After a very successful First Annual Symposium, we are excited to have an even more diverse faculty, bigger Hands on Lab, and more case based discussions for our Second Annual Houston Shock Symposium! Save the date to attend the Second Annual Houston Shock Symposium on March 1st – 3rd, 2019!

Please visit our website for more details. www.Houstonshock.org.
Cardiogenic shock is a life-threatening state with over fifty percent mortality rate despite aggressive treatment. Its overall incidence is between five to eight percent of all patients presenting with acute myocardial infarction, and it is the leading cause of death in these patients. The trend in this high mortality rate over the decades has not significantly decreased. As such, the need to arrange a comprehensive and inclusive symposium became prudent, to allow for more detailed discussions, innovations, and sharing of best practices.

In our endeavor to accomplish this task, we are joined with over forty-five world-renowned experts in the field of cardiogenic shock to discuss some of the issues surrounding cardiogenic shock, such as its high mortality rate, prevention, treatment strategies, and impact on various options of support, and debate the optimal therapeutic strategies. The Houston Shock Symposium encompasses Interventionalists, Advanced Heart Failure Cardiologists, Cardiothoracic Surgeons, Cardiologists, Intensivists, and Engineers. In addition to CME accredited sessions, we have several very complex and challenging case presentations followed by expert panel discussions.

We believe in hands on training. We invite our attendees to participate in the Houston Shock Wet Lab! This lab will allow our attendees to get hands on experience with major percutaneous mechanical circulatory support devices including the TandemHeart, the Impella devices, and veno-venous and veno-arterial ECMO. We are excited to have our inspirational Keynote speaker, Dr. O.H. Frazier joining us at this inaugural Symposium. Dr. Frazier has been a pioneer in the treatment of severe heart failure and in the fields of heart transplantation and artificial devices. Dr. Frazier has performed over 1,300 heart transplants and implanted more than 1,000 left ventricular assist devices, more than any other surgeon in the world.

Finally, I would like to thank our faculty and speakers for making Houston one step closer to becoming the premier platform for Cardiogenic Shock meetings.

Marwan F. Jumean, MD, FACC, FSCAI
Houston Shock Symposium Director
Assistant Professor, Internal Medicine
Center for Advanced Heart Failure
University of Texas Health Science Center at Houston

Dr. Frazier graduated from the University of Texas-Austin and received his medical degree at Baylor College of Medicine, where he received the DeBakey Award for Outstanding Surgical Medal. After his military service, he returned to Houston and completed his specialty training in thoracic and cardiovascular surgery under Dr. Denton A. Cooley at the Texas Heart Institute.

O.H. BUD FraZIEr

KEYNOTE ADDRESS
O.H. Bud Frazier

D.H. Frazier, M.D., is chief of Cardiopulmonary Transplantation, program director and chief of the Center for Cardiac Support, and director of Cardiovascular Surgery Research at the Texas Heart Institute. He is also chief of the Transplant Service at DHI Baylor St. Luke’s Medical Center. His academic appointments include professor of Surgery at the University of Texas Health Science Center in Houston, clinical professor of Surgery at the University of Texas M.D. Anderson Cancer Center, and tenured professor at Baylor College of Medicine in Houston. For more than 30 years, Dr. Frazier has been a pioneer in the treatment of severe heart failure and in the fields of heart transplantation and artificial devices that may be used either to substitute for or to assist the pumping action of the human heart. As a result of his work, TAH has become one of the top transplantation and mechanical circulatory support programs in the world. Dr. Frazier has performed over 1,300 heart transplants and implanted more than 1,000 left ventricular assist devices, more than any other surgeon in the world.

On behalf of the Symposium Chairs and Planning Committee Members, I welcome you to the first Annual Houston Shock Symposium.

From the perspective of the Center for Advanced Heart Failure, Houston Shock Symposium is an opportunity to carry on the tradition that has defined our practice. As we enter our third decade of care for patients with cardiogenic shock, we are committed to providing the highest level of care for these patients and to advancing the practice of cardiopulmonary support in our region and beyond.

Dr. Frazier’s work continues as his goal of a meaningful and practical total artificial heart replacement is on the horizon. Dr. Frazier has received numerous honors, including the Living Legend Award from the World Society of Cardiovascular Surgeons, the Gift to Marked Award from the American Organ Transplant Association, the Distinguished Surgeon Award from the Houston Surgical Society, Honored Physician Award from the American Heart Association, the Distinguished Fellowship Award from the American Organ Transplant Association, the Distinguished Fellowship Award from the World Society of Cardiothoracic Surgeons, the Gift to Mankind Award from the University of Texas Cooley Cardiovascualr Research Institute Foundation in recognition of his pioneering efforts in the clinical advancement of cardiac transplantation and of mechanical circulatory support and replacement devices.

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SESSION 1: SURVIVING CARDIOGENIC SHOCK
Location: Picasso
Moderators: B. Kar, H. Jneid
7:55-8:00 AM Opening Remarks
M. Jumean
8:00-8:10 Cardiogenic Shock: The Cardiologist’s Holy Grail
H. Jneid
8:10-8:20 Discussion
8:20-8:30 Pathophysiology of Cardiogenic Shock – A closer Look at the SIRS Response
D. De Backer
8:30-8:45 Discussion
8:45-8:55 Advances in the Medical Management of Cardiogenic Shock
F. Smart
8:55-9:10 Discussion
9:10-9:20 Classification of Cardiogenic Shock
I. Gregoric
9:20-9:35 Discussion
9:35-9:45 Has ECMO Improved Survival in Cardiogenic Shock?
J. Zwischenberger
9:45-10:00 Discussion
10:00-10:10 What is missing in the Cardiogenic Shock Guidelines?
J. Katz
10:10-10:25 Discussion
10:25-10:40 Coffee Break
SESSION 2: A DEEP DIVE INTO THE HEMODYNAMICS OF SHOCK
Location: Picasso
Moderators: D. De Backer, D. Mann
Panel: D. Burkhoff, K. Rajagopal, S. Hollenberg, S. Nathan, F. Smart, J. Zwischenberger
10:40-10:50 AM Beyond the Basics: Novel Invasive Hemodynamic Markers of the Failing Heart
D. Mann
10:50-11:05 Discussion
11:05-11:15 Invasive Hemodynamic Assessment Limitations in the Era of Percutaneous MCS
S. Hollenberg
11:15-11:35 Discussion
11:35-11:44 Which Side is Failing: Putting all the Pieces Together
D. Burkhoff
11:45-12:00 Discussion
12:00-12:10 Coffee Break
KEYNOTE ADDRESS
12:10-12:15 PM Introduction
B. Kar
12:16-12:30 G.M. Bud Frazier
12:30-1:30 Lunch
SESSION 3: ACUTE SHOCK – CATHETER BASED INTERVENTIONS
Location: Picasso
Moderators: F. Smart, V. Morone
Panel: J. Jentzer, R. Smalling, I. Gregoric, D. De Backer, S. Kumar, J. Lasala
1:30-1:40 PM Utility of Counterpulsation in AMI Shock in the Current Era
A. Civitello
1:40-1:55 Discussion
1:55-2:05 AMI Shock: Transition from Door to Reperfuse to Door to Unload, Are We There Yet?
R. Smalling
2:05-2:20 Discussion
2:20-2:30 Mechanical Complications of AMI: Percutaneous Approaches to Management
B. Kar
2:30-2:45 Discussion
2:45-2:55 Cardiac Angiography Following Cardiac Arrest – What is the Best Practice?
V. Morone
2:55-3:05 Discussion
3:05-3:15 MitraClip Implantation in Low Cardiac Output Patients: Where Do We Stand?
J. Lasala
3:15-3:25 Discussion
S. Sharma
3:35-3:45 Catheter Based Intervention: Electrical Storm Management in Cardiogenic Shock – Whos Not to Intervene
R. Hariharan
3:45-3:55 Discussion
3:55-4:10 Coffee Break
SESSION 4: THE RIGHT VENTRICLE
Location: Picasso
Moderators: S. Hollenberg, J. Estop
4:10-4:20 PM Right Ventricular Assessment in Cardiogenic Shock
M. Jumean
4:20-4:30 Discussion
4:30-4:40 Invasive Hemodynamics of Right Ventricular Failure
R. Kociol
4:40-4:50 Discussion
4:50-5:00 Right Ventricular Failure following LVAD implantation
G. Torre-Amione
5:00-5:10 Discussion
5:10-5:20 Medical Management of Right Ventricular Failure in Shock: Closer Look at Septic Shock
J. Jentzer
5:20-5:30 Discussion
5:30-5:40 Percutaneous MCS Options for Right Ventricular Support
D. Baran
5:40-5:55 Discussion Adjourn
SESSION 5: EARLY BIRD SESSION: BEYOND THE HEART
Location: Picasso
Moderators: S. Hollenberg, J. Jentzer
Panel: S. Nathan, D. De Baker, D. Feldman, R. Hussein, J. Patel
7:15-7:25 AM Case Presentation
K. Stelling
7:25-7:30 Discussion
7:30-7:40 Nursing Perspective on Management of pMCS Patients in the ICU
C. Morris
7:40-7:45 Discussion
7:45-7:55 Medical Management of Shock Patients in the ICU: Intensivists Perspective
B. Akkanti
7:55-8:00 Discussion
SESSION 6: POST CARDIOTOMY SHOCK
Location: Picasso
Moderators: I. Gregoric and J. Maly
8:00-8:10 AM Post Cardiotomy Shock – What Changed Since First Bypass Surgery?
J. Maly
8:10-8:25 Discussion
8:25-8:35 Case Presentation
I. Salas
8:35-8:50 Discussion
8:50-9:00 The Case of the Longest CPR Ever
M. Patel
9:00-9:10 Discussion
9:10-9:15 Case Presentation
H. Kapawa
9:15-9:20 Discussion
9:20-9:30 Best Temporary MCS Strategy to Bridge to Permanent Assist Device Therapy: A Surgeons Perspective
D. Pham
9:30-9:45 Discussion
9:45-9:55 When the LVAD Patient Presents in Shock – Diagnostic Dilemmas
S. Nathan
9:55-10:00 Discussion
10:00-10:10 Coffee Break
SESSION 7: PERCUTANEOUS MCS 1 – BEYOND THE BASICS
Location: Picasso
Moderators: B. Kar, D. Feldman
Panel: M. Jumean, V. Menon, F. Smart, J. Zwischenberger, Sandeep Nathan, J. Malay
10:40-10:50 AM Pressure Volume Loop Profils in Percutaneous MCS
D. Burkhof
10:50-11:00 Discussion
11:00-11:10 Case 4: Rescue Therapy in Acute Pulmonary Hypertension related to Sickle Cell Disease
Mirea Munteanu
11:10-11:25 Discussion
11:25-11:30 Lunch
1:30-1:40 PM Case Presentation: LVAD Complication with LM Thrombosis
M. Jumean
1:40-1:55 Discussion
1:55-2:05 Anticoagulation and Antiplatelet Therapeutic Strategies in pMCS supported patients
M. Slepian
2:05-2:15 Discussion
2:15-2:25 Debate: Impella is Superior to other pMCS Devices in Cardiogenic Shock
Sandeep Nathan
2:25-2:35 Debate: TandemHeart is Superior to other pMCS Devices in Cardiogenic Shock
B. Kar
11:20-11:30 Case Presentation
Saman Aran
11:30-11:45 Discussion
11:45-11:55 Predictors of Survival in VA-ECMO: Pulsatility, Biomarkers, and Beyond
A. El-Banayosy
11:55-12:10 Clinical Markers of Increased Afterload in VA-ECMO: What the PV Loop Does not tell us
K. Rajagopal
12:10-12:25 Discussion
12:35-13:00 Lunch
SESSION 8: PERCUTANEOUS MCS 2 – CAN ANY CLAIM SUPERIORITY?
Location: Picasso
Moderators: J. Zwischenberger, B. Kar
1:30-1:40 PM Case Presentation: LVAD Complication with LM Thrombosis
M. Jumean
1:40-1:55 Discussion
1:55-2:05 Anticoagulation and Antiplatelet Therapeutic Strategies in pMCS supported patients
M. Slepian
2:05-2:15 Discussion
2:15-2:25 Debate: Impella is Superior to other pMCS Devices in Cardiogenic Shock
Sandeep Nathan
2:25-2:35 Debate: TandemHeart is Superior to other pMCS Devices in Cardiogenic Shock
B. Kar
1:00-1:10 AM Post Cardiotomy Shock – What Changed Since First Bypass Surgery?
J. Maly
1:10-1:25 Discussion
1:25-1:35 Case Presentation
I. Salas
1:35-1:50 Discussion
1:50-1:55 Case 2: Any Given Sunday
Nils Johnson
1:55-2:10 Discussion
2:10-2:25 Case 3: LV Failure necessitating pMCS support
Neel Reddy
2:25-2:40 Discussion
2:40-2:55 Case 4: Rescue Therapy in Acute Pulmonary Hypertension related to Sickle Cell Disease
Mirea Munteanu
2:55-3:10 Discussion
3:10-3:25 Case 5: AMI Shock: Ideal MCS Choice
Rob Schott
3:25-3:40 Discussion
3:40-3:55 Case 6: Impella Weaning
Ajay Shrivastava
3:55-4:10 Discussion
4:10-4:25 Case 7: Post Cardiomyopathy RV Failure
Ahmed Al-Mustafa
4:25-4:40 Discussion
4:40-4:55 Case 8: Myocarditis
Raj Rajagopal
4:55-5:10 Discussion
5:10-5:25 Case 9: Impella is Superior to other pMCS Devices in Cardiogenic Shock
Sandeep Nathan
5:25-5:40 Discussion
5:40-5:55 Case 10: TandemHeart is Superior to other pMCS Devices in Cardiogenic Shock
B. Kar
5:55-6:10 Discussion
CME Accreditation and Designation Statement

Medical professionals’ education is key in keeping up-to-date with the latest science and advances in cardiogenic shock that will ultimately lead to improvements in survival. The 2018 Houston Shock Symposium will provide medical professionals the opportunity for a comprehensive review of evidence-based practices, an exposure to best practices and innovative techniques in diagnosis and management of cardiogenic shock across the country.

This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of The University of Texas Medical Branch at Galveston and the University of Texas Health Science Center at Houston. The University of Texas Medical Branch at Galveston is accredited by the ACCME to provide continuing medical education for physicians.

The University of Texas Medical Branch at Galveston designates this live activity for a maximum of 17.00 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Join the 2018 Houston Shock Wet Lab

The Houston Shock Wet Lab located in the Van Gogh this year is offering hands-on training with the Impella, TandemHeart, and VV/VA ECMO percutaneous support devices.

Explore Houston

Explore Houston's cultural and visual arts attractions, including the Museum of Fine Arts and NASA. Spend a day with the kids exploring the Children's Museum, Houston Zoo, Downtown Aquarium or Natural History Museum. Enjoy a show or the ballet in downtown's Theater District or a sophisticated nightspot after a day of meetings.

To explore Houston’s attractions, local culture, restaurants, shopping, events and more visit http://www.visithoustontexas.com
**SAVE THE DATE 2019**

Mark your calendars for the 2nd Annual Houston Shock Symposium on March 2\textsuperscript{nd} and 3\textsuperscript{rd}, 2019.
Registration will begin Winter of 2018.

**HOUSTON SHOCK SYMPOSIUM SUPPORTERS: PARTNERSHIP IN ACTION**

The Houston Shock Symposium is partially supported through educational grants and exhibit fees from commercial supporters. The agenda, speakers, and faculty were all chosen based on their merits and accomplishments in the field of cardiogenic shock without any influence from commercial supporters. Exhibits will be available for viewing at all scheduled breaks and following the conclusion of last sessions on Saturday and Sunday.

The Houston Shock Symposium would like to thank the following Grant Supporters and Exhibitors: