

# 5<sup>TH</sup> ANNUAL GULF COAST VASCULAR RESEARCH CONSORTIUM

Friday, August 4, 2023

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7:30 am – 8:30 am      **Breakfast** (The Stables, Cavalry Court)

7:15 am – 8:45 am      **Registration** (Lobby, The George Hotel)

8:45 am – 9:00 am      **Welcome and Introductory Remarks** (Statesman Ballroom, The George Hotel)

## Session 1: Vascular Disease and Inflammation (Statesman Ballroom, The George Hotel)

Moderators: Philip Shaul and Shannon Glaser

9:00 am – 9:25 am      **Nhat-Tu Le**, Houston Methodist  
*Role of TNIK in modulating interferon signaling and endothelial cell response to viral infection*

9:25 am – 9:40 am      **Sivareddy Kotla**, MD Anderson Cancer Center  
*Decoding ERK5 S496 Phosphorylation: Implications for Atherosclerosis and Senescence-Associated Stemness*

9:40 am – 9:55 am      **Adesewa Akande**, LSU Health Shreveport  
*Increased vascular permeability and decreased vascular density in neurogranin knockout mice*

9:55 am – 10:20 am      **Audrey Cleuren**, Oklahoma Medical Research Foundation  
*The endothelial cell response in inflammation: friend or foe?*

10:20 am – 10:30 am      **Coffee Break**

## Session 2: Cellular Bioengineering (Statesman Ballroom, The George Hotel)

Moderator: Feng Zhao

10:30 am – 10:55 am      **Taci Pereira**, Systemic Bio  
*h-VIOS: A novel human organ-on-a-chip platform using vascularized biomaterial*

10:55 am – 11:10 am      **Tanmay Mathur**, Texas A&M University  
*Gravitational Lumen Patterning of Complex Vascular Architectures: Fabricating Collagen Embedded Lumen for Modeling Spatially Intricate Blood Vessels*

11:10 am – 11:35 am      **Feng Zhao**, Texas A&M University  
*Structured cell-derived extracellular matrix for vascular bioengineering*

11:35 am – 12:00 pm      **Yi Hong**, University of Texas Arlington  
*Engineering cardiac hydrogels to promote in vitro angiogenesis*

12:00 pm – 1:00 pm      **Lunch** (The Stables, Cavalry Court)

### Session 3: Vascular Mechanobiology (Statesman Ballroom, The George Hotel)

Moderators: Andreea Trache and Gonzalo Rivera

- 1:00 pm – 1:25 pm      **Mabruka Alfaidi**, LSU Health Shreveport  
*The Interleukin-1 receptor mechano-signaling roles*
- 1:25 pm – 1:40 pm      **Jun-ichi Abe**, The University of Texas MD Anderson Cancer Center  
*LATS1/2 expression reduced by the pathological flow triggers intraplaque hemorrhage and distal pulmonary thrombosis by promoting EC apoptosis and proliferation in concert*
- 1:40 pm – 1:55 pm      **Mohammad Mohajeri**, Texas A&M University  
*Drop-like nuclear deformation in endothelial cells*
- 1:55 pm – 2:20 pm      **Aaron Baker**, University of Texas Austin  
*Biophysical Rejuvenation of Mesenchymal Stem Cells for Enhancing Vascular Regeneration*
- 2:20 pm – 2:40 pm      **Coffee Break**

### Session 4: Vascular Disease and Therapeutics (Statesman Ballroom, The George Hotel)

Moderators: Joseph Rutkowski and Ying Shen

- 2:40 pm – 3:05 pm      **Norman Harris**, LSU Health Shreveport  
*Retinal vascular pathology*
- 3:05 pm – 3:20 pm      **Suravi Majumder**, The University of Texas Health Science Centre at Houston  
*Pericentrin deficiency in smooth muscle cells leads to premature atherosclerosis*
- 3:20 pm – 3:35 pm      **Trevor Self**, Texas A&M University  
*Kv7 channel isoforms contribute to H<sub>2</sub>O<sub>2</sub>-mediated vasodilation in the ischemic heart after exercise training*
- 3:35 pm – 3:50 pm      **Anahita Mojiri**, Houston Methodist Research Institute  
*Reversal of radiation-induced DNA damage and senescence using mRNA telomerase*
- 3:50 pm – 4:15 pm      **Stryder Meadows**, Tulane University  
*Molecular Mechanisms Driving Arteriovenous Malformations (AVMs) in Hereditary Hemorrhagic Telangiectasia (HHT)*
- 4:15 pm – 4:30 pm      Session Break and Poster Set-up

### Session 5: Posters (Statesman Ballroom, The George Hotel)

- 4:30 pm – 7:00 pm      Posters with Cocktails (cash bar)

## Saturday, August 5, 2023

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7:30 am – 8:30 am Breakfast (The Stables, Cavalry Court)

### Session 6: Lymphatics in Disease (Statesman Ballroom, The George Hotel)

Moderators: Mari Muthuchamy

8:30 am – 8:55 am **Michael Dellinger**, UT Southwestern  
*Kras<sup>G12D</sup> drives lymphatic malformations during development by altering the cellular and molecular landscape of lymphatic vessels*

8:55 am – 9:20 am **Sanjukta Chakraborty**, Texas A&M University  
*Lymphatic vasculature in progression of liver disease: Targeting novel molecular regulators*

9:20 am – 9:35 am **Akshaya Narayanan**, Texas A&M University  
*Unlocking the Therapeutic Potential of Lymphatics in Amyotrophic Lateral Sclerosis Treatment*

9:35 am – 9:50 am **Priyanka Banerjee**, Texas A&M University  
*SARS-CoV-2 spike protein triggers endothelial to mesenchymal transition in lymphatic endothelial cells and accelerates pre-mature senescence in liver cancer via the TGF $\beta$ CXCL5-CXCR2 axis*

9:50 am – 10:15 am **Jorge Castorena**, Tulane University  
*Insights into mechanisms of collecting lymphatic vessel dysfunction in obesity*

10:15 am – 10:30 am **Coffee Break**

### Session 7: Large vessel Disease and Injury (Statesman Ballroom, The George Hotel)

Moderators: Jun-ichi Abe

10:30 am – 10:55 am **Dwight Towler**, UT Southwestern  
*Noncanonical Wnt Signaling in Arteriosclerosis and Aneurysmal Remodeling*

10:55 am – 11:10 am **Cyrine Ben Dhaou**, LSU Health Shreveport  
*Endothelial deletion of Nck1 reduces atherosclerosis in ApoE<sup>-/-</sup> mice*

11:10 am – 11:25 am **Yanming Li**, Baylor College of Medicine  
*Dynamic Phenotypic Transition of Smooth Muscle Cells During Human Ascending Thoracic Aortic Disease Progression: From Compensation in Aortic Aneurysm to Decompensation in Aortic Dissection*

11:25 am – 11:50 am **Xinchun Pi**, Baylor College of Medicine  
*The paracrine regulation of vascular remodeling response during pulmonary hypertension*

12:10 pm – 12:30 pm Concluding Remarks / Future Meetings

11:50 am – 12:10 pm Award Presentations

12:30 pm Adjourn & Boxed Lunch for out of town registrants (Statesman Ballroom)