



REMOTE DAMAGE CONTROL RESUSCITATION SYMPOSIUM

11th Meeting

**June 19-21, 2023
Bergen, Norway**



COUNTRIES REPRESENTED AT THIS YEAR'S CONFERENCE



AUSTRALIA



BELGIUM



CANADA



CZECH REPUBLIC



DENMARK



FINLAND



FRANCE



GERMANY



IRELAND



ISRAEL



JAPAN



KENYA



LUXEMBURG



NORWAY



SCOTLAND



SINGAPORE



SWEDEN



SWITZERLAND



UNITED KINGDOM



UNITED STATES



TABLE OF CONTENTS

THOR Network Mission	1
Conference Notes	3
THOR Gear	4
Agenda	5
Journal Supplements	18
Speakers, Moderators & Panelists	22
Sponsors	24
Conference Attendees	27
THOR Steering Committee	32
Industry Advertisements	33
Viking Laws	Back Cover

TRAUMA HEMOSTASIS & OXYGENATION RESEARCH NETWORK (THOR)

An international multidisciplinary network of civilian and military providers ranging from first responders and medics to critical care physicians and from basic scientists to clinical trialists.

VISION: To improve outcomes from traumatic hemorrhagic shock by optimizing the acute phase of resuscitation.

MISSION: To develop and implement best practices for prehospital care through to the completion of the acute phase of hemorrhagic shock resuscitation.

The THOR Network will execute this mission through a multidisciplinary collaborative approach to research, education, training, and advocacy.

RDCR

Remote damage control resuscitation is the prehospital application of damage control resuscitation (DCR) concepts. Damage control resuscitation principles include compressible hemorrhage control; hypotensive resuscitation; rapid surgical control of bleeding; avoidance of the overuse of crystalloids and colloids; prevention or correction of acidosis, hypothermia, and hypocalcemia; and hemostatic resuscitation.

For more information about THOR, visit RDCR.org or contact Dan@rdcr.org

CONFERENCE NOTES

BUFFET BREAKFAST

For those staying at the Solstrand, in the dining room: 7:00am-10:00am

LUNCH & DINNER

All group meals are included in your registration. Please note that all bottled, canned or alcoholic beverages need to be paid for by you upon checkout. All meals of any of your guests will need to be paid directly to the hotel upon checkout.

This year all lunches and dinner are served at table and begin at the time indicated on agenda. No buffet this year!

COCKTAIL HOUR

There will be a cocktail hour on Monday and Tuesday just before dinner. Each attendee will have two drink tickets per cocktail hour.

THOR NETWORK NORTH SEA DIP

Everyday at 7:00 am, meet at the dock for a refreshing dip in the North Sea.

SHUTTLES TO/FROM BERGEN

The shuttles will be available everyday of the conference for attendees and their guests 24 hours a day for trips to downtown Bergen. Please see Janne for accomodations.

SOLSTRAND AMENITIES

In the planned breaks in the days, take advantage of the many amenities offered by the hotel including three pools, saunas, spa, outdoor lounging and more.

CHECKOUT

Checkout for the hotel is 12:00pm. Please bring your bags to the hotel bar off of the front lobby on the last day of the conference before noon.

POST-CONFERENCE SURVEY

We value your feedback. After the conference, please complete the short survey at www.rdc.org/survey

AIRPORT SHUTTLE, JUNE 21-22

As the conference ends, there will shuttle busses departing to the airport. Shuttle times will be assigned to you based on the flight info that you entered during the shuttle registration. Shuttle times will be posted at rdcr.org/shuttle.

PARALLEL SESSIONS

Everyday, there will be parallel breakout sessions located in the lower level breakout rooms. These practical sessions will concentrate on point of injury care and care in transit. They will focus on practical aspects of emergency care and include presentations, demonstrations and interactive discussions.

THOR GEAR



rdcr.org/store



MONDAY

0830

THOR Symposium Introduction

Geir Strandenes, MD

*Anesthetist and Senior Advisor
Norwegian Coordination Center for Blood Preparedness
Department of Immunology and Transfusion Medicine
Haukeland University Hospital
Norway*

Philip C Spinella, MD FCCM

*Professor of Surgery
Professor of Critical Care Medicine
Co-Director, Trauma and Transfusion Medicine Research Center
Associate Medical Director, Center for Military Medicine Research
University of Pittsburgh
USA*

**Session 1:
0830-1030**

History and Ukrainian Experience

Moderators:

COL Jennifer M. Gurney, MD, FACS

*Chief, Joint Trauma System
USA*

Col Thomas Woolley, MD FRCA RAMC

*Consultant Anaesthetist
Defence Professor of Anaesthesia and Critical Care
British Army
UK*

0830-0900

The History of Blood Transfusion

Dr. Emily Mayhew

*Department of Bioengineering Historian in Residence
Imperial College, London
UK*

0900-1030

Lessons Learned from the War in Ukraine

0900-0925

Roxolana Horbowyj, MD, FACS

*NAEMT Affiliate Faculty
World Federation of Ukrainian Medical Associations, US President
USA*

0925-0950

Samar Attar, MD

*Associate Professor, Orthopedic Surgery
Northwestern University
USA*

0950-1015

John Quinn, EMT-P, MD, MPH, PhD

*Prague Center for Global Health
Institute of Hygiene and Epidemiology
First Faculty of Medicine
Charles University*

1015-1030

Discussion

1030-1045

Break



Session 2: 1045-1200 **Current Controversies in Prehospital Treatment of Hemorrhagic Shock**

Moderators:

Geir Strandenes, MD

*Anesthetist and Senior Advisor
Norwegian Coordination Center for Blood Preparedness
Department of Immunology and Transfusion Medicine
Haukeland University Hospital
Norway*

Juan C. Duchesne MD FACS FCCP FCCM

*Department of Surgery Tulane
TICU Medical Director
Norman McSwain Level I Trauma Center
USA*

1045-1115 **Prehospital Treatment of Hemorrhagic Shock**
Ed Barnard PhD FRCEM FIMC RCSEd

*Surgeon Commander (OF4) Royal Navy
Emergency Medicine & Pre-Hospital Emergency Medicine
Royal Centre for Defence Medicine (Operational)
UK*

1115-1145 **Prehospital Treatment of Hemorrhagic Shock**
Dr. Nick Crombie

*Consultant Trauma Anaesthetist
University Hospitals Birmingham NHS Foundation Trust
UK*

1145-1200 **Discussion**

1200-1400 **Lunch**

Whole Blood Field Transfusion Course



The THOR Network presents a **FREE** online course on current evidence-based field transfusion.

Over 20 videos in the course.

See rdcr.org/course





Session 3: Parallel Sessions 1400-1630

Session 3A: Hemostatic Resuscitation and Trauma Induced Coagulopathy (HERETIC) Science Sessions *Location: main conference room*

1400-1630

Moderator:

COL Andrew P. Cap, MD, PhD

Medical Corps, US Army

Director of Research, US Army Institute of Surgical Research

Professor of Medicine, Uniformed Services University

Hematology-Oncology Consultant to the US Army Surgeon General

San Antonio Military Medical Center

USA

1400-1430

Platelet Genomics

Lucy Zumwinkle Kornblith, MD, FACS

Assistant Professor of Surgery Trauma and Surgical Critical Care

Zuckerberg San Francisco General Hospital

USA

1430-1500

Platelet Immune Function

Fabrice Cognasse, PhD

Senior Scientist, Deputy Director for Scientific Affairs

the Auvergne-Loire Regional Branch of the French National Blood System EFS

France

1500-1530

Platelet Mediated Fibrinolysis

Nikki Mutch, PhD

School of Medicine, Medical Sciences and Nutrition,

Institute of Medical Sciences

University of Aberdeen

UK

1530-1600

Post Traumatic Immunothrombosis

Matthew D. Neal, MD FACS

Roberta G. Simmons Associate Professor of Surgery

University of Pittsburgh Medical Center

USA

1600-1630

Endotheliopathy of Trauma

Jillian R. Richter, PhD

Associate Professor

Co-Director, Short-Term Research Experiences Advancing Medical Students

University of Alabama

USA

Session 3B: Breakout Session, Demo & Discussion

Location: lower level breakout room

1400-1630

Review of Hemorrhagic Control in 2023. Has Anything Changed?

Moderators:

Håkon Eliassen, MD

Norwegian Armed Forces

Norway

Pat Thompson

Medic

UK / S. Africa

1630-1645

Break



Session 4: 1645-1800 Low Titer Type-O Whole Blood and the Risks of Alloimmunization and Hemolytic Disease of the Newborn and Fetus (HDFN)

Moderators:

Torunn Apelseth, MD PhD

*Department of Immunology and Transfusion Medicine
Haukeland University Hospital
Norway*

Philip C Spinella, MD FCCM

*Professor of Surgery
Professor of Critical Care Medicine
Co-Director, Trauma and Transfusion Medicine Research Center
Associate Medical Director, Center for Military Medicine Research
University of Pittsburgh
USA*

Caroline Wesonga Wangamati, BCom, MSc and MA

*Team Lead, Coalition of Blood for Africa (CoBA)
Kenya*

1645-1655 Low Titer Type-O Whole Blood Risks and Benefits From the Patient Perspective
Speaker TBD

1655-1715 The Risk of Alloimmunization and Hemolytic Disease of the Newborn and Fetus with Low Titer Type-O Whole Blood Transfusion

Mark H. Yazer, MD

*Professor of Pathology
University of Pittsburgh
USA*

1715-1735 Maternal Red Cell Alloimmunization and Resultant HDFN: Disease and Treatment

Bethany Weathersby

*Chief Executive Officer
Allo Hope Foundation
USA*

1735-1755 Patient Perspective of Alloimmunization and the Risks of HDFN

Molly Sherwood

*Director of Research
Allo Hope Foundation
USA*

1755-1800 Discussion

1800-1830 Break

1830 Cocktail Hour

1930 Dinner



TUESDAY

Session 5: History of Unexpected Survivors **0830-0900**

Moderators:

Michael Cripps, MD, MSCS, FACS

Director of Trauma and Acute Care Surgery

University of Colorado Hospital

USA

Andrew Beckett CD MD FRCSC FACS

Royal Canadian Medical Service

Canada

0830-0900 Long Term Outcomes of Unexpected Survivors

Dr. Emily Mayhew

Department of Bioengineering Historian in Residence

Imperial College, London

UK

Session 6: Current Controversies in the Treatment of Hemorrhagic Shock in Hospital **0900-1100**

Moderators:

Michael Cripps, MD, MSCS, FACS

Director of Trauma and Acute Care Surgery

University of Colorado Hospital

USA

Andrew Beckett CD MD FRCSC FACS

Royal Canadian Medical Service

Canada

0900-0930 Treatment of Hemorrhagic Shock in Adults

Christine Gaarder, MD PhD

Head of Department of Traumatology

Oslo University Hospital

Norway

0930-1005 Treatment of Hemorrhagic Shock in Children

Christine M. Leeper, MD

Assistant Professor

Department of Surgery

University of Pittsburgh

USA

1005-1020 Break

1020-1040 Treatment of Hemorrhagic Shock in the Elderly

Bellal Joseph, MD FACS

Professor of Surgery Chief of Trauma

EGS Critical Care & Burns Chief of General Surgery

Vice Chair of Research Department of Surgery

The University of Arizona

USA

1040-1100 Discussion



Session 7: Parallel Sessions
1100-1300

Session 7A: Hemostatic Resuscitation and Trauma Induced Coagulopathy (HERETIC) Science Sessions
1100-1300

Location: main conference room

Moderator:

Lucy Zumwinkle Kornblith, MD, FACS

*Assistant Professor of Surgery Trauma and Surgical Critical Care
San Francisco General Hospital
USA*

1100-1130 Metabolomics and Function of Cold Stored Platelets

Kim Thomas, PhD

*Assistant Investigator
Vitalant
USA*

1130-1200 Molecular Effects of PLT Manufacturing Methods

Fabrice Cognasse, PhD

*Senior Scientist, Deputy Director for Scientific Affairs
the Auvergne-Loire Regional Branch of the French National Blood System EFS
France*

1200-1230 Functional Effects of PLT Manufacturing Methods

Susan Shea, PhD

*Assistant Professor of Surgery and Bioengineering
Trauma and Transfusion Medicine Research Center
University of Pittsburgh
USA*

1230-1300 Fibrinogen Replacement in TIC: Does the Source Matter?

Nikki Mutch, PhD

*School of Medicine, Medical Sciences and Nutrition,
Institute of Medical Sciences
University of Aberdeen
UK*

Session 7B: Breakout Session, Demo & Discussion

1100-1300

Location: lower level breakout room

**Tension Pneumothorax in Remote Damage Control Resuscitation:
Swinging the Pendulum Back to Safety**

Pat Thompson

*Medic
UK / S. Africa*

1300 – 1500 Lunch



Session 8: Whole Blood in Austere Environments and for Emergency Preparedness **1500-1545**

Moderators:

Mary Homer, PhD

*Biomedical Advanced Research and Development Authority (BARDA)
Office of the Assistant Secretary for Preparedness and Response
U.S. Department of Health and Human Services
USA*

Philip C Spinella, MD FCCM

*Professor of Surgery
Professor of Critical Care Medicine
Co-Director, Trauma and Transfusion Medicine Research Center
Associate Medical Director, Center for Military Medicine Research
University of Pittsburgh
USA*

1500-1515 Norwegian Coordinating Center for Blood Preparedness

Torunn Apelseth, MD PhD

*Department of Immunology and Transfusion Medicine
Haukeland University Hospital
Norway*

1515-1535 Only Group O for Whole Blood?

Geir Stranden, MD

*Anesthetist and Senior Advisor
Norwegian Coordination Center for Blood Preparedness
Department of Immunology and Transfusion Medicine
Haukeland University Hospital
Norway*

1535-1545 Discussion

1545-1600 Break



Session 9: Cold Weather RDCR

1600-1715

Moderators:

Travis M. Polk, MD, FACS, Commander, MC, USN

Chair, Joint Program Committee-6

Director, US Combat Casualty Care Research Program (CCCRP)

US Army Medical Research and Development Command (USAMRDC)

Army Futures Command (AFC)

USA

COL Jennifer M. Gurney, MD, FACS

Chief, Joint Trauma System

USA

1600-1620

The Science Behind Hypothermia

Jørgen Melau, PhD

Researcher, Cold Weather Operations

Norwegian Armed Forces

Norway

1620-1640

TCCC Adaption to Arctic Warfare

Martin Ronghaug

Norwegian Armed Forces

Norway

1640-1700

The Challenge of Civilian Trauma Care Above the Arctic Circle

Jørgen Melau, PhD

Researcher, Cold Weather Operations

Norwegian Armed Forces

Norway

Martin Ronghaug

Norwegian Armed Forces

Norway

1700-1715

Discussion

Session 10: Recent Changes in Committee on Tactical Combat Casualty Care and SOMSA Guidelines and Recommendations

1715-1750

Moderators:

BG Prof Elon Glassberg

Surgeon General & Chief of the Medical Corps

Israeli Defense Forces

Israel

Pat Thompson

Medic

UK / S. Africa

1715-1730

Special Operations Medical Association (SOMA) Update

COL(Ret) Sean Keenan, FAAEM FAWM

Military Vice President, SOMA

Joint Trauma System, CU COMBAT Center

USA

1730-1745

Co-Tactical Combat Casualty Care Update

CAPT Brendon Drew

Chair, Joint Trauma System Committee on Tactical Combat Casualty Care (TCCC)

USA

1745-1750

Discussion

1750-1830

Break

1830

Cocktail Hour

1930

Dinner



WEDNESDAY

Session 11: Metabolism Matters

0830-1045

Moderators:

Kevin R. Ward, MD

*Professor, Department of Emergency Medicine
University of Michigan
Michigan Center for Integrative Research in Critical Care
USA*

Kim Thomas, PhD

*Assistant Investigator
Vitalant
USA*

0830-0850

Microvascular consequences of permissive hypotension

Alex Stoll, FRCPath MRCVS

*Principal Scientist, Veterinary Pathologist
Medical and Trauma Sciences, CBR Division
UK*

0850-0920

Novel Therapies for Shock and Vascular Dysfunction

COL Andrew P. Cap, MD, PhD

*Medical Corps, US Army
Director of Research, US Army Institute of Surgical Research
Professor of Medicine, Uniformed Services University
Hematology-Oncology Consultant to the US Army Surgeon General
San Antonio Military Medical Center
USA*

0920-0930

Discussion

0930-1030

Hemostatic Adjuncts

Moderators:

COL Andrew P. Cap, MD, PhD

*Medical Corps, US Army
Director of Research, US Army Institute of Surgical Research
Professor of Medicine, Uniformed Services University
Hematology-Oncology Consultant to the US Army Surgeon General
San Antonio Military Medical Center
USA*

Lucy Zumwinkle Kornblith, MD, FACS

*Assistant Professor of Surgery Trauma and Surgical Critical Care
San Francisco General Hospital
USA*

0930-1000

Cryoprecipitate

Bryan A. Cotton, MD, MPH

*Director, Surgical Critical Care, Acute Care Surgery and Trauma Fellowships
Department of Surgery and The Center for Translational Injury Research
McGovern Medical School at The University of Texas Health Science Center at Houston
USA*

1000-1030

Fibrinogen Concentrates

Andrew Beckett CD MD FRCSC FACS

*Royal Canadian Medical Service
Canada*

1030-1045

Break



Session 12: Hemostatic Adjuncts

1045-1130

1045-1115 Prothrombin Complex Concentrates
 Bellal Joseph, MD FACS
Professor of Surgery Chief of Trauma
EGS Critical Care & Burns Chief of General Surgery
Vice Chair of Research Department of Surgery
The University of Arizona
 USA

1115-1130 Discussion

Session 13: Transfusion and Futility

1130-1145

Moderator:
 Philip C Spinella, MD FCCM
Professor of Surgery
Professor of Critical Care Medicine
Co-Director, Trauma and Transfusion Medicine Research Center
Associate Medical Director, Center for Military Medicine Research
University of Pittsburgh
 USA

1130-1145 Blood transfusion and Futility: Is there a point of no return?
 COL Jennifer M. Gurney, MD, FACS
Chief, Joint Trauma System
 USA

Session 14: Parallel Sessions

Session 14A: Transfusion Medicine Lessons Learned

1145-1215

Location: main conference room

Moderator:
 Philip C Spinella, MD FCCM
Professor of Surgery
Professor of Critical Care Medicine
Co-Director, Trauma and Transfusion Medicine Research Center
Associate Medical Director, Center for Military Medicine Research
University of Pittsburgh
 USA

1145 – 1200 Experimental Research and Passage to Humans in Transfusion and Developing New Blood Products Without Repeating Past Mistakes
 Colonel Frédérique Dufour Gaume
 France

12:00-1210 Science Fiction and Back to the Future, Two Ways for New Blood Products
 Major General Anne Sailliol
French Institute for Biomedical Research of Armies
 France

1210-1215 Discussion

Session 14B: Breakout Session, Demo & Discussion

1145-1215

Location: lower level breakout room

Hot Topics from the THOR RDCR Pre-Conference (Part 1)
 BG Prof Elon Glassberg
Surgeon General & Chief of the Medical Corps
Israeli Defense Forces
 Israel

1215-1315 Lunch



Session 15: Parallel Sessions

Session 15A: Post Traumatic Pulmonary Thrombosis

1315-1415

Location: main conference room

Moderators:

Matthew D. Neal, MD FACS

*Roberta G. Simmons Associate Professor of Surgery
University of Pittsburgh Medical Center
USA*

Bellal Joseph, MD FACS

*Professor of Surgery Chief of Trauma
EGS Critical Care & Burns Chief of General Surgery
Vice Chair of Research Department of Surgery
The University of Arizona
USA*

1315-1335

Thrombotic Complications Including Pulmonary Thrombosis and Novel Treatment Considerations

M. Margaret (Peggy) Knudson MD

*Emeritus Professor of Surgery
University of California San Francisco
Medical Director, Military Health System Strategic Partnership American College of Surgeons
USA*

1335-1355

Pathophysiology of Post Traumatic Thromboembolic Events

Jessica Cardenes, PhD

*Assistant Professor
Department of Surgery
UTHealth
USA*

1355-1415

Panel Discussion on Definitions, Monitoring and Treatment for Post Traumatic Pulmonary Thrombosis

Panelists:

M. Margaret (Peggy) Knudson MD

*Emeritus Professor of Surgery
University of California San Francisco
Medical Director, Military Health System Strategic Partnership
American College of Surgeons
USA*

Lucy Zumwinkle Kornblith, MD, FACS

*Assistant Professor of Surgery Trauma and Surgical Critical Care
Zuckerberg San Francisco General Hospital
USA*

Jessica Cardenes, PhD

*Assistant Professor
Department of Surgery
UTHealth
USA*

Session 15B: Breakout Session, Demo & Discussion

1315-1415

Location: lower level breakout room

Hot Topics from the THOR RDCR Pre-Conference (Part2)

BG Prof Elon Glassberg

*Surgeon General & Chief of the Medical Corps
Israeli Defense Forces
Israel*



Session 16: Pain Control in Prehospital Setting

1415-1515

Moderators:

Håkon Eliasson, MD
Norwegian Armed Forces
Norway

Marc De Pasquale
Medic
USA

1415-1430

Prof Pierre Pasquier, MD, OF-5
French Military Medical Service
France

1430-1445

Lars Olav Fjose
Department of Health Sciences Gjøvik
Norway

1445-1500

MSG (Ret) John Dominguez
President, Special Operations Medical Association
USA

1500-1515

Discussion

1515-1530

Break

Session 17: Noncompressible Hemorrhage

1530-1640

Moderator:

BG Prof Elon Glassberg
Surgeon General & Chief of the Medical Corps
Israeli Defense Forces
Israel

1530-1605

Partial REBOA
Juan C. Duchesne MD FACS FCCP FCCM
Department of Surgery Tulane
TICU Medical Director
Norman McSwain Level I Trauma Center
USA

1605-1630

REBOA Alternatives – Gastroesophageal Occlusion of the Aorta and Foams
Kevin R. Ward, MD
Professor, Department of Emergency Medicine
University of Michigan
Michigan Center for Integrative Research in Critical Care
USA

1630-1640

Discussion



SESSION 18: Committee of the Chiefs of Military Medical Services (COMEDS) 1640-1710

Moderator:

Geir Strandenes, MD

Anesthetist and Senior Advisor

Norwegian Coordination Center for Blood Preparedness

Department of Immunology and Transfusion Medicine

Haukeland University Hospital

Norway

1640-1700

The Committee of the Chiefs of Military Medical Services in NATO (COMEDS) Position Regarding the Use of Blood Products- An Update From the Last COMEDS Meeting

BG Prof Elon Glassberg

Surgeon General & Chief of the Medical Corps

Israeli Defense Forces

Israel

Andrew Beckett CD MD FRCSC FACS

Royal Canadian Medical Service

Canada

1700-1710

Conference Summary

Geir Strandenes, MD

Anesthetist and Senior Advisor

Norwegian Coordination Center for Blood Preparedness

Department of Immunology and Transfusion Medicine

Haukeland University Hospital

Norway

Philip C Spinella, MD FCCM

Professor of Surgery

Professor of Critical Care Medicine

Co-Director, Trauma and Transfusion Medicine Research Center

Associate Medical Director, Center for Military Medicine Research

University of Pittsburgh

USA



SPEAKERS, MODERATORS & PANELISTS

Torunn Apelseth, MD PhD

Department of Immunology and Transfusion Medicine
Haukeland University Hospital
Norway

Samar Attar, MD

Associate Professor, Orthopedic Surgery
Northwestern University
USA

Ed Barnard PhD FRCEM FIMC RCSEd

Surgeon Commander (OF4) Royal Navy
Royal Centre for Defence Medicine (Operational)
UK

Andrew Beckett CD MD FRCSC FACS

Royal Canadian Medical Service
Canada

COL Andrew P. Cap, MD, PhD

Medical Corps, US Army
San Antonio Military Medical Center
USA

Jessica Cardenes, PhD

Assistant Professor, Department of Surgery
UTHealth
USA

Fabrice Cognasse, PhD

Senior Scientist, Deputy Director for Scientific Affairs
French National Blood System
France

Bryan A. Cotton, MD, MPH

Director, Surgical Critical Care
McGovern Medical School
USA

Michael Cripps, MD, MSCS, FACS

Director of Trauma and Acute Care Surgery
University of Colorado Hospital
USA

Dr. Nick Crombie

Consultant Trauma Anaesthetist
University Hospitals Birmingham NHS Foundation Trust
UK

Marc DePasquale

Medic
USA

MSG (Ret) John Dominguez

President, Special Operations Medical Association
USA

CAPT Brendon Drew

Chair, Joint Trauma System Committee on Tactical
Combat Casualty Care (TCCC)
USA

Juan C. Duchesne MD FACS FCCP FCCM

TICU Medical Director
Norman McSwain Level I Trauma Center
USA

**Håkon Eliassen, MD**

Norwegian Armed Forces
Norway

Lars Olav Fjose

Department of Health Sciences Gjøvik
Norway

Christine Gaarder, MD PhD

Head of Department of Traumatology
Oslo University Hospital
Norway

BG Prof Elon Glassberg

Surgeon General & Chief of the Medical Corps
Israeli Defense Forces
Israel

Colonel Frédérique Dufour Gaume

France

COL Jennifer M. Gurney, MD, FACS

Chief, Joint Trauma System
USA

Mary Homer, PhD

Biomedical Advanced Research and Development
Authority (BARDA)
U.S. Department of Health and Human Services
USA

Roxolana Horbowyj, MD, FACS

NAEMT Affiliate Faculty
World Federation of Ukrainian Medical Associations
USA

Bellal Joseph, MD FACS

Professor of Surgery Chief of Trauma
The University of Arizona
USA

COL(Ret) Sean Keenan, FAAEM FAWM

Military Vice President, SOMA
Joint Trauma System, CU COMBAT Center
USA

M. Margaret (Peggy) Knudson MD

University of California San Francisco
Medical Director, Military Health System Strategic
USA

Lucy Zumwinkle Kornblith, MD, FACS

Assistant Professor of Surgery
Zuckerberg San Francisco General Hospital
USA

Christine M. Leeper, MD

Assistant Professor
Department of Surgery
University of Pittsburgh
USA

Dr. Emily Mayhew

Department of Bioengineering Historian in Residence
Imperial College, London
UK

SPEAKERS, MODERATORS & PANELISTS

Jørgen Melau, PhD

Researcher, Cold Weather Operations
Norwegian Armed Forces
Norway

Nikki Mutch, PhD

School of Medicine, Medical Sciences and Nutrition,
Institute of Medical Sciences
University of Aberdeen
UK

Matthew D. Neal, MD FACS

Roberta G. Simmons Associate Professor of Surgery
University of Pittsburgh Medical Center
USA

Prof Pierre Pasquier, MD, OF-5

French Military Medical Service
France

Travis M. Polk, MD, FACS, Commander

US Army Medical Research and Development
Command (USAMRDC)
USA

John Quinn, EMT-P, MD, MPH, PhD

Prague Center for Global Health
Institute of Hygiene and Epidemiology
Charles University

Jillian R. Richter, PhD

Associate Professor
University of Alabama
USA

Martin Ronghaug

Norwegian Armed Forces
Norway

Major General Anne Sailliol

French Institute for Biomedical Research of Armies
France

Susan Shea, PhD

Assistant Professor of Surgery and Bioengineering
University of Pittsburgh
USA

Molly Sherwood

Director of Research
Allo Hope Foundation
USA

Philip C Spinella, MD FCCM

Professor of Surgery & Critical Care Medicine
University of Pittsburgh
USA

Alex Stoll, FRCPATH MRCVS

Principal Scientist, Veterinary Pathologist
Medical and Trauma Sciences, CBR Division
UK

Geir Stranden, MD

Anesthetist and Senior Advisor
Norwegian Coordination Center for Blood
Preparedness
Norway

Kim Thomas, PhD

Assistant Investigator
Vitalant
USA

Pat Thompson

Medic
UK / S. Africa

Kevin R. Ward, MD

Professor, Department of Emergency Medicine
University of Michigan
USA

Caroline Wesonga Wangamati, BCom, MSc

Team Lead, Coalition of Blood for Africa (CoBA)
Kenya

Bethany Weathersby


Chief Executive Officer
Allo Hope Foundation
USA

Col Thomas Woolley, MD FRCA RAMC

Consultant Anaesthetist
British Army
UK

Mark H. Yazer, MD

Professor of Pathology
University of Pittsburgh
USA



FRANK BUTLER'S LAWS

- 1 Nothing gets a pass because "That's the way we've always done it".
- 2 It doesn't matter how good the plan is - if nobody's using it.
- 3 If what you are doing is not working, do something else.
- 4 Pick a team that knows trauma care and is strongly motivated to keep improving it.
- 5 Maintain an active search for good ideas - wherever they can be found - and process them as though lives depend on it. Because, indeed, they do.
- 6 Make needed corrections quickly as additional evidence and experience is gained.
- 7 Improve the methodology for reaching decisions on battlefield trauma care recommendations.
- 8 Effective strategic messaging is needed to inform and inspire decision makers.
- 9 Evidence does not drive advances in trauma care. People do that.
- 10 Lessons learned are not really lessons learned - unless we actually learn them.

SPONSORS

Thank you to this year's sponsors. The conference organizers are proud to have these selected sponsors as supporters of this conference.

GOLD LEVEL



**THOR
NETWORK
FOUNDATION**



**Norwegian Naval Special
Operations Commando**

cerus 



PELI
BIOTHERMAL™



NORTH AMERICAN RESCUE®

SPONSORS

SILVER LEVEL



octapharma®



ZOLL®

BRONZE LEVEL



Ulrik Krogh Andersen
°MEQU
Denmark

Torunn Apelseth, MD, PhD
Norwegian Center for Blood Preparedness
Norway

Samer Attar, MD
Northwestern Medicine
USA

Denise Bäckström
Medical Advisor
Sweden

Gordon Bagley
Medic, USASOC
USA

Eric Bank, NRP, FAEMS
Harris County ESD 48 Fire Department
USA

Brent Barbour
USA

Dr. Ed Barnard PhD FRCEM FIMC RCSEd
UK Defence
United Kingdom

Bill Barnes, Mol Bio, MS
Air Force
USA

Vik Bebarta, MD
University of Colorado
USA

George Beck
ZOLL Medical Corporation

Andrew Beckett, MD
Canadian Forces
Canada

Kenneth Bertram, MD, PhD
Biogenerator
USA

Christopher Bjerkvig, MD
Norwegian Naval Special Operations Commando
Norway

Col. MU Dr. Milos Bohonek
Central Military Hospital Prague
Czech Republic

F. Bowling, BHS, NRP
USSOCOM
USA

Maxwell A. Braverman DO FACS
St Lukes University Health Network
USA

Steven K Burke, MD
Akebia Therapeutics
USA

James Bynum
The Metis Foundation
USA

COL Andre Cap, MD, PhD
U.S. Army Institute of Surgical Research
USA

Jessica C. Cardenas, PhD
The University of Texas Health Science Center
USA

Marte Carlsen, MDt
St.Olavs Hospital
Norway

Junior Castrillon-Rendon, SOMT
Canadian Special Operations Forces
Canada

John Chovanes , DO, FACS, COL, USAR
Cooper Trauma
USA

Kevin Church
Peli BioThermal
United Kingdom

Skye Clayton, EMT
University of Pittsburgh
USA

Fabrice Cognasse, PhD
French National Blood Establishment - EFS
France

CPO Matthew Cool
SOF Medic
USA

Brian Cotton, MD, MPH
UT Houston
USA

Michael Cripps, MD, FACS
University of Colorado
USA

Dr Nick Crombie
University Hospitals Birmingham (UK)
United Kingdom

Lee Daffin
AFSOC
USA

Julie Degueudre, Senior Captain, MSc
Belgian Defence
Belgium

CONFERENCE ATTENDEES

Marc DePasquale, 18D
Medic
USA

Lt. Col. Hanifi Dolu, MD
German Navy
Germany

John Dominguez
North American Rescue
USA

Brendon Drew
US Marine Corps
USA

Juan C Duchesne MD FACS FCCP FCCM
Tulane University
USA

Frédérique Dufour-Gaume, MD, IRBA
French Military Medical Research Institute (IRBA)
France

Ian Dunbar
North American Rescue
USA

Julie A. Dunn
University of Colorado Health North
USA

Cyrille Dupont
LUX Army
Luxemburg

Surg Cdr Iain Edgar
16 Medical Regiment
United Kingdom

G. Michael Fitzpatrick
Cellphire Therapeutics Inc.
USA

Lars Olav Fjose, MD
Sykehuset-Innlandet HF, Prehospitale tjenester
Norway

Belinda Flores
South Texas Blood & Tissue Center
USA

Frode Fossbakk
General Material Division / FMA
Norway

Theodor Fosse, MD
Haukeland University Hospital
Norway

Tina Gaarder
Oslo University Hospital
Norway

Matthew Garrison
USASOC
USA

Thomas Geisner, MD
Western Norway Trauma Center
Norway

Dr. Samantha Gomez-Ngamsuntikul
Blood Center
USA

Chris M. Gonzalez, PA-C
USASOC
USA

COL(Dr) Tan Nan Guang, MBBS, FRCS
Singapore Armed Forces
Singapore

Mattias Günther, MD,
Karolinska Institutet
Sweden

COL Jennifer M. Gurney, MD, FACS
Joint Trauma System
USA

David Hardin MD
United States Army
USA

Oliver Hegener
Octapharma
Switzerland

Col. MU Dr. Tomas Henlin
Air Ambulance Service Army of Czech Republic
Czech Republic

Mikko Herd OR-7
Finnish Defence Forces
Finland

Chris Hewitt, DO, MPH, FAAEM
Special Operations Medical Association
USA

Mary Homer, PhD
HHS/ASPR/BARDA
USA

Yasuyuki Honda, LTC, MD
Japan Ground Self-Defense Force
Japan

Roxolana Horbowyj, MD, FACS
WFUMA
USA

Dr Tony Hudson
UK NHS
United Kingdom

Rodney Isaacs
US Navy
USA

Isabel Lauren Jackson, PhD
True North BioPharm, LLC
USA

Mark Jezierski
Peli Biothermal
USA

George Johnson CRNA, LTC U.S. Army (Ret)
ARC Anesthesia Services
USA

Bellal Joseph, MD, FACS
Univeristy of Arizona
USA

Einar Kaarstein, MD, Lt.Cdr
SanSjØ
Norway

Ariel Katz
Quality In Flow (QinFlow)
USA

Sean Keenan, MD FAAEM FAWM
Disruptive Medical Solutions
USA

Emrys Kirkman, PhD
Defence Science and Technology Laboratory UK
United Kingdom

Peggy Knudson MD
University of California San Francisco
USA

Ales Kolenc
Terumo Blood and Cell Technologies
USA

Lucy Zumwinkle Kornblith, MD
University of California, San Francisco
USA

Einar K. Kristoffersen, MD, PhD
Haukeland University Hospital
Norway

Ben Kuhn, MS
Cellphire Therapeutics, Inc.
USA

Dr. Kendra Lawrence
U.S. Army Medical Materiel Development
USA

Christine Leeper, MD MS
University of Pittsburgh
USA

Svein Sondre Valvik Lindgaard BSc
Haukeland University Hospital
Norway

Sara Magnusson, MD
Swedish Air Force Rangers
Sweden

Chetan Makam
Terumo Blood and Cell Technologies
USA

James E. Manning, MD
University of North Carolina at Chapel Hill
USA

Dr Emily Mayhew
Imperial College London
United Kingdom

John L. McManus
Partner Therapeutics, Inc.
USA

Christian Medby, LtCol/MD
Norwegian Armed Forces Joint Medical Services
Norway

Richard Meehan
Velico
Ireland

Jørgen Melau, PhD
Norwegian Armed Forces
Norway

M. Adam Meledeo, PhD
US Army Institute of Surgical Research
USA

Andrew D Miller, MD
UPMC
USA

Lt Col Paul Moor
UK Blood Far Forward
United Kingdom

Nee-Kofi Mould-Millman, MD PhD
University of Colorado Denver
USA

Peter D. Muench, DO
US Army
USA

Nicola J. Mutch, PhD
University of Aberdeen
Scotland

LTC Dr. Roy Nadler
IDF
Israel

CONFERENCE ATTENDEES

Macky Neal, MD FACS
University of Pittsburgh
USA

LTC Andrew S. Oh, MD
75th Ranger Regiment
USA

Monica B. Pagano, MD
University of Washington
USA

LCol Dylan Pannell, MD, PhD, FRCSC, FACS
Canadian Armed Forces
Canada

Pierre Pasquier, MD
French Military Medical Service
France

Martin K. Pernar, MD
Iqarus Gulf FZ-LLC/ International SOS
Sweden

Heather Pidcoke, MD, PhD
Colorado State University
USA

Mark Piehl, MD, MPH
WakeMed
USA

Travis M. Polk, MD, FACS, Commander, MC, USN
US Army Medical Research and Development
Command
USA

Mark Popovsky, MD
Velico
USA

John Quinn, MD, PhD, Paramedic
Prague Center for Global Health
USA

Joseph Rappold, MD FACS
Maine Medical Center/Tufts University
USA

LtCol Jørn Rasmussen
Norwegian Army
Norway

Justin E Richards, MD
R Adams Cowley Shock Trauma Center
USA

Matt Richardson
Australian Tactical Medical Association
Australia

Jillian Richter, PhD
University of Alabama at Birmingham
USA

CAPT Leslie E Riggs
US Armed Services Blood Program
USA

Ivy L. Rodgers, MBA
Cerus Therapeutics
USA

Tania Rogerson
Australian Defence Force
Australia

Martin Rognhaug
Norwegian Armed Forces
Norway

Rebecka Rubenson Wahlin, MD, PhD
Karolinska Institutet
Sweden

Yaniv Sagie, Mjr, EMT-P
IDF (Reserve)
Israel

Anne Sailliol, MD
French Military Health Service
France

Mathias Sandin M.D
Swedish Armed Forces
Sweden

LCol Jo Schmid
Canadian Armed Forces
Canada

Jeff Schreier
Terumo BCT
USA

Surg Cdr Tom Scorer MD, FRCPATH, RN
Royal Navy
United Kingdom

Susan M. Shea, PhD
University of Pittsburgh
USA

Molly Sherwood
Allo Hope Foundation
USA

Jens Sigfridsson
Swedish Armed Forces
Sweden

Toby Silverman
Biomedical Advanced Research & Development
Authority (BARDA)
USA

Lt Dr. Ben Simon
IDF
Israel

Jason Smith
UK Defence Medical Services
United Kingdom

Jeffrey Smith
Cerus
USA

Kristian Sønstabø, MD
Haukeland University Hospital
Norway

Amanda Staudt, PhD, MPH
The Geneva Foundation
USA

Alexander Stoll MRCVS FRCPATH
Combat Casualty Care, Dstl, UK
United Kingdom

James R. Stubbs M.D.
Mayo Clinic
USA

Sanna Susila, MD
Finnish Red Cross Blood Service
Finland

Lt Col Marius Svanevik, MD, PhD
Norwegian Armed Forces Joint Medical Services
Norway

France T'Sas
Military Hospital Queen Astrid
Belgium

Kim Thomas, PhD
Vitalant Research Institute
USA

Patrick Thompson
ATEM Ltd
United Kingdom

Jay Toole
Canadian Special Operations Forces
Canada

Cindy Treland
Drammen Hospital
Norway

Tommi Vaaherma
Päijät Sote / FinnPHWB
Finland

MAJ Gabriel Valdez
75th Ranger Regiment
USA

MSG Patricio Vasquez
75th Ranger Regiment
USA

Maj Iain Vergie, MD
Canadian Special Operations Forces
Canada

Colin R. Vidos SSG, USA
75th Ranger Regiment
USA

Jordan R. Walker SOIDC, DiMM
USN
USA

Seth Walter
US Navy
USA

MAJ (DR) Jasper Wang
Singapore Armed Forces
Singapore

Kevin R. Ward, MD
University of Michigan
USA

Dr Sarah Watts
DSTL
United Kingdom

Caroline Wesonga Wangamati BCom, MSc, MA
Coalition of Blood for Africa
Kenya

Bryan Wiley
USASOC
USA

Steve Williams, RGN, RN
REVA
United Kingdom

Col Tom Woolley
MOD
United Kingdom

Mark Yazer, MD
University of Pittsburgh
USA

STEERING COMMITTEE

Philip C. Spinella, MD FCCM
CO-CHAIR
USA

Geir Strandenes, MD SMO NORNAVSOC
CO-CHAIR
Norway

Torunn Apelseth, MD PhD
Norway

COL Andrew P. Cap, MD PhD FACP
USA

Marc De Pasquale
USA

Håkon Eliassen, MD
Norway

BG Elon Glassberg, MD MHA
Israel

Donald H. Jenkins, MD FACS DMCC
USA

Sean Keenan, MD FAAEM FAWM
USA

Joseph Rappold, MD FACS
USA

Patrick Thompson
UK / S. Africa

Kevin Ward, MD
USA

Col Thomas Woolley, RAMC
UK

Mark Yazer, MD
USA / CANADA



OPTIMIZE YOUR QUANTUM™

Q.U.I.C.K. Quantum Ultimate Intensive Resuscitation Carry Kit

- 1x - MOLLE/PALS Configured Nylon Pouch
- 1x - Quantum™ Blood and Fluid Warming System
- 2x - NAR Saline Lock Kits

Q.U.I.C.K. Advanced also includes:

- 1x - Eldon Blood Typing Kit
- 1x - 550 Cord - 25.4 cm Long
- 1x - 450 mL Blood Bag

NEW TRAINER SYSTEM NOW AVAILABLE!

ITEM #	OPTION
35-0026	Q.U.I.C.K. Basic
35-0025	Q.U.I.C.K. Advanced
35-0006	Quantum System
35-0029	Quantum Trainer

Optimize your Quantum, find kits, gear, & more at NARescue.com today!

LIFEWARMER®

NORTH AMERICAN RESCUE®
www.NARescue.com • 888.689.6277

Instagram Twitter Facebook LinkedIn

octaplasLG®
Powder for solution for infusion
Human plasma proteins

ANYTIME. ANYWHERE.

QUICK & EASY PLASMA TRANSFUSION.

- Solvent Detergent treated AB (universal) plasma
- Standardised content of plasma proteins
- Prion removal through ligand chromatography
- Room temperature stable ($\pm 25^{\circ}\text{C}$)
- Quick and easy reconstitution with WFI (< 15 minutes)
- Two years shelf life at room temperature
- Eight hours of stability after reconstitution

References
SPC octaplasLG® Powder for solution for infusion
Date of preparation: May 2023

octapharma

WOUNDED

2014
SHORTLIST
wellcome
bookprize

THE LONG JOURNEY HOME
FROM THE GREAT WAR

EMILY MAYHEW

'A fascinating book' *The Times*



WE WILL SAVE LIVES BY CREATING
**transformative,
stabilized cellular
therapeutics.**



www.partnertx.com

LEUKINE is a registered trademark licensed to Partner Therapeutics, Inc.
PARTNER THERAPEUTICS and PTx are registered trademarks of Partner Therapeutics, Inc.
© 2023 Partner Therapeutics, Inc. All rights reserved. US-LEU-2300012 05/2023



**Be Ready.
When Minutes Matter®**

Pathogen Reduced Cryoprecipitated Fibrinogen Complex

(INTERCEPT® Fibrinogen Complex, IFC)

produced from the INTERCEPT® Blood System for Cryoprecipitation

To Learn More Visit:

www.INTERCEPTFibrinogenComplex.com



© 2023 Cerus Corporation.
Cerus, INTERCEPT,
and the Cerus logo are
registered trademarks of
Cerus Corporation.
MKT-EN-00516, V1.0

ZOLL

IMPROVING OUTCOMES FOR EVERY ROLE IN MILITARY HEALTHCARE



FORCE HEALTH PROTECTION

MILITARY HOSPITALS

MILITARY / CIVILIAN COOPERATION

OPERATIONAL MISSIONS

For more than 25 years, ZOLL® has been a trusted partner delivering acute critical care technologies to the military. ZOLL is proud to honor your trust with unmatched commitment to those who care for others during operational, humanitarian, disaster and peacetime missions.

ZOLL helps improve survival outcomes and operational efficiencies. Thus, ZOLL devices are the products of choice as the standard chosen by many militaries in U.S., NATO and Global coalition partners.

Copyright © 2023 ZOLL Medical Corporation, Chelmsford, MA, USA. ZOLL is a registered trademark of ZOLL Medical Corporation in the United States and/or other countries. All other trademarks are the property of their respective owners.



ALLO HOPE
FOUNDATION

Resources and support for alloimmunized women, families, and providers

EDUCATE

Educate a sensitized female patient with the right information about alloimmunization and hemolytic disease of the fetus and newborn (HDFN).

EMPOWER

Empower a sensitized female patient to advocate for the right care.

ASSURE

Assure a sensitized female patient that with proper care, fetal survival of HDFN is 98%.

HDFN is not a death sentence.

Help patients find and advocate for the right care.



podcast.allohopefoundation.org



allohopefoundation.org



instagram.com/allohope



facebook.com/allohope

°MEQU

WWW.MEQU.DK

°M WARMER SYSTEM

A portable IV-blood warmer for emergency transfusions

QinFLOW
NO MORE COLD BLOOD & FLUIDS



The Warrior lite:

Hospital-Grade Portable Blood Warmer for the Entire Continuum of Emergency Care

- **Immediately**
Nearly from the first drop
- **Unmatched Delivery Rate**
Up to 180ml/min for 4°C fluids/blood
- **Unique Intermittent (Bolus) Flow Handling**
LifeFlow, push-pull, hand pump, syringe
- **Unmatched Battery Capacity**
Up to 6 units of Whole Blood with a single charge
- **AC Powering Option Coming Soon**
Easy swap between battery and AC modes, and vice versa
- **Affordable Consumable**
Lowest per-use price compared with all modern warmers



Scan QR Code for More Information

Contact us at info@qinflow.com