



# CV network

THE OFFICIAL BULLETIN OF THE INTERNATIONAL ACADEMY OF CARDIOVASCULAR SCIENCES

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## Academy Honours Sir John Vane – Nobel Laureate

by Ivan Berkowitz, Winnipeg, Canada



Sir John Vane

**T**he William Harvey Research Institute, London, England, refers to Sir John Vane as "our Field Marshall in the battle against disease". He has devoted his life to battling the disease enemy with new pharmaceutical weapons, with new biochemical intelligence and with new alliances among disparate human communities in big pharma, academia and self-help groups. In 1982, his efforts were recognized with a Nobel Prize and since that time he has re-doubled his efforts to fight disease, with a special focus on curing pulmonary hypertension.

Sir John Vane graduated in Chemistry, took a D.Phil. in Pharmacology and received the Nobel Prize in Medicine for his work on prostaglandins and for the discovery of the mechanism of action of aspirin. He spent 20 years in

academic research. As a consultant to Squibb, he initiated the program on inhibiting angiotensin-converting enzyme which led to the marketing of Captopril. During 12 years as R&D Director at the Wellcome Foundation, he oversaw the development of Tracrium, Flolan, Zovirax, and Lamictal.

In 1971, Vane and his colleagues discovered that aspirin and similar drugs produced their effects because they inhibited the biosynthesis of a group of lipid mediators called prostaglandins. In the last five years it has become clear that there are two enzymes involved. One of the "cyclo-oxygenases" called Cox 1 is responsible for making prostaglandins, which protect the stomach and kidney from damage. Inhibition of Cox 1 accounts for the unwanted side effects of aspirin-like drugs such as gastric irritation and renal damage. The other enzyme, Cox 2, is induced by inflammatory stimuli and it is prostaglandins made by this enzyme that contribute to the inflammation in diseases such as rheumatoid arthritis. The presently marketed aspirin-like drug inhibits both enzymes and the research may lead to selective inhibition of Cox 2, the enzyme responsible for inflammation.

The William Harvey Research Institute was established in 1986 by Sir John. Under his direction, it grew to a staff of over 120 scientists and became one of the 20 top medical charities in the UK. He is now Honorary President of the charitable arm, the William Harvey Research Foundation.

The International Academy of Cardiovascular Sciences is pleased to recognize Sir John Vane for his extraordinary achievements with the Academy's Medal of Merit. ♥

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# IACS Japan Section

M E E T I N G

**July 17-18 • 2004**  
**Osaka-Senri • Japan**



**The 4th Annual Meeting of IACS Japan Section (The 27th Japanese Working Group on Cardiac Structure and Metabolism)**

**Chairman: Ryoji Matoba, MD, PhD. Osaka University.**

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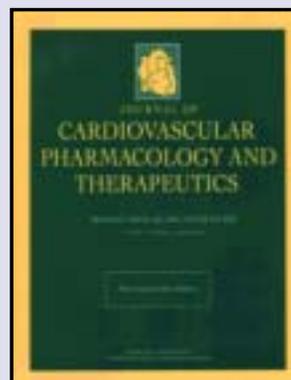
## Official Journals of the International Academy of Cardiovascular Sciences



### 1) EXPERIMENTAL & CLINICAL CARDIOLOGY

(Editor: Dr. B. Ostadal)

- An international, peer review journal covering all aspects of cardiology from basic science to clinical trials and reviews.
- An internationally renowned editorial board comprising leading experimental and clinical cardiologists from Europe, North America and around the world provides direction to the journal.



### 2) JOURNAL of CARDIOVASCULAR PHARMACOLOGY & THERAPEUTICS

(Editor: Dr. B. Singh)

- Published four times a year, this focuses on critical evaluation and discussion of pharmacologic and therapeutic advances in the treatment of cardiovascular disease.

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# Academy Honours James T. Willerson

by Ivan Berkowitz, Winnipeg, Canada



Dr. James T. Willerson

The International Academy of Cardiovascular Sciences is delighted to recognize Dr. James T. Willerson for his lifetime of exceptional accomplishments with the Academy's Medal of Merit.

James T. Willerson, MD is the President of The University of Texas Health Science Center at Houston where he has recently been named the Alkek-Williams Distinguished Professor. In 1989, he was named the Edward Randall III Professor and Chairman of the Department of Internal Medicine at The University of Texas Medical School at Houston, where an Annual Lectureship has been established in his name. He is also the Medical Director, Chief of Cardiology, Director of Cardiology Research, and Co-Director of the Cullen Cardiovascular Research Laboratories at the Texas Heart Institute; the Chief of Cardiology at St. Luke's Episcopal Hospital; and until recently, he served as the Chief of Medical Services at Memorial Hermann Hospital (1989-2000). He is also an Adjunct Professor of Medicine at Baylor College of Medicine, an Adjunct Professor of Medicine at The University of Texas MD Anderson Cancer Center, and he was named the Robert J. Hall Chair of Cardiology at St. Luke's Episcopal Hospital.

Dr. Willerson is a Phi Beta Kappa graduate of The University of Texas at Austin where he lettered for three years in swimming. Upon graduating as a member of Alpha Omega Alpha from Baylor College of Medicine in Houston, Texas, he completed his medical and cardiology training as an intern, resident, and research and clinical fellow at the Massachusetts General Hospital in Boston, Massachusetts, and as a Clinical Associate at the National Institutes of Health in Bethesda, Maryland.

He is the former Chairman of the National American Heart Association Research Committee and of the NIH Cardiovascular and Renal Study Section. He has received the Award of Merit from the American Heart Association and has served as a member of the Board of Directors and Steering Committee of the National American Heart Association. Before coming to The University of Texas Medical School at Houston, Dr. Willerson was Professor of Medicine and Director of the Cardiovascular Division at The University of Texas Southwestern Medical School in Dallas and Director and Principal Investigator of the National Heart, Lung, and Blood Institute's Specialized Center of Research under a major grant from the NIH. Upon his departure, the "James T. Willerson, MD Distinguished Chair in Cardiovascular Diseases" was established at The University of Texas Southwestern Medical School.

Dr. Willerson has served as visiting professor and invited lecturer at more than 170 institutions. He has received numerous national and international awards, including the "James B. Herrick Award" from the American Heart Association in 1993, the American College of Cardiology's Distinguished Scientist Award for 2000, and the American Heart Association's Distinguished Scientist Award for 2003. He has been elected a Fellow in the Royal Society of Medicine of the United Kingdom and made an

Honorary Member of the Society of Cardiology in Peru in 1994, in Spain in 1996, the Hellenic Society of Cardiology in Greece in 1997, and the Society of Cardiology of Venezuela in 2000. He is a member and past President of the Paul Dudley White Cardiology Society at Harvard Medical School and Massachusetts General Hospital.

He has served on the following editorial boards for professional publications: American Journal of Cardiology, American Journal of Medicine, Circulation Research, Cardiovascular Medicine, American Heart Journal, Journal of the American College of Cardiology, Journal of Clinical Investigation, and The New England Journal of Medicine. Since 1993, he has been the Editor-in-Chief of Circulation, the major publication of the American Heart Association. He has edited or co-edited twenty textbooks, including the 2nd Edition of Cardiovascular Medicine which was released in July of 2000. Additionally, he has had published more than 770 scientific articles.

He has been elected to membership in numerous professional societies, including the American Society of Clinical Investigation, the Association of American Physicians, the Association of Professors of Medicine, the Institute of Medicine of the National Academy of Sciences and as a Fellow in the International Academy of Cardiovascular Sciences. He was named a "Distinguished Alumnus" by the Baylor College of Medicine in 1998 and a "Distinguished Alumnus" by The University of Texas at Austin in 1999.

His recent research work has concentrated on elucidating mechanisms responsible for the conversion from stable to unstable coronary heart disease syndromes, the prevention of unstable angina and acute myocardial infarction, and the detection and treatment of unstable atherosclerotic plaques. Very recently, he and his colleagues at the Texas Heart Institute and in Houston, Texas, and at Hospital Procardico in Rio de Janeiro have begun bone marrow derived stem cell transplantation directly into the hearts of patients with severe heart failure and have demonstrated objective and subjective evidence of clinical improvement. The work will be expanded to centers in the United States. ❤️

## 2003 Norman Alpert Award Honours Bohuslav Ostadal

by Ivan Berkowitz, Winnipeg, Canada

As a highlight of the Mendel Symposium in Brno, Czech Republic, the second annual award in honour of Norman Alpert was presented to Professor Bohuslav Ostadal D.Sc., M.D. to recognize his outstanding achievements in the area of Cardiovascular Sciences and Medicine. Dr. Ostadal is head of the Department of Developmental Cardiology, Institute of Physiology, Academy of Sciences of the Czech Republic in Prague. He studied at the Faculty of Medicine of the Charles University in Prague and received a MUDr (M.D.) in 1963 and completed his Ph.D. thesis in 1968. He started with his scientific career at the Department of Pathological Physiology of the Faculty of Medicine, chaired by one of the founders of modern Czech experimental cardiology Professor O. Poupá. Studies on the onto- and phylogeny of the cardiac muscle for understanding the basis of fetal and neonatal cardiology influenced many young students at that time and became a specialty of the "Prague School" of developmental and comparative cardiology. Prof. Poupá introduced B. Ostadal to the problems of the developing heart, asking him to analyze the relationship between the phylo- and ontogenetic changes of the myocardial blood supply and the development of isoproterenol-induced myocardial necrosis. Their paper on myocardial necrosis in the turtle, showing that the lesions were localized exclusively in the inner spongy, vascularless layer of the cold-blooded heart was published in the *American Heart Journal* in 1968.

Dr. Ostadal, together with the outstanding Czech embryologist, Dr. Rychter, studied the mechanism of development of coronary vascularization of cardiac muscle and extended this analysis from the ultrastructural point of view during his stay at the Department of Anatomy, University of Wurzburg, Germany in 1969. After he returned to Prague, he encouraged his coworkers in the Institute of Physiology to follow the scientific ideas of Prof. Poupá and to analyze the effects of adaptation to chronic hypoxia on the cardiopulmonary system. This topic was very attractive also for colleagues working in clinical cardiology, particularly Prof. Widimský and his group; they started a long-lasting cooperation, describing protective and negative signs of adaptation, reversibility of adaptive changes as well as the possible relationship to the human disease and sports medicine. Permanent interest in the developmental approach brought Dr. B. Ostadal in close cooperation with the pediatric cardiol-



Dr. Makoto Nagano presented the award to Dr. Ostadal

ogists, particularly with Prof. Samanek and his Kardiocentrum. Together, they demonstrated metabolic adaptation of the atrial and ventricular tissue collected from the hearts of children, operated for congenital cyanotic heart disease. Because of the political situation at the time, all the international contacts were almost completely interrupted and the future was all but promising. In order to compensate for this precarious situation, Dr. Ostadal together with Dr. P. Bravený founded the Czechoslovak Experimental Cardiology Study Group in 1972. The aim of the new society was to acquaint experimental and clinical cardiologists with the newest developments in world cardiology. The Study Group fulfilled this original goal for further 30 years and is still very active.

In November 1989, Dr. Ostadal was elected as director of the Institute of Physiology of the Czechoslovak Academy of Sciences (1990-95) and promoted to full professorship at the Charles University (1992). From 1993 to 1998 he served as a member of the Committee of the International Society for Heart Research and became Secretary General of the XVth World Congress of this Society in Prague in 1995. In 1996, he founded the international journal *Experimental and Clinical Cardiology*, published by the Pulsus Group, Canada, and has since been serving as the editor-in-chief. In 2000 he organized the International Symposium on The Developing Heart in Prague.

As a teacher in the Department of Pathological

Physiology of the Faculty of Medicine as well as one of the organizers of the Postgraduate School in Biomedicine at the Charles University, Dr. Ostadal is in close contact with young students. He has been awarded the prize of the Czech Ministry of Health (1995), Czech Medical Association J.E. Purkyne (2000) and has received the Honorary J.E. Purkyne Medal from the Academy of Sciences of the Czech Republic for achievements in biology and medicine (2000). He is an honorary member of the Czech Medical Association, Czech Physiological and Czech Cardiological Society. He is a Fellow of Dr. Ostadal has published more than 200 full length papers, 2 monographs and edited 3 other monographs. His Department of Developmental Cardiology, a part of Czech Center of Excellence for Experimental Cardiovascular Research, now concentrates on the analysis of the protective mechanisms of adaptation to chronic hypoxia during ontogenetic development, particularly in comparison with another protective phenomenon, ischemic preconditioning. The aim of the whole research team is to help better understand the pathogenetic mechanisms that determine the degree of cardiac tolerance to oxygen deprivation as well as mechanisms responsible for different types of cardiac protection. Over the years, Dr. Ostadal has transformed himself from an avid student to an internationally respected teacher and researcher in Developmental Cardiology. ♥

# International Symposium on Myocardial Cytoprotection

by Elizabeth Roth, Pecs, Hungary



During September 25-27th, we held the fourth International Symposium on Myocardial Cytoprotection (ISMC) at its usual venue, Pecs, the picturesque southern capital of Hungary. The biannual gathering is organized under the auspices of the Experimental Section of the Hungarian Society of Cardiology. The September 2002 meeting had to be postponed by a year due to the close proximity with the very successful ISHR European section meeting (July 2002). ISMC is intended to be a small meeting with the sole aim of attracting participants from across the globe, all of whom share one common passion. That commonality is the mutual interest in advancing means of protecting the myocardium against deleterious injury, be it in the laboratory or at bed-side. Thus the symposium beckons a wide range of people from scientists, cardiologists to cardiac surgeons from mainly Europe. This year we also had the pleasure of many distinguished guests and invited speakers making their way from across the Atlantic. This is thanks in no small part to the newly adopted collaboration between the ISMC organizing committee and the International Academy of Cardiovascular Sciences. In partic-

ular this year's success owes a great deal to the personal support and assistance of Professor Naranjan Dhalla, a founding member and the Executive Director of the Academy. Subsequently we were able to invite leading speakers from USA and Canada in addition to our distinguished guests from Europe, greatly adding weight to the scientific debate during the Symposium as well as enriching the social atmosphere of the meeting.

ISMC 2003 was scientifically the most extensive meeting yet. 72 abstracts were accepted for either oral or poster presentations. The scientific program comprised of eleven oral and two poster sessions covering the various aspects of myocardial cytoprotection: preconditioning – theoretical and clinical point of view, ischaemia-reperfusion injury-from subcellular mechanism to whole heart, redox regulation – adaptation and survival signals, integrated control of flow and pressure in the coronary microcirculation and arrhythmia. We had the pleasure of hosting 24 invited speakers who presented their latest findings on a number of topics ranging from the mitochondria, preconditioning,

ischaemia-reperfusion, microcirculation, arrhythmias, metabolic disturbances and cardiac surgery, just to name a few. Although the topics of discussion have remained fairly similar through the consecutive meetings over the years, we are witnessing a rise in the number of abstracts submitted. And more importantly we are pleased to have secured interest of some of the most respected individuals in the field of myocardial protection. We sincerely hope that this trend will be upheld in future meetings, playing a small part in advancing this very crucial field of heart research for the benefit of all concerned.

To maintain a balance between basic science and clinical aspects of cardioprotection we also always try to organize a round table discussion on one of the latest relevant advances in clinical practice. ISMC 2000 hosted one such program on "Off-Pump Cardiac Surgery" in association with the Royal Brompton & Harefield NHS Trust (UK). This year in collaboration with Pharmaceutical Companies, we arranged a round table discussion on the "Theoretical aspects and clinical point of view of the use of ACE inhibitors". The focus of the discussion was the newly released results of the EUROPA trial (long-term perindopril treatment of patients with coronary artery disease), and its impact on management and future use of ACE inhibitors.

In conclusion we are pleased to have had the opportunity to organize ISMC 2003 and on behalf of the organizing committee would like to thank all participants for their valuable contribution to the success of the meeting. Whether this was your first ISMC attendance or you are a regular at our Symposium, we sincerely hope you enjoyed your short stay in Pecs and found everything, from science to social events, memorable and worthwhile. Finally, as the Congress president, special thanks to all my dear colleagues at the local organizing committee for their hard work and dedication to the success of the symposium. Looking forward to welcoming you all to Pecs again at ISMC 2005. ♥

# Academy Spans the World!

by Ivan Berkowitz, Winnipeg, Canada

On October 14, 2004, during the Academy's First World Congress in Belo Horizonte, Brazil, a meeting was held to provide an opportunity for Fellows in attendance to be brought up-to-date on Academy activities and establish a forum for exchange of ideas for future developments. Dr. Makoto Nagano chaired the meeting, welcomed

in Hungary; and the Third Annual Meeting of the Japan Section. The Norman Alpert Award was given at the Czech Meeting to Dr. B. Ostadal, who has been actively engaged in promoting cardiovascular research and education in Eastern Europe and is a World Leader in the field of Developmental Cardiology. A major

reinforced the request for support for his efforts as editor of E & C C. He acknowledged the exceptional ongoing support from Pulsus Group in Toronto, especially their work in correcting the English for articles coming primarily from authors whose first language is not English. He conveyed a desire to focus on current comments and encourage young people and teaching. The other Academy publication, Journal of Cardiovascular Pharmacology and Therapeutics is doing fine.

4. CV Network is being published regularly and we hope you are satisfied with this Bulletin. Your suggestions for further improvement will be welcomed by the Editor (Ivan Berkowitz). The Winnipeg Foundation again has been generous in providing \$20,000 for the second year for the CV Network.

5. Organizing a meeting is a tough job and one has to spend a great deal of time to put together an event. It is thus important that the Academy recognize the efforts of such people. Accordingly, we honoured Drs. P. Braveny, E. Roth and O. Gomes, Chairs of the Czech, Hungarian and Brazilian meetings, respectively. This involved giving the Distinguished Service Award Plaque to each of the proposed individuals.

6. Our program for awarding Medals of Merit to four individuals per year is being received with



Dr. Otoni Gomes shared his Distinguished Service Award with his delightful family whom he said did all the work for the World Congress.

all in attendance and paid lavish tribute to Dr. Otoni Gomes for the extraordinary effort by him and his team in organizing the Congress and creating such a delightful atmosphere for science and networking. He expressed the regret of all of us that Dr. Naranjan Dhalla could not join us. Dr. Pawan Singal referred to a recent report by our C E O Dr. Dhalla regarding the following:

1. We have been successful in establishing sections of the Academy in Japan, India and South America; all these are functioning independently and are doing well. Our efforts to set up a Section in Europe with a Head Office in Denmark are also successful. Slowly but surely, the Academy is making progress and Dr. Dhalla expressed confidence that the Academy will be a real moving force in involving the cardiovascular community at different levels all over the world.

2. This year we already had successful meetings with exceptional science in India where Howard Morgan and Makoto Nagano Awards were given to Prof. K.G. Nair and Prof. B.K. Sharma; the extraordinary Mendel Symposium on Gene and the Heart in Czech Republic; Cardioprotection

accomplishment for the Academy is our first World Congress in Brazil. The Organization Committee for the Brazil Meeting used their own mechanism to determine the most suitable candidate and selected Dr. Luis Souza from Curitiba, in the south of Brazil, as winner of the 2003 Naranjan Dhalla Award for young investigators in cardiovascular sciences. The endowment fund for all the four awards is yielding \$13,000 per annum and this can take care of our awards program. Prof. Nagano kindly raised some funds for the Mendel Symposium and Dr. Dhalla was successful in finding support for the Brazil Congress.

3. We have been able to secure a grant in the amount of \$75,000 from the Government of Canada to contribute to the cost of printing Experimental and Clinical Cardiology over a three year period. The Editor-in-Chief (Dr. B. Ostadal) has initiated a plan to improve the quality of journal and to apply for indexing in Current Content in order to join journals with "impact factor". Moreover, the Editorial Board will be innovated. You may contact him directly to have your input in this regard. Dr. Ostadal



Winner of the Distinguished Service Award, Dr. Elizabeth Roth, chair of the Pecs meeting.

great praise for the Academy. Our exceptional honourees include Michael DeBakey, Richard Bing, Eugene Braunwald, Robert Lefkowitz, Edwin Krebs and Robert Furchgott. We have at present 231 Fellows of the Academy and very many people are aspiring to receive this recognition.

7. In order to raise funds for the Academy in terms of individual donations and corporate contributions, we were advised to incorporate the Academy as a Foundation in the United States for tax-free status. We have received the tax-free number, opened a U S Bank Account at Wells Fargo and can now issue receipts for donations in the U S A as well as Canada.

Dr. Brigitte Nagano reported on the recent meeting of the Japan Section and on plans for the Fourth Annual Meeting to be held in Osaka in June, 2004. There are over 300 members already in the Japan Section. Dr. Hideaki Kawaguchi invited the delegates to attend the Second World Congress in Sapporo, Japan in 2006 – his target audience is the 10,000 Japanese cardiologists as well as professionals around the world. Dr. Grant Pierce expressed the sentiment of the entire Academy in congratulating the Naganos in building the Number One group in the Academy.

Dr. Gomes reported there are more than 600 delegates at the World Congress from 26 countries. Dr. Gomes introduced the new President of the South American Section, Dr. Ricardo Gelpi from Buenos Aires, Argentina. He will host the 2004 Section Meeting and the Academy will sponsor a symposium at the Family Cardiology Congress in Belo Horizonte in November, 2004. In cooperation with Brazilian Society of Cardiology FUNCOR and Fundacao Cardiovascular Sao Francisco de Assis, the Academy is organizing an "International Intensive Cardiology Education Program" which will conclude with a session in Winnipeg, Canada in October, 2004.

Drs. Keld Kjeldsen and Thomas Schmidt confirmed the formation of the European Section. Their vision is to create working links with front line cardiovascular science as was built recently between the Slovak Academy of Sciences and the St. Boniface Institute of Cardiovascular Sciences. They plan to integrate CV education between clinicians and scientists. A concept is to encourage scientific inspiration through culture for which they plan a symposium on "faith-based CV health", possibly in Rome (to which Dr. Pierce and Ivan Berkowitz suggested it would be important to involve all faiths, not only Christians) and "heights in CV health" with a trekking expedition at Parador de las Canadas in the Canary Islands (or to Mount Killimanjaro). They will make efforts to extend

knowledge to the public within the European Union. A meeting is planned in cooperation with the German Physiological Society in Leipzig in March, 2004. They hope to host a World Congress of the Academy in Copenhagen, Denmark in 2012. The suggestion was made that the Congress in 2009 should be at the global headquarters in Winnipeg, Canada.

Dr. Singal reported on the Indian Section. They are working hand in hand with ISHR. Meetings are planned in New Delhi and Lucknow in January, 2004.

Director of Development Ivan Berkowitz reported on CV Network, about to complete its second year, and reviewed the progress from the first

cial statement of collaboration, not competition should be formulated by the presidents of the two organizations and published in each bulletin.

3. Academy should emphasize teaching with smaller symposia taught by 3-4 Fellows to 15- 20 students.

Dr. Pierce told of his development of the link between University of Manitoba and Arabian Gulf University to encourage medical students to pursue research. He agreed with the Academy's role in such teach-ins as held in Trinidad. He suggested the Academy should provide the planning template and invite Fellows to serve as faculty.



Dr. Bruce McManus presented the Distinguished Service Award to Dr. Pavel Braveny, chair, Mendel Symposium

issue which was almost all from Canada to having articles and reports from around the world, even including the World Health Organization. A proposal has been submitted to NATO to sponsor a Workshop in Turkey in 2005. He told of discussions with the enthusiastic delegates from China who will establish a section, host a meeting in 2004 and provide members for the publications editorial boards. He encouraged involvement in the Journal, Experimental & Clinical Cardiology. Buoyed by the continuing growth of the Public Forum, held for the third time in Winnipeg in May, 2003, he encouraged the planning of such initiatives around the world – contact him for assistance.

Dr. Ostadal offered some learned suggestions for the Academy:

1. Membership must be encouraged – rules should be established internationally but strategies developed by sections.
2. A formal link should be set with ISHR. An offi-

Dr. Balwant Tuana suggested we involve students and include teaching programs. Dr. Kjeldsen emphasized that the Academy must be unique. The relatively moderate number of attendants at some of the sessions of the present meeting indicated to him that the Academy cannot live merely from copying meetings also arranged by others and yet more powerful organizations. His suggestion was that the Academy should indulge more into teaching activities. This idea was supported by many and it was suggested to start a "working-group" on this issue. Thus, probably a small group will be formed in the near future within the Academy, to promote establishing teaching activities with around the world.

Drs. Nagano and Singal thanked everyone for attending and again expressed our mutual appreciation to the Gomes family. They encouraged all in attendance as well as readers of CV Network to make every effort to provide ideas to contribute to the growth of the Academy. ♥

## 2003 Naranjan Dhalla Award Honours Luiz Souza

by Ivan Berkowitz, Winnipeg, Canada



At the Academy's 1st World Congress in Brazil, the Naranjan Dhalla Award for young investigators in cardiovascular sciences was presented to Luiz César Guarita Souza.

Dr. Souza was born in Curitiba, south of Brazil, and always wanted to pursue medicine. He studied at the University of Federal Medical School in Curitiba (UFPR). After graduating, he went to São Paulo to start his residence in Cardiovascular Surgery, with Professor Sergio Almeida de Oliveira. In his opinion, the most important cardiac surgeon in the Latin America. In 1999 he did his Masters, studying the benefits of the gastroepiploic artery in myocardial revascularization, with Prof. Luiz Antonio Rivetti. At the end of 1999, he went to

Paris to do his PhD, in cell therapy with Dr. Marcio Scorsin and Philippe Menasché. His Thesis Title: "Muscular cell transplant in adults after myocardial infarction. Experimental study in rats." In 2001, he continued studies in cell therapy in Curitiba in PUCPR (with grant funding from Grant funding from: Coordenação de Aperfeiçoamento de Pessoal de Nível Superior) and working as a cardiovascular surgeon at Clinica Cardiologia C. Costantini and once each week in College of Medical Sciences of Santa Casa (Faculdade de Ciências Médicas da Santa Casa de São Paulo, FCMSCSP), Sao Paulo, Brazil.

Dr. Souza's favorite hobby is cycling. ❤️

## ADVANCES IN HEART HEALTH

### The "Heart Lab" at UCLA

by Glenn Langer, Joy Frank, Jim Weiss, and Ken Philipson, Los Angeles, California



The Cardiovascular Research Laboratory in 1996. Front Row (L-R), Drs. Joy Frank, Ken Philipson, Jim Weiss, and Glenn Langer

In 1957, the Greater Los Angeles Affiliate of the American Heart Association established the first local privately supported research laboratory in the United States. An agreement with the University of California at Los Angeles provided space at the University Medical Center, itself only a few years old at the time, with the American Heart Association affiliate providing all the operational funding. Dr. Wilfred F. H. M. Mommaerts, then at Case Western Reserve University in Cleveland, was recruited as the Laboratory's first Director. Dr. Mommaerts, originally from Belgium and trained by Albert Szent-Gyorgyi in Hungary,

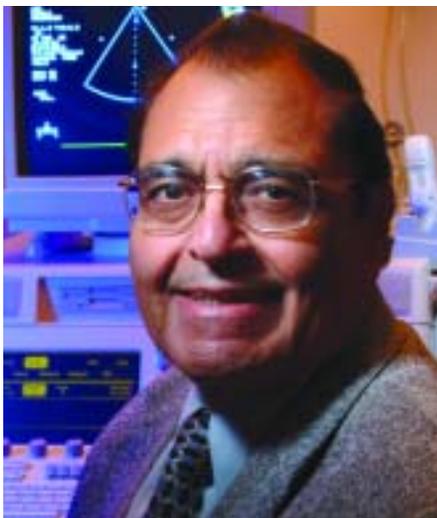
was an internationally recognized muscle physiologist. In the late 1950's, muscle research was totally focused on skeletal muscle and this was the tissue in which Mommaerts was primarily interested when he arrived in Los Angeles. He recognized, however, that his sponsor was the American Heart Association and he recruited a young investigator from the University of Washington named Allan Brady, whose interest was in cardiac muscle mechanics. A few years later, he persuaded another young faculty member, Glenn Langer, then at Columbia Physicians & Surgeons, to head west. With Dr. Langer's expert-

ise in cardiac excitation-contraction coupling, the cardiac emphasis grew, drawing on appropriate basic mechanisms discovered in skeletal muscle and testing them and modifying them to define cardiac function. During this period, Dr. Langer and Dr. Brady served as Associate Directors for what had come to be known as the "Heart Lab" at UCLA. By the time Dr. Langer succeeded Dr. Mommaerts as Director in 1986, the research had, indeed, become totally cardiac. In addition it had evolved to become one of the foremost laboratories in the world in the multidisciplinary study of basic function of the heart. Over its 40+ year history, the Heart Lab became a major training center for cardiovascular scientists, being the "home", at some time during their careers, of many of the foremost cardiac investigators. Alumni, for example, include Drs. Don Bers, John Bridge, Don Hilgemann, Martin Morad and others.

The current Director, Dr. James Weiss, and Associate Director, Dr. Kenneth Philipson, of the Cardiovascular Research Laboratory in the David Geffen School of Medicine at UCLA succeeded Dr. Langer in 1997. The Laboratory remains at the forefront of cardiovascular research, and its major emphasis has remained on the myocardium. The Laboratory receives generous support from the Laubisch Foundation. Projects include structure/function analysis of transporters and channels, signal transduction in cardioprotection, hypertrophy, and heart failure, molecular dissection of cardiac development, and mathematical analysis of cardiac arrhythmias. ❤️

# Impact of Echocardiography in Clinical Practice

by Andrew P. Miller and Navin C. Nanda, Birmingham, Alabama



Dr. Navin C. Nanda

## ABSTRACT

Since its inception in the late 1960s, echocardiography has rapidly evolved to become an extension of the clinician's hand in diagnosing and managing complex cardiovascular diseases. In this review, we will discuss the historical development of echocardiography, its current practice, and the development of new ultrasound strategies including contrast and three-dimensional echocardiography.

## HISTORICAL DEVELOPMENT

In the late sixties and early seventies, M-mode echocardiography first appeared as a clinical tool for diagnosing and assessing severity of mitral stenosis as well as for evaluating pericardial effusions. Quickly, the pulmonary valve was successfully imaged and the field of pediatric echocardiography blossomed with detection of complex congenital lesions such as transposition of the great vessels. Also, in this time period, contrast echo found its infancy with the use of saline or indocyanine green to identify structures such as the aorta, the heart chambers, and the right-sided valves.

In the late seventies and into the eighties, real-time two-dimensional transthoracic echocardiography (TTE) came on the scene. This new technology permitted unequalled assessment of left and right ventricular anatomy. When TTE was followed shortly thereafter by the development of conventional Doppler, assessment of stenotic valves was greatly

enhanced and when, in 1984, color Doppler was introduced at the University of Alabama at Birmingham, complete assessment of valvular regurgitation was established. These accomplishments led to echocardiography becoming the most extensively used noninvasive cardiovascular diagnostic technique.

In 1988, transesophageal echocardiography (TEE) was introduced to the clinical practice of medicine, permitting assessment of the left and right atrial appendages as well as determination of valvular vegetations. The application of this technology to patients with stroke, atrial fibrillation, aortic dissection, and suspected endocarditis as well as to those in the operating room led to great advances and innumerable publications in the ultrasound literature.

In the nineties, harmonic imaging was developed, making technically difficult exams easier to perform. This dramatic improvement in image quality and the aforementioned accomplishments brought TTE into the daily practice of medicine with echocardiography becoming an extension of the physical examination in the diagnosis and management of patients with cardiovascular disease.

Today we sit on the verge of two major advancements in the field of echocardiography. First, progress in contrast echo has led to better assessment of left ventricular (LV) endocardial borders and shunts, detection and quantification of myocardial perfusion, and to characterization of myocardial or vascular inflammation. Presently, the contrast agents Optison, Definity, and Imagent have been introduced in the United States, Levovist in Canada and Europe, and Sonovue in Europe with many more under development. These agents combined with pharmacologic agents such as dobutamine and adenosine should rapidly expand the field of stress echocardiography.

Second, three-dimensional (3D) echocardiography has become a reality. Beginning with reconstruction from TEE collected images in the nineties, 3D echo has long shown promise as a research tool. Now real-time online 3D echo has been introduced and 3D TTE imaging is feasible. This should be a challenging but rewarding development in cardiac ultrasound as it promises to rewrite the standard TTE

exam and offer ultrasound views that were previously not possible.

Many other developments in echocardiography have also played a major role in its ever-expanding scope. The field of diastology has been greatly impacted by development of tissue Doppler, LV strain and strain rate imaging. Intravascular and intracardiac ultrasound have found a place in the invasive catheterization and electrophysiology laboratories. Transpharyngeal ultrasound combined with the standard TEE exam permits imaging from the great vessels to the coronary arteries. Despite challenges from other non- or semi-invasive strategies, the field of echocardiography should continue to ascend as the most clinically useful tool for cardiac imaging due to its malleability and portability.

## CURRENT APPLICATIONS OF ECHO

The current state of echo is excellent. The ultrasound beam is only limited today in imaging of the distal coronary arteries and peripheral pulmonary arteries, but otherwise provides comprehensive views of anatomy and function of the cardiovascular system. Traditional echocardiography affords superb evaluation of valvular disease (both native and prosthetic), myocardial disease (impairment of right and left ventricular function and diagnosis of cardiomyopathies – infiltrative, ischemic, or idiopathic), and other thoracic structures including the pericardium and the great vessels. Tissue Doppler imaging and LV strain or strain rate imaging provide a quantitative assessment of lusitropy, permit detection of diastolic dysfunction, and have become useful in characterization of cardiac dyssynchrony. 3D and contrast echo promise great advances, possibly rewriting the echocardiography literature. Finally, echo is reaching into the invasive cardiovascular laboratories with intracardiac and intravascular ultrasound. As numerous advances continue to occur in this exciting field, echocardiography should continue to fulfill its promise as a pivotal tool in the diagnosis and management of our patients.

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The Mendel Symposium entitled Genes and the Heart was organized by Masaryk University Brno together with the Academy of Sciences of the Czech Republic, the Slovak Academy of Sciences, and Czech Medical Association. The Symposium sponsored by the International Academy of Cardiovascular Sciences was held in the historic city of Brno, Czech Republic August 26-29th, 2003. The city of Brno, the cap-

# Mendel Symposium Explores Genes and the Heart

by Lorrie Kirshenbaum, Winnipeg, Canada

ital of Moravia was the once home of the acclaimed monk Gregor Johann Mendel whose pioneering experiments on pea plants established principles and practices that forged the basis for modern day genetics. Some 150 years later, Mendel's work together with the discovery of DNA have established a linkage between genes and human disease. The Mendel Symposium "Genes and Heart" was held at St. Thomas Abbey of the Mendel Centre, the very place where Mendel lived and worked. The theme of the meeting was in the spirit of understanding genetic pathways that regulate heart function under normal and disease conditions. Specialized sessions dedicated to topics on cardiac development, signal transduction, ischemia-reperfusion injury, cardiac hypertrophy and heart failure were held in an ornately decorated lecture room overlooking the garden where Mendel's peas once grew. The meeting was attended by more than 200 internationally recognized leaders from Canada, United States,

Germany, Slovakia, Czech Republic and Japan. Notably, Dr. M. Nagano (Japan) and Dr. N. S. Dhalla (Canada) were honoured by Masaryk University in Brno for their extraordinary lifetimes of achievements. The awards were presented by the Lord Mayor of Brno.

The second annual award honouring Norman Alpert was presented to Professor Bohuslav Ostadal D.Sc., M.D. in recognition of his amazing accomplishments in Cardiovascular Patient Care, Sciences and Education.

The meeting was considered to be a major success and Dr. Braveny and his local organizing team are to be congratulated for putting together an excellent, thought-provoking scientific forum as well as providing the attendees with wonderful local hospitality. Gregor Mendel himself would have been proud to be part of the science and the camaraderie. One could not help to think, that at least in spirit ... Mendel was there. ♥

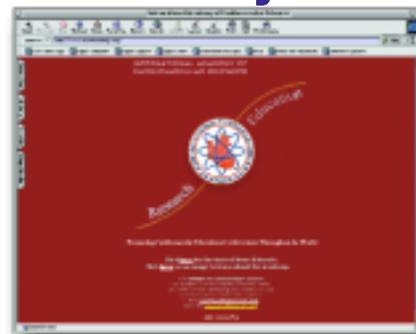
REMEMBERING SOMEONE SPECIAL



## Samraj S. Dhalla

With great sadness, we remember Samraj S. Dhalla January 21, 1957 - October 1, 2003. It was with the greatest sadness that the Dhalla Family announced the sudden and unexpected passing of their beloved son, Sam, the eldest son of Dr. Naranjan S. Dhalla. He is survived by his wife Madhu; his two sons, Sandeep and Shawn; sister Sonia; and brothers, Sonny, Vikram and Romel. A successful entrepreneur, a community figure, and great family man, Sam always lived life to the fullest and enriched the lives of all those who knew him with his infectious laughter, charming charisma, generosity and kindness. ♥

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**Dr. Suresh K. Gupta, All India Inst. of  
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**E-mail: [skgupa@hotmail.com](mailto:skgupa@hotmail.com)**

# SCHEDULE OF INTERNATIONAL CONFERENCES

## 2004

**January 7 - 8**, New Delhi, India: International Symposium on Pharmacotherapy of Heart Failure. Inquiries: Dr. Suresh K. Gupta, All India Institute of Medical Sciences, Dept. of Pharmacology, Ansari Nagar, New Delhi, 110 029, India

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Fax: +91-11-2686 2663

E-mail: [skgup@hotmail.com](mailto:skgup@hotmail.com)

**January 9 - 11**, Lucknow, India: "Coronary Artery Disease – Molecule to Man". Joint International Conference with ISHR (Indian Section) and the International Academy of Cardiovascular Sciences. Inquiries: Prof. V.K. Puri, Head, Dept. of Cardiology, King George's Medical College, Lucknow – 226003, India

Phone & Fax: +91-522-2255830

E-mail: [vijaykurmarpuri@hotmail.com](mailto:vijaykurmarpuri@hotmail.com) & [aniket@sancharnet.in](mailto:aniket@sancharnet.in)

**March 14 - 17**, Leipzig, Germany: 83rd Meeting German Physiological Society. Sponsored by International Academy of Cardiovascular Sciences. Chair: Dr. Heinz-Gerd Zimmer, Professor of Physiology & Chair and Director, Medizinische Fakultät

Carl-Ludwig-Institut für Physiologie, Universität Leipzig, Liebigstr. 27, Leipzig, 04103, Germany

Tel: +49-34-1-971-5500

Fax: +49-34-1-971-5509

E-mail: [zimmer@medizin.uni-leipzig.de](mailto:zimmer@medizin.uni-leipzig.de)

**April 30**, Mexico City, Mexico Ignacio Chavez Rivera Symposium on Cardiovascular Disease. Organized by International Academy of Cardiovascular Sciences.

For details, please contact: Dr. Pawan Singal, St. Boniface Hospital Research Centre, Winnipeg Canada

Telephone: (204) 235 3485

E-mail: [pawan\\_singal@sbrcc.ca](mailto:pawan_singal@sbrcc.ca)

**May 2 - 5**, Westin Regina Resort, Cancun, Mexico: XXVI Annual Meeting of the ISHR - North American Section entitled "Bench to Bedside and Back: Exploring New Paradigms - A Multinational Perspective of Cardiovascular Research in North America"

Inquiries: Dr. Daniel Villarreal, Div. of Cardiology, Dept. of Medicine, SUNY Upstate Medical Univ., 750 E. Adams St., Syracuse, NY 13210 Phone: (315) 464-9578, Fax: (315) 464-9571, E-mail: [Villarrd@upstate.edu](mailto:Villarrd@upstate.edu) or [Backusb@upstate.edu](mailto:Backusb@upstate.edu).

**May 6 - 9**, Winnipeg, Canada: National Research Forum for Young Investigators in Circulatory and Respiratory Health. A program of the CIHR Institute of Circulatory and Respiratory Health and partners. Coordinator: Ivan Berkowitz, Institute of Cardiovascular Sciences, St. Boniface Hospital Research Centre, 351 Taché Ave., Winnipeg MB R2H 2A6

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E-mail: [ivan@mts.net](mailto:ivan@mts.net);

Web Site: [www.yiforum.ca](http://www.yiforum.ca)

**July 17 - 18**, 2004. Osaka-Senri, Japan.

The 4th Annual Meeting of IACS Japan Section (The 27th Japanese Working Group on Cardiac Structure and Metabolism). Chairman: Ryoji Matoba, MD, PhD. Osaka University.

e-mail: [matoba@legal.med.osaka-u.ac.jp](mailto:matoba@legal.med.osaka-u.ac.jp)

**July 17 - 20**, Vancouver, British Columbia: 9th World Congress on Heart Failure: Mechanisms and Management. World Congress on Heart Failure, PO Box 17659, Beverly Hills, California 90209. Telephone (310)-657-8777, fax (310)-275-8922,

E-mail [Klimedco@ucla.edu](mailto:Klimedco@ucla.edu)

**August 7 - 11**, Brisbane, Australia: XVIII World Congress International Society for Heart Research and the 52nd Annual Scientific Meeting of the Cardiac Society of Australia & New Zealand "Cardiology Bench to Bedside: The Science and The Practice" Inquiries: ISHR 2004 Congress, PO Box 164, FORTITUDE VALLEY QLD 4006, AUSTRALIA. Phone.: +61 (0)7 3854 1611, Fax: +61 (0)7 3854 1507,

E-mail: [heart2004@ozaccomm.com.au](mailto:heart2004@ozaccomm.com.au) Web site: [www.heart2004.com](http://www.heart2004.com)

**October 17 - 22**, Winnipeg, Canada: International Intensive Cardiology Education Program. In cooperation with Brazilian Society of Cardiology FUNCOR/Fundacao Cardiovascular Sao Francisco de Assis, the International Academy of Cardiovascular Sciences is organizing a year-long program in Brazil which will conclude with sessions in Canada. Informações e Inscrições: ECM – FCMMG Rua dos Otoni, 909 - Sala 1.808 Belo Horizonte – MG, Brazil Tel: (31)3273-0484

E-mail: [wpadua@pib.com.br](mailto:wpadua@pib.com.br)

Canadian coordinator: Ivan Berkowitz, Institute of Cardiovascular Sciences, St. Boniface Hosp. Research Centre, 351 Taché Ave., Winnipeg MB R2H 2A6

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E-mail: [ivan@mts.net](mailto:ivan@mts.net);

Web Site: <http://www.feluma.org.br/cpg/cardio>

**October 23 - 27**, Calgary, Alberta: 57th Annual Meeting of the Canadian Cardiovascular Society. Stéphanie Mutschler, CMP, Manager, Meetings, 222 Queen Street, Suite 1403, Ottawa, Ontario K1P 5V9, tel. (613)-569-3407, fax (613)-569-6574, E-mail: [meetings@ccs.ca](mailto:meetings@ccs.ca), web site [www.ccs.ca](http://www.ccs.ca)

**Nov. 26 - 28**, Belo Horizonte, Brazil: XIV Scientific Forum and 1st Brazilian Congress on Cardiology for the Family. Dr. Otoni M. Gomes, Rua Manoel Lopes Coelho, 365 - Itapoa - 31710-530 Belo Horizonte - MG, Brazil Tel: +55-31-3444-8807 / 3441-2254 (res.)

E-mail [gomes@sevicor.com.br](mailto:gomes@sevicor.com.br)

## 2005

**May 12 - 15**, New Orleans, Louisiana: XXVII Annual Meeting of the ISHR - North American Section. Inquiries: Dr. Dennis B. McNamara & Dr. Krishna C. Agrawal, Dept. of Pharmacology, Tulane University School of Medicine, 1430 Tulane Ave., SL 83, New Orleans, LA 70112 Phone: (504) 584-2635 or -28, Fax: (504) 588-5283, E-mail: [agrawal@tulane.edu](mailto:agrawal@tulane.edu)

**Nov. 25 - 27**, Belo Horizonte, Brazil: XV Scientific Forum and 1st World Congress on Cardiology for the Family. Dr. Otoni M. Gomes, Rua Manoel Lopes Coelho, 365 - Itapoa - 31710-530 Belo Horizonte - MG, Brazil Tel: +55-31-3444-8807 / 3441-2254 (res.)

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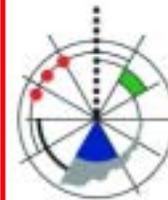
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**FRIDAY APRIL 30, 2004**

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## **Joint International Conference with International Society for Heart Research (Indian Section)**

Encouraged by the great success of the 2003 meeting, Prof. V. K. Puri has announced plans for the conference entitled; 'Coronary Artery Disease - Molecule to Man' to be held from January 9-11, 2004 in Lucknow, India.

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