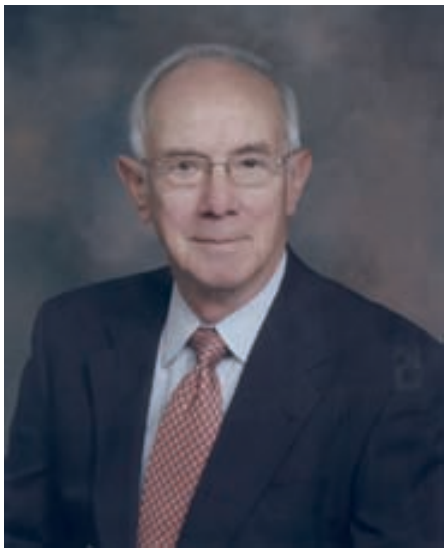
ROBERT B. JENNINGS, M.D.

INAUGURAL RECIPIENT OF THE ISHR DISTINGUISHED LEADER AWARD (2009)



Dr JENNINGS is Emeritus James B Duke Professor of Pathology at Duke. He retired from the chair of Pathology at Duke in 1989 and continued active experimentation until he closed his laboratory in 2000. He has published several recent papers on work done earlier but never written up.

Dr Jennings's association with the ISHR began in the late 1960s when he became a member of a committee named "the International Study Group for Research in Cardiac Metabolism" formed by George Rona, Richard Bing, and Eörs Bajusz. This committee was formed as a reaction to the emphasis placed by the American Heart Association on hemodynamics and electro–cardiography. Metabolism, mechanisms of contraction, genetic diseases, ultra–structure, ischemic injury, Ca overload, *etc.* were all uncommon topics in AHA pub–lications and generally were not discussed at heart meetings. This committee arranged meetings in Europe and the USA where investigators with similar scientific interests could meet and discuss their work. Eventually, under the leadership of Naranjan Dhalla, Lionel Opie, and Richard Bing, the International Association of Heart Research was formed as a loosely organized Society composed of scientists from around the world who met to discuss cardiovascular research topics of interest to them. In 1973, the Society held an excellent meeting in Freiberg, Germany arranged by Albrecht Fleckenstein. In 1978, the Society held a meeting in New Delhi following the World Congress of Cardiology in Tokyo. At this meeting, Jennings became the President-Elect of the ISHR.

It was clear that the Society could prosper only if it had bylaws to govern its operations and the relationships between the intern–ational sections of the Society. Using the bylaws of the International Society of Nephrology as a model of how to organize a confederation of international societies, Dr Jennings prepared a draft of bylaws for the ISHR. Howard Morgan helped write and edit the final version, and in 1980 the bylaws were presented and approved at the Moscow Congress of the ISHR [Editors Note: The ISHR Bylaws are available online at www.ishrworld.org under the "Bylaws" tab.]. Since that time, the Society has been functioning in an orderly fashion. The Secretary General of the Society is the most critical officer because most actions take place through this office. This individual is responsible for holding the Sections together and for keeping the ISHR-International operating between triennial congresses.

Following the new bylaws, Dr Jennings served as President for only two years and as Past-President for three years. He continues to be active on a variety of Committees, has arranged symposia at various Congresses and attended many of the Congresses of the Society. In Kobe in 1993, he was awarded the Peter Harris Distinguished Scientist Award for ex–cellence in cardiovascular research. In 1996, he was named Chairman of the newly formed Finance Committee of the Society. A finance committee became necessary when Drs Dhalla, Morgan and Makoto Nagano raised US$300,000 to support

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ISHR Distinguished Leader Award

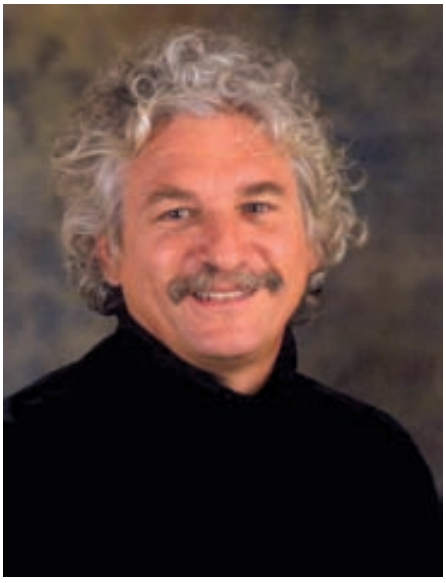
The **ISHR Distinguished Leader Award** is an award of high distinction that is conferred annually, beginning in 2009, to an individual who has made sustained outstanding contributions to accomplishing the mission and ad–vancing the objectives of the ISHR.

The selection of the recipient is made solely on the basis of a distinguished and consistent track record of major contributions to the Society, such as leadership roles, activities, and initiatives that have benefited and promoted the ISHR by overcoming problems, devel–oping new programs, and expanding the reach and impact of the Society at the Section and/or the International levels.

Candidates are nominated by current Section Presidents and President of the Intl-ISHR. Details of the competition are available on the ISHR website (www.ishrworld.org) under the ISHR Awards tab.

Edward G. Lakatta, M.D.

2010 Recipient of the ISHR Distinguished Leader Award



Dr LAKATTA is the founder and Director of the Laboratory of Cardiovascular Science, National Institute on Aging, National Institutes of Health. He also holds adjunct appointments as Professor, Department of Physiology, University of Maryland School of Medicine, and Professor, Cardiology Division, Johns Hopkins School of Medicine.

Dr Lakatta was recently awarded the prestigious 2011 Distinguished Leader Award of the International Society for Heart Research (ISHR) at XX World Congress of the ISHR in Kyoto, Japan for his sustained and outstanding contributions to advancing the objectives of the Society. Over the years, Dr Lakatta has been both a leader and advocate for the ISHR. He served for many years on both the International Council and the North American Section Council, and chaired the Scientific Program Committees for the successful ISHR World Congresses held in Rhodes, Greece (1998) and Brisbane, Australia (2004). In addition, he has published more than 50 papers in the Society journal, the *Journal of Molecular and Cellular Cardiology*. During his career, Dr Lakatta has placed particular emphasis on mentoring early-career scientists both in his laboratory and in the context of career development activities of the Society.

Dr Lakatta has made a sustained 30-plus-year commitment to a broad-based research career. His studies range from molecules to humans, including translation of novel findings into the clinical realm. The overall goals of his research program are 1) to identify age associated changes that occur within the cardiovascular system and to determine the mechanisms for these changes; 2) to determine how aging of the heart and vasculature interacts with chronic disease states to enhance the risk for CV diseases in older persons; 3) to study basic mechanisms in excitation-contraction coupling and how these are modulated by surface receptor signaling pathways in cardiac cells; 4) to elucidate mechanisms of pacemaker activity in sinoatrial nodal cells; 5) to elucidate mechanisms that govern cardiac and vascular cell survival; 6) to establish the potentials and limitations of new therapeutic approaches such as changes in lifestyle, novel pharmacologic agents or gene or stem cell transfer techniques in aging or disease states.

Dr Lakatta is recognized as both nationally and internationally as an expert in cardiovascular research. He has authored over 350 original publications in top peer-reviewed cardiovascular journals, written over 200 invited reviews/book chapters, and delivered over 300 invited lectures. He is a member of multiple scholarly societies and journal editorial boards. Based upon his accomplishments, Dr Lakatta has received numerous awards, among which are the Allied Signal Achievement Award in Aging, the Novartis Prize in Gerontology, and the Irving Wright Award of Distinction of the American Federation for Aging Research (AFAR). ■

Symposia at the International Congresses. These funds, together with income from investments and the publication of the *Journal of Molecular and Cellular Cardiology*, have grown to more than US$1,000,000. In 2005, Charles Steenbergen was named Co-Chairman of the Finance Committee. With his aid and advice, the Finance Committee continues its excellent stewardship of ISHR funds.

Dr Jennings began his studies on myocardial ischemic injury in 1953 at Northwestern University Medical School (Chicago) where he developed an animal model of acute myocardial infarction that allowed one to study the biochemical and ultrastructural changes leading to cell death in ischemia. Using reperfusion with arterial blood to eliminate ischemia, he showed that myocytes tolerated 15 minutes of severe ischemia without dying (reversible ischemic injury); conversely, after 40 to 60 minutes of ischemia, reperfusion did not salvage the myocytes in the subendocardial myocardium (irreversible ischemic injury). This was the scientific basis for the later use of reperfusion therapy to salvage myocytes in evolving acute myocardial infarcts in man. The reperfused, irreversibly

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ISHR MEETINGS CALENDAR

- **May 22-25, 2011.** **XXXII Annual Meeting of the North American Section.** Philadelphia, PA, USA
- **June 26-29, 2011.** **XXX Annual Meeting of the European Section.** Haifa, Israel
- **August 11-14, 2011.** **XXXV Annual Meeting of the Australasian Section** (jointly with the Cardiac Society of Australia and New Zealand). Perth, Australia. *Website* www.csanz.edu.au
- **August 27-31, 2011.** **Congress of the European Society of Cardiology.** Paris, France. *Website* www.escardio.org
- **November 12-16, 2011.** **Scientific Sessions of the American Heart Association.** Orlando, Fl. *Website* www.scientificsessions.org
- **December 2, 2011.** **XVIII Annual Meeting of the Japanese Section.** Tokyo, Japan. *E-mail* Dr Isobe Mitsuaki: isobemi.cvm@tmd.ac.jp

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injured myocytes exhibited striking disruption of their architecture within a few seconds of the onset of reperfusion (contraction band necrosis), and were later shown to accumulate large quantities of calcium phosphate in the mitochondria. The source of the calcium was the plasma reperfusing the tissue.

In 1975, Jennings retired from the chair–manship of Pathology at Northwestern and became Chairman of Pathology at the Duke Univ. Med. Ctr (Durham, NC), where he continued his work on ischemic injury but added cardioprotection to the topics under study. Since reperfusion therapy was now a common clinical procedure, his group studied the factors involved in myocyte salvage after prolonged periods of isch–emia. They showed that there was a wavefront of ischemic injury progressing from the subendocardium to the subepi–cardium and that most of the myocytes salvaged by reperfusion were in the midmyocardium and subepicardial myo–cardium. They also established the parameters required to estimate whether or not a therapy was protective. Dr Jennings, along with collaborators Chuck Murry and Keith Reimer, showed that a brief episode of ischemia followed by reperfusion protected the myocardium against a prolonged period of ischemia. This was termed preconditioning with ischemia, which is the strongest form of cardio–protection identified to date.

Finally, Dr Jennings and his group established the biochemical and ultra–structural features associated with the transition to irreversibility in the dog heart. These features include very low ATP and destruction of the adenine nucleotide pool with accumulation of adenosine, inosine, hypoxanthine and xanthine in the tissue together with marked acidosis secondary to the accumulation of lactate. From the ultrastructural point of view, irreversibility is associated with small breaks in the sarcolemma generally located in the region of the attachment complexes between the Z band and the sarcolemma. In addition, the cytoskeletal protein, vinculin, is lost from the complexes at about the same time that the disruption occurs.

Dr Jennings has delivered numerous named lectures around the world and has received a number of awards such as the Distin–guished Achievement Award of the Society of Cardiovascular Pathology and the Distinguished Alumnus Award of the Northwestern University Medical School, both in 1996. In 2004, he was awarded the AHA Discovery Channel Award, and in 2005 he was awarded the Medal of Merit of the International Academy of Cardio–vascular Sciences. He won the Gold-Headed Cane Award of the American Society of Investigative Pathology in 2007, and at the 2009 Annual Meeting of the American Section of the ISHR in Baltimore, MD, he was the inaugural recipient of the Distinguished Leader Award of the ISHR. ■

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myocyte Ca^{2+} cycling and contractility. *Biophys J* 2009; **96:** 515a.

14. Tocchetti CG *et al.*. Nitroxyl enhances con–tractility in failing isolated mouse cardio–myocytes. *Circ Res* 2009; **105:** E60.

15. Tocchetti CG *et al.* Playing with cardiac "redox switches": the "HNO way" to modulate cardiac function. *Antioxid Redox Signal* 2011, Mar 3 [Epub ahead of print].

16. Tocchetti CG *et al.* Nitroxyl improves cellular heart function by directly enhancing cardiac sarcoplasmic reticulum Ca^{2+} cycling. *Circ Res* 2007; **100:** 96-104.

Dr Carlo Tocchetti
Naples, Italy ■