



**TRAUMA RESEARCH  
AND COMBAT CASUALTY  
CARE COLLABORATIVE**  
*An initiative of The University of Texas System*

# UT System Trauma Research Symposium

**February 20–21, 2024**  
**Austin, Texas • [TRC4.org](http://TRC4.org)**











**The University of  
Texas System**

Dear Participants,

Welcome to the inaugural UT System Trauma Research Symposium. We are pleased that you are joining us for this informative and rewarding conference.

The newly established Trauma Research and Combat Casualty Care Collaborative (TRC4) is inclusive of the 14 UT System institutions and was funded through the generosity of the UT System Board of Regents and the Texas Legislature in 2023. Hosted by the leadership of the TRC4, the symposium's goals are to promote collaboration and conduct leading-edge trauma research with the goal of saving lives both here in Texas and those serving in our military forces.

This annual trauma symposium will provide an ideal forum to showcase the exceptional trauma-related research being conducted by our faculty across the UT System and will facilitate the exchange of new ideas for research and build new professional partnerships. Ultimately, the innovative life-saving therapeutics, devices, and clinical concepts presented at this meeting will stimulate further research and development in the months and years ahead.

We congratulate Dr. James Bynum for his leadership as director of the TRC4 and Dr. Ronny Stewart for his chairmanship of the TRC4 Advisory Committee. Kudos also to the Advisory Committee members and the symposium planning team for their dedication to this vitally important research collaborative.

Have a productive and enjoyable meeting!

Sincerely,

**James B. Milliken**  
Chancellor

**John M. Zerwas, M.D.,  
FASA**  
Executive Vice Chancellor  
for Health Affairs

**David L. Lakey, M.D.**  
Vice Chancellor and  
Chief Medical Officer





**TRAUMA RESEARCH  
AND COMBAT CASUALTY  
CARE COLLABORATIVE**

*An initiative of The University of Texas System*

Dear Attendees,

On behalf of TRC4, I extend a warm welcome to each of you to the inaugural UT System Trauma Research Symposium. We are thrilled to host this significant event, bringing together experts, researchers, practitioners, and advocates from across the UT System and the Department of Defense to delve into the multifaceted dimensions of trauma and its impact on individuals and communities.

The program of this year's conference underscores the critical need for collaborative efforts and interdisciplinary approaches in addressing the complexities of trauma. As we gather here, we recognize the profound significance of advancing our collective understanding, sharing insights, and exploring innovative solutions to mitigate the effects of trauma and promote resilience.

Over the course of the symposium, our distinguished speakers and presenters will lead thought-provoking discussions, present cutting-edge research findings, and engage in interactive sessions that delve into various aspects of trauma, including its psychological, social, and physiological implications. We aim to foster meaningful dialogue, inspire new perspectives, and catalyze actionable strategies for addressing trauma in diverse contexts.

Moreover, this conference serves as a platform for networking and forging connections with fellow professionals who share a common commitment to advancing trauma research and practice. We encourage you to seize this opportunity to engage with your peers, exchange insights, and establish collaborations that have the potential to drive positive change in the field of trauma studies.

Warm regards,

*James A. Bynum, PhD*

**James A. Bynum, PhD**  
Executive Director, TRC4

# UT System Trauma Research Symposium

## Meeting Agenda

### Day 1: February 20

7:30am – 8:30am:

Registration/Breakfast

8:30am – 9:00am:

#### Introduction/Opening Remarks

- Introduction: James Bynum, PhD, Executive Director, TRC4
- Opening Remarks: John M. Zerwas, MD, FASA, Executive Vice Chancellor for Health Affairs

9:00am – 9:30am:

**Ronny Stewart, MD, University of Texas Health Science Center at San Antonio “Trauma Research and Combat Casualty Care Collaborative (TRC4): Background, Mission, Vision and Goals”**

9:30am – 10:15am:

#### Keynote Speaker: Lilian Kao, MD

- Division Director, Division of Acute Care Surgery, UT Health Houston
- Jack H. Mayfield, MD, Chair in Surgery, UT Health Houston “Operationalizing a Learning Trauma System”

10:15am – 10:30am:

Break/Networking

10:30am – 11:00am:

#### Military Keynote Speaker: CDR Shane D. Jensen, MD, FACS, USN

- Program Director, Acute Care Surgery/SCC Fellowship
- Navy Specialty Leader for Trauma “Military Surgeons Perspective on Research Gaps”

11:00am – 11:15am:

Break/Networking

11:15am – 12:00pm:

#### Scientific Session 1 – Chair: Alan Cook, MD, University of Texas at Tyler

- Speaker 1: Charles Cox, MD, University of Texas Health Houston “Cellular Therapeutics for Traumatic Injuries”
- Speaker 2: Alan Cook, MD, MS, University of Texas at Tyler “A Criteria to Reduce Interhospital Transport of Traumatic Brain Injuries in Greater East Texas (BIGTEX)”

12:00pm – 1:00pm:

Lunch/Networking

**Day 1: February 20** (Continued)

1:00pm – 2:00pm:

**Scientific Session 2 – Chair: Benjamin Levi, MD, University of Texas Southwestern**

- Speaker 1: Amina Qutub, PhD, University of Texas at San Antonio “Opportunities for Artificial Intelligence to Improve Trauma Care”
- Speaker 2: Eric Brey, PhD, University of Texas at San Antonio “Versatile Capabilities for Addressing Trauma”
- Speaker 3: Mark Brotto, PhD, University of Texas at Arlington “Bone-Muscle Crosstalk: New Scenarios for Musculoskeletal Trauma Research & Treatments”

2:00pm – 2:15pm:

Break/Networking

2:15pm – 3:15pm:

**Scientific Session 3 – Chair: Chris Rathbone, PhD, University of Texas at San Antonio**

- Speaker 1: Susannah Nicholson, MD, University of Texas Health Science Center at San Antonio “An Overview of Trauma Research at UT Health San Antonio”
- Speaker 2: Don Jenkins, MD, University of Texas Health Science Center at San Antonio “Eight Years in the Making: Cold Stored Blood in Texas”
- Speaker 3: Benjamin Levi, MD, UT Southwestern “Threads of Repair and Resilience: A Comprehensive Summary of Trauma Research at UT Southwestern”

3:15pm – 4:45pm:

**Military Session – Chair: Edward Chagoy, MHA, TRC4**

- Defense Health Agency
  - Diana del Monaco, PhD, Defense Health Agency R&E, STEID
  - Jeremy T. Nelson, PhD, Defense Health Agency R&E, STEID
  - John Shero, MHA, Defense Health Agency R&E, EACE
- CAPT Jennifer J. Buechel, PhD, Navy Medical Research Unit San Antonio (NAMRU-SA)
- COL J. Brian Lanier, MD, Army Institute of Surgical Research (ISR)
- LTC Julie Rizzo, MD, Brooke Army Medical Center (BAMC)
- Robert T. Gerhardt, MD, 59th Medical Wing Science and Technology Office (59MDW/ST)

4:45pm – 5:00pm:

5:00pm – 5:30pm:

5:30pm – 7:00pm:

## **Day 2: February 21**

7:30am – 8:30am:

8:30am – 10:00am:

10:00am – 10:30am:

10:30am – 12:00pm:

12:00pm – 12:30pm:

Break/Networking

**Wounded Warrior Keynote Speaker: J.R. Martinez**

- Army Veteran and Purple Heart Recipient
- Winner, Dancing with the Stars, Season 13

Reception/Networking and Poster Presentations

Registration/Breakfast

**Scientific Session 4 – Chair: Susannah Nicholson, MD,  
University of Texas Health Science Center at San Antonio**

- Speaker 1: Tatiana Cardenas, MD, University of Texas at Austin “Burn Resuscitation in the Modern Era: Is Plasma the Answer?”
- Speaker 2: Carlos Brown, MD, MS, University of Texas at Austin “Prehospital Advances and Opportunities in Trauma Care”
- Speaker 3: Bryan Cotton, MD, UT Health Houston “A Decade’s Work in Radically Transforming the Resuscitation of Hemorrhage in Trauma”
- Speaker 4: Seth Hays, PhD, University of Texas at Dallas “Targeted Plasticity Therapy for the Treatment of Post-Traumatic Stress Disorder”

Break/Networking

**Scientific Session 5 – Chair: Erika Brigmon, MD, University of  
Texas Health Science Center at San Antonio**

- Speaker 1: Rahid Zaman, PhD, University of Texas at Arlington “Recent Advances in Traumatic Brain Injury (TBI) Risk Prediction, Sensing, and Mitigation”
- Speaker 2: Luis G Fernandez, MD, University of Texas at Tyler “Use of a Modified ABTHERA ADVANCE Open Abdomen Dressing with Intrathoracic Negative Pressure Therapy for Temporary Chest Closure After Damage Control Thoracotomy”
- Speaker 3: Michael Kilgard, PhD, University of Texas at Dallas “Enhanced Recovery from Spinal Cord Injury”
- Speaker 4: Yuanyuan Zhang, MD, PhD, UT Southwestern “Harnessing Radiation Insights into the Pathogenesis and Prevention of Traumatic Heterotopic Ossification”

Concluding Remarks



# Keynote Speakers



## Lilian Kao, MD

Division Director, Division of Acute Care Surgery  
UT Health Houston

Lilian Kao is Professor and Division Chief of Acute Care Surgery at McGovern Medical School at the University of Texas Health Science Center at Houston (UT Health). She holds an endowed chair – Jack H. Mayfield, MD, Chair in Surgery – and she is Vice Chair for Quality for the Department of Surgery. She is faculty for the Masters Program in Clinical Research at UT Health, and she is the co-founder and co-director for the Center for Surgical Trials and Evidence-based Practice (C-STEP).

Dr. Kao is active in a number of national organizations – she is a past president of the Association for Academic Surgery. She is the past Quality Pillar Lead and current Chair of the American College of Surgeons Board of Governors. She is the incoming Quality Pillar Lead for the Committee on Trauma. She is the social media editor and a deputy editor for the Journal of the American College of Surgeons, and she sits on five other journal editorial boards. Dr. Kao's interests include quality improvement to include assurance of equitable care, dissemination and implementation research, and development of a learning healthcare system and learning healthcare scholars.



## CDR Shane Jensen, MD, FACS, USN

Program Director Acute Care Surgery/  
SCC Fellowship, Navy Specialty Leader for Trauma

Commander Shane D. Jensen, MC, USN, was born in Tucson, Arizona, in 1978. He spent his early years there before relocating to Winnipeg, Manitoba, Canada, where he attended St. Paul's Jesuit High School. At 18, he returned to Arizona, pursuing a career in healthcare. After earning his Bachelor of Science in Exercise Science from Northern Arizona University, he attended the University of Arizona, College of Medicine, supported by a Navy Health Professions Scholarship. Jensen commenced his active-duty career as a surgical intern at Naval Medical Center San Diego (NMCS), swiftly transitioning to the role of Battalion Surgeon during Operation Iraqi Freedom.

Promoted to LCDR in 2012, he completed surgical training at NMCS, distinguishing himself as a top graduate during a deployment on the USNS Mercy. Jensen later served as the ship's surgeon on the USS Ronald Reagan (CVN 76), alongside his duties at NMCS as a staff Acute Care Surgeon.

Following clinical training at the University of Texas-Houston, Jensen joined Naval Medical Center Portsmouth as a Staff Surgeon, deploying for disaster relief efforts on the USNS Comfort and as the NATO Role 3 MMU Chief of Trauma.

Currently serving as the Navy Lead for the Defense Health Agency, Trauma and Critical Care Clinical Community, Jensen was appointed Trauma Surgery Specialty Leader by the Corps Chief's office in October, 2021. He represented the Navy at the Joint Trauma System (JTS) as the Defense Committee on Trauma Chair until June, 2023 and is now the Navy Trauma Specialty Leader.

In addition to his leadership roles, Jensen oversees the DoD's only Trauma/Critical Care Fellowship in San Antonio. His personal awards include the Meritorious Service Medal, Navy and Marine Corps Commendation Medal, and multiple other prestigious awards, affirming his dedication to advancing military healthcare.





## JR Martinez

Army Veteran and Purple Heart Recipient  
Winner, *Dancing with the Stars*, Season 13

J.R. Martinez embodies resilience and inspiration, and is known for his roles as an actor, best-selling author, motivational speaker, and advocate. Born on June 14, 1983, in Shreveport, Louisiana, J.R.'s upbringing was shaped by his family's Salvadoran heritage. Raised in Hope, Arkansas, and later Dalton, Georgia, J.R. nurtured dreams of NFL stardom while excelling in high school football.

Following graduation, J.R. enlisted in the U.S. Army, driven by a desire to serve the country that had given him so much. After training at Fort Benning, Georgia, he was assigned to the 101st Airborne Division. His deployment to Iraq in March 2003 thrust him into the crucible of war. However, tragedy struck on April 5 when his Humvee struck a roadside bomb in Karbala. J.R. sustained severe burns covering 34 percent of his body, an experience he describes as transformative, drawing strength from the memory of his late sister Anabel. J.R. has undergone 34 different surgeries, including skin grafts and cosmetic surgery, in the years since his injury.

Enduring a grueling recovery at Brooke Army Medical Center in San Antonio, J.R. found solace in sharing his journey with fellow burn victims, discovering the power of mutual inspiration. This experience ignited his passion for motivational speaking, leading him to become a sought-after speaker, spreading messages of resilience and optimism worldwide.

J.R.'s remarkable journey also includes a successful acting career. He gained prominence portraying "Brot Monroe" on *All My Children*, a role that earned him widespread acclaim. His popularity soared further when he triumphed on *Dancing with the Stars*, winning the Season 13 championship alongside partner Karina Smirnoff.

Beyond entertainment, J.R. channels his influence into advocacy. He serves as a spokesperson for organizations such as debra of America, Phoenix Society for Burn Survivors, Glasswing International, and A Call To Men, using his platform to raise awareness for important causes. J.R. is the author of The New York Times best-selling book, *Full of Heart: My Story of Survival, Strength and Spirit*, a memoir about how he was able to take his personal tragedy and turn it into an inspiration for others.

In 2020, J.R. launched his podcast, 'REBIRTH with J.R. Martinez,' delving into themes of reinvention and resilience. In each episode, with his joyful effervescence, quick wit, and curious nature, J.R. takes listeners on a journey through conversations that explore what defines us, the moments that changed us forever, and the hope that propels us forward. Despite his demanding schedule, J.R. cherishes family time with his wife Diana, their children Lauryn and Leo, and their beloved dog Ellie in their home in Austin, Texas.

# Executive Director

## **James Bynum, PhD**

University of Texas Health Science Center  
at San Antonio  
Executive Director, TRC4  
Professor and Vice Chair of Research  
Department of Surgery

---

# Advisory Committee

## **Ronald (Ronny) Stewart, MD, FACS**

University of Texas Health Science Center  
at San Antonio  
Chair – Voting  
Chair, Department of Surgery

## **Alan Cook, MD, MS, FACS**

University of Texas at Tyler  
Member – Voting  
Medical Director, Center for Clinical Research

## **Charles S. Cox, MD, FACS**

University of Texas Health Science Center  
at Houston  
Member – Voting  
Chair, Neurosciences & Chair, Pediatric Surgery

## **Joseph DuBose, MD, FACS**

University of Texas at Austin  
Member – Voting  
Professor, Department of Surgery  
and Perioperative Care

## **David Lakey, MD**

University of Texas System  
Member – Voting  
Vice Chancellor for Health Affairs,  
Chief Medical Officer

## **Benjamin Levi, MD**

University of Texas Southwestern  
Medical Center  
Member – Voting  
Chair, Surgery and Plastic and  
Reconstructive Surgery

## **Rafael Martín, PhD**

University of Texas at Dallas  
Member – Voting  
Vice President and Chief of Staff

## **Byron Hepburn, MD, FAAFP**

(Maj Gen, USAF, Ret.)  
University of Texas Health Science Center  
at San Antonio  
Ex Officio – Non-Voting  
Associate Vice President and Director,  
Military Health Institute

## **Chris Rathbone, PhD**

University of Texas at San Antonio  
Member – Voting  
Associate Professor, Department of  
Engineering and Chemical Engineering

## **Emre Umucu, PhD**

University of Texas at El Paso  
Member – Voting  
Associate Dean, Research,  
College of Health Science

## **Steven Wolf, MD**

University of Texas Medical Branch  
at Galveston  
Member – Voting  
Professor and Division Chief of Burn,  
Trauma and Acute Care Surgery

## **Jingsong Zhou, PhD**

University of Texas at Arlington  
Member – Voting  
Professor of Kinesiology and Associate  
Director for Bone-Muscle Research Center

## **Lucia Nguyen, MD**

University of Texas Rio Grande Valley  
Member – Voting  
Assistant Professor of Surgery

## **Jennifer Gurney, MD, FACS (COL, MC, USA)**

Joint Trauma System, Defense Health Agency  
Ex Officio – Non-Voting  
Chief, Joint Trauma System

## **Xuemin Xu, PhD**

University of Texas Permian Basin  
Member – Voting  
Director of Biomedical Research Center  
Professor of Biology







**TRAUMA RESEARCH  
AND COMBAT CASUALTY  
CARE COLLABORATIVE**  
*An initiative of The University of Texas System*

7703 Floyd Curl Dr.,  
San Antonio, Texas 78229

