### PURPOSE OF CONFERENCE

The purpose of the joint APS-EHRA Conference is to present the most up-to-date information on the physiology and pathophysiology of Sickle Cell Disease (SCD). The consequences of SCD affect the function of nearly every organ system. While we have known the genetic cause of the world’s most prevalent single gene mutation disease, understanding how to prevent and reverse the deadly consequences will require a greater understanding of the basic physiology that is impacted by sickling hemoglobin. Much of the work to be presented will focus on translational research and new potential therapies. In addition to invited lectures, the abstract-driven program will focus on trainees and early career investigators giving oral and poster presentations of their work.

### CONFERENCE PROGRAM

**Career Workshop**  
**Career Development Workshop**  
**Plenary Lecture**  
**Symposia I**  
**Neural Circuits and Neurovascular Physiology**  
Chair: Thomas D. Coates  
- Targeting Pain at its Source in Sickle Cell Disease - Kalpna Gupta  
**Selected Abstract Oral Presentations**

**Symposia II**  
**SCD Gene Therapy, Gene Editing, and Pharmacological Treatment**  
Chair: David Williams  
- Gene Therapy for Hemoglobinopathies: The Challenge to Find a Cure - Giuliana Ferrari  
- TBD - Betty S. Pace  
**Selected Abstract Oral Presentations**

**Symposia III**  
**Cell Therapy**  
Chair: Betty S. Pace  
- Control of HbF Silencing: Implications for Genetic and Pharmacologic Induction of HbF for Therapy - Stuart Orkin  
- CRISPR/Cas9 Enhanced Sickle Gene Correction in Human and Mouse Hematopoietic Stem Cells - Tim Townes  
**Selected Abstract Oral Presentations**

**Symposia IV**  
**Small Molecules to Treat SCD**  
Chair: J. Douglas Engel  
- KEAP1-NRF2 Antioxidant Response System and Sickle Cell Anemia - Masayuki Yamamoto  
- Oral Tetrahydrocurcumin and Decatabine for Non-Cytotoxic Epigenetic Modification of Sickle Cell Disease: A Randomized Phase 1/2 Study - Yogen Saunthurarajah  
- RN-1, an LSD-1 Inhibitor, Induces Hb F in the Baboon (P. anubis) and Reduces Mitochondria-containing RBC in a SCD Mouse Model - Angela Rivers  
**Selected Abstract Oral Presentations**

**Symposia V**  
**Renal and Vascular Physiology**  
Chair: Jennifer Pollock  
- Sickle Cell Disease: When Endothelin Becomes a Nephrotoxic and Proinflammatory Cytokine - Pierre-Louis Tharaux  
**Selected Abstract Oral Presentations**

**Symposia VI**  
**Lung Physiology and Pathophysiology**  
Chair: Steffen Meiler  
- TBD - Solomon Ofiori-Acquah  
**Selected Abstract Oral Presentations**

**Symposia VII**  
**Red Cell Physiology**  
Chair: Sergei Nekhai  
- Developmental Regulation of Erythroid Self-renewal - James Pallas  
- Pathobiology of Sickle Red Cells: Implications for Pathophysiology of Sickle Cell Disease - Mohandas Narla  
**Selected Abstract Oral Presentations**

**Symposia VIII**  
**Coagulation and Thrombosis**  
Chairs: Felicity N. Gavins and Rafal Pawlinski  
- De-clotting Sickle Cell Disease - Rafal Pawlinski  
- Promoting the Resolution of Inflammation in Sickle Cell Disease - Felicity N. Gavins  
**Selected Abstract Oral Presentations**

### ORGANIZING COMMITTEE

Dexter L. Lee (Chair)  
Howard University  
Sergei Nekhai (Co-Chair)  
Howard University  
J. Douglas Engel  
University of Michigan  
Felicity N. Gavins  
Louisiana State University  
Kalpna Gupta  
University of Minnesota  
Karen Lang  
University of Michigan  
Harvey Luksemburg  
NIH, NHLBI  
Betty S. Pace  
Augusta University  
David M. Pollock  
University of Alabama at Birmingham  

For more information or to register, visit theaps.org/SickleCellPoster or scan this code.