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.

ISHR

International Society for Heart Research

The Janice Pfeffer Distinguished Lecture 2013

Janice M. Pfeffer, Ph.D.
1943-2001

Honored Speaker:

Michael Marber, MB.BS, PhD, FRCP

"Keep Tabs on p38 mitogen-activated protein kinase "

Michael Marber,

MB.BS, PhD, FRCP

2013 Honored Speaker

San Diego, CA, USA

Mike Marber graduated from the Middlesex Hospital Medical School, London in 1984 having intercalated a BSc in Biophysics. After clinical training at the Brompton, St Peter's and St George's Hospitals he was awarded a British Heart Foundation Intermediate Fellowship to undertake his PhD in Physiology with Derek Yellon and David Latchman at University College London. This Fellowship was extended to allow postdoctoral training with Dr Wolfgang Dillmann at University of California, San Diego. In 1996 he was appointed as a Senior Lecturer, Honorary Consultant Cardiologist at the United Medical and Dental Schools of Guy's and St Thomas' Hospitals and subsequently promoted to Professor of Cardiology at King's College London and Guy's and St Thomas' Hospitals in 1999.

Mike Marber's research focuses on the myocardial response to ischaemic stress. Initial interests during his PhD and post-doctoral training in San Diego focused on cardiac stress proteins (Circulation 1993, J Clin Invest 1994 & 1995). After moving to King's College London he concentrated on the parallel development of clinical and laboratory models of adaptation to controlled myocardial ischaemia. His was the first group to hypothesize that the laboratory phenomenon of ischaemic preconditioning had a clinical correlate in warm-up and walk-through angina (Br Med J 1994, Lancet 1996) and has examined these correlates in patients (J Am Coll Cardiol 2003 & 2004, Circulation 2004, 2007 & 2012, Eur Heart J 2005). He has also looked at potential clinical markers of cardiac ischaemic injury (Eur Heart J 2004, Mol Cell Proteomics 2009). Although these observations provided some insight to the potential clinical benefits of warm-up angina they did not suggest how it could be "bottled". This required a deeper understanding of the underlying mechanism.

Most research groups agree that cardioprotection following brief episodes of myocardial ischaemia is mediated by the activation of protein kinase signalling pathways. Mike Marber's research suggested that this was by PKCε signalling through a stress-activated protein kinase, p38-MAPK (FASEB J 2000 & 2004, Circ Res 2001, Cardiovasc Res 2002). Over the last few years his group's research has focused on the p38-MAPK pathway and its role in sensing myocardial ischaemia. Pharmacological inhibition of p38-MAPK with SB203580 unexpectedly reduces the activating phosphorylation of p38 itself. Using a variety of approaches in isolated cardiac myocytes and intact myocardium his research suggests that this observation is due to p38-MAPK autophosphorylation following its association with another protein called TAB1 (Circ Res 2003, J Am Coll Cardiol 2006, J Biol Chem 2008 and 2010, Circulation 2012). The further characterization of this association is the subject of the Janice Pfeffer Distinguished Lecture.

Professor Marber has served as Chairman of the British Society for Cardiovascular Research, member of the Council of the British Cardiovascular Society, member of the Physiological Sciences Panel of the Welcome Trust, member of the Project Grant Committee of the British Heart Foundation, member of the Cardiovascular Panel of the UK Research Assessment Exercise, as a consultant and external reviewer for Health Technology Appraisals by the National Institute for Clinical Excellence and the Genetic Therapy Advisory Committee of the Department of Health and as Dean of the St Thomas' Hospital Campus. He currently co-leads the Atherosclerosis Theme within the National Institute of Health Research Biomedical Research Centre at Guy's & St Thomas' NHS Foundation Trust, serves on the Council of King's College London, is a member of the Chairs and Programme Grants Committee of the British Heart Foundation, is a member of the SE England specialist training committee for Cardiology and is Chairman of the Academic and Research Committee of the British Cardiovascular Society. He currently serves on the Editorial Boards of the *Journal of the American College of Cardiology, European Heart Journal*, *Journal of Molecular and Cellular Cardiology*, *Heart and Metabolism* and *Basic Research in Cardiology.*

Professor Marber contributes to the under- and post- graduate medical curriculum and received the student vote as "Best Clinical Teacher" in 2007 and was renominated for this award by students in 2009 and clinical trainees in 2011. His clinical interests are in patient care during and after acute myocardial infarction.

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