2010 to recognize international collaboration among individuals over an extended time that has resulted in major contributions to fundamental or clinical science related to cardiac arrest or traumatic injury. The award was named posthumously in honor of professor Ian George Jacobs, PhD, OStJ, FERC, FAHA, in 2014 in recognition of his tireless efforts to bring clinicians and researchers together from multiple disciplines and countries to improve acute resuscitation care throughout the world.

The 2016 award will be presented to the Resuscitation Academy in Seattle, Washington, whose mission is to improve survival from cardiac arrest through a fellowship program designed for EMS managers, EMS directors and EMS medical directors. The Resuscitation Academy was established in King County, Seattle in 2008 to provide agencies the information and tools they need to have a fully effective program with the end goal of improving survival rates.
ReSS Awards (continued)

2016 Best Abstract Awards

Four recipients have been selected to receive this award for the top-scoring abstracts submitted to the Resuscitation Science Symposium. The winners of the Best Abstract Awards will be recognized during ReSS.AOS.04: Best of the Best Oral Abstract Presentations at 10:30 AM Saturday.

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<th>Name</th>
<th>Presentation Number</th>
<th>Title</th>
<th>Category</th>
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<tbody>
<tr>
<td>Ryan A. Coute</td>
<td>1</td>
<td>NIH-Funded Cardiac Arrest Research: A 10-Year Trend Analysis</td>
<td>Cardiac Resuscitation Science</td>
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<tr>
<td>Ken Nagao, MD, PhD</td>
<td>2</td>
<td>Impact of Changes in the Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care on Neurologically Intact Survival</td>
<td>Cardiac Resuscitation Science</td>
</tr>
<tr>
<td>Daniel W. Spaite</td>
<td>3</td>
<td>Evaluation of Prehospital Hypotension Depth-duration Dose and Mortality in Major Traumatic Brain Injury</td>
<td>Trauma Resuscitation Science</td>
</tr>
<tr>
<td>Toshikazu Abe</td>
<td>4</td>
<td>Resuscitative Endovascular Balloon Occlusion of the Aorta versus Aortic Cross Clamping Among Patients With Critical Trauma: A Nationwide Cohort Study in Japan</td>
<td>Trauma Resuscitation Science</td>
</tr>
</tbody>
</table>
These awards are presented for the top-scoring abstracts submitted by young investigators who are within the first 5 years of their appointment. The Young Investigator Event recognized the following winners of these awards on Friday, November 11.

<table>
<thead>
<tr>
<th>Name</th>
<th>Presentation Number</th>
<th>Abstract Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sardar Ansari</td>
<td>22</td>
<td>Noninvasive Peripheral Vascular Resistance Measured by a Polyvinylidene Fluoride Sensor Identifies Patterns of Oxygen Debt Repayment During Resuscitation After Hemorrhage</td>
</tr>
<tr>
<td>Ellinor Berglund</td>
<td>119</td>
<td>The Stockholm Automated External Defibrillator and Mobile Bystander Activation Trial - Results From the Run-in Period</td>
</tr>
<tr>
<td>Audrey Blewer</td>
<td>18</td>
<td>Cardiopulmonary Resuscitation Training in the United States: Relationship With Age and Socioeconomic Status</td>
</tr>
<tr>
<td>Justin Boutilier</td>
<td>19</td>
<td>Quantifying the Value of Drone-Delivered Automated External Defibrillators in Cardiac Arrest Response</td>
</tr>
<tr>
<td>Maya Chan</td>
<td>172</td>
<td>Frequency and Prognosis of Recurrent In-hospital Cardiac Arrest</td>
</tr>
<tr>
<td>Kadambari Chandra Shekar</td>
<td>256</td>
<td>Temporal Comparison of Mitochondrial Dysfunction in a Porcine Model of Untreated Ventricular Fibrillation</td>
</tr>
<tr>
<td>David de la Puente Bethencourt</td>
<td>279</td>
<td>In-vivo Pet Imaging of Long-Term Microglia-Activation After Cardiac Arrest in Rats</td>
</tr>
<tr>
<td>Callie Drohan</td>
<td>142</td>
<td>Sedation Use Alters Quantitative Electroencephalography in Comatose Post Cardiac Arrest Patients</td>
</tr>
<tr>
<td>Florence Dumas</td>
<td>371</td>
<td>Amplitude Spectrum Area (amsa) and Outcome: Role of Utstein and Comorbidities Factors</td>
</tr>
<tr>
<td>Ludvig Elfwén</td>
<td>30</td>
<td>Early Coronary Angiography Is Associated With Improved 30-day Survival in Out-of-hospital Cardiac Arrest Patients Without ST-elevation on First Ecg</td>
</tr>
<tr>
<td>Jonathan Elmer</td>
<td>17</td>
<td>Influence of Cardiac Catheterization and Automated Implantable Cardioverter Defibrillator Placement on Long-Term Cause of Death in Cardiac Arrest Patients Discharged From the Hospital</td>
</tr>
<tr>
<td>Stephen George</td>
<td>100</td>
<td>Sodium Nitroprusside Enhanced Cardiopulmonary Resuscitation Improves Short Term Survival in a Porcine Model of Ischemic Refractory Ventricular Fibrillation</td>
</tr>
<tr>
<td>Junichi Izawa</td>
<td>262</td>
<td>Survival After Out-of-hospital Cardiac Arrests and Arterial Oxygen Partial Pressure During Cardiopulmonary Resuscitation: The CRITICAL Study in Osaka, Japan</td>
</tr>
<tr>
<td>Name</td>
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</tr>
<tr>
<td>---------------------</td>
<td>---------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Mahmood Khan</td>
<td>389</td>
<td>Hyperoxic Cycling of Human Inducible Pluripotent Derived Cardiomyocytes (hipsc-cms) Augments Transplanted Cell Survival in Rats Subjected to Myocardial Infarction</td>
</tr>
<tr>
<td>Alan Kuo</td>
<td>168</td>
<td>Unique Changes in Electrocardiographic Metrics on Continuous Telemetry Prior to In-Hospital Cardiac Arrests Identified With Automated Algorithms</td>
</tr>
<tr>
<td>Tadashi Matsuoka</td>
<td>11</td>
<td>Hydrogen Gas Inhalation Improves Survival in Rats With Lethal Hemorrhagic Shock Resuscitated With Saline</td>
</tr>
<tr>
<td>Timothy Matsuura</td>
<td>28</td>
<td>Ischemic Postconditioning Requires High-Quality CPR and Epinephrine to Improve Cardiac Mitochondrial Respiration After Prolonged Cardiac Arrest</td>
</tr>
<tr>
<td>Ari Moskowitz</td>
<td>265</td>
<td>Predicting Mortality for Initial Survivors of Acute Respiratory Compromise Events</td>
</tr>
<tr>
<td>Takayuki Ogura</td>
<td>274</td>
<td>Traumatic Bleeding Severity Score (TBSS) based Initiation of Massive Transfusion Results in Earlier Transfusion and Improved Outcomes in Severely Injured Trauma Patients With Hemorrhagic Shock: A Prospective Interventional Study</td>
</tr>
<tr>
<td>Dorothy Perry</td>
<td>27</td>
<td>Real Time Mitochondrial Monitoring Using Surface Raman Resonance Spectroscopy Detects Impending Cardiac Arrest</td>
</tr>
<tr>
<td>Joshua Reynolds</td>
<td>218</td>
<td>Association Between Duration of Resuscitation and Favorable Outcome After Out-of-Hospital Cardiac Arrest: Implications for Prolonging Resuscitation</td>
</tr>
<tr>
<td>Gabriel Riva</td>
<td>14</td>
<td>Increase in Bystander Cardiopulmonary Resuscitation in Sweden During the Last 15 Years is Mainly Attributed to Increased Rates of “Chest Compression Only” CPR</td>
</tr>
<tr>
<td>Jason Rose</td>
<td>25</td>
<td>A Carbon Monoxide (CO) Scavenging Agent Reverses CO-Induced Mitochondrial Inhibition in vitro and in vivo</td>
</tr>
<tr>
<td>Victoria Scicluna</td>
<td>248</td>
<td>Does Experience Matter? Implications for Community Consultation for Research in Emergency Settings</td>
</tr>
<tr>
<td>Sanjana Srinivasan</td>
<td>239</td>
<td>Modeling a Novel Hypothetical Use of Postal Collection Boxes as Automated External Defibrillator Access Points</td>
</tr>
<tr>
<td>Henrik Staer-Jensen</td>
<td>140</td>
<td>Comparison of Cardiac Output Assessment With Two Different Minimally-invasive Pulse Contour Analysis-monitoring Devices and Echocardiography During Mild Therapeutic Hypothermia and Normothermia</td>
</tr>
<tr>
<td>Christopher Sun</td>
<td>238</td>
<td>Ranking Businesses and Municipal Locations by Spatiotemporal Cardiac Arrest Risk to Guide Public Defibrillator Placement</td>
</tr>
</tbody>
</table>
### ReSS Awards (continued)

<table>
<thead>
<tr>
<th>Name</th>
<th>Presentation Number</th>
<th>Abstract Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tomoyoshi Tamura</td>
<td>131</td>
<td>First-in-human Pilot Study of Hydrogen Gas Inhalation for Treatment of Post-cardiac Arrest Syndrome</td>
</tr>
<tr>
<td>Chingping Wan</td>
<td>130</td>
<td>Outcome of In-Hospital VT/VF Arrest by Time and Location When Using a Wearable Cardioverter Defibrillator</td>
</tr>
<tr>
<td>Ping-Hsun Yu</td>
<td>15</td>
<td>Statin Use is Associated With Better Outcomes in Patients With Out-of-Hospital Cardiac Arrest in a Nationwide Cohort Study</td>
</tr>
</tbody>
</table>

#### 3CPR Emergency Medical Services Travel Stipends

Sponsored by the Council on Cardiopulmonary, Critical Care, Perioperative and Resuscitation (3CPR), the EMS travel stipends support the efforts of EMS chiefs, educators and other non-physician EMS leadership by providing travel stipends to attend ReSS. The recipients of the 2016 travel stipends were selected based on their commitment and interest in cardiac arrest, CPR and resuscitation care, their potential to make an impact in out-of-hospital resuscitation care, and their record of EMS accomplishments.

The 2016 3CPR EMS Travel Stipend recipients are:
- Willow C. Chavez, Limestone Hospital & Huntsville Emergency Services, Athens, Alabama
- William B. Gleason, Medstar Mobile Healthcare, Fort Worth, Texas
- Edward M. McDonald, Loudoun County VA Fire Rescue and Emergency Management, Leesburgh, Virginia
- Charles Serns, Anchorage Fire Department, Anchorage, Alaska
- Jean-Paul Veronese, WCG College of Emergency Care, Cape Town, South Africa
ReSS Three-Day Event Preliminary Program

**Friday, November 11**

6:00–9:30 PM
Young Investigator Event

**Saturday, November 12**

8:00–8:15 AM
*The Great Hall A*
Symposium Opening: Welcome and Introduction
Tom P. Aufderheide, Milwaukee, Wisconsin

8:15–9:30 AM
*The Great Hall A*
ReSS.02
Main Event Session: Future of Trauma and Resuscitation Trial Design
*Moderators:*
Graham Nichol, Seattle, Washington
Kjetil Sunde, Oslo, Norway

8:15
Post-Resuscitation Trials – What is Needed?
Niklas Nielsen, Lund, Sweden

8:30
Efficient Trial Design: Lessons from NETT
Robert Silbergleit, Ann Arbor, Michigan

8:45
The Problem with Resuscitation Trials Thus Far
Lance Becker, Manhasset, New York

9:00
Pragmatic Trial Design: Lessons from ROC
Clifton W. Callaway, Pittsburgh, Pennsylvania

9:15
Panel Discussion

9:30–10:15 AM
*The Great Hall A*
ReSS.03
2016 Awards for Lifetime Achievement in Cardiac Resuscitation Science and Trauma Resuscitation Science and Presentation of the Ian G. Jacobs Award for International Group Collaboration to Advance Resuscitation Science
*Moderators:*
Benjamin S. Abella, Philadelphia, Pennsylvania
Tom P. Aufderheide, Milwaukee, Wisconsin

9:30
Lifetime Achievement Award in Cardiac Resuscitation Science Recipient
Jerry P. Nolan, Bath, United Kingdom

9:45
Lifetime Achievement Award in Trauma Resuscitation Science Recipient
Karim Brohi, London, United Kingdom

10:00
Ian G. Jacobs Award for International Group Collaboration to Advance Resuscitation Science
Resuscitation Academy
Award being accepted by Thomas Rea, Seattle, Washington

10:15–10:30 AM
Refreshment Break/Networking

**10:30–11:45 AM**

10:30
*The Great Hall A*
ReSS.AOS.04
Best of the Best Oral Abstract Presentations and Presentation of the Best Abstract Awards for Cardiac and Trauma Resuscitation Science
*Moderators:*
Rudolph W. Koster, Amsterdam, Netherlands
Samuel A. Tisherman, Baltimore, Maryland

**Oral Abstract Presentations**

10:30
NIH-Funded Cardiac Arrest Research: A 10-year Trend Analysis
Ryan A. Coute, University of Michigan, Ann Arbor, Michigan
Ashish R. Panchal, Ohio State University, Columbus, Ohio
Timothy J. Mader, Baystate Medical Center, Springfield, Massachusetts
Robert W. Neumar, University of Michigan, Ann Arbor, Michigan

10:45
Impact of Changes in the Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care on Neurologically Intact Survival
Ken Nagao, Hiroshi Nonogi, Naohiro Yonemoto, David F. Gaieski, Noritoshi Ito, Morimasa Takayama, Shinichi Shirai, Singo Furuya, Sigemasa Tani, Tsukasa Yagi, Eizo Tachibana, Takeshi Kimura, Keijiro Saku, JCS-ReSS, Tokyo, Japan

11:00
Evaluation of Prehospital Hypotension Depth-Duration Dose and Mortality in Major Traumatic Brain Injury
Daniel W. Spaite, Chengcheng Hu, University of Arizona, Phoenix, Arizona
Bentley J. Bobrow, Vatsal Chikani, Arizona Department of Health Services, Phoenix, Arizona
Bruce J. Barnhart, Joshua B. Gaither, Kurt R. Denninghoff, University of Arizona, Phoenix, Arizona
P. David Adelson, Phoenix Children's Hospital, Phoenix, Arizona
Samuel M. Keim, Chad Viscusi, University of Arizona, Phoenix, Arizona
Terry Mullins, Arizona Department of Health Services, Phoenix, Arizona
Duane Sherrill, University of Arizona, Phoenix, Arizona

11:15
Resuscitative Endovascular Balloon Occlusion of the Aorta versus Aortic Cross Clamping Among Patients with Critical Trauma: A Nationwide Cohort Study in Japan
Toshikazu Abe, Tsukuba Medical Center Hospital, University of Tsukuba, Tsukuba, Japan
Masatoshi Uchida, Isao Nagata, University of Tsukuba, Tsukuba, Japan
Daizo Saitoh, National Defense Medical College, Tokorozawa, Japan
Nanako Tamiya, University of Tsukuba, Tsukuba, Japan
ReSS 2016 3-Day Event Program (continued)

11:45 AM–12:15 PM
Lunch Break

12:15–1:15 PM
Room 201-202
ReSS.05A
Concurrent Session A
Women in Resuscitation Networking Meeting (Brown Bag Session)
Moderator:
Audrey L. Blewer, Philadelphia, Pennsylvania

12:15 Title TBD
Catherine Hill, Washington, D.C.

12:45 Q&A/Discussion

12:15–1:15 pm
Room 206-207
ReSS.05B
Concurrent Session B
Joint AHA/Japanese Circulation Society Session: Extracorporeal CPR
Moderators:
Benjamin S. Abella, Philadelphia, Pennsylvania
Yoshihiko Tahara, Osaka, Japan

12:15 Comprehensive PCAS Training in Japan including ECPR Simulation with Low Cost Model
Tomoyuki Endo, Sendai, Japan

12:35 The U.S. Approach to ECPR Implementation and Training
David Gaieski, Philadelphia, Pennsylvania

12:55 Panel Discussion, Q&A

1:15–2:45 PM
The Great Hall C-D
ReSS.APS.06
Poster Session
Late-Breaking Resuscitation Science Abstracts 92-99a
Abstracts 100-178

2:45–4:00 PM
The Great Hall A
ReSS.07
Main Event Session: Long-Term Outcomes: What Matters to Patients
Moderators:
Steven C. Brooks, Kingston, ON, Canada
Mary Ann Peberdy, Richmond, Virginia

2:45 Patient-Centered Outcomes after Cardiac Arrest
Kirstie Haywood, Coventry, United Kingdom

3:00 Patient-Centered Outcomes after Major Trauma
Maureen McCunn, Baltimore, Maryland

3:15 What Mattered to Me after My Cardiac Arrest
Kelly N. Sawyer, Pittsburgh, Pennsylvania

3:30 What Mattered to Me after My Traumatic Injury
Bryan McVern, Pittsburgh, Pennsylvania

3:45 Panel Discussion

4:00–4:30 PM
Refreshment Break/Networking

4:30–5:45 PM
The Great Hall A
ReSS.AOS.08
Late-Breaking Resuscitation Science
Moderator:
Jason A. Bartos, Minneapolis, Minnesota
Matthew Huei-Ming Ma, Taipei, Taiwan

4:30 The Impact of Innovative Early Warning Electronic Information System on Reducing in-hospital Cardiac Arrest
Shu-Hung Kuo, Kaohsiung Veterans General Hospital, Kaohsiung City, Taiwan; Wei-Chun Huang, Kaohsiung Veterans General Hospital, Foyin University and Yang Ming University, Kaohsiung City, Taiwan; Wang-Chuan Juan, Kun-Chang Lin, Wang-Ting Hung, Meng-Wei Ke, Cheng-Hung Chiang, Sheng-Che Lin, Chin-Chang Cheng, Po Hsiang Lin, Kai-Yu Fong, De-sheng Hou, Shue-Ren Wann, Yao-shen Chen, Guang-Yuan Mar, Chun-Peng Liu, Kaohsiung Veterans General Hospital, Kaohsiung City, Taiwan

4:45 Impact of Bystander AED Use on Survival and Functional Outcomes in Shockable Observed Public Cardiac Arrest
Ross A. Pollack, Johns Hopkins School of Medicine, Baltimore, Maryland; Siobhan Brown, Tom Rea, University of Washington, Seattle, Washington; Tom Aufderheide, Medical College of Wisconsin, Milwaukee, Wisconsin; Jason Buick, University of Toronto, Toronto, Ontario, Canada; Jim Christenson, University of British Columbia, Vancouver, BC, Canada; Ahamed Idris, UT Southwestern, Dallas, Texas; Jamie Just, Medical College of Wisconsin, Milwaukee, Wisconsin; Mike Kampp, Oregon Health and Science University, Portland, Oregon; Peter Kudenchuk, Susanne May, University of Washington, Seattle, Washington; Laurie Morrison, University of Toronto, Toronto, Ontario, Canada; Marc Muhr, Clark County EMS, Vancouver, WA; Graham Nichol, University of Washington, Seattle, Washington; Joseph P. Ornato, Virginia Commonwealth University Health System, Richmond, Virginia; George Sopko, NIH/NHLBI, Bethesda, Maryland; Christian Vaillancourt, University of Ottawa, Ottawa, Ontario, Canada; Myron Weisfeldt, Johns Hopkins School of Medicine, Baltimore, Maryland
5:00  Neuroprotective Effects of the Glucagon-Like Peptide-1 Analog Exenatide After Out-of-Hospital Cardiac Arrest, a Randomized Controlled Trial
Sebastian Wiberg, Christian Hassager, Rigshospitalet – Copenhagen University Hospital, Copenhagen, Denmark; Henrik Schmidt, Odense University Hosp, Odense, Denmark; Jakob Hartvig Thomsen, Martin Frydland, Matias Greve Lindholm, Dan Eik Høfsten, Thomas Engstrøm, Lars Keber, Rigshospitalet – Copenhagen University Hospital, Copenhagen, Denmark; Jacob Eifer Møller, Odense University Hospital, Odense, Denmark; Jesper Kjaergaard, Rigshospitalet – Copenhagen University Hospital, Copenhagen, Denmark

5:15  A Pilot Multicenter Randomized Trial on the Effectiveness of Different Levels of Cooling in Comatose Survivors of Out-of-hospital Cardiac Arrest. FROST-I Trial
Esteban Lopez-de-Sa, Hosp Univirio La Paz, Madrid, Spain; Miriam Juarez, Hosp Univirio Gregorio Maranon, Madrid, Spain; Eduardo Armada, Hosp Univirio La Paz, Madrid, Spain; Jose C. Sanchez-Salado, Hosp Univirio de Bellvitge, L’Hospitalet de Llobregat, Spain; Pedro L. Sanchez, Hosp Univirio de Salamanca, Salamanca, Spain; Pablo Loma-Osorio, Hosp Univirio Josep Trueta, Girona, Spain; Alessandro Sionis, Hosp de la Santa Creu i Sant Pau, Barcelona, Spain; Maria C. Monedero, Hosp Univirio La Paz, Madrid, Spain; Manuel Martinez-Selles, Hosp Univirio Gregorio Maranon, Madrid, Spain; Miguel Sanchez-Gracia, Hosp Clinico San Carlos, Madrid, Spain; Albert Ariza, Hosp Univirio de Bellvitge, L’Hospitalet de Llobregat, Spain; Aitor Urribarri, Hosp Univirio de Salamanca, Salamanca, Spain; Jose M Garcia-Acuna, Complejo Hospario Univirio de Santiago, Santiago de Compostela, Spain; Patricia Villa, Hosp Univirio Principe de Asturias, Alcala de Henares, Spain; Pablo J. Perez, Hosp Univirio de Canarias, San Cristóbal de La Laguna, Spain; Christian Storm, Charité – Univsmedizin Berlin, Berlin, Germany; Jose L. Lopez-Sendon, Hosp Univirio La Paz, Madrid, Spain

5:30  Evaluating Processes of Care and Outcomes of Children in Hospital (EPOCH): A Cluster Randomized Trial of the BedsidePediatric Early Warning System

5:45–6:45  pm
The Great Hall A
ReSS.21
Update on the IOM Cardiac Report and Future Direction
Panelists:
Lance B. Becker, Manhasset, New York
Tom P. Aufderheide, Milwaukee, Wisconsin

Sunday, November 13

8:00–9:30  am
The Great Hall C-D
ReSS.APS.09
Poster Session
Abstracts 200-279

9:30–10:30  am
The Great Hall A
ReSS.10
Main Event Session: Year in Review
Moderators:
Maaret Castrén, Helsinki, Finland
Ahamed H. Idris, Dallas, Texas

9:30  Year in Review: Cardiac Arrest
Joseph P. Ornato, Richmond, Virginia

9:50  Year in Review: Trauma
Joseph Minei, Dallas, Texas

10:10  Panel Discussion, Q&A

10:30–10:45  am
Refreshment Break/Networking
10:45–11:45 AM  
Room 203-205  
ReSS.AOS.11A  
Concurrent Session A  
Oral Abstracts – Basic Science/Translational  

Moderators:  
Cameron Dezfulian, Pittsburgh, Pennsylvania  
Joshua Lampe, Philadelphia, Pennsylvania  

Oral Abstract Presentations  

Mechanisms of Akt1-mediated Hypothermia Protection After Cardiac Arrest: Metabolism, Inflammation and Contractile Function  
Jing Li, Huashan Wang, Chunpei Lee, University of Illinois at Chicago, Chicago, Illinois; Sy-Jou Chen, Tri-Service General Hospital, National Defense Medical Center, Taipei, Taiwan; Xiangdong Zhu, University of Illinois at Chicago, Chicago, Illinois; Yuanyu Qian, Chinese PLA General Hospital, Beijing, China; Ryan H. Burney, University of Illinois at Chicago, Chicago, Illinois; David G. Beiser, University of Chicago, Chicago, Illinois; Terry L. Vanden Hoek, University of Illinois at Chicago, Chicago, Illinois  

Composition Dependence of the Clot Stabilizing Potential of Transfusion Plasmas  
Thomas Orfeo, Matthew Gissel, Maria Cristina Bravo, University of Vermont, Colchester, Vermont; Mark Fung, University of Vermont, Burlington, VT; Kathleen Brummel-Ziedins, University of Vermont, Colchester, Vermont  

Hydrogen Gas Inhalation Improves Survival in Rats with Lethal Hemorrhagic Shock Resuscitated with Saline  
Tadashi Matsuoka, Masaru Suzuki, Motoaki Sano, Kei Hayashida, Tomoyoshi Tamura, Keiichi Fukuda, Junichi Sasaki, Keio University School of Med, Tokyo, Japan  

Enhanced Pyruvate Dehydrogenase Activity Improves Myocardial Hemodynamics and Return to Spontaneous Circulation in a Murine Model of Cardiac Arrest  
Lin Piao, Yonghu Fang, Willard Sharp, University of Chicago, Chicago, Illinois  

10:45–11:45 AM  
Room 206-207  
ReSS.AOS.11B  
Concurrent Session B  
Oral Abstracts – Clinical  

Moderators:  
Abhishek Bhardwaj, Aldan, Pennsylvania  
Andrew Lockey, Halifax, United Kingdom  

Oral Abstract Presentations  

Telephone CPR is Independently Associated with an Increase in Initial Shockable Rhythms in Patients with Out-of-Hospital Cardiac Arrest  
Micah Panczyk, Arizona Department of Health Services, Phoenix, Arizona; John Sutter, University of Arizona, Phoenix, Arizona; Blake Langlais, Arizona Department of Health Services, Phoenix, Arizona; Chengcheng Hu, University of Arizona, Tucson, Arizona; Tyler F. Vadeboncoeur, Mayo Clinic, Jacksonville, Florida; Terry Mullins, Arizona Department of Health Services, Phoenix, Arizona; Daniel W. Spalte, University of Arizona, Phoenix, Arizona; Bentley J. Bobrow, Arizona Department of Health Services, Phoenix, Arizona  

Increase in Bystander Cardiopulmonary Resuscitation in Sweden During the Last 15 Years Is Mainly Attributed to Increased Rates of “Chest Compression Only” CPR  
Gabriel Riva, Jacob Hollenberg, Leif Svensson, Mattias Ringh, Karolinska Institute, Stockholm, Sweden; Sten Rubertsson, Uppsala University, Uppsala, Sweden; Per Nordberg, Andreas Claesson, Therese Djärv, Karolinska Institute, Stockholm, Sweden; Johan Herlitz, University of Borås, Borås, Sweden  

Statin Use is Associated with Better Outcomes in Patients with Out-of-Hospital Cardiac Arrest in a Nationwide Cohort Study  
Ping-Hsun Yu, Taipei Hospital, Ministry of Health and Welfare, Taiwan, R.O.C., New Taipei City, Taiwan; Chien-Hua Huang, Min-Shan Tsai, Wen-Jone Chen, National Taiwan University Hospital, Taipei City, Taiwan
11:30  Association Between Coronary Angiography With or Without Percutaneous Coronary Intervention and Outcomes after Out-of-Hospital Cardiac Arrest
Tyler F. Vadeboncoeur, Mayo Clinic, Jacksonville, Florida; Vatsal Chikani, Arizona Department of Health Services, Phoenix, Arizona; Daniel W. Spaite, Univ of Arizona, Phoenix, Arizona; Chengcheng Hu, The University of Arizona, Mel and Enid Zuckerman College of Public Health, Tucson, Arizona; Margaret Mullins, University of Arizona, Phoenix, Arizona; Bentley J. Bobrow, Arizona Department of Health Services, Phoenix, Arizona

11:45 AM–12:00 PM Refreshment Break/Networking

12:00–1:15 PM ReSS.12
Main Event Session: Preparing for and Executing Team Resuscitation
Moderator: Saket Girotra, Iowa City, Iowa
Hiroshi Nonogi, Shizouka, Japan

12:00  Anticipation of Adult In-Hospital Cardiac Arrest
Dana Edelson, Chicago, Illinois

12:15  Anticipation of Pediatric In-Hospital Cardiac Arrest
Christopher Bonafide, Philadelphia, Pennsylvania

12:30  Code Team Performance and Practice
Gavin D. Perkins, Warwick, United Kingdom

12:45  Team Science and Trauma Care
Elizabeth A. Hunt, Baltimore, Maryland

1:00  Panel Discussion

1:00–3:00 PM Lunch/Scientific Sessions Opening Sessions

3:00–4:00 PM ReSS.AOS.13A
Concurrent Session A
Oral Abstracts – Cardiac Arrest Epidemiology
Moderators:
Bryan McNally, Atlanta, Georgia
Theresa Olasveengen, Oslo, Norway

Oral Abstract Presentations

3:00  Influence of Cardiac Catheterization and Automated Implantable Cardioverter Defibrillator Placement on Long-Term Cause of Death in Cardiac Arrest Patients Discharged from the Hospital
Patrick J. Coppler, David J. Wallace, Cameron
### Oral Abstract Presentations

<table>
<thead>
<tr>
<th>Time</th>
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</tr>
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<tbody>
<tr>
<td>3:00 PM</td>
<td><strong>Accuracy of Prehospital Documentation of Hypoxia Compared to Continuous Non-Invasive Monitor Data Tracking in Major Traumatic Brain Injury</strong></td>
<td>Octavio Perez Jr., Daniel W. Spaite, University of Arizona, Phoenix, Arizona; Eric Helfenbein, Philips Healthcare, Foster City, California; Henry Wang, Birmingham, Alabama; Carrie A. Sims, Philadelphia, Pennsylvania</td>
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<td>3:15 PM</td>
<td><strong>Noninvasive Peripheral Vascular Resistance Measured by a Polyvinylidene Fluoride Sensor Identifies Patterns of Oxygen Debt Repayment during Resuscitation after Hemorrhage</strong></td>
<td>Sardar Ansari, Mohammad Hakam Tiba, Kenn Oldham, Kevin R. Ward, Kayvan Najarian, University of Michigan, Ann Arbor, Michigan; Bruce J. Barnhart, University of Arizona, Phoenix, Arizona; Saeed Babaeizadeh, Philips Healthcare, Andover, Massachusetts; Chengcheng Hu, University of Arizona, Phoenix, Arizona; Vatsal Chikani, Arizona Department of Health Services, Phoenix, Arizona; Joshua B. Gaither, Kurt R. Denninghoff, Samuel M. Keim, Chad Viscusi, Duane Sherrill, University of Arizona, Phoenix, Arizona; Bentley J. Bobrow, Arizona Department of Health Services, Phoenix, Arizona</td>
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<tr>
<td>3:30 PM</td>
<td><strong>Resuscitation by Prehospital Transfusion with Hemoglobin Vesicles in Trauma Induced Hemorrhagic Shock / Coagulopathy Rabbits</strong></td>
<td>Kohsuke Hagisawa, Manabu Kinoshita, Natl Defense Medical College, Tokorozawa, Japan</td>
</tr>
<tr>
<td>3:45 PM</td>
<td><strong>Evaluation of a Fuzzy Logic Control System for Hypotensive Resuscitation in a Swine Model of Hemorrhagic Shock</strong></td>
<td>Peng Zhao, Wencai Pan, Lang Lang, Jieshi Ma, An Zhao, Xinqiao Hosp, Third Military Medical University, Chongqing, China; Yongyi Li, Third Military Medical University, Chongqing, China; Yinhao Chong, Xinqiao Hosp, Third Military Medical University, Chongqing, China</td>
</tr>
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### 4:30-5:45 PM

**Main Event Session: Inhalation Therapies in Resuscitation**

**Moderators:** Michael Fries, Limburg, Germany; Michael Holzer, Vienna, Austria

<table>
<thead>
<tr>
<th>Time</th>
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</tr>
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<tbody>
<tr>
<td>4:30 PM</td>
<td><strong>Inhaled Nitric Oxide in Cardiac Arrest</strong></td>
<td>Cameron Dezfulian, Pittsburgh, Pennsylvania</td>
</tr>
<tr>
<td>4:45 PM</td>
<td><strong>Inhaled Xenon in Cardiac Arrest</strong></td>
<td>Mervyn Maze, San Francisco, California</td>
</tr>
<tr>
<td>5:00 PM</td>
<td><strong>Hyperbaric Oxygenation in Traumatic Brain Injury</strong></td>
<td>Gaylan Rockswold, Minneapolis, Minnesota</td>
</tr>
<tr>
<td>5:15 PM</td>
<td><strong>Controlled Oxygenation in Cardiac Arrest</strong></td>
<td>Matthias Riess, Nashville, Tennessee</td>
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<tr>
<td>5:30 PM</td>
<td><strong>Panel Discussion</strong></td>
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**Cardiovascular Seminar: PCI and the Cardiac Arrest Patient**

**Moderators:** Eric Peterson, Durham, North Carolina; Karl Kern, Tucson, Arizona

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Authors</th>
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<tbody>
<tr>
<td>5:30 PM</td>
<td><strong>Overview of the Role of PCI in Cardiac Arrest Patients</strong></td>
<td>Marko Noc, Ljubljana, Slovenia</td>
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<td>5:45 PM</td>
<td><strong>Is Public Reporting of PCI Outcomes Harming Our Patients?</strong></td>
<td>Frederic Resnic, Burlington, Massachusetts</td>
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<td>6:00 PM</td>
<td><strong>Lucas Support Device To and From the Cath Lab</strong></td>
<td>Henrik Wagner, Lund, Sweden</td>
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<td>6:15 PM</td>
<td><strong>State of the Art in Cooling for Cardiac Arrest</strong></td>
<td>Demetris Yannopoulos, Minneapolis, Minnesota</td>
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### Refreshment Break/Networking

4:00–4:30 PM
Monday, November 14

8:00–9:30 AM
The Great Hall C-D
ReSS.APS.15
Poster Session

9:30–10:30 AM
The Great Hall A
ReSS.16
Main Event Session: Pro-Con Debate on EMS Resuscitation Strategy
Moderator:
Carolina Hansen, Durham, North Carolina
Sten Rubertsson, Uppsala, Sweden

9:30 Stay and Play: A Physician Perspective
Pierre Carli, Paris, France

9:45 Stay and Play: EMS Perspective
Mark Smyth, Coventry, United Kingdom

10:00 Scoop and Run: A Physician Perspective
Daniel Spaite, Tucson, Arizona

10:15 Scoop and Run: EMS Perspective
Bryan Fischberg, New Brunswick, New Jersey

10:30 Panel Discussion

10:45–11:45 AM
The Great Hall A
ReSS.AOS.17
Oral Abstracts: The Mitochondrion and Resuscitation
Moderators:
Raúl Gazmuri, North Chicago, Illinois
Terry Vanden Hoek, Chicago, Illinois

Oral Abstract Presentations

10:45 A Carbon Monoxide (CO) Scavenging Agent Reverses CO-induced Mitochondrial Inhibition In Vitro and In Vivo
Jason J. Rose, Ling Wang, Ivan Azarof, Qinzi Xu, Xueyin N. Huang, University of Pittsburgh, Pittsburgh, Pennsylvania; Andrea Belanger, Wake Forest University, Winston-Salem, North Carolina; Ying Wang, Lanping Guo, University of Pittsburgh, Pittsburgh, Pennsylvania; Chen Lui, Kamli B. Ucer, Wake Forest Univ, Winston-Salem, North Carolina; Charles F. McTiernan, Christopher P. O'Donnell, Jesús Tejero, University of Pittsburgh, Pittsburgh, Pennsylvania; Daniel B. Kim-Shapiro, Wake Forest University, Winston-Salem, North Carolina; Sruti Shiva, Mark T. Gladwin, Univ of Pittsburgh, Pittsburgh, Pennsylvania

11:00 Protective Effects Of Hoe-642 on the Neuronal Mitochondria in Asphyxial Cardiac Arrest Model in Rats
Pengjiao Zhang, Jiaxiu Dong, Chaoran Nie, Xintong Liu, Lanying Wei, Fei Han, Harbin Medical University, Harbin, China

11:15 Real Time Mitochondrial Monitoring Using Surface Raman Resonance Spectroscopy Detects Impending Cardiac Arrest
Dorothy Alison Perry, Joshua Salvin, Brian Polizzotti, Lindsay Thomson, Boston Children’ Hospital, Boston, Massachusetts; Francis X. McGowan, Children’s Hospital of Philadelphia, Philadelphia, Pennsylvania; Padraic Romfh, Daryoosh Vakhshoori, Pendar Technologies, Cambridge, Massachusetts; John N. Kheir, Boston Children’s Hospital, Boston, Massachusetts

11:30 Ischemic Postconditioning Requires High-quality CPR and Epinephrine to Improve Cardiac Mitochondrial Respiration After Prolonged Cardiac Arrest
Timothy R. Matsusura, Jason A. Bartos, Matthew D. Olson, Adamantios Tsangaris, Kadambari Chanda Shekar, Stephen A. George, Jennifer N. Rees, Scott H. McKnite, University of Minnesota, Minneapolis, Minnesota; Matthias L. Ries, TVHS VA Medical Center and Vanderbilt University, Nashville, Tennessee; Robert W. Neumar, University of Michigan, Ann Arbor, Michigan; Martin Bienengraeber, Tom P. Aufderheide, Medical College of Wisconsin, Milwaukee, Wisconsin; Demetris Yannopoulos, University of Minnesota, Minneapolis, Minnesota

11:45 AM–12:15 PM
Lunch Break

12:15–1:15 PM
Room 203-205
ReSS.18A
Concurrent Session A
Funding Organizations Report
Moderator:
Tom P. Aufderheide, Milwaukee, Wisconsin

12:15 PCORI and Comparative Effectiveness Research Opportunities
Diane Bild, Washington, D.C.

12:25 New Training Opportunities of Interest to Resuscitation Scientists
Drew Carlson, Bethesda, Maryland

12:35 TBD
George Sopko, Rockville, Maryland

12:45 Panel Discussion/Q&A
12:15–1:15 PM
Room 206-207
ReSS.18B
Concurrent Session B
EMS Clinical Science Workshop

Moderators:
David Buckler, Philadelphia, Pennsylvania
Kelly N. Sawyer, Pittsburgh, Pennsylvania

12:15 Lessons Learned from the Paramedic Perspective
Linda Mattrisch, Milwaukee, Wisconsin

12:22 Lessons Learned from the National EMS Perspective
Lynn J. White, Columbus, Ohio

12:29 Lessons Learned from the EMS and Epidemiology Perspective
E. Brooke Lerner, Milwaukee, Wisconsin

12:36 Lessons Learned from the Physician Researcher Perspective
Michael Levy, Anchorage, Alaska

12:43 Panel Discussion/Q&A

1:15–1:30 PM
Refreshment Break/Networking

1:30–2:45 PM
The Great Hall A
ReSS.19
Main Event Session: Epidemiology in Cardiac Arrest and Trauma

Moderator:
Paul Chan, Kansas City, Missouri
Anne V. Grossetreuer, Boston, Massachusetts

1:30 Global Cardiac Arrest Epidemiology: The PAROS Perspective
Marcus Ong, Singapore

1:45 Resuscitation Disparities: CPR Training and Survival
Monique L. Anderson, Durham, North Carolina

2:00 Resuscitation Disparities: Neighborhoods and Systems of Care
Marina Del Rios, Chicago, Illinois

2:15 Trauma Epidemiology and Systems of Care
Brendan G. Carr, Philadelphia, Pennsylvania

2:30 Panel Discussion

2:45–3:15 PM
Refreshment Break/Networking

3:15–4:30 PM
The Great Hall A
ReSS.20
Main Event Session: Brain-Directed Resuscitation

Moderators:
Robert Berg, Philadelphia, Pennsylvania
Sarah M. Perman, Aurora, Colorado

3:15 Titrating Post-Arrest Care by EEG
Stephan A. Mayer, New York, New York

3:30 Near-Infrared Spectroscopy During CPR
Sam Parnia, Stony Brook, New York

3:45 Ischemic Conditioning for Brain Resuscitation
Demetris Yannopoulos, Minneapolis, Minnesota

4:00 pH Monitoring after Traumatic Injury
Eileen Bulger, Seattle, Washington

4:15 Panel Discussion

4:30–5:30 PM
The Great Hall A
ReSS.AOS.21
Oral Abstracts: Post-arrest Management

Moderators:
Michael C. Kurz, Birmingham, Alabama
Jesper Kjaergaard, Copenhagen, Denmark

Oral Abstract Presentations

4:30 Post-resuscitation Care and Survival after In-hospital Cardiac Arrest
Saket Girotra, University of Iowa, Iowa City, Iowa; Brahmajee K. Nallamothu, University of Michigan, Ann Arbor, Michigan; Yunshu Zhou, Mary Vaughan-Sarrazin, University of Iowa, Iowa City, Iowa; Paul S. Chan, University of Missouri-Kansas City, Kansas City, Missouri

4:45 Early Coronary Angiography is Associated with Improved 30-day Survival in Out-of-hospital Cardiac Arrest Patients without ST-elevation on First Ecg
Ludvig Elfwén, Department of Clinical Science and Education, Södersjukhuset, Karolinska Institutet, Stockholm, Sweden; Rickard Lagedal, Department of Anesthesiology and Intensive Care, Uppsala University, Uppsala, Sweden; Martin Jonsson, Jacob Hellenberg, Department of Medicine, Center for Resuscitation Science, Solna, Karolinska Institute, Stockholm, Sweden; Ulf Jensen, Department of Clinical Science
5:00 Post-Resuscitation Hyperoxia and Hypoxia are Associated with Increased Cardiac Arrest Mortality

Henry E. Wang, University of Alabama at Birmingham, Birmingham, Alabama; David Prince, University of Washington, Seattle, Washington; Jon C. Rittenberger, University of Pittsburgh, Pittsburgh, Pennsylvania; Stephen Trzeciak, Cooper Medical School of Rowan University, Camden, New Jersey; Jonathan Elmer, University of Pittsburgh, Birmingham, Pennsylvania; Nicholas Johnson, University of Washington, Seattle, Washington; Brian Grunau, St. Paul’s Hospital, Vancouver, British Columbia, Canada; David Carlborn, University of Washington, Seattle, Washington; Ian Drennan, University of Toronto, Toronto, Ontario, Canada; Peter Kudenchuk, University of Washington, Seattle, Washington; Myron L. Weisfeldt, Johns Hopkins University, Baltimore, Maryland; Michael C. Kurz, Univ of Alabama at Birmingham, Birmingham, Alabama; Matthew Hansen, Oregon Health & Science University, Portland, Orego; Ahamed Idris, UT Southwestern Medical Center, Dallas, Texas; Tom P. Aufderheide, Medical College of Wisconsin, Milwaukee, Wisconsin; Denise Griffiths, Oregon Health and Science University, Portland, Oregon; Jamie Jasti, Medical College of Wisconsin, Milwaukee, Wisconsin; Susanne May, University of Washington, Seattle, Washington; Jim Christenson, University of British Columbia, Vancouver, British Columbia, Canada; The ROC Investigators

5:15 Late Repolarization During Targeted Temperature Management at 33 Degree C vs. 36 Degree C and Risk of Ventricular Arrhythmia In Post Cardiac Arrest Care

Jakob H. Thomsen, Christian Hassager, Rigshospitalet, Copenhagen O, Denmark; Claus Graff, Aalborg University, Aalborg, Denmark; Steen Pehrson, Lars Køber, Rigshospitalet, Copenhagen O, Denmark; David Erlinge, Lund University Hospital, Lund, Sweden; John Bro-Jeppesen, Jesper Kjærgaard, Rigshospitalet, Copenhagen O, Denmark