

Janice M. Pfeffer, Ph.D.

1943-2001

The Janice M. Pfeffer Lectureship recognizes the scientific contributions of one of the pioneers in the field of cardiac remodeling. Born in Rockford, Illinois on October 31, 1943, Janice Marie Sikorski graduated with honors from Rockford College. There she studied with a lab partner named Marc Pfeffer, who shared her passion for integrative physiology. Janice and Marc became inseparable not only as husband and wife, but also as collaborators in integrative physiology. Janice M. Pfeffer was awarded her Ph.D. in Physiology and Biophysics from the University of Oklahoma, where she studied under Dr. Edward D. Frohlich. Her doctoral thesis, "Longitudinal Changes in Cardiac Function and Geometry During the Development of Left Ventricular Hypertrophy in the Spontaneously Hypertensive Rat," became a classic study on the role of cardiac hypertrophy and left ventricular remodeling. She continued her studies as a post-doctoral fellow in Dr. Eugene Braunwald's laboratory at the Peter Bent Brigham Hospital, Harvard Medical School. There she demonstrated that progressive ventricular enlargement, "ventricular remodeling", occurs following a myocardial infarction, and that this process continues long after the histologic resolution within the infarct zone. Her landmark study, "Influence of Chronic Captopril Therapy on the Infarcted Left Ventricle of the Rat", definitively demonstrated that ventricular enlargement was attenuated by angiotensin converting enzyme inhibitors, and that favorable alterations in ventricular remodeling in the animal model were associated with improved cardiac performance and prolonged survival. These pioneering animal studies introduced the concept of ventricular remodeling as a potential therapeutic target, and subsequently served as the basis for the landmark clinical trial, Survival and Ventricular Enlargement (SAVE), which showed that long-term treatment with an angiotensin converting enzyme inhibitor (captopril) prevented cardiac remodeling and resulted in improved clinical outcomes in humans. Based upon the results of this seminal translational study, angiotensin converting enzyme inhibitors have become one of the mainstays of therapy for the treatment of myocardial infarction.

In addition to being a meticulous and thoughtful scientist, Janice M. Pfeffer was a devoted mother and wife, who serves as a role model for countless women scientists. The intent of the Janice M. Pfeffer Lectureship is to acknowledge not only the latest insights and advances in the field of cardiac remodeling, but also to remember the remarkable personal and professional qualities that were emblematic of Dr. Janice M. Pfeffer.

About the Award...

Each year, the International Council selects a speaker to deliver the Pfeffer Distinguished Lecture at the World Congress or at the annual section meeting of one of the three largest ISHR Sections. The purpose of this lecture is to honor the memory of Dr. Pfeffer and to recognize her contributions to cardiovascular research. The topic of the lecture must be in the field of remodeling, heart failure and/or hypertrophy. The speaker receives a plaque and \$1,000. honorarium in addition to travel expenses.



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ISHR

International Society for Heart Research

The Janice Pfeffer Distinguished Lecture 2018



Janice M. Pfeffer, Ph.D.
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Honored Speaker:

Ajay Shah, MD, FMedSci

"A Radical Adventure - Unexpected roles of Nox proteins"

2018 Honored Speaker

Santiago, Chile

Ajay Shah, MD, FMedSci



Ajay Shah qualified in medicine with commendation from the University of Wales in 1982, then undertook his specialist training in internal medicine and cardiology at the University Hospital of Wales. His doctoral research training was pursued in Wales and Belgium under the

guidance of Andrew Henderson and Dirk Brutsaert respectively, and the work was awarded the British Cardiac Society Young Investigator Award in 1991. He was a post-doctoral scientist in Edward Lakatta's lab at the NIH in Baltimore in the early 1990s. After returning to the UK, he obtained a Medical Research Council Senior Fellowship in 1994 and was appointed to the British Heart Foundation (BHF) Chair of Cardiology at King's College London in 1998. He was appointed Head of the Cardiovascular Division (now, the School of Cardiovascular Medicine and Sciences) at King's in 2002 and awarded the title of James Black Professor of Medicine in 2014. He established and has been Director of the King's BHF Centre of Research Excellence since 2008. He remains a practicing clinical cardiologist.

His main research interests are in the role of oxidative stress, redox signalling and NADPH oxidases (NOX enzymes) in cardiovascular physiology and disease, particularly heart failure. His group contributed to the discovery and characterization of NOX enzymes in the heart and endothelial cells, their roles in cardiac hypertrophy, endothelial dysfunction and heart failure, and their involvement in signal transduction. Current work focuses on the cell-specific roles of NOX2 in cardiovascular disease and elucidating the intriguing adaptive effects of NOX4 when upregulated in the heart and vessels in response to disease stress. He also has a longstanding interest in the actions of nitric oxide (NO) in the heart, having published seminal studies describing the effects of NO on myocardial relaxation in cells, isolated hearts and in humans in vivo early in his career. More recently, he has pursued first-in-man studies investigating the roles of neuronal NO synthase (nNOS) in the human cardiovascular system.

Dr Shah has published over 325 peer-reviewed papers and has an H index of 82. He has delivered numerous invited international and national lectures. He is passionate about research training and has mentored >45 graduate students and numerous postdoctoral scientists. He is a Fellow of the UK Academy of Medical Sciences, the International Society for Heart Research, the European Society of Cardiology, and

the American Heart Association. He is Associate Editor of the American Journal of Physiology (Heart & Circulation), Consulting Editor for Cardiovascular Research, and serves on the Editorial Boards of Circulation and the European Heart Journal.

Previous Award Winners...

- 2017: Tetsuji Miura, MD, PhD**
- 2016: Edward Lakatta, MD**
- 2015: Kinya Otsu, MD, PhD**
- 2014: Joan Heller Brown, PhD**
- 2013: Michael Marber, MBBS, PhD, FRCP**
- 2012 Daria Mochly-Rosen, PhD**
- 2011: Thomas Force, MD**
- 2010: Junichi Sadoshima, MD, PhD**
- 2009: Donald M. Bers, PhD**
- 2008: Howard Rockman, MD**
- 2007: Joanne S. Ingwall, PhD**
- 2006: Evangelia Kranias, PhD**
- 2005: Edward D. Frohlich, MD**
- 2004: David Kass, MD**
- 2003: Piero Anversa, MD**

This award is funded by generous contributions from Bristol Myers Squibb, Hoffman-LaRoche, AstraZeneca, Scios and the Michael and Keri Whalen Foundation.