

Song Biography

Dr. Long-Sheng Song is a professor and the Edith King Pearson Chair in Cardiovascular Research at the University of Iowa Carver College of Medicine. He is an elected Fellow of the ISHR. A leading expert in cardiac excitation-contraction (E-C) coupling, Dr. Song has authored over 120 peer-reviewed publications in high-impact journals. His pioneering research has significantly advanced the understanding of cardiac E-C coupling in both health and disease. Notably, his work revealed how ultrastructural remodeling of T-tubules contributes to E-C coupling dysfunction and heart failure (*PNAS*, 2006) and how these changes are linked to the dysregulation of junctophilin-2, a key structural protein in E-C coupling (*Circ Res*, 2010; *PNAS*, 2014; *Circulation*, 2014). In his landmark 2018 Science paper, Dr. Song demonstrated that the calpain-cleaved N-terminal fragment of junctophilin-2 acts as a stress-adaptive transcriptional regulator, protecting against transcriptional reprogramming and pathological remodeling in stressed hearts. This discovery opens new avenues for precision medicine and targeted therapeutic strategies in heart failure (*Circ Res*, 2022; *Circulation*, 2024).