

The President's Lecture

In October 2004, the International Council created a new distinguished lecture, named The President's Lecture, which will be a highlight of ISHR World Congresses and Section meetings.

The President's Lecture will be held at each World Congress of the ISHR and, in non-Congress years, at the meeting of the Section to which the selected speaker belongs. This lecture is intended to be a high profile event and will be scheduled as a keynote plenary lecture. The International Council will select the speaker. **The topic of the lecture will be in the field of molecular biology, genetics, genomics or proteomics, but the content should be chosen to be of broad interest to the cardiovascular community.** The speaker will be reimbursed for travel expenses, and will receive a plaque and a \$1,000 honorarium. A photograph and biosketch of the speaker will be published in *JMCC*, and in *Heart News and Views*, and will be posted in the ISHR website.

The President's Lecture will enhance the content of the ISHR scientific meetings by providing a high-quality presentation in a topical area that is not covered by other distinguished lecture awards, and reflects the continuing growth of the ISHR as a professional Society.

This award is funded by a generous donation from **Roberto Bolli, MD**, Winner of the ISHR 2004 Research Achievement Award, who declined to collect the monetary prize associated with the Award and requested that it be used for this purpose.



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ISHR

International Society for Heart Research

The President's Lecture 2007



Honored Speaker

Jeffrey Robbins, Ph.D.

**"Genetic Manipulation of
the Mammalian Heart:
What Have We Learned?"**

Jeffrey Robbins, Ph.D.

2007 Honored Speaker

Bologna, Italy



Dr. Jeffrey Robbins received his Ph.D. in Genetics and Development in 1976 from the University of Connecticut and is currently Professor of Pediatrics, Division Chief of Molecular Cardiovascular Biology and Associate Chair of the Research Foundation at Cincinnati Children's Hospital and Distinguished University Professor at the University of Cincinnati. Prior to assuming his present position, Dr. Robbins was Professor in the Departments of Pharmacology and Cell Biophysics, Molecular Genetics and Biochemistry, and Molecular Physiology at the University of Cincinnati College of Medicine. He has won a number of teaching awards, including the Golden Apple. His early work in defining the elements necessary for cardiac specificity of the transcriptional apparatus led to the development of reagents that are currently used worldwide to affect the protein complement of the heart through transgenic manipulation. Dr. Robbins, along with hundreds of other scientists, has used these tools to mechanistically explore the structure-function relationships of cardiac proteins. His work has focused on understanding the behavior of both the normal contractile proteins and the mutations that cause cardiovascular disease. His current work focuses in part on moving these models into large animals that more closely reflect

human cardiovascular behavior.

Dr. Robbins has been publishing in the field of cardiovascular biology for approximately 13 years. With over 140 peer-reviewed publications during this period, his contributions have changed the way that basic cardiovascular research is done, by allowing the research community to carry out "gain-of-function" approaches specifically in the myocardium via cardiac-specific transgenesis. In a series of landmark papers, Robbins first defined the promoter elements needed to drive high levels of gene expression in the mammalian heart. Identifying the cis-trans interactions was what drove the basic research but, understanding the implications, Robbins then took the work further and explored the utility of cardiac-specific gene expression as a method of doing defined genetics in the mammalian four-chambered heart.

After the initial proof-of-principal that cardiac specific transgenesis was feasible, he defined, built and tested a set of reagents that are now routinely used by hundreds of laboratories to carry out genetic experiments in the mouse cardiovascular system. Robbins unambiguously showed the utility of the general approach and developed a set of robust reagents that could be used by relatively inexperienced investigators to create animal models of cardiovascular disease. Robbins' work has changed the way in which we explore the basic pathology of cardiovascular disease. With well over 300 different models being developed and published using his reagents, the work that Robbins published has allowed the entire field to move forward at a pace undreamed of only 10 years ago. A contributing factor to the rapid spread of the technology was Robbins' early decision to make the reagents freely available, allowing the rapid dissemination of the needed tools, free from the confines of university intellectual property concerns.

Robbins went on to use gain-of-function approaches to further his own investigations into the underlying

pathologies of hypertrophic cardiomyopathy, as well as defining the structure-function relationships in a number of the contractile proteins. His recent experiments have established the importance of mutations in the intermediate filament protein desmin and the chaperone alpha B crystallin as causative for a class of cardiomyopathies, which has recently led to establishing a role in cardiovascular disease for intracellular pre-amyloids.

Dr. Robbins is a Fellow of the International Society of Heart Research and the American Heart Association. He has served on and chaired numerous national research review committees for the National Institutes of Health and the American Heart Association. He currently serves on 11 Editorial Boards, is Associate Editor for a number of journals and has been Cardiovascular Section Editor for the *Annual Review of Physiology* for the past 7 years. He has won numerous research awards and, in 2005, he was the recipient of the American Heart Association's highest honor for lifetime contributions to basic research; the Research Achievement Award.

Previous Award Winner.....

Dr. Mark Sussman Toronto, 2006

"Akt/PKB and me: our nuclear relationship"