

CV Network

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Academy hosted a unique meeting!



IACS Europe Executive Secretary Keld Kjeldsen (left) and Deputy Executive Secretary Thomas Andersen Schmidt presented Joseph Cardinal Ratzinger, now Pope Benedict XVI, with a copy of CV Network.

In December 2004 in Rome, IACS Europe launched a new course on Faith and Disease. The course immediately caught the attention of the scientific community as something new in our time and it was also deemed interesting by the Vatican. Thus, course participants were received in Palazzo de Uffizio by Joseph Cardinal Ratzinger, now Pope Benedict XVI. The cardinal gave an introduction to his work on relativism and took questions from course participants. Important interaction took place, and the audience lasted around an hour.

IACS Europe is currently planning a related course in Jerusalem. For further information, please contact Thomas A. Schmidt, MD, DSc: tas@dadlnet.dk or Ivan Berkowitz: ivan@mts.net



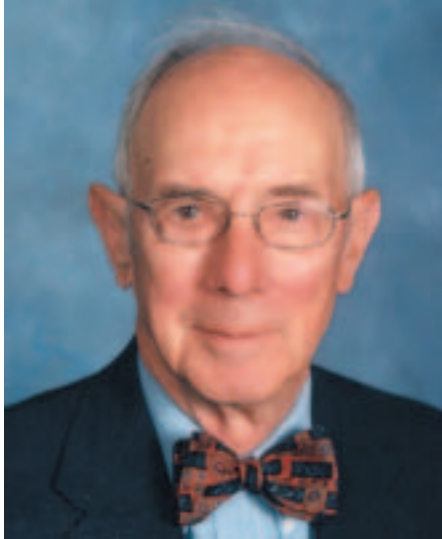
PEOPLE AND PLACES

Robert Jennings receives high honours from the Academy

The International Academy of Cardiovascular Sciences is delighted to recognize his extraordinary achievements and honour Robert Jennings with its most prestigious Medal of Merit

Dr. Robert B. Jennings graduated from the Northwestern University Medical School in Chicago Illinois in 1949 at the age of 22. After a rotating internship, he spent a year in research in the Pathology Department of the Medical School prior to entering the U. S. Navy in 1951 during the Korean War. He reported for duty at the Great Lakes Naval Hospital where he was assigned to the Pathology Service. After serving for two years as a Medical Officer, he transferred to the inactive reserve and became an Instructor in Pathology at Northwestern University. He spent much of the next 50 years studying the heart and pursuing a career in academic medicine.

His first job was a good one from the point of view of research. His only responsibility was to teach medical students general patholo-



Dr. Robert Jennings

gy for roughly six months of the year. The remainder of his time was available for research. He applied himself and was lucky in his choice of questions to study. He rose from instructor to professor in 10 years and became Chairman of the Department of Pathology in 1969 when he also was named Magerstadt Professor of Pathology.

The search for an answer to a single question has guided much of Dr. Jennings' research on the heart, namely: What event or series of events kills myocytes when they are made acutely ischemic? In 1953, as well as now, necrosis is not obvious in the human heart for hours after a patient develops signs and symptoms of acute myocardial infarction. Jennings hypothesized that it was likely that cell death occurred much faster than the histological study of autopsy hearts indicated. Using experimental acute myocardial infarcts in which he knew the part of the heart that was going to die in sustained occlusion, he was able to show that myocytes tolerated 15 to 18 minutes of severe ischemia. He termed this "Reversible Injury". However, longer periods of ischemia resulted in the death of more and more myocytes in the subendocardial myocardium. Although dead, these myocytes were grossly normal. This state was termed "Irreversible Injury". The question then became one of ascertaining which changes occurred in the reversibly injured myocytes at the time of transition to irreversibility. Dr. Jennings was able to show, together with Charles Steenbergen and Charles Ganote that, at about the time of

the transition, electron microscopy indicated that the sarcolemma was disrupted. Functional assessment of sarcolemmal integrity in tissue slices prepared from irreversibly injured tissue confirmed this finding. Thus, loss of cell membrane integrity is considered to be the critical event that leads to the death of ischemic myocytes.

In a critical experiment performed in 1959 and 1960, Dr. Jennings attempted to learn precisely when myocytes passed the "point of no return". He did this by reperfusing the ischemic myocytes with arterial blood after having exposed them to various periods of ischemia. Using this technique, he was able to show that myocytes remained reversibly injured for an extended period of time and moreover, that they did not die simultaneously. These findings served as the scientific basis of reperfusion therapy in man, a procedure developed in the mid-1970s by Rentrop and others.

In 1978, Dr. Jennings and his long time collaborator, Keith Reimer, gave a blueprint for the salvage of ischemic myocytes in the dog heart. They showed that there was a transmural wave front of cell death in acutely ischemic myocardium in which the subendocardial myocardium died first followed by the death of myocytes in the mid- and subepicardial myocardium. Cell death progressed transmurally as a function of collateral arterial flow until all myocytes destined to die were dead. Salvage was possible during the first six hours of ischemia but not thereafter. Thus, significant numbers of myocytes can be salvaged by reperfusion for an extended period of time. This work was done at the Duke University Medical Center where in 1975 Dr. Jennings became Chairman of Pathology and a James B. Duke Professor. These studies were the basis of the American Heart Association Discovery Health Channel Award in 2004 for a basic science discovery that led to a major advance in clinical medicine.

From 1978-90, a number of important studies looked at the mechanism of cell death. Most of these studies involved analysis of the changes occurring in reversibly and irreversibly injured myocytes during or as a consequence of reperfusion of the damaged tissue, demonstrating that massive sarcolemmal destruction occurs within seconds of the onset of reperfusion of irreversibly injured tissue, and that this change is associated with massive calcium loading. This was the first direct link between calcium loading and cell death. Anthony Shen and Dr. Jennings identified that the calcium came from the plasma reperfusing the tissue and that most of the calcium was actively accumulated by the mitochondria. Dr. Jennings also showed a close association between ATP depletion, lactate accumulation and cell death during the first episode of ischemia, and hypothesized that sarcolemmal disruption might be related to one or both of these changes, although ATP depletion and lactate accumulation slowed greatly during a second brief episode of ischemia. This unexpected observation led to the discovery of the phenomenon known as "Ischemic Preconditioning". A bright graduate student named Charles Murry, who was working with Drs. Jennings and Reimer, showed clearly that a brief episode of reversible ischemia protected the heart against the effect of a prolonged episode of ischemia, and proposed that the slowed metabolic changes might be the cause of the beneficial effect. In any event, this was the strongest protective effect ever identified in the experimental animal heart and was shown to occur in the human heart as well.

In 1989, Dr. Jennings retired from the Chair in Pathology at Duke and continued to be active in research until 2003. He has been awarded multiple honors over the course of his career including the Borden award for the best research done while a medical student, a Markle Scholarship in Academic Medicine, the Peter Harris Award for Excellence in Research of the International Society of Heart Research in 1992, the Cardiovascular Pathologist of the Year Award by the American Society of Cardiovascular Pathology in 1993, and the American Heart Association's Discovery Health Channel award in 2004. ❤️

Academy Elects Two New Fellows

President Howard Morgan is pleased to announce the election of two new Fellows to bring the number to 243 of the most exceptional heart health professionals from around the world. The Fellows were elected to acknowledge their distinguished careers and outstanding achievements.



Attilio Maseri

Prof. Attilio Maseri, MD is Professor of Cardiology, Faculty of Medicine, Università Vita- Salute S. Raffaele, Milan, Italy; and Chairman, Cardiovascular and Thoracic Department, San Raffaele Scientific Institute. Their Cardiovascular Clinical Biology Unit is devoted to the application of molecular biology and functional genomics to patients' diagnosis and treatment. In the past the application of physiological methods to clinical research revealed the cardiovascular dysfunctions responsible for patient symptoms and adverse prognosis, thus making available strategies for their repair. Now the application of biological methods to clinical research allows us to investigate the multiple etiological mechanism of such dysfunction and hence to develop novel, individually targeted diagnostic, therapeutic and preventive strategies.

Dr. Maseri's experience included:

- MD Degree, University of Padua, 1960
- Ph.D. in Cardiology (1963) and Nuclear Medicine (1968), University of Pisa
- 1965-1967: University of Pisa, Columbia University and Johns Hopkins University
- 1967-1979 Head of the Coronary Research Group at the University of Pisa
- 1979-1991: Sir John McMichael Professor of Cardiovascular Medicine at the Royal Postgraduate Medical School and Director of Cardiology c/o Hammersmith Hospital, London
- 1991-2001: Professor of Cardiology, Catholic University of Rome

His Memberships and Prizes are truly global:

- Lifetime Member of the Johns Hopkins Society of Scholars
- Honorary Member of the Alpha Omega Alpha Honor Medical Society
- First George von Hevesy Prize for Nuclear Medicine – Tokyo, 1974
- James B. Herrick Award of the American Heart Association, 1992
- Distinguished Investigator Award from the ACC, 1992
- King Faisal International Prize for Medicine 1992
- Invernizzi Prize for Medicine - 1998
- European Society of Cardiology Gold Medal Award (2002)



Krishna Agrawal

Dr. Krishna C. Agrawal received the Ph.D degree in Pharmaceutical Chemistry from the University of Florida in 1965. After one year postdoctoral fellowship, Dr. Agrawal accepted a position as Research Associate in the Department of Pharmacology, Yale University School of Medicine, New Haven, CT. He became a faculty member as an Instructor, was then promoted to Assistant Professor and then to Associate Professor of Pharmacology. In 1976, he moved to Tulane University School of Medicine as an Associate Professor of Pharmacology. He was promoted to Professor of Pharmacology in 1981. In 1996, he was appointed as an Interim Chair of the Department of Pharmacology and in 1999, he was named as the Regents Professor and Chairman of the Department of Pharmacology at Tulane University School of Medicine.

Dr. Agrawal's research initially was primarily in the field of new drug development in cancer chemotherapy. In 1978, Dr. Agrawal started the first cancer research stem cell laboratory at Tulane, to test the sensitivity of anticancer drugs against the individual tumor stem cells that were grown in petri dishes. Dr. Agrawal's early research at Tulane was focused in the area of the development of radiosensitizing drugs, designed to sensitize hypoxic tumor cells to radiation therapy. Dr. Agrawal then extended his research program to develop anti-HIV drugs that could be effectively used in the treatment of AIDS. His major focus was on the development of prodrugs of zidovudine (AZT) in an attempt to reduce AZT-induced myelosuppression. His work demonstrated that the down-regulation of erythropoietin receptors in the erythroid precursor cells played a major role in AZT-induced anemia observed in patients receiving this drug. Dr. Agrawal's research continued in the field of molecular pharmacology and he demonstrated that a combination of AZT with HIV-1 protease inhibitors caused a synergistic endothelial cell dysfunction which lead a to higher incidence of cardiovascular diseases in HIV-1-infected patients. Dr. Agrawal demonstrated that HIV-1 protease inhibitors suppress adipogenesis by disrupting the concerted actions of host proteases regulating ECM integrity, which is required for the initiation of adipogenic differentiation. His most recent research has focused on delineating the molecular mechanisms of highly active anti-retroviral therapy-induced endothelial dysfunction. He has shown that chronic exposure to the anti-HIV-1 drugs increases oxidative stress in endothelial cells and induces mononuclear cell recruitment which eventually precipitate cardiovascular diseases in HIV+ patients.

Throughout his tenure at Tulane, Dr. Agrawal's research has been supported by grants from the National Institutes of Health. He has published over 110 research articles in peer-reviewed journals and 10 chapters in various books.

Dr. Agrawal has received many honors including Pantulu Gold Medal for outstanding achievement in B. S., 1959; Sigma Xi, 1965; and

Fellow of the American Institute of Chemists, 1971. Dr. Agrawal has served on many scientific advisory panels such as Scientific Advisory Committee for the Institutional Research Grants, American Cancer Society; Merit Review Subcommittee for Oncology, Department of Veterans Affairs; Member of the NIH Study Sections on AIDS Research and Related Research, Experimental Therapeutics II Study Section and the Drug Discovery and Molecular Pharmacology Study Section. Dr. Agrawal is a member of the following professional societies: American Society for Pharmacology and Experimental Therapeutics, American Association for Cancer Research, Radiation Research Society, American Chemical Society, American Society of Hematology, International Society for Antiviral Research, Society for Experimental Biology and Medicine, and International Society for Heart Research. ❤

REMEMBERING SPECIAL PEOPLE

Sir John Vane



John Robert Vane became a pharmacologist by accident. His first choice of career, stemming from a childhood hobby, was chemistry, and he graduated in that subject from the University of Birmingham in 1946. As an experimentalist by nature, however, he did not find chemistry as rewarding as he had imagined. Discussing his future with his head of department, he was told that J. H. Burn in Oxford was seeking graduates to be trained in pharmacology, the study of drug action. After qualifying, he spent a short time at Sheffield University before returning to postgraduate studies in Oxford. After receiving his DPhil he went to join the Department of Pharmacology at Yale as an assistant professor. The roots of much of Dr. Vane's subsequent work could be traced back to his Oxford days and to the friendships he forged while there. In 1955 he returned to the UK and embarked upon what might be regarded as the first of his three major creative periods. He joined Dr. W. D. M. Paton's department of pharmacology at the Institute of Basic Medical Sciences, eventually located at the Royal College of Surgeons in London. Dr. Paton was succeeded as head of department in 1961 by G. V. R. Born, a friend of Dr. Vane's from Oxford. Vane rose quickly through the academic ranks, gaining a chair in 1966. Under his and Dr. Born's guidance, the department provided a productive intellectual environment which not only nurtured important breakthroughs but also kick-started the careers of many of today's most able pharmacologists.

John Vane shared the Nobel Prize for Medicine in 1982 for solving one of medical science's most baffling mysteries: how aspirin worked. The Ancient Egyptians, the Greeks and the Romans had all used willow bark to treat pain; it contains salicylates, from which aspirin is chemically derived. In the 19th century, the drug became known for its painkilling and anti-inflammatory effects, and in 1948 Californian Dr. Lawrence Craven recommended that his patients take an aspirin a day to reduce the risk of heart attack. But not until Dr. Vane's discovery could anyone work out how this versatile and mysterious drug actually operated.

Dr. Vane had already developed a system that allowed him to measure, almost instantaneously, the level of a number of hormones in blood at the same time. Using this, he was able to determine that aspirin inhibits the action of prostaglandins — compounds like hormones that cause inflammation, pain and fever in the body. He also worked out that even a tiny dose of aspirin stops the production in platelets of a prostaglandin called thromboxane, which causes platelets to stick together to plug any ruptures in blood vessels. This provided scientific justification for aspirin's efficacy in preventing blood clots, a common cause of heart attacks and strokes.

Though it was his work on aspirin that won him the Nobel Prize, Dr. Vane made many other advances in the field of pharmacology over his long and distinguished career. Many of the current remedies for hypertension, for example, owe their foundation to his discoveries; and as the Director of the Wellcome Foundation he oversaw the development of drugs to combat such diverse ills as viral infection, gout and epilepsy. The drugs he was directly or indirectly responsible for producing are now some of the most frequently used treatments in medicine.

In 1986, aged 59, he left the Wellcome Foundation, but Dr. Vane had no intention of retiring. An invitation from St Bartholomew's Hospital Medical School and an offer of some start-up funding from Glaxo Group Research gave him the chance to start up a new lab. He accepted with alacrity. He retired as the full-time Director of the Institute in 1995, but still kept an office there. After the merger of the Institute with the Medical School in 2000, he took over the role of honorary chairman of the charitable William Harvey Research Foundation.

Although by nature rather a shy man, Dr. Vane was immensely sociable. He, his wife Daphne and his daughters Nicki and Miranda frequently entertained their friends and colleagues with enormous panache at their home, in restaurants and at scientific meetings around the world. His wife and daughters survive him.

Dr. Wilfred G. Bigelow

Wilfred G. Bigelow was born in Brandon Manitoba. He earned his MD from the University of Toronto in 1938, followed by a surgical residency at Toronto General Hospital. In World War II, he served as a surgeon in casualty clearing stations, during which time he grew

interested in the ravages of injury brought on by hypothermia or total body cooling. After the war, Dr. Bigelow studied at Johns Hopkins University, and then at the Toronto General Hospital and the University of Toronto, investigating the physiological effects of hypothermia. His key discovery, made in 1950, was recognizing how to lower the body's oxygen requirements while lowering the body's core temperature to a point at which safe open heart surgery was possible. The first successful application of Dr. Bigelow's hypothermia research for open heart surgery occurred in 1953. Meanwhile, he had pioneered another major advance in the management of heart disease, the pacemaker, which evolved quite unexpectedly out of his hypothermia research in 1951. The first model is shown below – Dr. Bigelow (l) was with his co-inventors John Callaghan (centre) and Jack Hopps (r).



Together, these discoveries revolutionized heart surgery and have made a significant difference to the lives of millions of people with heart disease. Dr. Bigelow authored 120 publications, including important historical works on hypothermia and the pacemaker, and on the development of heparin in Toronto. He was also the recipient of some 25 major awards, including the International Gairdner Award for Medical Science (1959), Officer of the Order of Canada (1981) and the FNG Starr Medal (1992) which is the Canadian Medical Association's highest honour. At the recent 2nd Annual National Research Forum for Young Investigators in Circulatory and Respiratory Health, attracting over 400 scientists to Winnipeg, one of the Landmark Lectures was named in honour of Dr. Bigelow.

"Bill" Bigelow was one of the most distinguished surgeons Canada has ever produced and he stands among the world's titans of medicine. He was a close friend of one of the Academy's Founding Directors Dr. Robert E. Beamish whom we also miss desperately. ♥

Dr. Bigelow died in Toronto on March 27, 2005 at age 91.

AN OPPORTUNITY TO HONOUR NORMAN ALPERT



Buoyed by the incredible outpouring of shock and sympathy at the loss of the beloved Norman Alpert, it seems appropriate to encourage friends to donate in his memory to the "NORMAN ALPERT MEMORIAL FUND TO RECOGNIZE ACHIEVEMENTS OF ESTABLISHED INVESTIGATORS". Interest from this endowment fund will make possible a most prestigious award annually.

Dr. Alpert spent many years as Chair of the Department of Physiology and Biophysics at the University of Vermont. During his tenure as Chair, he created one of the preeminent departments of cardiovascular and muscle physiology and mentored an exceptional team of professionals who now lead institutions around the world. He also was CEO of Lionheart Technologies, a multinational biotech firm with over 200 employees. He was involved with many organizations. He was a Founder and served as an initial Vice President of the International Academy of Cardiovascular Sciences

We remind those who contribute to this Fund that the Academy is registered to give Tax Deductible Receipts in Canada (International Academy of Cardiovascular Sciences Inc.) as well as in the United States (Academy of Cardiovascular Sciences Foundation USA Inc.). Please forward your contribution to the attention of Ivan Berkowitz, 3006-351 Tache Av. Winnipeg, MB Canada R2H 2A6. An appropriate tax deductible receipt will be issued. We will acknowledge all donors to the Alpert Family.

ADVANCES IN HEART HEALTH

Stress Induced Biochanges in the Heart: From Genes to Bedside

by Ivan Berkowitz, Winnipeg, Canada



Antalya, Turkey was the site of a unique workshop organized by the Academy under the co-direction of Dr. Belma Turan (as the hostess in her country, Belma did an incredible job of making all the logistical arrangements) and Dr. Jan Slezak. As the principal sponsor, NATO's contribution was most appreciated.

On Feb. 2, 2005, Dr. Turan welcomed the participants with her Opening Address: An Overview of the Workshop, followed by the Plenary Address by Dr. N.S. Dhalla "Subcellular Remodeling in Congestive Heart Failure Due to Myocardial Infarction", and the first of the excellent receptions and dinners, all held in the pleasant seaside Falez Hotel.

Day Two features talks on PATHOPHYSIOLOGICAL MECHANISMS – "Septic cardiomyopathy- from molecular mechanisms to therapy" by Dr. K. Werdan from Germany; "The Na/H exchanger: regulation by multiple stresses and pathophysiological roles" by Dr. M. Avkiran, England; "The intracellular energetic units in healthy and diseased hearts" by Dr. E. Seppet from Estonia; "Involvement of DNA damage in diabetes-linked contractile dysfunction" by Dr. S. Schaffer, U S A; "Signal transduction mechanism of ischemic preconditioning" by Dr. A. Beresewicz from Poland; and "Autoantibodies against G-protein coupled receptors from patients with cardiovascular diseases are able to activate the transcription factor NfκB" by Dr. W. Schulze from Germany.

Day Two featured also ISCHEMIC HEART DISEASE – "Redox signalling of the ischemic stress-adapted heart" by Dr. D.K. Das, U S A; "Myocardial genomics and proteomics: Profiling the cardioprotective effect of prior exercise training" by Dr. G. Kessler-Icekson from Israel; "Cardioprotective effect of adaptation to chronic hypoxia" by Dr. B. Ostadal, Czech Republic; "Cellular mechanisms of contractile dysfunction in chronically ischemic hibernating myocardium" by Dr. K. Sipido from Belgium; "Adaptation of cardiomyocytes to hypoxia and ischemia" by Dr. J. Slezak, Slovak Republic; "Circulating progenitor stem cells for non-invasive diagnosis and prognosis in coronary artery patients" Dr. V. N. Smirnov from Russia; and "A common mechanism in the protective effects of preconditioning cardiac pacing and physical exercise against ischemia and reperfusion-induced arrhythmias" by Dr. A. Vegh from Hungary.



left to right Jan Slezak, Ivan Berkowitz, Belma Turan, Ranjit Dhalla and Brigitte Nagano

The social highlight was the gala Farewell Dinner when flowers were presented by Dr. Brigitte Nagano, Mrs. Ranjit Dhalla and Ivan Berkowitz for the extraordinary efforts by Drs. Turan and Slezak.

The main topic for Day Three was DIABETES – "Metabolic therapy in diabetic stress" by Dr. G.D. Lopaschuk from Canada; "Peroxisome proliferator-activated receptor agonists and diabetes" by Dr. D. B. McNamara, U S A; "Beta-adrenoceptor subtypes in diabetic heart" by Dr. M. Altan, Turkey; "Altered mechanical and electrical activities of diabetic heart: possible usage of new therapeutics?" by Dr. B. Turan of Turkey.

Later in Day Three and through the next day, the focus was on HEART FAILURE – "Molecular biochanges in heart failure due to adriamycin" by Dr. P.K. Singal from Canada; "Role of ryanodine receptors and consequences of their alterations during cardiac insufficiency" by Dr. G. Vassort from France; "Matrix metalloproteinase-2 mediates contractile failure via a novel intracellular mechanism in the oxidatively stressed heart" by Dr. R. Schulz, Canada.

The concluding talk "Promotion of Heart Health" was given by Ivan Berkowitz from Canada. It was followed by a general discussion. Throughout the Workshop, all attendees were encouraged to participate and were able to present Poster Discussions.



Drs. Ostadal, Slezak and Singal presented the Academy's Distinguished Service Award to Dr. Belma Turan.



During the meeting, a dynamic session was held to gather ideas from attending Fellows of the Academy.



An excellent meeting between Naranjan Dhalla (r), Ivan Berkowitz (photographer) and Vladimir Smirnov (l) developed plans for a section for the Academy in Russia.

At the conclusion of the Workshop, Dr. Turan had organized a most interesting tour of historical sites near Antalya. Danina Muntean took some incredible photos which can be viewed at: <http://daninasphotos.fotopic.net/c433038.html> ❤️

Richard Schulz Wins 2005 Dhalla Award



left to right – Makoto Nagano, Rick Schulz, Pawan Singal and Jan Slezak

At the Farewell Banquet of the NATO Workshop organized by the Academy in Antalya Turkey, the 2005 Naranjan Dhalla Award for Outstanding Investigators in Cardiovascular Sciences was presented to Richard (Rick) Schulz by the Academy's chairman Makoto Nagano, an observer at the Workshop.

Dr. Schulz was appointed as Professor (effective July 1, 2005) in the Departments of Pediatrics and Pharmacology at the University of Alberta in Edmonton, Canada and is also a member of the Cardiovascular Research Group. His undergraduate training was in chemistry at the University of Calgary, followed by his first medical research experience in Giessen, Germany with Dr. Werner Seeger; a PhD in Pharmacology under Dr. David Cook at the University of Alberta; and post-doctoral training with Dr. Salvador Moncada at the Wellcome Research Laboratories in London, UK; and with Drs. Gary Lopaschuk and Peter Olley at the University of Alberta. His research focuses on the impact and treatment of oxidative and nitrosative stress injury in cardiovascular disease, with special emphasis on ischemia-reperfusion and

inflammatory stress injury to the heart. Most recently he has identified matrix metalloproteinase-2 as an important mediator of the early response of the heart to oxidative stress injury and that this protease has novel intracellular targets within the cardiac myocyte. ❤️

Council of IACS Europe Appointed

Subsequent to meetings held during the NATO Workshop in Turkey, further meetings were held in Winnipeg during the Young Investigators Forum in Winnipeg April 28 – May 1, 2005. The Executive Council for the International Academy of Cardiovascular Sciences Section in Europe will be composed of the following:

President:

Bohuslav Ostadal Czech Republic

Vice President:

Karl Werdan Germany

Executive Secretary:

Keld Kjeldsen Denmark

Finance Secretary:

Thomas Schmidt Denmark.

Council Members:

Giuseppe Ambrosio Italy

Dan Atar Norway

Andrzej Beresewicz Poland

Johan Brandt Sweden

Dennis Cokkinos Greece

Paolo Di Nardo Italy



left to right; Keld Kjeldsen, Hon. Raymond Simard, Ivan Berkowitz, Wagner Padua Filho and Bohuslav Ostadal

Istvan Edes	Hungary
Manuel Galinanes	England
Sigmundur Gudbjarnason	Iceland
Gania Kessler-Icekson	Israel
Frantisek Kolar	Czech Republic
Jos M.J. Lamers	The Netherlands
Bohdan Lewartowski	Poland
Elizabeth Roth	Hungary
Heinz Rupp	Germany
Robert Schwinger	Germany
Enn Seppet	Estonia
Ajay Shah	England
Jan Slezak	Slovak Republic
Belma Turan	Turkey
Guy Vassort	France
Faiez Zannad	France

During the Young Investigators Forum sponsored by the C.I.H.R. Institute of Circulatory and Respiratory Health in Winnipeg on April 29, 2005, a very special dinner was hosted by Academy CEO Naranjan Dhalla in the new Asper Clinical Research Centre at St. Boniface Hospital. Academy Fellows Bohuslav Ostadal and Keld Kjeldsen, along with Wagner Padua Filho from Brazil were presented by the Member of Canada's Parliament representing St. Boniface Hon. Raymond Simard, with the Academy's Award for Distinguished Achievement. Also receiving the Award were Onkar Tripathi from India and Newman Stephens from Winnipeg. ❤

P E O P L E A N D P L A C E S

Council Introduced for IACS - North America



left to right - Executive Secretary: Dennis McNamara; Fellow: Daniel Villarreal; Academy C. E. O. Naranjan Dhalla; Fellow: Philip Kadowitz; President: Karl Weber; and Fellow: William Weglicki

During a most sociable luncheon at Arnaud's in New Orleans on May 13, 2005, the founding Council of the International Academy of Cardiovascular Sciences – North America Section was announced to include:

- President:**
Karl Weber Memphis
- Vice President:**
Tomas Salerno Miami
- Executive Secretary:**
Dennis McNamara New Orleans

Finance Secretary:

Krishna Agrawal New Orleans

Council Members:

Stephen Archer Edmonton

Ivor Benjamin Salt Lake City

Nanette Bishopric Miami

Laurence Brunton La Jolla

Arun Chockalingam Vancouver

Dipak Das Farmington

Garrett Gross Milwaukee

Rakesh Kukreja Richmond

Jawahar Mehta Little Rock

Yao Sun Memphis

Balwant Tuana Ottawa

Dorothy Vatner Newark

Daniel Villarreal Syracuse

William Weglicki Washington

Angel Zarain-Herzberg Mexico City

The plan for a meeting of the Academy's North American Section was confirmed to be held in conjunction with the Annual Meeting of the Southern Society for Clinical Investigation in New Orleans, February 10, 11 and 12, 2006.

Dr. Weber challenged the Academy "It will be an honor to serve as president of the North American Chapter of the International Academy of Cardiovascular Sciences. The Chapter embraces the well-established goals of the Academy to promote education and research in order that we might advance the practice of medicine and the delivery of effective and efficient patient care. We are of a common purpose.

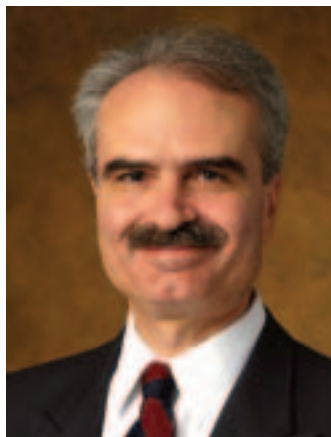
The world's population is currently 6 billion and is estimated to reach 8 billion in 2025. Global life expectancy will continue to increase from 66 years presently to 73 years in 2025. With more older people the world over, disease patterns are likely to change. Cardiovascular disease will become more prevalent and more common in countries where infectious diseases were once dominant and determined life expectancy. As people live longer, will they live healthier? As scientists and clinicians we must continue to advance biomedical science and education to ensure this is the case. We must be mindful and committed to global health and the progress of mankind.

Our Chapter endorses specific objectives that include: contributing to the implementation of programs that promote education and research throughout North America and also with our neighbors in Central and South America; integrating and translating discoveries from the bench to the bedside; and creating bridge-building strategies between basic, clinical and population-based sciences for the purpose of health promotion.

I look forward to working with the distinguished members of council and to our implementing these objectives. Let us dare to dream more than others think practical and to care more than others think wise. Let us work toward one world, one civilization." ♥

PEOPLE AND PLACES

2005 Howard Morgan Award for Roberto Bolli



At a special Awards Luncheon on May 15, in New Orleans, Dr. Bolli was presented with the Howard Morgan Award for Distinguished Achievements in Cardiovascular Research for 2005 by the International Academy of Cardiovascular Sciences.

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. The hallmark of a successful scientist is the fact that his/her hypotheses stand the test of time and become accepted in the scientific community. Dr. Bolli 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 pharmacologic 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. 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), the Basic Research Prize of the American Heart Association (2001), the Research Achievement Award of the International Society for Heart Research (2004), the Ken Bowman Research Award from the Institute of Cardiovascular Sciences of the University of Manitoba (2004), the Louis and Artur Lucian Award from McGill University (2004) and the President's Award for Outstanding Scholarship from the University of Louisville. 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).

Dr. Bolli has emerged as a leader 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 was 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 and the Council Operations 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 160 lectures at national and international meetings, including several keynote, landmark, and plenary lectures. He was selected as the Keith Reimer Distinguished Speaker of the ISHR (2002) and the Robert Berne Distinguished Lecturer of the American Physiological Society (2005). Dr. Bolli has published more than 260 peer-reviewed papers, including 172 original articles. Among the original articles, 31 have appeared in *Circulation Research*, 7 in *PNAS*, 7 in *JCI*, and 16 in *Circulation*. 32 of his papers have been cited more than 100 times and six more than 300 times. He is the first or last author in 71% of the 172 original articles. ❤️

ADVANCES IN HEART HEALTH

Academy Fellows Work Together To Develop Singular Events In South America

by David P. Brasil, Belo Horizonte, Brazil

Since its creation in 1996, the International Academy of Cardiovascular Sciences has been devotedly working toward lowering the borders among nations through the dissemination of high quality science and education. To pursue this lofty goal, the Academy mobilizes its most precious gift, the dedication and enthusiasm of a magnificent team of fellows from all over the world.

Nearly a century ago, J. Shaw Billings noted the following: "The education of the doctor which goes on after he has his degree is, after all, the most important part of his education"; alluding on the magnitude of the principle of continued education. During last October 13 to 15th Academy



The Young Investigators Forum in Winnipeg provided opportunities to promote CardioGlobal as above (L to R) Wagner Pádua Filho; Ivan Berkowitz; Delfin Rodríguez Leyva (from Cuba); and Domingos Melo

fellows ran in Brazil an international teach-in program on cardiovascular diseases named CardioGlobal, which was primarily conceived to serve the purpose of providing continued scientific education for graduate medical professionals.

The chosen host venue was the Center of Arts & Convention in Ouro Preto, one of the most pleasant and charming cities in Brazil. Ouro Preto is world-renowned for its very unique historical sites, gorgeous baroque style architecture and sculptures, and remarkable cultural aspects. During the event, foremost professionals were featured in presentations based on their own cardiovascular expertise, making significant contributions to heart health in Brazil.

The organizing board in Brazil was formed by Drs. D. Brasil (scientific and international coordination), R. Nascimento & W. Pádua (executive coordination), and R. Simões & M. V. Malachias (academic affairs).

The organizers were most thankful for the support of International Academy of Cardiovascular Sciences and overall gratefully indebted to Dr. N. S. Dhalla (program international chair) and Dr. P. K. Singal (special advisor) for their generosity, invaluable support, and enthusiastic determination in making CardioGlobal a sound success. They also thank the editor of CV Network, Mr. I. Berkowitz, for reporting the teach-in accomplishments.

The 3-day scientific program was designed to attract interest from a comprehensive group of delegates, covering various key scenarios in the cardiovascular setting. Teaching ranged from basic and population sciences to clinical insights, joining a broad scope of expertise. Learning and knowledge-sharing were the underlying pursued objectives and interaction the tool to achieve these goals. A program overview at a glance unveiled singular learning opportunities under a composite of topics, whose highlights included:

- Genetic, epidemiological, and therapeutic aspects of hypertension
- Management of atherogenic dyslipidemia and prevention of IHD events in diabetes & the metabolic syndrome
- Vascular remodeling, inflammation and plaque thrombosis
- Subcellular mechanisms of heart dysfunction in IHD
- Management of cardiac arrhythmias in cardiomyopathies
- Heart failure, oxidative stress, cardiac remodeling, and the RAA system
- Late-breaking studies on heart failure, CAD and peripheral arterial disease (PAD)
- Valvular heart disease and atrial fibrillation
- Management of unstable angina, NSTEMI and STEMI

About 350 delegates from all over Brazil attended the event. The international faculty added an inestimable value to discussions held at the meeting and included prominent cardiovascular scientists from Canada (N. S. Dhalla, P. K. Singal, and K. Prasad), USA (K. C. Agrawal, D. Villarreal, and B. McNamara), and Argentina (R. J. Gelpi). Insightful contribution was provided by the Brazilian faculty, headed by Dr. A. F. Simão - President of Brazilian Society of Cardiology, and formed of 36 leading cardiovascular educators from 10 Brazilian States. At the end of the meeting, organizers, speakers, and delegates were most delighted to acknowledge its success.

In addition, as a result of this unparalleled atmosphere of scientific and education cooperation, a team of Brazilian cardiologists visited Winnipeg to attend the 2nd Annual Forum for Young Investigators.

Future Developments

Porto Alegre, in the south of Brazil, will host CardioGlobal 2005 on September 17th during the 60th Annual Congress of Brazilian Society of Cardiology. International Executive Committee comprises: Naranjan S. Dhalla (Canada), Ricardo Gelpi (Argentina) and Daniel Villarreal (USA); Executive Coordinators: Raimundo M. Nascimento Neto and Wagner C. Pádua Filho; Scientific Committee Coordinator: Domingos Melo. CardioGlobal 2005's program will include symposia on New Management of Coronary Disease; New Approaches to Dyslipidemia; Advances in Metabolic Syndrome; and Lectures - "Hypertension and Ventricular Hypertrophy: Why and How to Reduce" and "Cardiovascular Aspects of Dietary and Iatrogenic Magnesium Deficiency"

A symposium of the South American Section of IACS will focus on the major aspects of heart failure in Recife Sept. 9-10, 2005. In addition, other cardiovascular educational initiatives are currently under construction in South America in fulfillment of the Academy's ultimate mission. ❤️



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Karl Weber wins 2005 Makoto Nagano Award



Pawan Singal (r) presented Award to Karl Weber

Dr. Weber is the Neuton Stern Professor of Medicine and Director of the Division of Cardiovascular Diseases at the University of Tennessee Health Science Center. He received his medical degree from Temple University School of Medicine, where he also completed his internship. After a 2-year stay at the National Institutes of Health's Artificial Heart Program, he served his residency in internal medicine and fellowship in cardiology at the University of Alabama at Birmingham. Dr. Weber joined the Department of Medicine, Cardiovascular-Pulmonary Division, at the University of Pennsylvania as Assistant Professor in 1974, later becoming Associate Professor of Medicine and Director of the Cardio-Pulmonary Research Laboratories. In 1983 Dr. Weber was appointed Professor of Medicine at the University of Chicago and Director of the Cardiology Division and Cardiovascular Institute of the Michael Reese Hospital and Medical Center and in 1985 became the Harold H. Hines, Jr. Professor of Medicine. He joined the University of Missouri Health Sciences Center in 1990 serving as Chairman of the Department of Internal Medicine and Director of the Division of Cardiology through 1997. Dr. Weber's research interests (NIH-funded since 1974) have focused on heart failure, its pathogenic origins and its pathophysiologic expressions. Among his many scientific contributions that have advanced the practice of medicine is his pioneering work into the importance of the heart's extra-

cellular matrix and mechanisms responsible for cardiac fibrosis. Dr. Weber is a prolific author with over 500 publications. He serves on several US and international editorial boards. He has been elected president of the Central Society for Clinical Research (1995-96) and the International Society for Heart Research, North American Section (1997-2000). Dr. Weber is the recipient of Moravian College (1987) and Temple University School of Medicine (1998) Alumni Achievement Awards. In 2002 he was elected into the International Academy of Cardiovascular Sciences and was selected as recipient of the Bowman Research Achievement Award presented by the Institute of Cardiovascular Sciences in Winnipeg, Canada. He is the 2005 recipient of the Makoto Nagano Award for Distinguished Achievements in Cardiovascular Research presented by the International Academy of Cardiovascular Sciences. ♥

Scientific Forum XV

Othon Palace Hotel Convention Center, in Copacabana, Rio de Janeiro
Dec. 8 - 10, 2005;

Co-sponsored by: International Academy of Cardiovascular Sciences - South American Section, International Society for Heart Research - Latin American Section, Brazilian Academy of Cardiology for Family, Brazilian Society of Cardiology/DFCVR-CEX, Brazilian Society of Cardiovascular Surgery/DEPEX, American Society of Angiology.

Contact: **Otoni M. Gomes M.D., F.I.A.C.S, F.A.S.A.**

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1. SPECIAL LECTURES

President: Otoni M. Gomes, Minas Gerais
Secretary: Alexandre Babosa, Minas Gerais

- "How to Move Funds, Minds and Hearts to Improve Community Heart Health" Ivan Berkowitz, Canada
- Second Medical Opinion - Euclydes F. Marques, Sao Paulo & Marcio Peres Ribeiro, Sao Paulo

- Experimental Atherogenesis - Prof.Christina Kallás Hueb, Sao Paulo
- Molecular mechanisms underlying the arrest of diabetic cardiomyopathy Studies in rat models of type 1 diabetes - Irina Smirnova, USA
- Why are large vessels affected differently by diabetes?: Lisa Stehno-Bittel, USA
- How to Optimize Clinical Research in Acute Coronary Syndrome - Antônio Carlos de Carvalho, Sao Paulo
- Intracellular Mechanisms of Ischemic Preconditioning and Postconditioning - Ricardo Gelpi, Argentina

- Cardiomyogenesis: The Gene-therapy Approach" - Alberto Crottogini, Argentina
- Cardiomyogenesis: Cell Therapy - Antônio Luis Campos de Carvalho, Rio de Janeiro
- Evidences for Myocardium Calcium Flow Disturbance in the Myocardium Stress Diskinesy Disease - Otoni M. Gomes, Minas Gerais
- Evidences of Efficacy of the No-touch Technique in Vasavasorum and Vessel Patency Preservations - Michael Dashwood, England

2. PROF. NARANJAN S. DHALLA FORUM ON APLLIED CARDIOVASCULAR RESEARCH

President : Ricardo Gelpi, Argentina
Chairman: Domingos Sávio Souza, Sweden

The Academy's 2nd World Congress



will be held on
July 14 (Fri) -16 (Sun), 2006 at
Kouseinenkin Kaikan
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For details please contact the Chairwoman:

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Hokkaido 060-0819, Japan Fax: +81-11-736-7877
e-mail: kawaguchi@med.hokudai.ac.jp

WEB SITE (to be developed)

Tentative sessions/chair persons:

Cardiac Function and Heart Failure	R. Sugiura (Tokyo)
Gene Therapy and Cell Transplantation Therapy	T. Toyooka(Tokyo)
AC by-pass and stent-therapy	H.Yoshino(Kyorin)
Ischemic Heart Disease and Preconditioning	T. Miura(Sapporo)
Pathophysiology of Electrolyte Metabolism	H. Hayashi(Hamamatsu)
Cardiac Remodeling	N. Makino(Ohita)
HCM Basic and Clinical View	A. Kimura (Tokyo)
Cardiac Tissue Regeneration	U. Ikeda(Shinshu)
DM and Heart Failure	M. Kato (Jikei)
New Approaches for Cardioprotection	T. Miyauchi (Tsukuba)
Cytokine in Cardiac Inflammation/Heart Failure	A. Matsumori (Kyoto)
Restenosis and Vascular Remodeling	T. Ito (Aichi)
Renin/angiotensin System in C V D	A. Takeda (Jikei)
Molecular/Clinical Aspect of Cardiomyopathies	T. Izumi (Kitasato)
Signal Transduction in Ischemic Heart	M. Kitakaze (Osaka)

FOR INFORMATION ABOUT THE LOCALE FOR THE WORLD CONGRESS:

Sapporo city - <http://www.global.city.sapporo.jp>

Hokkaido University - <http://www.hokudai.ac.jp>



Heart Failure Symposium

September 9-10, Recife, Brazil

Contact: Dr. Domingos Melo

E-mail: drdomingosmelo@uol.com.br

2005 IACS Japan Section Meeting - July 16/17, Hamamatsu, Japan

For details, please contact: Chair Prof. Hideharu Hayashi • E-mail: hayashi@hama-med.ac.jp

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