Janice 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 Pfeffer was awarded her Ph.D. in Physiology and Biophysics from the University of Oklahoma, where she studied under Dr. Edward 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 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.

ISHR

International Society for Heart Research

The Janice Pfeffer Distinguished Lecture 2003

Honored Speaker

Dr. Piero Anversa

"Myocardial Regeneration in Heart Failure"

2003 Honored Speaker

Piero Anversa, M.D.

Mystic, Connecticut

Dr. Anversa received his M.D. degree from the University of Parma (Italy) in 1965. He quickly rose to the rank of Professor of Pathology at the University of Parma and subsequently Professor of Pathology, Medicine, and Microbiology and Immunology at New York Medical College, where he is also Vice-Chairman of the Department of Medicine and Director of the Cardiovascular Research Institute.

Dr. Anversa's scientific accomplishments have been extraordinary. During his remarkably productive career, he has designed, conducted, and published a large number of seminal studies which have provided fundamental new insights into the pathophysiology of myocardial infarction, ventricular remodeling, heart failure, and cardiac repair. His investigations are uniformly characterized by their thoroughness, comprehensive nature, and technical excellence. Perhaps the most striking feature of Dr. Anversa's work, however, is its innovativeness: His studies challenge existing paradigms rather than expanding them, and in so doing they have led to novel ideas that have advanced our understanding of cardiovascular disease. For example, his demonstration that stretch-induced generation of angiotensin II contributes to fibrosis after infarction has paved the way for the use of ACE inhibitors in patients with heart failure. Despite obstinate recalcitrance in the molecular establishment, Dr. Anversa's demonstration that cardiac myocytes can divide *in vivo* has impelled a radical reassessment of the widely-accepted belief that these cells are terminally differentiated. Even more provocative – and far-reaching – are the implication of Dr. Anversa's recent studies documenting the ability of hematopoietic and cardiac stem cells to differentiate into cardiac myocytes and other cardiac cell types. These findings have had an enormous impact on the scientific community; more than anyone else's work, they have stimulated the development of the burgeoning field of cardiac regeneration.

Dr. Anversa's productivity has been phenomenal. He has published over 200 original articles, many of which have appeared in the most stringent journals (47 in *Circulation Research*, 8 in *JCI*, 5 in the *New England Journal of Medicine*, 2 in *Nature*, and 5 in *PNAS*). He has also published 61 book chapters/review articles, is a regular speaker at national and international meetings, and serves as a frequent reviewer for NIH grant and program project applications.

Few other cardiovascular investigators can boast an impact on the scientific community comparable to Dr. Anversa's. He is a leader rather than a follower. He does not adapt other people's ideas to his model – he generates new ideas for others to test and adapt to their models. Through his tenacious (and at times lonely) work, he has reshaped the way we think about such fundamental issues as ventricular remodeling, cardiac cell cycle regulation, hypertrophy, and cardiomyocyte death and regeneration. The hallmark of a great scientist is his/her ability to change prevailing thinking patterns. That, Dr. Anversa has certainly done.

About the Award…

Each year, the International Council selects a speaker to deliver the Pfeffer Distinguished Lecture at the World Congress or American Section meeting. 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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