

ISHR Research Achievement Award

The purpose of this award is to recognize an outstanding scientist who (i) has made major and independent contributions to the advancement of cardiovascular science, and (ii) is likely to further develop his/her research in the future. The main criteria for selecting awardees are scientific excellence and potential for future research contributions. While the Peter Harris Award recognizes lifelong accomplishments and the Richard Bing Award recognizes young investigators, the Research Achievement Award is targeted at scientists in the intermediate phase of their career.

The Research Achievement Award is presented triennially at the ISHR World Congress, where the winner presents a major lecture. The Award consists of a plaque and a monetary prize of \$30,000, which will be used to support the research program of the awardee. An announcement of this Award, along with a photograph and a biosketch, will be published in the *Journal of Molecular and Cellular Cardiology* and in *Heart News and Views*, and posted in the ISHR website.

*This award is funded by a generous contribution
from Chugai Pharmaceutical Co.*



ISHR

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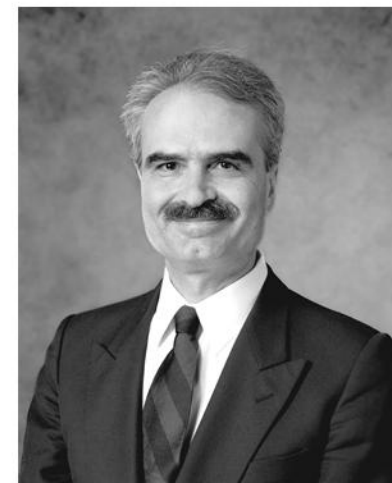
Y Yazaki, *Japan*



ISHR

International Society for Heart Research

The Research Achievement Award 2004



Award Winner

Dr. Roberto Bolli

Roberto Bolli, M.D.

**2004 Award Winner
Brisbane, Australia**

Dr. Bolli graduated from the University of Perugia (Italy) in 1976. After a research Fellowship at the NIH (1978-1980) and a clinical Fellowship in Cardiology at Baylor College of Medicine (1981-1983), he was appointed to the faculty at Baylor, where he rose to the rank of Professor. In 1994, he accepted the position of Chief of Cardiology at the University of Louisville, where he is also a Distinguished University Scholar and the Director of the Institute of Molecular Cardiology. Twice at two different institutions, Dr. Bolli has developed *de novo* a leading research program that has achieved international prominence.

Over the past 25 years, Dr. Bolli has made extraordinary contributions to our understanding of the molecular mechanisms responsible for myocardial injury during ischemia and reperfusion, paving the way for the development of novel cardioprotective strategies. His innovative work has importantly shaped our current knowledge regarding these issues. His research is innovative, mechanistic, thorough, and hypothesis-driven. He is a rare example of a scientist who has proposed several novel hypotheses, has tested them rigorously, and eventually has succeeded in validating them to the point where now they are regarded as proven hypotheses. Indeed, one of the most striking aspects of his research is that it has been consistently reproducible and his work has stood the test of time.

His earlier work at Baylor established a fundamental role of reactive oxygen species in the pathogenesis of reversible postischemic dysfunction or myocardial "stunning". In a series of studies spanning a decade, he proposed, tested, and validated the concept that myocardial stunning is a manifestation of oxygen radical-mediated reperfusion injury, a concept that is now regarded as a proven hypothesis. More recently, he has identified, for the first time, the signal transduction pathways and the cardioprotective genes responsible for the late phase of preconditioning, thereby elucidating the molecular basis of this adaptation of the heart to stress. His discovery that the cardioprotection afforded by preconditioning is mediated by two proteins commonly thought to be detrimental (inducible NO synthase and

cyclooxygenase-2) has changed our understanding of the role of these enzymes in the heart; it has also provided a rationale for a novel therapeutic approach in patients with coronary disease, i.e., prophylactic cardioprotection based upon chronic upregulation of protective proteins via gene therapy. Unlike most basic investigators, he has also translated his basic discoveries to the clinical setting. For example, he has demonstrated the existence of preconditioning in patients and has discovered that nitroglycerin can mimic this powerful beneficial effect during coronary angioplasty, thereby revealing a novel therapeutic application of nitrates in patients with coronary artery disease. His work has established him as an undisputed leader in the field of myocardial ischemia.

Dr. Bolli is the recipient of an NIH MERIT Award (2001-2010) and the Basic Research Prize of the American Heart Association (2001). He is a member of the American Society for Clinical Investigation and the Association of American Physicians. He has also received the Physician-Scientist Award of the American College of Chest Physicians (1987-89) and the Young Investigator Award for Free Radical Research (1988). He has been active in several scientific organizations. He served in the NIH CVB Study Section (1992-96) and then in the NHLBI Program Project Review Committee (2000-2003), and is presently a member of the NHLBI Advisory Council. He is also Chairman of the NHLBI Working Group on Protection of the Ischemic Myocardium. In the American Heart Association, Dr. Bolli served as a member of the National Research Committee (1998-2000), Chairman of the Cardiovascular Pathophysiology I Review Committee (1998-2000) and the Reynolds Foundation Review Committee (2003), and is currently Chairman of the Council on Basic Cardiovascular Sciences. In addition, he is a member of the Program Committee of the AHA and chairs the Distinguished Scientist Selection Committee of the AHA. With regard to the ISHR, he served as Secretary General and Treasurer (1998-2004) and is now President-Elect (2007-2010). Dr. Bolli is or has been on the Editorial Board of virtually all major cardiovascular journals, and is presently Associate Editor of *Circulation Research* and of the *Journal of Molecular and Cellular Cardiology*.

Dr. Bolli has delivered over 140 lectures at national and international meetings, including several keynote and landmark lectures. He was selected as the Keith Reimer Distinguished Speaker of the ISHR in 2002. Recently, he has been awarded the Robert Berne Distinguished Lecture for the 2005 Congress of the American Physiological Society. Dr. Bolli has published more than 230 peer-reviewed papers, including 158 original articles. Among the original articles, 28 have appeared in *Circulation Research*, 5 in *PNAS*, 7 in *JCI*, and 15 in *Circulation*. Thirty-one of his papers have been cited more than 100 times and six more than 300 times. He is the first or last author in 70% of the 158 original articles.

**2001 Award Winner
Eduardo Marban, M.D. Winnipeg, Manitoba**



Eduardo Marbán earned his B.S. in mathematics from Wilkes College in Pennsylvania, and then attended the Yale University School of Medicine in a combined M.D./Ph.D. program. (M.D. 1980, Ph.D. in Physiology 1981). During his internship and residency at Johns Hopkins Hospital, he was appointed research associate in the Dept. of

Physiology at the Univ. of Maryland. The following year he became a fellow in the division of cardiology at Johns Hopkins under Myron Weisfeldt, M.D. Appointed as an assistant professor in the Dept. of Medicine in 1985, Dr. Marbán was promoted to associate professor in 1988 and in 1991 achieved the rank of full professor. In 1992, he was appointed Director of Molecular and Cellular Cardiology at Johns Hopkins. In 1998, Dr. Marbán became director of the newly-established Johns Hopkins Institute of Molecular Cardiobiology, an interdepartmental program designed to foster fundamental research into the workings of the heart. Dr. Marbán was honored as the first faculty member, in 1999, to be named to the Michel Mirowski, M.D. Professorship in Cardiology. In 2003, Dr. Marbán became the Chief of Cardiology at Johns Hopkins and inaugurated the Donald W. Reynolds Cardiovascular Clinical Research Center at Johns Hopkins, a \$24 million 4-year program focused on identifying novel risk factors for sudden cardiac death.