A new translational research paradigm will be explored, representing a shift from benchside-to-bedside, to reverse translation - bedside-to-bench. This pre-conference event is designed to address challenges facing traditional "forward-translation" stroke research. Despite four decades of research investigating mechanisms involved in ischemic brain injury, for example, we have yet to develop an FDA-approved neuroprotective agent. Is forward translation the only approach we should be taking? How can we take advantage of human samples, from biofluids to tissue, to help guide our future stroke research? This half-day symposium brings together leading researchers who have successfully achieved reverse translation, starting with human samples, and applying cutting-edge big data techniques to identify genes/proteins of relevance. Though reverse translation assures relevance to human disease, how can we leverage traditional bench approaches to truly understand the significance of these findings? We will further explore examples of next steps needed to understand molecular mechanisms implicated by the genes/proteins identified by these new "omic" techniques.

After participating in this activity, participants will be able to:
- Define how human genetics can be used to identify new targets involved in stroke pathogenesis
- Discuss the utility of the blood transcriptome to understand stroke etiology and subtypes
- Apply a systems biology approach to integrating big data across the “omics”
- Explain how to exploit animal models to understand underlying mechanisms of GWAS hits
- Describe the use of human tissue to create in vitro models of disease

The American Heart Association/American Stroke Association is grateful to the members of the ISC Pre-Conference Symposium II 2018 Program Committee for their dedication and leadership provided throughout the year in planning the program.

Program Committee
Jin-Moo Lee, MD, PhD, Chair
Daniel Woo, MD
Bruce Ovbiagele, MD, MSc, FAHA (ISC Program Committee, Chair)
Miguel A Perez-Pinzon, PhD, FAHA (ISC Program Committee, Vice Chair)

Continuing Medical Education Accreditation - Physicians
The American Heart Association is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

Continuing Medical Education Accreditation - Physician Assistants
AAPA accepts Category I credit from AOACCME, Prescribed credit from AAFP, and AMA PRA Category 1 Credit™ from organizations accredited by ACCME.

For full CME/CE accreditation information on the ISC Pre-Conference Symposium II, please visit strokeconference.org.

Please note that there is a separate registration fee to attend the ISC Pre-Conference Symposium II.

Tuesday, Jan 23
1:00 pm – 5:00 pm

Moderators: Jin-Moo Lee, MD, PhD, Saint Louis, MO
Daniel Woo, MD, Cincinnati, OH

1:00 Failure of Traditional Forward Translation: The Case of Neuroprotection
Jin-Moo Lee, MD, PhD, Saint Louis, MO
1:15  Genomics Approach to Reverse Translation  
    Martin Dichgans, MD, Munich, Germany

1:55  Probing Biofluids to Understand Disease Pathogenesis: A Transcriptomics Approach  
    Frank Ray Sharp, MD, Sacramento, CA

2:35 – 2:45 Break

2:45  Integrating Big Data across the Omics: A Systems Biology Approach  
    Philip De Jager, MD, New York, NY

3:25  Bedside-to-Bench: Choosing the Right Animal Model to Understand GWAS Hits  
    Ordan Lehmann, PhD, Edmonton, AB

4:05  Harvesting Human Cells to Develop “Disease-in-a-dish”  
    Adam Engler, PhD, La Jolla, CA

4:45  Q&A