10 Years...and THE FUTURE!

EDITOR'S NOTE: With this cover, we pay tribute to the Academy’s Founder Naranjan Dhalla and also recognize the 12 extraordinary servants of heart health who have been awarded the Academy’s highest honour, the “Medal of Merit”.

I am thrilled that we will welcome the world to Winnipeg again. Beyond my fondest dreams, my vision to celebrate Naranjan’s 70th Birthday with a Conference will be successful and our unique Symposium on the FUTURE OF HEART HEALTH will be awesome. We thank most sincerely our sponsors (their logos are on page 30); our “team” listed on page 41; and everyone who honours us with their attendance. 

Jean Carleman, Winnipeg, Canada
Co-Chairs: Lee and Albert Friesen

### Oct. 12, Thursday

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>7:00 - 9:30 PM</td>
<td>Reception to Celebrate the 10th Anniversary of IACS at the Manitoba Legislative Building (under the Golden Boy) (Buses will depart from the Winnipeg Convention Centre York Ave. entrance at 6:45 PM) supported by Manitoba Liquor Marts</td>
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### Oct. 13, Friday

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<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>7:15 - 7:50 AM</td>
<td>Breakfast (Presentation Theatre Concourse - 2nd Floor)</td>
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#### University of Manitoba Faculty of Medicine Symposium

**“Developments in Cardiovascular Science and Medicine”**

**Keynote Lectures (Presentation Theatre - 2nd Floor)**

**Chairs:**
- Senator Wilbert Keon, Ottawa, Canada
- Academician Eugeny Chazov, Moscow, Russia

**Speakers:**
- Peter Liu, Director, CIHR Institute of Circulatory and Respiratory Health, Toronto, Canada: *Strategic Vision for Cardiovascular Research in Canada*
- His Excellency Ismail Sallam, Former Health Minister of Egypt, Cairo, Egypt: *Health for Peace and Security, New Dimensions and Potentials*

#### Symposia Sessions

**Symposium #1 Room 2E**

**Chairs:**
- Robert B. Jennings, Durham, USA
- K. Gopal Nair, Mumbai, India

**Speakers:**
- 9:00 - 9:20 AM Paul Armstrong, Edmonton, Canada: *Acute myocardial infarction is an inflammatory matter.*
- 9:40 - 10:00 AM Ursula Muller-Werdan, Halle, Germany: *Inflammation and the aging heart.*
- 10:00 - 10:20 AM Discussion

**Symposium #2 Room 2F**

**Chairs:**
- Laurentiu Popescu, Bucharest, Romania
- Borivoj Korecky, Ottawa, Canada

**Speakers:**
- 9:00 - 9:20 AM Michael Sole, Toronto, Canada: *Molecular diurnal rhythms: Unrecognized critical determinants of cardiovascular health and disease*
- 9:20 - 9:40 AM Bruce McManus, Vancouver, Canada: *Searching for biomarkers of acute and chronic allograft.*
- 9:40 - 10:00 AM Lorrie Kirshenbaum, Winnipeg, Manitoba: *Regulation of cell death in the heart.*
- 10:00 - 10:20 AM Discussion
- 10:20 - 10:35 AM Coffee Break

**Symposium #3 Millennium Suite**

**Chairs:**
- Subhamay Ghosh, Pecs, Hungary
- Mohammed Saleemi, Faisalabad, Pakistan

**Speakers:**
- 9:00 - 9:20 AM Garrett Gross, Milwaukee, USA: *The CYP450 pathway: A new cardioprotection paradigm.*
- 9:40 - 10:00 AM Rakesh Kukreja, Richmond, USA: *Cardioprotection with PDE-5 inhibition: Role of calcium activated K+ channels.*
- 10:00 - 10:20 AM Discussion
- 10:20 - 10:35 AM Coffee Break
**Symposium #4 Pan-Am Room**  
**Sponsored by the DRTC**

**Chairs:**  
Ivana Ostadalova, Prague, Czech Republic  
Khalid Rehman, Liverpool, England

**Speakers:**

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Country</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00 - 9:20 AM</td>
<td>David Severson</td>
<td>Calgary, Canada</td>
<td>Metabolic and contractile dysfunction in type 2 diabetic mouse hearts.</td>
</tr>
<tr>
<td>9:40 - 10:00 AM</td>
<td>Brian Rodrigues</td>
<td>Vancouver, Canada</td>
<td>Control of fatty acid delivery to the heart following insulin resistance and diabetes.</td>
</tr>
<tr>
<td>10:00 - 10:20 AM</td>
<td>Discussion</td>
<td></td>
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<tr>
<td>10:20 - 10:35 AM</td>
<td>Coffee Break</td>
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**Symposium #5 Room 2E**

**Chairs:**  
Eldon Smith, Calgary, Canada  
Dragan Djuric, Belgrade, Serbia

**Speakers:**

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<tr>
<th>Time</th>
<th>Speaker</th>
<th>Country</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>10:40 - 11:00 AM</td>
<td>Jawahar L. Mehta</td>
<td>Little Rock, USA</td>
<td>New biology of atherosclerosis: lessons from LOX-1 knockout mice.</td>
</tr>
<tr>
<td>11:00 - 11:20 AM</td>
<td>Eugeny Chazov and T. Krasnikova</td>
<td>Moscow, Russia</td>
<td>Chemokines in atherosclerosis: Pathological role and potential targets</td>
</tr>
<tr>
<td>11:20 - 11:40 AM</td>
<td>Jan Kyselovic</td>
<td>Bratislava, Slovak Republic</td>
<td>Calcium channel blocker inhibits Western type diet evoked atherosclerosis development in ApoE-deficient mice.</td>
</tr>
<tr>
<td>11:40 - NOON</td>
<td>Discussion</td>
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**Symposium #6 Room 2F**

**Chairs:**  
Wafa Etelba, Cairo, Egypt  
Raja Babu Panwar, Bikaner, India

**Speakers:**

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<tr>
<th>Time</th>
<th>Speaker</th>
<th>Country</th>
<th>Title</th>
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<tbody>
<tr>
<td>10:40 - 11:00 AM</td>
<td>Karl Werdan</td>
<td>Halle, Germany</td>
<td>Septic cardiomyopathy - a not yet discovered cardiomyopathy.</td>
</tr>
<tr>
<td>11:00 - 11:20 AM</td>
<td>Karl Weber</td>
<td>Memphis, USA</td>
<td>Nutrient balance in African-Americans with heart failure.</td>
</tr>
<tr>
<td>11:40 - NOON</td>
<td>Discussion</td>
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**Symposium #7 Millennium Suite**

**Chairs:**  
Elissavet Kardami, Winnipeg, Canada  
Harpal S. Buttar, Ottawa, Canada

**Speakers:**

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<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Country</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:40 - 11:00 AM</td>
<td>Bohuslov Ostadal</td>
<td>Prague, Czech Republic</td>
<td>Ischemic tolerance and protection of the immature heart.</td>
</tr>
<tr>
<td>11:00 - 11:20 AM</td>
<td>Stephen Schaffter</td>
<td>Mobile, USA</td>
<td>A novel mechanism of cell death linked to mitochondrial DNA damage.</td>
</tr>
<tr>
<td>11:20 - 11:40 AM</td>
<td>Mohammed Siddiqui</td>
<td>Brooklyn, USA</td>
<td>Signaling events in myocardial hypertrophy.</td>
</tr>
<tr>
<td>11:40 - NOON</td>
<td>Discussion</td>
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**Symposium #8 Pan-Am Room**

**Chairs:**  
Shyam S. Agrawal, New Delhi, India  
Alexandre Fabiato, Richmond, USA

**Speakers:**

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<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Country</th>
<th>Title</th>
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<tbody>
<tr>
<td>10:40 - 11:00 AM</td>
<td>Ashwani Malhotra</td>
<td>Newark, USA</td>
<td>Signal transduction pathways in diabetes mellitus.</td>
</tr>
<tr>
<td>11:00 - 11:20 AM</td>
<td>Ashok Srivastava</td>
<td>Montreal, Canada</td>
<td>Growth factor receptor transactivation in vasoactive peptide and redox-induced signaling in vascular smooth muscle.</td>
</tr>
<tr>
<td>11:20 - 11:40 AM</td>
<td>Nilanjana Maulik</td>
<td>Farmington, USA</td>
<td>Rescue of diabetes-related impairment of myocardial angiogenesis.</td>
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<tr>
<td>11:40 - NOON</td>
<td>Discussion</td>
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**Oct. 13, Friday (PM)**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>NOON - 2:00 PM</td>
<td>Lunch to Celebrate the 10th Anniversary of the Institute of Cardiovascular Sciences, St. Boniface General Hospital and - Faculty of Medicine, University of Manitoba</td>
</tr>
<tr>
<td>Chair</td>
<td>Arnold Naimark, President-Emeritus, University of Manitoba, Winnipeg</td>
</tr>
<tr>
<td>Greetings from the University</td>
<td>President Emőke J.E. Szathmáry</td>
</tr>
<tr>
<td>Greetings from St. Boniface General Hospital</td>
<td>President Michel Tétrault, Winnipeg</td>
</tr>
<tr>
<td>Response and Introduction of Special Guest</td>
<td>Larry Hryshko, Director, Institute of Cardiovascular Sciences, Winnipeg</td>
</tr>
<tr>
<td>Special Guest</td>
<td>Hugh Smith, Mayo Clinic, Rochester, USA “Do We Know What We Know”</td>
</tr>
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**8th Annual Award Lectures and Presentations of the Institute of Cardiovascular Sciences, University of Manitoba and St. Boniface General Hospital**  
(Supported by St. Boniface Hospital Research Foundation, Heart and Stroke Foundation of Manitoba and Merck Frosst, Canada)

**Award Lectures - Presentation Theatre - 2nd Floor**

**Chairs:**  
Pawan K. Singal, Winnipeg, Canada  
Jan Slezač, Bratislava, Slovak Republic

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<tr>
<th>Time</th>
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<tbody>
<tr>
<td>2:00 - 2:05 PM</td>
<td>Opening Remarks</td>
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</table>
| 2:05 - 2:45 PM| Robert Beamish Award Lecture  
What Makes the Heart Fail? - New Insights for Future Therapeutics  
Richard A. Walsh - Cleveland, USA |
| 2:45 - 3:25 PM| John Foerster Award Lecture  
Real Time 3D Echocardiography; Will it Replace 2D Echocardiography  
Navin C. Nanda - Birmingham, USA |
| 3:25 - 4:05 PM| Ken Bowman Award Lecture  
Optimizing Energy Metabolism as a Novel Approach to Treat Ischemic Heart Disease and Heart Failure  
Gary D. Lopaschuk - Edmonton, Canada |
| 4:05 - 4:20 PM| Coffee Break                                                        |
| 4:20 - 5:00 PM| Vincenzo Panagia Award Lecture  
Pharmacologic Modulation of the Vascular Wall-Response to Catheter-induced Injury  
Dennis B. McNamara - New Orleans, USA |

**Award Presentations by Stuart Murray, Winnipeg, Canada and Debbie Brown, Winnipeg, Canada**

<table>
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<tr>
<th>Time</th>
<th>Event</th>
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</table>
| 5:00 - 5:30 PM| Arnold Naimark Award: ..............................................................Judit Barta (Hungary)  
Sr. Jacqueline St-Yves Award: ..................................................Yan-Jun Xu (Winnipeg)  
Jack Litvack Award: .................................................................Val Coward (Winnipeg)  
Heart and Stroke Foundation Award: .........................................Santosh SanganalMath (Louisville)  
Henry Friesen Award: .................................................................Melissa Dent (Winnipeg)  
T. Edward Cuddy Award: ..............................................................Vinit Elimban (Winnipeg)  
James S. McGoey Award: ...............................................................Irwin Eydelnant (Winnipeg) |

**7:00 - 10:30 PM**

**An evening of FUN, FEASTING and ROASTING**

To celebrate Naranjan Dhalla’s 70th Birthday,

McPhillips Street Station, 484 McPhillips St  
(Buses will depart from the Winnipeg Convention Centre York Ave. entrance at 6:30 PM)

**Oct. 14, Saturday**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>7:30 - 8:15 AM</td>
<td>Breakfast (Delegates only - Room 2E, 2nd Floor)</td>
</tr>
<tr>
<td>8:00 - 2:00 PM</td>
<td>Exhibits and Posters 1st Floor, S E Corner</td>
</tr>
</tbody>
</table>
THE FUTURE OF HEART HEALTH

Oct. 14, Saturday

1st Floor

Program Co-Chairs: Grant Pierce and Alan Menkis
(This session is being recorded for production of a DVD)

8:15-8:40  "Global Issues - From the Fatty Cell to Community Policies and Children’s Education”
Valentin Fuster - President, World Heart Federation, New York NY
Chair - Larry Hryshko, Director, Institute of Cardiovascular Sciences, Winnipeg MB

FOCUS OF RESEARCH - Chair - Grant Pierce, Executive Director of Research, St. Boniface General Hospital, Winnipeg MB

8:45-9:10  "Can We Live For 150 Years?” - Robert Roberts, Ottawa Heart Institute, Ottawa ON

9:10-9:35  "Can Stem Cell Research Change The Face of Cardiovascular Disease?”
- Piero Anversa, New York Medical College, Valhalla NY

9:35-10:00  "Potential Stem Cell-Based Therapies: A Veritable Revolution” - Roberto Bolli, University of Louisville, Louisville KY

10:00-10:30  Panel Discussion - Bolli, Anversa, Roberts, Pierce, Fuster, Hryshko

10:30-10:45  Refreshment Break - 1st Floor, S E Corner

WHERE WILL SURGERY GO? - Chair - Alan Menkis, Medical Director, Cardiac Sciences Program, Winnipeg

10:45-11:10  “Will Cardiac Surgery Exist in 20 Years?” - Randy Wolf, University of Cincinnati, Cincinnati OH

- Walter Dembitsky, Sharpe Memorial Hospital, San Diego CA

11:35-12:00  Panel Discussion- Menkis, Dembitsky, Wolf

12:00-1:00  Naranjan Dhalla’s Favourite Lunch - 1st Floor, S E Corner and outside

HOW CAN WE IMPROVE QUALITY OF HEART PATIENTS’ LIVES?
- Chair - James Tam, Chief of Cardiology, Cardiac Sciences Program, Winnipeg MB

1:00-1:25  “Prevention Will Reduce Heart Disease More Than Any Other Factor” - Salim Yusuf, McMaster University, Hamilton ON

1:25-1:50  “Heart Disease in Women - Where it’s Going and The Challenges Ahead”
- Noel Bairey Merz, Cedars-Sinai Heart Center, Los Angeles CA

- Edward Kaplan, University of Minnesota, Minneapolis, MN

2:15-2:45  “Multimodality Cardiovascular Imaging: Embarking on a Fantastic Voyage” - A. Jamil Tajik, Mayo Clinic, Scottsdale AZ

2:45-3:15  Panel Discussion - Bairey Merz, Tajik, Yusuf, Kaplan, Tam

3:15-3:30  Refreshment Break - 1st Floor, S E Corner

ROUND TABLE ON IMPLEMENTING FUTURE CHANGES -
Chair: Albert Friesen, President, Medicure Inc, Winnipeg MB


3:50-4:10  “How Can We Afford Health Care in the Future?” - Roger Evans, Rochester MN

4:10-4:30  “The Role of Industry in Research & Development & Health Care. How Will It Look 20 Years from Now?”
- Calvin Stiller, London, ON

4:30-5:00  Panel Discussion - Stiller, Evans, H. Friesen, A. Friesen

5:00-5:30  “Keynote” Address - Sir Magdi Yacoub, President-Elect of International Academy of Cardiovascular Sciences, London, England  Chair: Alan Menkis

7:00-11:00  Indo-Canadian Community Reception, Dinner and Entertainment to honour Dr. Dhalla – Hall B 3rd Floor
Symposium on the Future of Heart Health – Speaker BIOS

Dr. Valentin Fuster
After receiving his medical degree from Barcelona University and completing an internship at Hospital Clinic in Barcelona, Dr. Fuster spent several years at the Mayo Clinic, first as a resident and later as Professor of Medicine and Consultant in Cardiology. In 1981, he came to Mount Sinai School of Medicine as head of Cardiology. From 1991 to 1994, he was Mallinckrodt Professor of Medicine at Harvard Medical School and Chief of Cardiology at the Massachusetts General Hospital. He returned to Mount Sinai in 1994 as Director of the Zena and Michael A. Wiener Cardiovascular Institute. Dr. Fuster also serves Mount Sinai The New York–Jersey Region and later Hadassah–Hebrew University. Dr. Fuster's work examines the regulation of signaling molecules into the nucleus of cells to turn genes on and off in the regulation of vascular growth. Dr. Fuster's research also investigates the relationship between infection, inflammation and the atherosclerotic blockages that occur in vessels. Dr. Fuster's work is integrated with that of the newly created CCARM. The goal of CCARM is to investigate the health related benefits of nutraceuticals and functional foods. Natural health remedies are becoming more and more popular each day and CCARM is dedicated to discovering the mechanisms responsible for these beneficial actions. CCARM is the only research of its group housed within a medical research facility with capabilities for conducting both basic science and clinical research activities associated with a teaching hospital. This unique research potential has been recently recognized by Agriculture and Agri-food Canada who have joined the team with their own research resources, personnel and agricultural products. This union of researchers with St. Boniface Hospital, the University of Manitoba and Agriculture and Agri-food Canada has created a national research resource in the area of nutritional interventions that is extremely powerful. CCARM researches the effects of Chinese herbal medicine, phytoestrogens, bosentan, placenta, CLA, flax seed, hempseed and a variety of other phytochemicals and their impact upon human health and animal disease processes.

Dr. Larry Hryshko
On April 1, 2006, Dr. Hryshko succeeded Dr. Naranjan Dhalla as Director of the Institute of Cardiovascular Sciences at the St. Boniface General Hospital Research Centre, Winnipeg Canada.

In 1994 Dr. Hryshko obtained his Ph.D. degree in Pharmacology and Therapeutics from the University of Manitoba in 1987. He then conducted Post-Doctoral research studies in the Division of Biomedical Sciences at the University of California, Riverside from 1987-1991. Following this training, he became an Assistant Research Physiologist at the Cardiovascular Research Laboratories at UCLA from 1991-1994. Currently he is a Professor of Physiology. Dr. Hryshko holds a Canada Research Chair specializing in Cardiac Electrophysiology.

Dr. Hryshko’s research is centered on identifying novel drugs that will minimize the injury associated with heart attacks. These agents are also being evaluated in experimental models of diabetes, a disease that predisposes individuals to increased risk of cardiac injury. His research program ranges from altering the molecular structure of important proteins involved in cardiac function to evaluating novel therapeutic agents in unique genetic models of cardiac disease.

Dr. Grant N Pierce
Dr. Pierce was recently appointed as Executive Director of Research, St. Boniface General Hospital, Winnipeg. He is a member of the Institute of Cardiovascular Sciences at the Centre and organized the new Canadian Centre for Agri-food Research in Health and Medicine (CCARM) at St. Boniface General Hospital. Dr. Pierce's research investigates the role of sodium hydrogen and sodium calcium exchange in ischemia-reperfusion injury to the heart as well as the determinants of vascular disease under atherosclerotic conditions. With respect to this latter research direction, Dr. Pierce's work examines the regulation of signaling molecules into the nucleus of cells to turn genes on and off in the regulation of vascular growth. Dr. Pierce's research also investigates the relationship between infection, inflammation and the atherosclerotic blockages that occur in vessels. Dr. Pierce's work is integrated with that of the newly created CCARM. The goal of CCARM is to investigate the health related benefits of nutraceuticals and functional foods. Natural health remedies are becoming more and more popular each day and CCARM is dedicated to discovering the mechanisms responsible for these beneficial actions. CCARM is the only research of its group housed within a medical research facility with capabilities for conducting both basic science and clinical research activities associated with a teaching hospital. This unique research potential has been recently recognized by Agriculture and Agri-food Canada who have joined the team with their own research resources, personnel and agricultural products. This union of researchers with St. Boniface Hospital, the University of Manitoba and Agriculture and Agri-food Canada has created a national research resource in the area of nutritional interventions that is extremely powerful. CCARM researches the effects of Chinese herbal medicine, phytoestrogens, bosentan, placenta, CLA, flax seed, hempseed and a variety of other phytochemicals and their impact upon human health and animal disease processes.

Dr. Robert Roberts
Dr. Roberts received his M.D. from Dalhousie University and completed his residency in Internal Medicine and Fellowship in Cardiology at the University of Toronto. Funded by a Canadian Heart Foundation Scholarship he pursued research in enzyology and cardiac metabolism at the University of California, San Diego, following which he was Director of the Cardiac Care Unit at Barnes Hospital and Associate Professor of Medicine, Washington University. In 1982, he assumed the position as Chief of Cardiology at Baylor. Dr. Roberts was appointed as President, Chief Executive Officer and Chief Scientific Officer of the University of Ottawa Heart Institute on April 1st, 2004. Dr. Roberts is an active clinician and researcher recognized for his groundbreaking research on cardiac creatine kinase (CK-MB), a key diagnostic marker for cardiac injury, as well as for his original contributions to the molecular biology and genetics of heart disease. He and his research team are credited with uncovering the genetic basis for several inherited cardiac disorders.

Dr. Piero Anversa
Dr. Anversa and the Cardiovascular Research Institute at New York Medical College began their fruitful association in 1972, when the Italian born and educated physician signed on as a visiting assistant professor of pathology. Some three decades later his reputation extends to the appointments he holds at Albert Einstein College of Medicine in the Bronx, and three institutions in Italy in addition to those at the College, where he is a professor in the departments of Pathology, Microbiology and Immunology, and Medicine. His work has been recognized with the Dean's Distinguished Research Award, and an appointment as vice chairman of the Department of Medicine last year. Anversa has stated: "Cardiac stem cells could be removed from the heart, multiplied in test tubes and returned, or it might be possible to boost their growth without removing them. Most likely both strategies could somehow improve the performance of the failing heart." Anversa and his team measured cardiac stem cell growth and aging in hearts taken from 20 patients who had died after a heart attack, from 20 patients who underwent heart transplantation for end-stage heart failure, and in 12 non-diseased "control" hearts.

Dr. Roberto Boll
Dr. Boll graduated from the University of Perugia (Italy) in 1976. He completed a research fellowship at the NIH under the mentorship of Dr. Stephen E. Epstein (1978–1980) and a clinical fellowship in Cardiology at Baylor College of Medicine (1981–1983). In 1983 he was appointed Instructor of Medicine and Director of the Experimental Research Laboratory at Baylor College of Medicine, where he rose to the rank of Professor with tenure. In 1994, he accepted the position of Chief of the Division of Cardiology at the University of Louisville. He is also the Vice Chairman for Research of the Department of Medicine, a Distinguished University Scholar, the Jewish Hospital Distinguished Chair in Cardiology, and the Director of the Institute of Molecular Cardiology at the University of Louisville. Twice at different institutions (Baylor and University of Louisville), Dr. Boll developed a leading research program that did not previously exist.

Dr. Boll has received the Physician Scientist Award of the American College of Chest Physicians (1987), the Pharmacica-Chiron Young Investigator Award "for outstanding work in the field of oxygen free-radical mechanisms in ischemia-reperfusion injury," 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 Howard Morgan Award for Distinguished Achievements in Cardiovascular Research from the International Academy of Cardiovascular Sciences (2005). He is a member of the American Society for Clinical Investigation and the Association of American Physicians. Dr. Boll has delivered 178 lectures at national and international scientific meetings, including a plenary session at the 71st Sessions of the AHA in 1998 and a State-of-the-Art Lecture at the 73rd Sessions of the AHA in 2000. Dr. Boll was selected as a Landmark Lecturer at the XVIII World Congress of the ISHR (2001), as the Keith Reimer Distinguished Lecturer of the ISHR (2002), and as the Robert Berne Distinguished Lecturer of the American Physiological Society (2005). Dr. Boll has been a member of the CVB Study Section of the NIH and of the NHLBI Program.
Dr. Bolli is PI in five NIH grants, including a MERIT Award and a P01 grant. He has published 259 papers including 178 original articles. Among the original articles, 32 have appeared in Circulation Research, 8 in PNAS, 7 in JCI, and 18 in Circulation. Twenty-nine of his papers have been cited more than 100 times, 6 more than 200 times, and 5 more than 300 times. He is first or last author in 79% of the 176 original articles.

For the past 25 years, Dr. Bolli’s research has focused on the mechanisms responsible for myocardial ischemia/reperfusion injury and on the development of cardioprotective strategies. His earlier work at Baylor established a fundamental role of reactive oxygen species in the pathogenesis of reversible posts ischemic 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 myocardial 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 impelled a reassessment of current paradigms regarding these enzymes and has paved the way for developing novel pharmacologic or genetic therapeutic strategies in patients with coronary artery disease.

Dr. Alan Menkis
Dr. Menkis was appointed in May 2004 as the Medical Director of the Winnipeg Regional Health Authority Cardiac Sciences Program and Head of the Section of Cardiac Surgery, University of Manitoba. He was the Director of Minimally Invasive and Robotic Cardiac Surgery at the London Health Sciences Centre. He was a Professor of Surgery at The University of Western Ontario. He was born and raised in Toronto, Ontario and completed his DDS degree in Toronto followed by a staff position in the Arctic with the Department of National Health and Welfare stationed in Inuvik, North West Territories. He achieved an MD degree from McMaster University in Hamilton and did postgraduate training in cardiovascualar research, internal medicine, and surgery in Hamilton, and Memorial University in Newfoundland. He received cardiac surgical training at The University of Ottawa Heart Institute. He received advanced post fellowship training in mechanical circulatory assist devices in Ottawa and at the University of Utah, in Salt Lake City.

Dr. Bolli has an interest in Health Care Policy, Economics and Administration and participated in several programs most notably the prestigious Executive Program for Physicians and Health Care Leaders at Harvard University.

His research interests include innovations in the treatment of valvular heart disease, mechanical circulatory assistance and most recently in robotic surgery. His other research interests include adult and pediatric heart and lung transplantation. He has published extensively and has been the recipient of numerous research grants.

He currently sits on the Clinical Trials Committee of the Canadian Institutes for Health Research, and is an associate editor the Journal of Heart and Lung Transplantation. He is the former Chairman of Cardiac Surgery at the University of Western Ontario and the London Health Sciences Centre. He is Past President of the International Society for Heart and Lung Transplantation and Past President of the Canadian Society for Transplantation. Since 1997 he has been a driving force in the development of minimally invasive and robotic cardiac surgery locally, nationally and internationally.

Dr. Randall K. Wolf
In August, 2003, the University of Cincinnati Medical Center was pleased to announce that Randall K. Wolf, MD, returned to Cincinnati. Dr. Wolf is a pioneer in robotic cardiac surgery and holds appointments in both the Department of Surgery and the Department of Biomedical Engineering at UC. He also serves as the Director of UC’s Center for Surgical Innovation. Dr. Wolf was the first surgeon in the United States to use robotic applications for cardiac surgery. His return to Cincinnati followed four years as the director of Minimally Invasive Cardiac Surgery and Robotics at The Ohio State University Medical Center. While there, he performed the first endoscopic cardiac procedure in North America in 1999. He also completed the first Federal Drug Administration study with the da Vinci robotic system for cardiac surgery. A graduate of the Indiana University School of Medicine, Dr. Wolf came to Cincinnati and completed his vascular fellowship at Jewish Hospital in 1986 and his cardiothoracic fellowship at UC in 1988. He practiced cardiothoracic surgery in Cincinnati for 11 years. From 1990 to 1997, he introduced several new thoracic procedures.

Dr. Walter Dembitsky
Practicing in San Diego since 1978, Dr. Dembitsky, is medical director, cardiac surgery and Mechanical Circulatory Support Program at Sharp Memorial. He received his undergraduate, medical degree and completed his surgical internship at the University of Missouri. Dr. Dembitsky completed a general surgery residency and was chief resident in general surgery at Washington University in St. Louis. He then went on to complete a residency in cardiothoracic surgery and was chief resident in cardiothoracic surgery at Washington University. Dr. Dembitsky completed research fellowships at Peter Bent Brigham Hospital in Boston, Massachusetts, Barnes Hospital in St. Louis, Missouri, and Washington University in St. Louis, Missouri. He is a noted researcher and author on topics related to the use of mechanical assist devices.

Dr. James Tam
Dr. Tam was recently appointed as Chief of Cardiology of the Winnipeg Regional Health Authority Cardiac Sciences Program and University of Manitoba. He is a graduate of the University of Toronto. After completing training in cardiology and echocardiology in Ottawa and Halifax, he came to Winnipeg in 1996. His interests are valvular heart disease, congestive heart failure and congenital heart disease.

Dr. Salim Yusuf
Dr. Yusuf is a cardiologist and epidemiologist. After qualifying in medicine from St. John’s Medical College, Bangalore, India in 1976, he received a Rhodes Scholarship and obtained a DPhil at Oxford, during which he was involved (along with Richard Peto and Peter Sleight) in initiating the concept of large, simple trials and meta-analysis. He subsequently coordinated the first ISIS trial and served on the steering committee of all subsequent ISIS trials. In 1984, following clinical training in medicine and cardiology in the UK, he moved to the National Institutes of Health, Bethesda, USA. There he applied these principles of large, simple trials to other areas that led to the SOLVD and DIG trials in heart failure. In 1992 he moved to McMaster University and since then has established an international program of research in cardiovascular diseases and prevention. Landmark studies include the recently completed HOPE, OASIS, and CURE trials as well as population based studies in diverse ethnic groups in Canada such as the SHARE study and one of the world’s largest case control studies of acute myocardial infarction, which involves 52 countries (INTER-HEART). He is currently the Director of the Population Health Research Institute at McMaster University and Hamilton Health Sciences, Hamilton, Canada. He has also been a visiting professor at St. John’s Medical College in India for over the last twelve years, where he has collaborated in facilitating several projects.

Dr. Noel Bairey Merz
C. Noel Bairey Merz, MD is Medical Director of the Preventive and Rehabilitative Cardiac Center at Cedars-Sinai Medical Center. Board certified in internal medicine, cardiovascular diseases and medical examination, she is also Holder of the Women’s Guild Chair in Women’s Health and Medical Director of Women’s Health at Cedars-Sinai. Dr. Bairey Merz also serves as Professor of Medicine at the David Geffen School of Medicine at the University of California, Los Angeles (UCLA). Dr. Bairey Merz’s primary area of research interest involves the development and prevention of heart disease in women, including the role of nutrition, exercise and stress. She is Chair of the National Institutes of Health (NIH)-sponsored multi-center study, Women’s Ischemic Syndrome Evaluation (WISE), which is investigating the potential for more effective diagnostic and evaluation methods of coronary artery disease in women.
Dr. Ed Kaplan
Edwin L. Kaplan, M.D., is a professor of Pediatrics at the University of Minnesota Medical School in Minneapolis. He also has been the head of the World Health Organization Collaborating Center for Reference and Research on Streptococci since 1985. Dr. Kaplan specializes in pediatric infectious diseases and pediatric cardiology, and has had extensive clinical and basic laboratory experience in the epidemiology, pathogenesis, diagnosis and management of streptococcal infections and rheumatic fever and rheumatic heart disease. He has been the recipient of numerous national and international awards, and is internationally renowned for his work on streptococcal infections and rheumatic heart disease and heart disease in children.

Dr. Jamil Tajik
Dr. Tajik received his medical degree from King Edward Medical College in Lahore, Pakistan in 1965. From 1966 - 1967 he completed his Internship and Residency at Hamilton Civic Hospitals in Hamilton, Ontario, Canada. From 1968 - 1972 Dr. Tajik completed his Residency in Internal Medicine and a Fellowship in Cardiology at the Mayo Graduate School of Medicine. In 1972, he was appointed to the staff of the Mayo Clinic as a consultant in the Cardiovascular Division and Consultant in the Cardiac Catheterization Laboratory. He was appointed Director of the Echocardiography Laboratory in 1980 and served in that position through 1992 at which time he was selected as the Chairman of the Cardiovascular Division. Recently, he moved to Mayo Clinic Scottsdale and is the Thomas J. Watson, Jr. Professor. He is an internationally renowned expert on various aspects of echocardiography. Dr. Tajik and his colleague Dr. James Seward, also of the Mayo Clinic, hold several U.S. patents on new ultrasound catheter-based technology. Dr. Tajik also has a special interest in risk factors for coronary artery disease and its prevention and has been the driving force behind a countrywide (Olmsted County, MN, U.S.A.) primary and secondary prevention project called Cardiovison 2020.

Dr. Albert Friesen
Albert D. Friesen holds a Ph.D. in Protein Chemistry from the University of Manitoba. As the first full time employee and President of the Winnipeg Rh Institute he oversaw the development and initial pharmaceutical approval of WinRho. Dr. Friesen has also been instrumental in founding several health industry companies including Novopharm Biotech Inc. (now Vivenil Biotech Inc.), Genesys Pharma Inc., and KAM Scientific. Inc. In 1997, with Naranjan Dhalla, he co-founded Medicare Inc. and currently serves as the Company’s President, CEO and Chairman.

Dr. Roger Evans
Dr. Evans is primarily recognized for his research on organ and tissue transplantation. However, this largely reflects his broader interests in medical technology, health care economics, practice variations, outcome assessment, and health care evaluation. He received his doctorate in Sociology from Duke University in 1979. From 1979 to 1982 he was a Research Scientist at the Battelle Human Affairs Research Centers in Seattle, Washington (a division of the Battelle Memorial Institute in Columbus, Ohio). In 1992, he was appointed to chair the newly created Section of Health Services Evaluation at the Mayo Clinic in Rochester, Minnesota. In 1999, he became an independent consultant in health care. During his career, he directed several national studies. These studies have addressed the clinical and health policy implications of organ and tissue transplantation. They include the following: (1) the National Kidney Dialysis and Kidney Transplantation Study, (2) the National Heart Transplant Study, and (3) the National Cooperative Transplantation Study. In addition, his research has helped shape the future of new biotechnology products (recombinant human erythropoetin) and companies (Amgen).

Dr. Henry Friesen
An internationally known Canadian medical scientist, leader and educator, Dr. Henry Friesen is the visionary who conceived of the Canadian Institutes of Health Research and worked with the health research community to bring the vision to fruition. Dr. Friesen received his degree from the University of Minnesota in 1958. Until 1992, when he was appointed President of the Medical Research Council, Dr. Friesen was Professor and Head of the Department of Physiology and Professor of Medicine at the University of Manitoba. A specialist in endocrinology, Dr. Friesen is widely known for directing research and clinical trials into the effectiveness of using human growth hormone (HGH) to stimulate the growth of very small children. He also discovered the human hormone prolactin and developed a simple blood test to identify patients with excessive amounts of the hormone. Thanks to his research, many thousands of women and men with reproductive disorders related to prolactin have become parents. Dr. Friesen was named the first Chair of Genome Canada.

Dr. Cal Stiller
Dr. Stiller was raised in Naicam, Saskatchewan and obtained his medical degree from the University of Saskatchewan in 1965 and his F.R.C.P (C) in 1970 following seven years of post-graduate studies in London and Edmonton. He returned to the University of Western Ontario and University Hospital to become a professor at the Department of Medicine and co-director of Immunology at the John P. Robarts Research Institute, London, Ontario. Dr. Stiller established the Multi-Organ Transplant Service in London and served as the unit’s chief from 1984 to 1996. During this period, he was principal investigator of the Canadian multi-centre study that established the importance of Cyclosporine in transplantation and led to its worldwide use as first-line therapy for transplant rejection. He co-chaired a Government Task Force on Organ Donation, co-founded the Multiple Organ Retrieval and Exchange Program, was elected to Council of the Transplantation Society and co-chaired the first International Congress on Ethics in Transplantation. Dr. Stiller is also a businessman and entrepreneur. He was Chairman and founder of Diversicare Corporation, as well as founder and Chairman of Chelsea Corporation and Oracle Network Corporation, Medical Discovery Management Corporation and Canadian Medical Discoveries Fund Inc. He sits on the boards of several companies including Retirement Reit (TSX), NPS Pharmaceuticals (Nasdaq), Spectral Diagnostics, and several Public endowments and foundations including MARS (Medical and Related Sciences Discovery District) and OCRN (Ontario Cancer Research Network). He co-founded four venture capital funds, the Canadian Medical Discovey Fund, Canadian Science and Technology Growth Fund, CMDF II, and Starting Startups Venture Fund.

Sir Magdi Yacoub
Dr. Yacoub has performed more transplants than any other surgeon in the world and, as a scientist, his interest in the basic mechanisms of heart structure and function in health and disease has improved transplant surgery and patient care. Sir Magdi was born and raised in Cairo where he qualified as a doctor in 1957. He came to Britain in 1962 and since then has made pioneering strides in cardiothoracic surgery. Under his leadership, Harefield Hospital became the country’s leading transplant centre, performing over 200 operations a year. He is working with children with congenital heart defects and performed complex operations on the tiny hearts of babies in their first days of life. In a career spanning over four decades, Magdi has been involved in a number of firsts. He was involved in the first UK heart transplant, performed the first UK live lobe lung transplant and the first ever domino operation, in which one patient with failing lungs is given a new heart and lungs, with a second patient receiving the first patients fully functioning heart. He retired from the NHS in September 2001, but continues to head his research program at Harefield Hospital, which he sees as, “treating patients in the future.” In addition, at the beginning of 2002, Mr. Alan Milburn, MP appointed Sir Magdi as Special Envoy to the NHS in a National drive to recruit overseas qualified specialists in a new and innovative International Fellowship scheme. As the Founder Patron of the global charity Chain of Hope, Prof. Yacoub devotes his boundless energy in pursuit of heart health for children around the world. He has always combined surgical work with scientific research, which he sees it as the key to improving patient care and ultimately eliminating heart disease. He has conducted research looking into organ rejection after transplantation and is working to produce a tissue-engineered aortic heart valve. “Operating on patients with heart disease leads you to ask, why did this organ go wrong in the first place and what can we learn about the basic mechanisms of the heart that can help us understand heart failure better,” says Sir Magdi. “There is a massive amount of heart disease in this country and elsewhere - we are almost flooded – wouldn’t it be great if we could abolish it completely or, at least, reduce the numbers of people affected. My research is driven by the search to find answers to patients’ problems. The more you look into a problem, like heart failure, the more you find. Heart transplants were regarded as pie in the sky when I started out in medicine. Research is a chance to help treat the patients of the future.”
Oct. 15, Sunday

7:30 - 8:10 AM  Breakfast - Presentation Theatre Concourse - 2nd Floor

INTERNATIONAL ACADEMY OF CARDIOVASCULAR SCIENCES Symposium
“Progress in Molecular, Cellular and Clinical Cardiology”

Keynote Lectures - Presentation Theatre Concourse - 2nd Floor

**Chairs:**
Makoto Nagano, Chairman, Board of Director, IACS, Tokyo, Japan
Dean Sandham, Dean, Faculty of Medicine, University of Manitoba, Winnipeg, Canada

**Speakers:**
8:15 - 8:45 AM  Stephen Vatner, President, IACS, Newark, USA: Presidential address
8:45 - 9:15 AM  Eldon Smith, Editor Canadian Journal of Cardiology, Calgary, Canada: National Strategy for Cardiovascular Health

Symposia Sessions

**Symposium #1 Room 2E**

**Chairs:**
Tofy Mussivand, Ottawa, Canada
Amarjit S. Arneja, Winnipeg, Canada

**Speakers:**
9:40 - 10:00 AM  Ren-Ke Li, Toronto, Canada: Matrix modulation after cell transplantation.
10:00 - 10:20 AM  Suresh Tyagi, Louisville, USA: MMP in cardiac synchrony and dys-synchronous remodeling in heart failure.
10:20 - 10:40 AM  Ian M. C. Dixon, Winnipeg, Canada: Antifibrotic effects of Ski in myofibroblasts

**Symposium #2 Room 2F**

**Chairs:**
Vladimir Jakovljevic, Kragujevac, Serbia
Grant Hatch, Winnipeg, Canada

**Speakers:**
9:20 - 9:40 AM  Vladimir Smirnov, Moscow, Russia: Stromal progenitor cells in atherosclerosis.
9:40 - 10:00 AM  Philip Kadowitz, New Orleans, USA: Gene and stem cell therapy for the treatment of cardiovascular disease.
10:00 - 10:20 AM  Muhammad Ashraf, Cincinnati, USA: Long term therapeutic effects of mesenchymal stem cell based multiple gene delivery for cardiac repair.
10:20 - 10:40 AM  Hong Tian, Winnipeg, Canada: Adipose-tissue derived stem cells for cardiac repair.

**Symposium #3 Millennium Suite**

**Chairs:**
Shiyao Wu, Shanghai, China
Paul Ganguly, Antigua

**Speakers:**
9:20 - 9:40 AM  Sergio Dalla Volta, Padova, Italy: Heart failure: New drugs or better use of the old.
9:40 - 10:00 AM  Wagner Padua, Belo Horizonte, Brazil: Statins and heart failure.
10:00 - 10:20 AM  John H. McNeill, Vancouver, Canada: Metoprolol and cardiac CPT-1: unraveling a complex interaction
10:20 - 10:40 AM  Hari Sharma, Rotterdam, The Netherlands: Genomics of right ventricular hypertrophy

**Symposium #4 Pan-Am Room**

**Chairs:**
Ed Kroeger, Winnipeg, Canada
Rajat Sethi, Kingsville, USA

**Speakers:**
9:20 - 9:40 AM  C.C. Kartha, Trivandrum, India: Does endocardial endothelium modulates ventricular remodeling?
9:40 - 10:00 AM  Ghassan Bkaily, Sherbrooke, Canada: Nuclear membrane G-protein coupled receptors and ionic transporters: Implication in cardiovascular physiology and pathology.
10:00 - 10:20 AM  Wolfgang Schulze, Berlin, Germany: The pathophysiological role of autoantibodies against G-protein coupled receptors in cardiovascular diseases.
10:45 - 11:00 AM  Coffee Break
### Symposium #5 Room 2E
**Chairs:**
Delfin Rodriguez Levy, Cuba  
Patrick Choy, Winnipeg, Canada  

**Speakers:**
11:25 - 11:45 AM Frantisek Kolar, Prague, Czech Republic: Involvement of PKC delta in the cardioprotective mechanism of chronic hypoxia.  
12:05 - 12:25 PM Thomas Netticadan, Winnipeg, Canada: Effect of high sucrose feeding on cardiac performance and sarcoplasmic reticular function.

### Symposium #6 Room 2F
**Chairs:**
Anthony Miller, Winnipeg, Canada  
Larry Hryshko, Winnipeg, Canada  

**Speakers:**
11:05 - 11:25 AM Ricardo Gelpi, Buenos Aires, Argentina: Time course of the myocardial infarction remodeling the rabbit heart.  
11:25 - 11:45 AM Tanya Ravingerova, Bratislava, Slovak Republic: Different role of PI3K/AKT pathway in anti-infarct protection and susceptibility to ischemic arrhythmias in the rat heart.  
11:45 - 12:05 PM Keld Kjeldsen, Copenhagen, Denmark: Sudden cardiac death and potassium dynamics.  

### Symposium #7 Millennium Suite
**Chairs:**
Rajinder Bhullar, Winnipeg, Canada  
Raimundo Nascimento, Belo Horizonte, Brazil  

**Speakers:**
11:45 - 12:05 PM Enn Seppet, Tartu, Estonia: Structure-function relationship in the regulation of energy transfer between mitochondria and ATPase in cardiac cells.  
12:05 - 12:25 PM Olga Jilkina, Winnipeg, Canada: K-ATP channels studied by NMR.

### Symposium #8 Pan-Am Room
**Chairs:**
Jagdish K. Khatter, Winnipeg, Canada  
Girma Asemu, Bethesda, USA  

**Speakers:**
11:25 - 11:45 AM Mahesh Gupta, Chicago, USA: Role of PARP Sir2 axis of signaling in cardiac hypertrophy.  
11:45 - 12:05 PM Moris Karmazyn, London, Canada: Leptin as cardiac hypertrophic factor: mechanisms and therapeutic implications.  
12:30 - 1:50 PM Lunch - informal discussions - Rooms 2 G/H
# INTERNATIONAL ACADEMY OF CARDIOVASCULAR SCIENCES Symposium

**“Progress in Molecular and Cellular Cardiology and Cardiac Surgery”**

## Symposium #9 Room 2E

**Chairs:**
Judit Barta, Debrecen, Hungary  
Ratna Bose, Winnipeg, Canada

**Speakers:**
1:55 - 2:15 PM Ashok Grover, Hamilton, Canada: Calcium handling story of two neighbors-smooth muscle and endothelin.
2:15 - 2:35 PM Pedro D’Orléans-Juste, Sherbrooke, Canada: Pharmacology of vasoactive factors revisited in knock out models in vitro and in vivo.

## Symposium #10 Room 2F

**Chairs:**
Krishnamurti Dakshinamurti, Winnipeg, Canada  
Rajender K. Suri, Chandigarh, India

**Speakers:**
2:35 - 2:55 PM Narinder Mehra, New Delhi, India: A journey into the world of HLA and medicine.
2:55 - 3:15 PM Valery Kupryianov, Winnipeg, Canada: Thermal imaging on cardiac ischemia.
3:20 - 3:35 PM Coffee Break

## Symposium #11 Millennium Suite

**Chairs:**
Newman L. Stephens, Winnipeg, Canada  
Burban Badakh, Ulaanbaatar, Mongolia

**Speakers:**
3:40 - 4:00 PM Yao Sun, Memphis, USA: Cardiac and renal remodeling: the role of oxidative stress.
4:00 - 4:20 PM Kenji Okumura, Nagoya, Japan: Upregulation of renal eNOS by a high sodium diet facilitates hypertension in doxorubicin-treated rats through oxidative stress.
4:40 - 5:00 PM Harjot K. Saini, Winnipeg, Canada: Role of oxidative stress in ischemia-reperfusion induced calcium handling abnormalities in cardiomyocytes.

## Symposium #12 Pan-Am Room

**Chairs:**
Mohinder S. Nijjar, Winnipeg, Canada  
Wayne Lautt, Winnipeg, Canada

**Speakers:**
3:40 - 4:00 PM Ramesh Goyal, Ahmedabad, India: Newer strategies in the usage of drugs and devices in heart failure patients with diabetes.
4:00 - 4:20 PM Sukhinder Kaur Cheema, St. Johns, Canada: Rosiglitazone improves plasma lipoprotein levels in Zucker diabetic fatty rats.
4:40 - 5:00 PM Pram Tappia, Winnipeg, Canada: Defective phospholipid-mediated signaling in diabetic cardiomyopathy.

## Symposium #13 Room 2E

**Chairs:**
Adela Joanta, Cluj Napacova, Romania  
Andrew Morris, Winnipeg, Canada

**Speakers:**
3:40 - 4:00 PM Baljit Singh, Saskatoon, Canada: Intracellular monocytes/macrophages in health and disease.
4:00 - 4:20 PM Suresh Tiwari, New Delhi, India: Cardiovascular risk in kidney disease.
4:40 - 5:00 PM Domingos Melo, Recife, Brazil: End-stage heart failure.
Symposium #14 Room 2F

**Chairs:**
Donald Smyth, Winnipeg, Canada
Subramanyan Murthy, New Orleans, USA

**Speakers:**
3:40 - 4:00 PM  Peter Zahradka, Winnipeg, Canada: Preservation of vascular function by adipokines.
4:00 - 4:20 PM  Kailash Prasad, Saskatoon, Canada: Measures to lower C-reactive proteins in cardiovascular disease.
4:40 - 5:00 PM  Santosh SanganalMath, Louisville, USA: Antiplatelet therapy attenuates ventricular remodeling.

Symposia #15 & #16 Presentation Theatre - 2nd Floor

**2:00 PM “São Francisco de Assis Cardiovascular Foundation-ServCor Post-Graduation Symposium”**

**Chairs:**
Roxanne Deslauriers - Winnipeg, Canada
Alan Menkis - Winnipeg, Canada

**Welcome:** Ivan Berkowitz (São Francisco de Assis Cardiovascular Foundation) Winnipeg, Canada

The First Latin American Book on Applied Cardiovascular Physiology Tribute to Naranjan S. Dhalla, World Professor of Cardiovascular Sciences
Otoni M. Gomes - Belo Horizonte, Brazil

- Crossed Papillopecty in Mitral Valve Replacement, Ricardo Adala Benfatti - Brazil
- Indications and Surgical Strategy in Ascending Aorta Aneurysms, Rui S. M. Almeida - Brazil
- Post Stenting Aortic Aneurysm Approach, José Carlos Dorsa V. Pontes - Brazil
- Myocardium Cell Membrane Disease: From Cardioplegy to Ergometry, Otoni M. Gomes - Belo Horizonte, Brazil
- The Retrocaval Procedure in Coronary Saphenous Vein By-pass Graft: Technique and Results, Melchior Luiz Lima - Brazil
- Myocardial Preservation of Hypertrophied Failing Hearts, Ganghong Tian - Winnipeg, Canada
- Vulnerability of Atherosclerotic Carotid Disease: Changing Paradigms?, Luciano Cabral Albuquerque - Brazil
- Endovascular Treatment of Abdominal Aortic Aneurysms: Technique and Results., Eduardo Keller Saadi - Brazil

**5:00 P.M. LECTURE: Beating Heart Mitral Valve Surgery,** Tomas Salerno - Miami, USA

7:00 - 10:30 PM  St. Boniface Hospital Research Centre Reception and Dinner at Tiffani’s, 17th Floor, 133 Niakwa Road, Winnipeg
(Buses will depart from the Winnipeg Convention Centre York Ave. entrance at 6:30 PM)

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**PLANNING ‘TEAM’**

**CHAIRS**
Lee and Bert Friesen

**HON. CHAIRS**
Makoto Nagano, Tokyo
Eugene Braunwald, Boston
Michael DeBakey, Houston
Nirmal Ganguly, New Delhi
Otoni Gomes, Belo Horizonte
Qi-de Han, Beijing
Sen. Wilbert Keon, Ottawa
Jutta Schaper, Bad Nauheim
Sir Magdi Yacoub, London

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Hon. Peter Liba
Hon. Pearl McGonigal
Arnold Naimark
Tannis Richardson
Bill Norrie

**“FUTURE of HEART HEALTH”**
Alan Menkis
Grant Pierce

**8th ANNUAL ICS AWARDS PROGRAM**
Pawan Singal

**SCIENTIFIC SYMPOSIAS**
Naranjan Dhalla

**“SERVCOR SYMPOSIUM”**
Otoni Gomes

**“FUN, FEASTING, ROASTING”**
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**CONFERENCE DIRECTOR**
Ivan Berkowitz
1) DIVERGENT EFFECTS OF PI3K/AKT ACTIVATION ON THE SIZE OF MYOCARDIAL INFARCTION AND SUSCEPTIBILITY TO VENTRICULAR ARRHYTHMIAS IN THE RAT HEART

T Ravingerová, J Matejková, J Neckář*, E Andelová, D. Pancza, F Kolář*. Institute for Heart Research, Slovak Academy of Sciences, Bratislava, Slovak Republic; *Department of Developmental Cardiology, Institute of Physiology, Academy of Sciences of the Czech Republic and Centre for Cardiovascular Research, Prague, Czech Republic

Endogenous cardiac protection against sustained ischemic insult (I/R) can be achieved by repeated brief episodes of ischemia (hypoxia) or by long-term adaptation to various stresses such as chronic hypoxia. Both, short-term and long-lasting cardioprotective phenomena may share common elements of the same molecular pathways, e.g., protein kinase signaling. Phosphatidylinositol 3-kinase (PI3K) and its downstream effector Akt is involved in antiapoptotic effects, and Akt activation is increased by ischemic preconditioning (IP). However, whether or not it is required for overall heart salvage including clinically relevant end-points, such as myocardial infarction and malignant arrhythmias, remains obscure.

We addressed a potential common role of PI3K/Akt in anti-infarction protection during test LAD occlusion/reperfusion, in the experimental settings of adaptation to chronic intermittent hypobaric hypoxia (IHH; 8 h/day, 25-30 exposures, in vivo rats) and IP (2 cycles of 5-min I/R, Langendorf-perfused hearts). In addition, we explored the role of PI3K/Akt in susceptibility to ischemic ventricular arrhythmias.

In the open-chest hypoxic rats, PI3K/Akt inhibitor LY294002 (LY; 0.3 mg/kg) given 5 min before test I/R partially attenuated infarct size-limiting effect of IHH (IS/AR 59.7 ± 4.1% vs. 51.8 ± 4.4% in the non-treated hypoxic rats compared with 64.9 ± 5.1% in the normoxic controls; P<0.05) and did not affect IS/AR in the normoxic rats. In the isolated hearts, 15-min treatment with LY (5M) prior to test I/R completely abolished anti-infarction protection by IP (IS/AR 55.0 ± 4.9% vs. 15.2 ± 1.2% in the non-treated preconditioned hearts and 42.0 ± 5.3% in the non-preconditioned controls; P<0.05). PI3K/Akt inhibition did not modify IS/AR in the control hearts on other hand suppress ventricular arrhythmias. In the LY-treated hearts, the total number of ventricular premature beats and the incidence of ventricular tachycardia was reduced from 518 ± 71 and 100% in the controls to 155 ± 15 and 12.5%, respectively (P<0.05), that was comparable with the effect of IP. Moreover, bracketing of IP with LY did not reverse its antiarrhythmic potential (77 ± 19 and 14.3%; P<0.05 vs. non-preconditioned control hearts).

These results suggest that activation of PI3K/Akt cascade plays a role in the infarct size-liminting mechanism in the rat heart; however, it is not involved in the mechanisms of antiarrhythmic protection. Supported by grants VEGA SR 2/5110/25, APVT 51-027404 and GACR 305/04/0465.

2) CONTRIBUTION OF TYROSINE KINASE/p38-MAPK AND REACTIVE OXYGEN SPECIES TO ENDGENOUS MYOCARDIAL PROTECTION IN THE RAT HEART: RELATIONSHIP WITH MITOCHONDRIAL K(+)/ATP(CHANNELS


Receptor tyrosine kinase (TK) has been initially regarded as a trigger of ischemic preconditioning (IP) and upstream activator of MAPK cascades. The role of a "stress" kinase p38-MAPK in the mechanisms of ischemia/reperfusion (I/R) and IP is the most controversial. We tested TK/p38-MAPK involvement in different phases of I/R and investigated their relationship with mitochondrial K(+)ATP(CHANNELS [mitoK(+)ATP] opening. Recently, reactive oxygen species (ROS) have been recognized as important triggers of cell signalling, and, therefore, our further goal was to identify a link between generation of ROS and mitoK(+)ATP activation.

Langendorf-perfused rat hearts were subjected to test I/R (TI; 25 min global I, 40 min R) with or without preconditioning by 2 cycles of I/R 5 min each, or by 15-min perfusion with mitoK(+)ATP) opener diazoxide (D, 50 µM) and using 5-HD (200 µM) as a mitoK(+)ATP block. inhibitors of TK (Genistein, G, 100 µM) and p38-MAPK (SB 203580, SB, 5 µM) were applied either 5 min before IPC or before TI.

Western blot analysis revealed a 2.5-fold increase in phosphorylation of p38-MAPK following brief ischemia but no changes in its activation after sustained ischemia. Both, IPC and D attenuated I/R injury (improved recovery of contractile function and reduced occurrence of malignant arrhythmias), and SB but not G reversed cardioprotection when drugs were applied prior to I/R. Both drugs abrogated protective effect of IPC and D when given after I/R or simultaneously with D. Both interventions moderately increased production of ROS in the hearts as evidenced by an enhanced myocardial concentration of conjugated dienes (CD) after IPC and treatment with D, however, they also suppressed its marked elevation following sustained ischemia. Increased concentration of CD during sustained ischemia was also normalized by antioxidant N-acetyl-L-cysteine (NAC) that ameliorated I/R injury in the non-preconditioned hearts. On the other hand, pretreatment with NAC and (or) mitoK(+)ATP inhibition with 5-HD reduced production of ROS during preconditioning and subsequently abolished its protective effects.

These results suggest that TK is not a trigger, but rather a mediator in the cascade of cardioprotection. Activation of p38-MAPK is an essential component of IPC and is also reduced during sustained ischemia. Upstream mechanisms may involve mitoK(+)ATP opening in the triggering phase of IPC and subsequent generation of ROS as a potential link to TK/p38-MAPK activation. Supported by grants VEGA SR 2/5110/25, 2/6170/26 and APVT 51-027404.

3) ROLE OF ELECTROPHYSIOLOGICAL STUDIES IN INVESTIGATION AND EVALUATION OF COMPLICATIONS IN DIABETIC HEART: NEW THERAPEUTIC APPROACHES

Belma Turan, Departments of Biophysics, Faculty of Medicine, Ankara University 06100, Ankara, Turkey

The existence of a diabetic cardiomyopathy is supported by epidemiological findings showing the association of diabetes with heart failure although the presence of it, independent of hypertension and coronary artery disease, is still controversial. Moreover, clinical studies are confirming the association of diabetes with left ventricular dysfunction and experimental evidence of myocardial structural and functional changes. The most important mechanisms of diabetic cardiomyopathy are metabolic disturbances (i.e. changes in calcium homeostasis), myocardial fibrosis (association with increases in angiotensin II), cardiac autonomic neuropathy, and insulin resistance. Contraction is initiated when a small amount of Ca(++) entering into the cell following membrane depolarization, triggers larger release of Ca(++) from the sarcoplasmic reticulum (SR). The defects identified in the mechanical activity of the hearts from type 1 diabetic animals include alteration of Ca(++) signaling via changes in critical processes that regulate intracellular Ca(++) concentration. Since the Ca(++) flux underlying the Ca(++) sparks reports the summation of ryanodine-sensitive Ca(++) release channel (RyR2) behavior in the spark cluster, evaluation of the properties of the Ca(++) sparks may provide insight into the role of RyR2 in the altered Ca(++) signaling in cardiomyocytes from diabetic animals.

Evidences showing increased levels of AT1 receptors, tissue angiotensin II (Ang II), and PKC activity in diabetes suggest the importance of renin angiotensin system in the development of cardiac complications. Although data on redox regulation of Ang II signaling and PKC in the heart are pointing out the role of AT1 receptors blocker in diabetes, the mechanisms involved in this process remain elusive. So, we aimed to investigate the effect of an Ang II receptor blocker, candesartan, on abnormal Ca(++) release mechanisms and its relationship with PKC and oxidant stress in the cardiomyocytes from streptozotocin-induced diabetic rats. Candesartan incubation of cardiomyocytes from the diabetic rats restored significantly the altered kinetic parameters of Ca(++) transients as well as depressed Ca(++) loading of sarcoplasmic reticulum. Spatio-temporal properties of the Ca(++) sparks together with basal Ca(++) level in cardiomyocytes from diabetic rats incubated with candesartan were also significantly restored similar to the restorations of the Ca(++) transients. Bisindolylmaleimide I (BIM), a PKC inhibitor, showed also similar recovery effects on the parameters of Ca(++) sparks as well as Ca(++) transients in diabetic cardiomyocytes. Additionally, candesartan incubation reduced significantly increased PKC levels and reduced oxidized protein thiolis in the membrane fraction of diabetic cardiomyocytes. Thus, AT1 receptor blockade protects the heart from the development of cellular alterations typically associated with Ca(++) release mechanisms, partially related to the restoration of the cell redox state. These data strongly suggest that Ang II
4) PHARMACOLOGICAL AND MOLECULAR STUDIES THE CARDIOPROTECTION POTENTIAL OF MEDICINAL PLANT: NEED FOR CLINICAL RESEARCH FROM BENCH TO BEDSIDE

Dr. S.K. Gupta, Dean, Institute of Clinical Research & DIPSAR, 201, Okhla Phase-I New Delhi, India.

A Major opportunity exists in identifying and selecting inexpensive approaches to the management of cardiovascular disorders. Utilization of the local resources is one of the ways to bring the otherwise expensive treatment of cardiovascular diseases within the means of our rural and urban masses, which account for more than 80% of Indian population. In the present study Withania somnifera, Curcuma longa and Ocimum sanctum which are widely used in India for medicinal purposes were studied for their potential cardioprotective action in terms of their antioxidant and anti-apoptotic properties in the in vivo models of myocardial infarction. Chronic oral pretreatment with Withania somnifera, Curcuma longa and the herbal combination (HCB) including Withania somnifera (50 mg/kg) + Curcuma longa (100 mg/kg) + Ocimum sanctum (75 mg/kg) exerted significant cardioprotective effects in the experimental models of myocardial injury. The most remarkable observation of the present study is that cardioprotective effect exerted by HCB treatment was found to be superior to that shown by singular treatment with individual herbal extracts. The combination of herbal extracts was found to significantly ameliorate the ischemia and reperfusion cardiomyocyte apoptosis, cardiac dysfunction, compromised antioxidant status and histopathologic alterations as compared to control group. Cardioprotection by HCB treatment may be attributed to its favorable hemodynamic effects, myocardial adaptogenic properties, and significant antioxidant and anti-apoptotic properties. Furthermore, HCB decreased the severity of pathological changes and significantly preserved the myocardial CKP confirming its myocardial salvaging effects. The present study thus provides the scientific rationale for the development of therapeutic herbal extracts for cardioprotection, as described in Ayurveda, the ancient Indian system of medicine. These herbal extracts have the potential for the management of patients at risk of myocardial infarction. In view of the safety, efficacy and traditional acceptability of these agents. Well- controlled prospective clinical trials should be contemplated to establish their efficacy in the treatment of ischemic heart disease.

5) THE CONTINUING IMPACT OF RHEUMATIC HEART DISEASE IN INDIA

Rajesh Krishnamoorthi, S. Thomas, P.M. Babu, N.S. Khanna, Madras Medical College & Government General Hospital, Chennai, India.

This study estimates the current prevalence of Rheumatic Heart Disease (RHD) in South India. Many studies have reported that RHD has ceased to exist in the developed world, and its prevalence in India has also been reported to be drastically reduced. However, clinical experience in Government hospitals indicated that RHD still has a major impact in poorer populations.

Our study was conducted at Madras Medical College & Government General Hospital, Chennai, a tertiary care centre that attracts around 220,000 patients / year from Tamilnadu and other South Indian states, primarily from economically disadvantaged groups. We conducted a prospective cross-sectional study on a comprehensive sample of patients with Cardio Vascular abnormalities in an eight week period in order to estimate prevalence of RHD in South India.

We conducted a systematic follow-up of all patients over the age of thirteen presenting to the Internal Medicine and Cardiology outpatient department between 02/01/2006 to 02/03/2006. We identified patients diagnosed with Valvular Heart Disease (VHD) based on clinical examination and ECHO. We then identified the number of patients suffering from RHD based on their history and presentation. Various valvular involvements and their combinations were also derived.

We found that Patients with RHD (n=212) constitute 36.48% of the total cases with cardiovascular abnormalities (n=581) and 77.65% of patients with valvular heart disease (n=273). 64% showed Mitral valve involvement alone, while 27% had both Mitral and Aortic damage. Only 6% showed solely aortic involvement and only 3% had pathologies of all Mitral, aortic and tricuspid valves. Common valvular lesions included MR with MS (35%) and isolated MS (29%).

Contrary to earlier reports, our study shows that RHD continues to be a major contributor to cardiovascular disease in developing countries like India. However, RHD is disease for which both primary and secondary lines of prevention are known. There is tremendous potential to reduce the incidence of RHD and improve the Cardiac health of people in India. Therefore, RHD must not be ignored from any discussions on the current and future issues in Cardiology.

6) SUBCELLULAR MECHANISMS OF FUNCTIONAL REMODELING IN DIABETIC MYOCARDIUM: VARIABILITY IN ROLES OF FREE RADICALS

A. Ziegelbein, M. Ferko, 1 Waczulikova, T Holotnakova, J Pastorek, S Pastorekova, J Mukuosova, J Jarsky

1Institute for Heart Research, Slovak Academy of Sciences, Department of Biomedical Physics, Faculty of Mathematics and Physics, CU, 2Institute of Virology, SAS, Institute of Medical Chemistry and Biochemistry, Faculty of Medicine, CU, Bratislava, Slovakia

Background: Administration of streptozotocin (STZ) to rats induces parallelly to diabetes (DIA) also endogenous protective mechanisms (EPM) which yield in functional remodeling (FURM) of subcellular structures and finally in certain degree of adaptation of the myocardium (MYO) to DIA.

Aims: i) Study the effect of free radicals (FR) in FURM of MYO sarcolemma (SL) and mitochondria (MIT); ii) Elucidate the role that may play FURM in keeping the DIA MYO functioning; iii) Reveal the possible role of FR in modulation of the hypoxic genes and their involvement in adaptation of the DIA MYO to work in conditions of pseudo-hypoxia (PHY).

Materials and Methods: Experiments were performed on adult male Wistar rats (220+20 g b. wt) obtaining 65 mg/kg streptozotocin (Sigma, ST2) 1 p. and terminated on the 8th day after STZ application. Investigated were: the metabolism, functional parameters of SL and MIT, cell signaling. Regulation of hypoxic genes expression (carbonic anhydrase, CA) was studied by means of RT PCR as well as by immuno blotting in Rat2K- cells (immortalized thimidine kinase-deficient rat fibroblasts).

Results & Discussion: Metabolic characteristics of the acute DIA rats: blood glucose +235.8 %, triacylglycerols +270.4 %, cholesterol +53.6 %, glycohemoglobin +89.5 % and insulin –53.9 %. FURT of the SL is represented by decreased transduction of sympathetic signals and cations, due to decreased membrane fluidity (MF, all p<0.05-0.01) resulting from non enzymatic glycation of proteins and the action of FR (glycoxidation). Nevertheless, these changes protect the DIA cardiac cells against excessive sympathetic and calcium impulses. In MIT, FURM is represented by decrease in O2 consumption and in capacity of oxidative phosphorylation– ascribed to FR and PHY. However, this damage is not extended to FR-induced oxidation of MIT membrane lipids (MF is increased, p<0.05) and it is compensated considerably by enhanced transport of energy through the MIT membrane. Moreover, FR seem to be involved in regulation of hypoxic genes, particularly that of CA 9 expression.

Conclusion: In acute DIA the MYO experiences damage by FR originating from different sources. However, this damage is not extreme and induces in turn several EPM. Hence, not all FR-mediated processes in acute DIA MYO may be considered as unambiguously destructive ones. Grants: VEGA 2/5110/25, APVT 51-027404, 51-017902, SP51/0289091 and SP51/0289092.

7) THE ASSOCIATION AMONG SERUM HSP60 LEVELS, LIPC POLYMORPHISM AND SUBGROUPS OF CHD

Wu Shi-Yao, Zhou Wu-Gang, Yan Yu-Qin, Ren Yi-Rong, Huang Zhen-Hua Department of Cardiology, The Ninth People’s Hospital, Shanghai Jiao Tong University, Shanghai 200011, China

Objective: To study the association among serum HSP60 levels, LIPC polymorphism and subgroups of CHD.

Methods: The venous blood samples were obtained from the 91 patients 12 hours after they were in hospital. The 72 healthy controls’ blood samples were obtained in the morning after an overnight fast. The serum HSP60 levels were determined by enzyme-linked immunosorbent assay. LIPC NalI polymorphism was analyzed by PCR-RFLP after geno-
ic DNA was extracted from peripheral blood leucocytes. Then analyze the frequencies of LIPC NlaII polymorphism and the distribution of all the genotypes.

**Results:**
1. The TT genotype frequency of NlaII polymorphism in CHD was not greatly different from that of controls' (15.4% vs. 8.3%, P=0.373), and the TT genotype frequency of NlaII polymorphism in MI were significantly different from that of controls'. (28.1% vs. 8.3%, P=0.023)*
2. The serum HSP60 levels of TT, CT, CC genotype of NlaII polymorphism in CHD were 662.6±2621, 3980±1578, 3537±3018ng/ml. The HSP60 levels of TT genotype were significantly different from that of TT and CC genotype. (P<0.05)
3. In the lower serum HSP60 level (<3639ng/ml) group, TT genotype frequency of NlaII polymorphism was 2.2%, MI 2.2%. In the higher level (>3639ng/ml) group, TT genotype frequency was 28.9%, MI 68.9%, and there was significant difference between the two groups. (P<0.05)

**Conclusion:**The serum HSP60 levels of CHD and TT genotype frequency were elevated along with the severity of the CHD subgroups.

8) **EFFECT OF HORMONE 'LEPTIN' ON ISOLATED LANGENDORFF PERFUSED RABBIT HEART**

**AR qraa, MM. Jaafar and SY Khaltib. Faculty of Medicine, Department of Physiology, Jordan University of Science & Technology, Irbid, Jordan**

Leptin is a protein hormone, secreted by white adipose tissue and acts via receptors that are widely distributed in the hypothalamus and to a lesser extent in the extraneural tissue including heart. It has been proven to be the regulator of food intake and energy status as it inhibits food intake and increase energy expenditure in rodents and human. It has cardiovascular effects demonstrated by increases in arterial pressure and heart rate and peripheral vasodilation. The mechanism of action for these effects is not clear but it has been suggested to be due to centrally increases of the sympathetic outflow. On the other hand it acts peripherally by increasing the production of Nitric oxide (NO) which causes vasodilation and express a negative inotropic effect on the myocardium.

The aim of the present study was to examine the direct effect of different doses of Leptin on coronary flow (CF), heart rate (HR) and left ventricular pressure (LVP) in isolated Langendorff perfused rabbit heart. And by this way we exclude the central sympathetic effect since the isolated heart is denervated.

**Methods:** New Zealand rabbits were sacrificed and the heart perfused on Langendorff at 37 CO with oxygenated Krebs. The effect of different doses of Leptin were tested on CF, HR and LVP for 30 min. Results: Leptin transiently increased CF for the first 5 min by 21, 23, and 41%. (n = 8, P<0.05) with 10, 100, and 200 ug/L respectively before decreasing back to normal suggesting a dose - dependent effect. On LVP we found a biphasic effect. It showed a dose - dependent increase (~1, 12, and 25%) for 10, 100, and 200 ug/L respectively during the first 2-3 minutes of perfusion which then decreased below the steady state by about 10% after 25 min. (n=8, P<0.05).

**Conclusion:** Leptin has no direct effect on HR. Its initial positive inotropic effect could be due to the initial increase in CF whereas the depressive effect could due to direct effect on the myocardium which has been noted in previous reports in isolated myocytes. It is concluded that the Leptin effects in vivo may be due to increasing central sympathetic activity.

9) **EFFECT OF SIMVASTATIN ON EXPRESSION OF TNF-α AND FAS IN VIRAL MYOCARDITIS MURINE**

**Wu Shi-Yao *, Wang Shao-Min, Chen Yuan-Mei, Zhang Yan, Yin Zhao-Fang Department of Cardiology, The Ninth People’s Hospital affiliated to Jiaotong University School of Medicine, Shanghai 20001, China**

**Objective:** To investigate the effects of simvastatin on expression of tumor necrosis factor-α and Fas, myocardial histopathologic changes of the murine myocarditis caused by Coxackievirus B3.

**Methods:** BALB/c mice were inoculated intraperitoneally with Coxackievirus B3 virus to create myocarditis model, then equally divided into model control group, simvastatin 5mg/kg/d treated group (5mg group), 20mg/kg/d treated group (20mg group), 40mg/kg/d treated group (40mg group). Fourteen days later, myocardial histopathologic changes and mortalities of every groups were observed; investigate myocardium TNF-α and Fas mRNA levels by the way of realtime PCR, changes of serum TNF-α were assayed using ELISA and Fas on cardiac myocyte were observed using immunohistochemistry.

**Result:**Comparing with model control group, simvastatin distinctly reduced the extent of cellular infiltration and myocardial necrosis in 20mg/kg/d and 40mg/kg/d group. In addition, the serum TNF-α level, expression of TNF-α and Fas mRNA, myocardial cells with function of Fas expression were decreased in the two groups. But given simvastatin at 5mg/kg/d had no use to all these. Serum TNF-α level in 40mg group was lower than that of 20mg group, but there are no differences between two groups in others. Mortalities of all groups had no difference in statistics.

**Conclusion:**Simvastatin attenuates the murine coxackievirus B3 myocarditis through inhibition of expression of TNF-α and Fas.

10) **TRANSGENIC MOUSE OVEREXRESSING Cav1.2C1C CHANNEL INCREASED SUSCEPTIBILITY TO CHRONIC β-ADRENERGIC STIMULATION AND ACCELERATED DEVELOPMENT OF CARDIOMYOPATHY REVEALED BY MAGNETIC RESONANCE IMAGING.**


**Background:** Cav1.2 C1C channels comprised of α1C-
2, α2δ-2 and α3 subunits play a central role in controlling cardiac function. Previously our laboratory has found that alternative splicing of the Cav1.2C1C subunit is affected by atherosclerosis. The molecular signature of the effect is appearance of exon-22 isoform of the α1C subunit that is absent from non-diseased artery.

**Methods and results:** To find whether Cav1.2C1Cα represents a pathological phenotype, we generated transgenic mice (TGα+) overexpressing α1C splice variant. Here, magnetic resonance imaging (MRI) was used to investigate the cardiovascular phenotype in the basal state as well as during stress induced by isoproterenol (IP) infusion (30 mg/kg/d, total of 7 day) Wild type (WT) and TGα mice were studied. Chronic IP stress significantly increased LV mass and LV/BW ratio in WT and TGα mice vs. vehicle-treated mice. MRI revealed that mice under chronic IP stress show a substantial increase of LV end-systolic volume in WT, (9.4±0.7 to 18.5±2.7), TGα (10.8±1.6 to 25.8±3.4) vs. vehicle-treated groups. IP-induced stress in TGα mice showed a significantly lower LV ejection fraction and cardiac output and markedly increased LV end-systolic epicardial diameter as compared to IP stressed WT mice.

**Conclusions:** MRI study revealed that chronic IP stress in TGα mice results in severe contractile dysfunction that lead to LV hypertrophy and accelerates the development of dilated cardiomyopathy. Thus, TG mice overexpressing exon-22 subunit of human Cav1.2C1C variant expressed in atherosclerosis, exhibit a pathological phenotype that gives insight into a potential pathogenic role for this channel.

11) **AMPK CONTROL OF MYOCARDIAL FATTY ACID METABOLISM FLUCTUATES WITH THE INTENSITY OF INSULIN DEFICIENT DIABETES.**

**G. Kewalramani and Brian Rodrigues. Faculty of Pharmaceutical Sciences, UBC, 2146 East Mall, Vancouver, BC, Canada V6T 1Z3**

**Objective:** Flexibility in substrate selection is essential for the heart to maintain production of energy and contractile function, and is managed through multiple mechanisms including PPAR-α and AMP activated protein kinase (AMPK). It is unclear whether AMPK is activated following hypoinsulinemia.

**Methods:** Rats injected with 55 mg/kg STZ (D55) were kept for 4 days (acute diabetes; D55-A) or 6 weeks (chronic diabetes; D55-C), prior to termination. Rates of glucose and palmitate oxidation were quantitatively measured using [U-13C] glucose and [9,10-1H] palmitate respectively. Western blotting was used to identify phosphorylation of AMPK-α and acetyl-CoA carboxylase (ACC). To validate the relationship between lipids and cardiac AMPK activation, we either induced more severe diabetes (100 mg/kg STZ to provoke both hyperglycemia and hyperlipidemia acutely; D100-A or infused intralipid (IL) to enlarge circulating lipids.

**Results:** Fatty acid (FA) oxidation increased in D55-A hearts, with no significant change in gene expression of PPAR-α or its downstream targets. However, both AMPK and ACC phosphorylation were significantly higher in these hearts, effects that were reversed by insulin. Unexpectedly, AMPK
and ACC phosphorylation were comparable in control and D55-C hearts when the duration of diabetes was extended to 6 weeks. Measurement of plasma and cardiac lipids established a lipid overload, only in D55-C diabetic rats. There was no difference in cardiac AMPK and ACC phosphorylation in D100-A rats compared to control. In addition, measurement of AMPK and ACC phosphorylation in control and D55-A hearts revealed that their phosphorylation was inhibited by acute IL infusion.

Conclusions: Our data suggests that activation of AMPK is an adaptation that would ensure adequate cardiac energy production when glucose utilization is compromised. However, in severe diabetes, with the addition of augmented plasma and heart lipids, AMPK activation is prevented, and control of FA oxidation is likely through PPAR-α.

12) HYPERTENSION AND SEXUAL FUNCTION IN WOMEN
B N Okeahialam, FWACP and C. Ogbonna, FMCPhD, Departments of Medicine and Community Health, Faculty of Medical Sciences, University of Jos, Jos Nigeria.

RATIONALE: The effect of hypertension and its treatment on female sexual function is largely unexplored especially in Africa in contrast with males. However in practice, cases where adverse effect on sexual function lead to poor or non-compliance; with dire consequences abound. Believing that like in males, hypertension and its treatment should affect sexual function in women; we set out using a structured questionnaire to study the subject.

METHODOLGY: 500 questionnaires were distributed to consenting women in 3 Nigerian cities after ethical clearance was obtained. The self administered questionnaire adapted from Duncan et al were given to women fluent in English to ensure full compliance.

RESULTS: A total of 454 returned questionnaires were analysable. Out of this number, 109 admitted to being hypertensive. Only 89 were on treatment. Two hundred and sixty six were in regular sexual relationship. Most of them were between 30 and 50 years. It was found that hypertension rates increased with age (p=0.001). Hypertensives had more difficulty staying excited (p=0.03), and difficulty getting excited by fantasies (p=0.001). They thought less about sex (p=0.003), reported increased vaginal dryness in the previous year (p=0.02), reduced rate of sexual relationship (p=0.02) and reduced frequency of sexual and non-sexual contact (p=0.04). Consequently they rated their marriages poorer (p=0.03). Drug treatment resulted in increased unpleasanthess of sex (p=0.03)

CONCLUSION: It is therefore concluded that hypertension and its treatment affect sexual function in women just as in men; and may operate via similar mechanisms. Therefore all the precautions taken with men in this regard should also apply to women; to ensure compliance and maintain quality of life.

13) FREE FLOW MEASUREMENTS IN Y-GRAFTS WITH LEFT INTERNAL THORACIC ARTERY AND RADIAL ARTERY
EK Saadí, A. Barlem, LH Dussin. Department of Surgery, Federal University of Rio Grande do Sul, Porto Alegre, Brazil

Background. In order to improve the late results in the coronary bypass surgery total arterial revascularization has been proposed. This can be achieved connecting the radial artery to the left internal thoracic artery as an Y-graft. This strategy raises some concerns because all blood flow depends on the left internal thoracic artery pedicle, and the blood flow to the left anterior descending(LAD) coronary artery may be different from that supplied by a single left internal thoracic artery implantation.

Methods. Fifteen patients had their left coronary system bypassed by composite Y-grafts with radial and left internal thoracic arteries. The free blood flow in the single left internal thoracic artery and in the composite Y-graft was assessed by direct measurement.

Results. The free flow in the single left internal thoracic artery was 86.93 ± 15.30 ml/min while in the Y-graft it was 148.00 ± 17.04 ml/min, representing an increase of 70.25 % in the blood flow of the left internal thoracic artery pedicle (p < 0.001). The free flow in the left internal thoracic artery pedicle was lower than the flow assessed in the single left internal thoracic artery before the Y-graft construction (p < 0.001).

Conclusions. The construction of the Y-graft increased in about 70 % the blood flow in the left internal thoracic artery pedicle, and the partial flow deviation through the radial artery decreased in about 15 % the potential blood flow supplying the left anterior descending coronary region.

14) ENDOVASCULAR TREATMENT OF ABDOMINAL AORTIC ANEURYSMS: INITIAL EXPERIENCE, SHORT AND MIDDLETERM RESULTS
EK Saadí, AJ Zago, F Gastaldo, L H Dussin, L Moura. Department of Surgery, Cardiovascular & Endovascular Unit, Federal University of Rio Grande do Sul, Porto Alegre, Brazil

Objective: The purpose of this study is to present the short and medium-term results of the endovascular treatment of abdominal aortic aneurysms (AAAs). This is an initial experience of a multidisciplinary team in Brazil.

Method: Between July 2003 and October 2005, 42 patients(25 of whom suffered from AAAs) were treated with endovascular therapy for aortic diseases. The mean patient age was 74 ± 10.2 years with 92% men. The endovascular procedures were performed by a multidisciplinary team in the Hospital de Clínicas de Porto Alegre and Hospital Luterano (ULBRA) in Porto Alegre, Brazil. In twenty-four of the AAA patients, bifurcated grafts were used and only one had a straight graft. In all patients the procedure was carried out by femoral artery dissection in a catheterization laboratory. There was no need to convert to open repair.

Results: There were no operative or postoperative deaths. The survival rate free from reinterventions is 96% after two years and three months. One (4%) patient needed a new endovascular procedure for a type 1 endoleak one year after, and three extensions were used successfully. Two other patients needed femoro-femoral bypasses, one at the same time as the endovascular procedure and the other one 24 hours later because of lower limb ischemia.

Conclusion: The endovascular treatment of AAAs represents a new less invasive alternative to conventional surgery, especially for high risk patients. Further prospective and randomized studies to evaluate the long term outcomes are needed. Excellent results in the short and medium-term can be obtained by multidisciplinary teams in our country.

15) ADIPOSE-DERIVED STEM CELLS IMPROVE CARDIAC FUNCTION OF INFARCTED HEARTS
Lei Wang, Jian Wang, Jixian Deng, Bo Xiang, Tarek Kashour, Marco Gruwel, John Rendell, Miriam Glogowski, Gang Li, Boguslaw Tomanel, Roxanne Deslauriers, Ganghong Tian. Institute for Biodiagnostics, National Research Council, Winnipeg, MB, Canada

Objective: this present study was to determine whether in vitro myocardial transplantation of adipose-derived stem cells (ADSCs) improved cardiac function and reduced infarction-associated cardiac remodeling.

Methods: ADSCs were isolated from subcutaneous fat tissue in abdominal region of inbred Lewis rats and then labeled with superparamagnetic iron oxide (SPIO) and lenti-GFP for monitoring of the stem cells in vivo and in vitro, respectively. Twelve rats were divided into two groups that underwent an open-chest surgery for permanent occlusion of the left anterior descending (LAD) coronary artery. One week after the LAD occlusion, rats in group 1 and 2 received intra-myocardial injections of the labeled ADSCs and cell-culture medium, respectively. During recovery period, cardiac function and structure were monitored using magnetic resonance (MR) imaging.

Results: We found that T2-T2* relaxation times of the labeled ADSCs showed an almost linear relationship with cell concentration and passage, suggesting that MR imaging could be used to monitor stem cell transplantation and cell proliferation. In addition, the rats that received ADSC transplantation showed a significantly (P < 0.05) better left ventricular ejection fraction (LVEF, 54.66 ± 2.83%) than those receiving cell-culture medium (45.55 ± 2.83%). Moreover, infarcted LV wall was significantly thicker in group 1 rats (1.74 ± 0.37 mm) than in group 2 rats (1.26 ± 0.22 mm).

Conclusion: Our results demonstrated that ADSCs could be effective- ly labeled with SPIO in vivo without change in viability and proliferation. It is feasible to monitor proliferation and concentration of the ADSCs in vivo using MR imaging. More importantly, ADSCs improves cardiac function of infarct hearts and reduces infarction-associated cardiac remodeling. We conclude that ADSCs are an effective stem cell source for cardiac repair.
16) ASSOCIATION BETWEEN SERUM AUTOANTIBODIES AND SEVERE CAROTID ATHEROSCLEROTIC DISEASE: A CASE CONTROL STUDY.

MR Lopes, LC Albuquerque, L Narvaez, J Braga, H Staub, GL Norman, CA Von Mühlern, MA Goldani. Cardiovascular Surgical Division Catholic University Hospital, Porto Alegre, Brazil.

Introduction – Mechanism of autoimmunity may have influence on the occurrence of atherosclerosis. This includes antiphospholipid antibodies (AAP), and antibodies against heat shock proteins (anti-Hsp). A beta 2-glycoprotein I (beta2-gpl) and the 60 and 65 kilodaltons (6kDa) Hsp are molecules present in atherosclerotic plaques, and its antibodies could be elevated in patients with carotid disease.

Objective – To determine the association between the presence of AAP/anti-Hsp and the occurrence of severe obstructive carotid artery disease.

Patients and Methods – In this case control study the cases consisted of patients with either symptomatic or asymptomatic severe obstructive carotid artery disease. The control group consisted of patients admitted to orthopedic wards. IgG/IgM/IgA aCL, IgG/IgM/IgA anti-beta2-gpl, IgG anti-Hsp 60 kDa recombinant human and IgG anti-Hsp 65 kDa of Mycobacterium bovis antibodies were detected by enzymatic test. In order to assess the degree of association between antibodies with severe obstructive carotid artery disease, (odds ratios, OR) were calculated with their respective confidence intervals (IC 95%).

Results – 57 case patients and 93 control patients were studied and the average age was 66 + 8.7 years for case patients and 47.5 + 18.8 years for control patients (P<0.001). Most case patients were male individuals (61.4%), and there was a predominance of black race individuals in the control group. The presence of hypertension (OR=21.0; IC 95%: 8.0 to 57.1; P<0.001) and hypercholesterolemia (OR=23.5; IC 95%: 9.5 to 70.9; P<0.001) determined the strongest associations between the risk factors already known and severe obstructive carotid artery disease. IgA antibeta2-gpl antibodies were detected in 33.3% of the case patients and in 9.7% of the control patients (OR adjusted 4.7; IC 95% 1.0 to 23.7; P=0.06). The frequency of other tested antibodies was not significantly different in cases and controls.

Conclusion – No association was found between the presence of aCL, IgG/IgM antibeta2-gpl, anti-Hsp and the occurrence of severe obstructive carotid artery disease. The presence of Ig-antibeta2-gpl antibodies was found to be a risk factor for severe obstructive carotid artery disease (OR adjusted 4.7), although with borderline significance (P=0.06). The association of IgA antibeta2-gpl with severe obstructive carotid artery disease may be one of the links between auto-immunity and carotid, even as an epiphenomenon.

17) UNSTABLE CAROTID PLAQUE: ASSOCIATION BETWEEN LEVELS OF C-REACTION PROTEIN AND MORPHOLOGIC CHARACTERISTICS.

LC Albuquerque, LB Narvaez, LE Rohde, J Rohef Filho, M Friedrich, MA Goldani. Cardiovascular Surgical Division Catholic University Hospital, Porto Alegre, Brazil.

Introduction – Assessment of bleeding in the atheroma of the carotid artery system can be performed by high-resolution nuclear magnetic resonance imaging (MRI), but its association with inflammatory activity markers are not completely defined.

Methods – We studied consecutive patients submitted to carotid endarterectomy, with simultaneous assessment of plaque morphology by high-resolution MRI and evaluation of clinical characteristic, and serum levels of C-reactive protein (CRP). Intraplaque haemorrhage was determined by the presence of hyper-intense signal at MRI.

Results – We studied 70 patients with an average age of 66 ± 9 years, predominantly males (66%) and hypertensive (89%). MRI angiography identified 15 (21.5%) patients with stenosis between 50 and 69%, 15 (21.5%) with stenosis between 70 and 90%, and 40 (57%) with stenosis > 90%. High-resolution MRI showed a hyper-intense signal in 45 (64%) of cases. No angiographic characteristic led to the identification of those patients with signs of intraplaque bleeding at the MRI. High-sensitive CRP levels were similar in different degrees of carotid stenosis assessed by angiography, but they were significantly higher in clinically unstable patients (p=0.006) and in those with a positive hyper-intense signal at MRI (p=0.01). In an aggregated analysis where clinical characteristics and MRI findings were considered indicators of plaque vulnerability, we found a progressive increase of high-sensitive C-reactive protein levels (p=0.02).

Conclusions – Intraplaque haemorrhage evaluated by MRI and increased CRP levels can identify unstable carotid plaques, regardless of the degree of stenosis.

18) Cardiovascular risk factor in renal disease

Suresh C. Tiwari, M.D., D.M., Professor and Head, Dept of Nephrology, All India Institute of Medical Sciences (AIIMS), New Delhi, India

Cardiovascular disease is the most common cause of morbidity and mortality in patients with renal disease. This is due to increase of atherosclerotic lesions, ischemics heart disease, cardiomyopathy, pericarditis and pericardial effusion. The risk of cardiovascular mortality is higher in the patients who have associated dyslipidemia, hypertension, diabetes mellitus, hyperuricemia, decrease in glomerular filtration rate and chronic inflammation. There is increasing evidence suggesting that abnormality in serum phosphorus, increase in calcium phosphorus products, increase in homocystine and increase sympathetic activities contribute to the risk of cardiovascular morbidity and mortality in renal disease population.

To sum up minor renal impairments are important and independent cardiovascular risk factor.
Dear Dr. Dhallia:

It is with great pleasure that I extend my warmest greetings to you upon being honoured at the Global Conference on Heart Health and Disease.

Today, you are celebrated by the Canadian and international medical communities for your exceptional contributions to the field of cardiovascular research. Over the years, your leadership in cardiovascular science, heart health and education has transcended borders and influenced medical professionals worldwide. Your countless accomplishments and prestigious accolades can only begin to tell the story of your remarkable career. I would like to proudly join with everyone in attendance in thanking you for your dedication, passion and outstanding skill over the past 30 years. I am certain that you will continue to have a profound impact in the medical community for many years to come.

On behalf of the Government of Canada and all Canadians, I would like to congratulate you as you mark your 70th birthday as well as the 10th anniversary of the International Academy of Cardiovascular Sciences and the Institute of Cardiovascular Sciences at St. Boniface Hospital and the University of Manitoba, Faculty of Medicine. I wish you every happiness and continued success in the future.

Yours sincerely,

Dr. Naranjan Dhallia
As he celebrates his 70th birthday, and prepares to step down from his position as Director of the Institute of Cardiovascular Sciences at the St. Boniface General Hospital Research Centre, it is fitting to reflect on the contribution Dr. Narajan S. Dhillon has made to Canadian medicine.

In his 19 years as Director of the Institute of Cardiovascular Sciences, Dr. Dhillon conducted innovative research into cardiovascular health and the therapy of heart disease. His work led to the understanding that heart dysfunction in diabetes is due to an imbalance between fatty acid and glucose utilization. He has published 670 full-length research papers during his professional career and has remained committed to using his research to develop new treatment options for patients.

Dr. Dhillon has been recognized by the medical community many times for his work. He has received 97 awards in his career, including the Order of Canada. He chaired the highly successful World Conference on Heart Health in Winnipeg in 2001, and has chaired several other high-profile conferences.

His mentorship over the years has produced over 145 scientists pursuing academic and research careers in health all over the world. In addition, through the more than 40 books which he edited and authored, Dr. Dhillon has introduced studies in cardiovascular health to a generation of doctors in Canada and abroad.

As Minister of Health, I congratulate Dr. Dhillon on his many accomplishments. Even more admirable than his personal achievements are the efforts he has made to engage others in the bid to keep Canadians healthy. As a doctor, a researcher, and a teacher Dr. Dhillon truly deserves the best wishes of Canadians on his birthday.

Tony Clement
Minister of Health
Government of Canada
A MESSAGE FROM THE PREMIER

On behalf of the citizens and government the Province of Manitoba, I am pleased to extend greetings to everyone attending the Global Conference on Heart Health and Disease in Winnipeg from October 12-15, 2006.

This conference not only brings together many leading cardiovascular scientists, cardiac surgeons, and cardiologists from all over the world, it provides the chance to mark a number of significant milestones – the 10th Anniversary of the International Academy of Cardiovascular Sciences and the Institute of Cardiovascular Sciences – and to honour the world-renowned cardiovascular scientist and founder of the Academy, Dr. Naranjan S. Dhall, on his 70th birthday.

This weekend’s birthday celebrations for Dr. Dhall give us the wonderful opportunity to acknowledge his leadership and lifelong achievements in heart health, cardiovascular science, and education. Far from slowing down, the energy and dedication Dr. Dhall continues to give to his profession and community is truly inspirational.

On behalf of my colleagues in the Government of Manitoba, I extend my best wishes for very productive and successful gathering, and congratulations once again to Dr. Dhall on your 70th birthday – may you have continued health and happiness in the years to come.

Gary Doer
Tribute to Dr. Naranjan S. Dhalla from the Honourable Theresa Oswald

Please accept my best wishes on the occasion of your 70th birthday.

The Global Conference on Heart Health & Disease is an excellent occasion to highlight your many accomplishments in the area of cardiovascular research and to celebrate the 10th Anniversary of the International Academy of Cardiovascular Sciences.

You have earned your many honours and deserve to be recognized and praised for your hard work. Your dedication and commitment to cardiovascular research has benefited many people throughout the world. You have been a driving force in developing research facilities, attracting talented investigators, and promoting the exchange of scientific information. The demands of fulfilling your many roles, including that of researcher, teacher, mentor, trainer, public speaker and author, result in a full and hectic schedule. This hive of activity has also resulted in creating your reputation as a commanding and influential presence in the field of cardiovascular research.

I commend you for the work that you do, and I appreciate the opportunity to convey Manitoba's pride in you and your accomplishments. You are an inspiration to all of us.

I wish you a wonderful time at your birthday celebration and continued success in your career.

Regards,

Theresa Oswald
September 2006

Dear Dr. Naranjan S. Dhallia:

It is my sincerest honour to congratulate you on your remarkable commitment and contribution to cardiovascular pathophysiology and therapy of heart disease. I commend on you on all of the success you have had over the years, and would like to take this opportunity to recognize your world-class research.

It takes passion to dedicate yourself so wholeheartedly to cardiovascular research, as is outlined in your many achievements and awards, as well as in the minds of your students.

Through your establishment of the world-renowned Institute of Cardiovascular Sciences in St. Boniface General Hospital, to professing your knowledge to others at the University of Manitoba, you have certainly contributed endless amounts of hard work and dedication to the City of Winnipeg.

You have brought global recognition to the exceptional research that has been carried out in our city for decades, and have single-handedly attracted over 20 million dollars in funds for medical research in Winnipeg.

We have all benefited from your lifelong dedication to heart research, as the numerous awards and honours that have bestowed, all serve to document, recognize and praise a career by which standards have been set for others to follow.

Your passion for science has truly allowed Winnipeg to reach its full potential as a City of Opportunity, and I thank you for all that you have contributed over the years.

Congratulations on all of your success, and best wishes for the future. I hope that you have a wonderful 70th birthday.

Yours sincerely,

Sam Katz
Mayor of Winnipeg

City of Opportunity • Ville d’avenir
Dear Naranjan, dear Professor Dhalia,

It is a general belief that the seventieth birthday represents a milestone in human life, probably because people revere this venerable high age. It may also represent an indirect hint to start to slow down in the rate of living. I agree with the first supposition but not completely with the second one. What we celebrate now at this meeting dedicated to your seventieth birthday is homage to your outstanding scientific achievement, your exceptional organizational talent and your deeply humanitarian attitude. Your scientific results will be certainly duly appreciated in the course of the meeting. So I will rather focus on the last two items.

We have known each other and have been friends for more than three decades. If I am not mistaken, we first met at an early Prague meeting in 1974 and since then we have met nearly every year at world congresses of ISHR and at European Section meetings of our Society. Thus I could follow your activity and I know that formation and existence of the International Society of Heart Research is inseparable of the personality of Naranjan Dhalia.

For us, cardiovascular researchers, working at that time behind the iron curtain, it was a wonderful chance to join in the newly founded ISHR. A great help for our future work enabling us to meet our colleagues from the West, to present and submit our results to the judgment of a truly international forum. As far as I remember, not everybody shared our joy over our possible adherence. I firmly know that primarily you have the credit for, dear Naranjan (and also two other leading persons: David Hearse and Jutta Schaper) electing me Council Member of ISHR as representative of Eastern Europe at the 1983 London ISHR World Congress. Soon I got the same position in the Council of the European Section of ISHR. In both Councils I served three cycles, i.e. twelve years, founding the Eastern European Subsection, capable of organizing its own regional meetings and participating in European Section and World Congresses of ISHR.

And it was primarily owing to your effort, dear Naranjan (and to that of the above-named leading persons) that you understood our then existing not easy situation in Eastern Europe. You offered us your help by reduced or free registration, by cheap accommodation and food at the site of convention, thus permitting a number of younger and elder Eastern European research workers to participate in ISHR Congresses. It is due to your support and to that of the above named leading persons that thirteen years after the 1974 Prague Congress I had the honor to become the host of the XIII European Section ISHR Congress in my home town Szeged. In addition be it remembered that the 1995 Prague ISHR World Congress were unrealizable without your active support.

Briefly so much and that is by far not all what you have done in the past to help us. We all, who were active at that time we shall never forget your help and tell about it to our young generation of research workers, fortunate enough to start their career in a free world.

Now being seventy years old you will stop for a moment to look back on your past. I am convinced that you can be well contended with most of what you have done up to now. But please stop for a moment only! You are not the type of man falling asleep at a milestone!

We all, who admire your achievement and like your personality we wish you further happy years and good health to continue! And I personally, as a sometime representative of Eastern Europe and as your friend, I specially share in these feelings and wishes!

Yours,
László Szekeres MD, PhD, DSc., FISHR, Emeritus Professor of Pharmacology, Kazinczy SZEGED, Hungary.

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BY DENNIS (BEN) McNAMARA, NEW ORLEANS

I met Naranjan in St Louis in June, 1968. Naranjan’s reputation preceded him whereas mine did not. Unfortunately the exact date of this meeting of Mohamed and the Mountain is lost. The occasion was a Sunday afternoon on which a friend and I had gone to the “$1.25 Steakhouse” for dinner. While in line Naranjan showed up. My friend, John Alexander, was a St Louis University medical student who was working in Naranjan’s laboratory. After getting his steak, salad and piece of toast Naranjan joined us at our table. John introduced me to Naranjan who managed to totally ignore me. He had bigger fish to fry, steak house or not. He told John of his new appointment in the Department of Physiology at the University of Manitoba. They talked and I ate. Naranjan eventually asked John if he knew of anyone who wanted to go to graduate school. As John knew I had begun to apply he said “How about Ben?” Naranjan looked at me and not being impressed with what he saw went back to his meal. This went on for several more repetitions until we all finished eating. I don’t recall Naranjan saying one word to me however listening to his discussions with John did introduce me to the sometime repetitive nature of his questioning.

John and I went to the medical school to go back to the library and again bumped into Naranjan in the entrance foyer of the school. Naranjan asked John if he knew anyone who was interested in going to graduate school. John suggested me. Naranjan looked at me wordlessly for a while and then said “Come”. We went to his office and talked. Then he gave me application forms for the graduate program at the University of Manitoba. I went to the library to tell John what had transpired and to find a map to exactly locate the whereabouts of Winnipeg.

I arrived in Winnipeg one evening in August, 1968, less than 2 months after meeting Naranjan. I checked into the Maryland Hotel by the medical school. I had driven up from St Paul Minnesota that day. After going to bed I found out that the hotel was also housing the women winners and finalists in the Manitoba Woman’s Bowling Championship Bowl-off. The night was not restful with them drunkenly shouting and running up and down the halls, pounding on what sounded like the walls of all of the other rooms along the hall. Sometimes they just yelled through the walls to their friends or rivals in the next room. I was neither but I was in the room on the other side of party central. At least they did not start bowling in the halls. I called and complained but the desk clerk couldn’t stop them. After peeling out through a crack in the door and seeing the size and energy of some of these women I completely understood why he wasn’t being successful in quieting them down. I spent the rest of the night until they became worn out in the early hours of the morning, praying I would not be discovered as the source of the complaints.

Without knowing it, I was prophetically prepared to meet with Naranjan the next day. Thus began my relationship with Naranjan Singh Dhalia.
Man is the Architect of His own Life

Naranjan S. Dhalla is The Example

NARANJAN DHALLA
AN EVERLASTING CONFUSION
“Whenever I get any distinction,
  It was always a confusion.
Was it my own achievement?
  Or was it a God given gift?”
That’s a quote of “Dr. Naranjan” full of confusion
That puts me further into confusion.
Why do people wish to see angels?
  When we know it’s just an illusion
Adding further to my confusion
Is why people cannot recognize a person
Who is nothing but like an angel?
Whenever I see an angel like “Naranjan”
There is multiplication of my confusion
In modesty is he human being or the Sun?
“Sun” who conceals himself and lets his stars shine
“Naranjan” delivers to the science
Giving credit to teammates in the world of science.
To praise oneself is not unusual
To criticize oneself is very unusual.
“Naranjan” considering himself to be “ugly”
Doesn’t know garden flowers are always full of beauty.
Person being praised and staying in several hearts
Person working for the welfare of millions of hearts
Person bringing together thousands of specialists of hearts
Has been inducted in the “Hall of Fame”
  has his bust added to the park
Now there is no confusion
As to why there is criticism of himself by Naranjan
Answers I could now recognize
Angels never learnt to praise or criticize

“Vidhya Vivaday, Dhana Maday, Shakti PareehamPar-peed nay.
Khalasya Naranjan Vipreetamett, Ginayaya, Danayche Rakahanay.”

(Persons having knowledge, money, and power normally utilize for
arguments, fun & amusements, and harassing others respectively;
however, opposite to them, the great persons like Naranjan, it is
being utilized for Education, Donations and Protection respectively.)

Prof. Naranjan Dhalla is a personality having
In depth Knowledge not only of cardiovascular sciences,
  But also of people, religion, culture, literature and humanity.
Enough Welath not only to maintain a high profile family,
  But also of heart health & scientists in the world.
Strong Power no only to direct efficient administration,
But also to direct the students & fellows to glorious career.

However opposite to the common people
Who utilize their knowledge for more debate,
Naranjan utilizes knowledge for giving Education.
Who utilize wealth for fun and amusement,
Naranjan utilizes wealth for giving Donation.
Who utilize their power for harassing others,
Naranjan utilizes power for giving Protection.

May such a personality have many more decades of
“Life Full of Life”

By: Prof. Ramesh K. Goyal, PhD.
  Ahmedabad, India
FROM: Nobutaka Takeda, M.D., Ph.D.
Professor and Director
Department of Internal Medicine
Aote Hospital, Jikei University School of Medicine
Tokyo, Japan

I would like to offer my sincere congratulations to Prof. Naranjan S. Dhall on his 70th birthday. I am very pleased that he has welcomed the birthday in the best of health. Looking back on his past life, the history of the head of the St. Boniface General Hospital, Cardiologic Research Centre, we cannot praise his selflessness too much. His contribution to the development of cardiovascular research is extraordinarily large. He produced not only a lot of major scientific achievement, but also he has educated many excellent young scientists from all over the world. Thus he made Winnipeg one of the most famous cities in the world in cardiovascular research field. He contributed to bring today's prosperity to the International Society for Heart Research (ISHR) serving as a secretary general and then president of ISHR. He established the International Academy of Cardiovascular Sciences (IACS), He has served as the editor of a scientific journal of Molecular and Cellular Biochemistry (MCB). I have done a lot of collaborative research on heart failure with him for more than ten years. It is a great pleasure to celebrate sincerely his 70th birthday as a collaborator.

There are an increasing number of patients with hypertension, diabetes mellitus, hyperlipidemia, and obesity. These lead to atherosclerosis and to coronary heart disease. In order to improve the quality of life of patients and also control the medical expenses preventive medicine, e.g., diet therapy and exercise, is essential. The role of dieticians must become more important. The International Academy of Cardiovascular Sciences will be able to play a great role in promoting preventive medicine. I hope the Academy which was established and developed by Prof. Dhall will enjoy further prosperity.

Greetings to Dr. Dhall
Jutta Schaper, M.D., Ph.D.
Max-Planck Institute, Bad Nauheim, Germany

In 1973, in Freiburg, Germany, I met Naranjan Dhall on for the first time. This was at the occasion of the International Congress of the "International Study Group for Research in Cardiac Metabolism" that adopted the name "International Society for Heart Research" (ISHR) in 1976 at the World Congress in Tokyo. In Freiburg, Dr. Dhall was elected Secretary of the ISHR and stayed in office for more than a decade (17 years) while Drs. Bing, Wollenberger, Opie, Jennings and Harris were International Presidents. Dr. Dhall was President of the society for 3 years, from 1992-1995. While I was well aware of Dr. Dhall's professional work in cardiovascular research in the early years as well as later, I came to know him personally in 1981 when I was elected Secretary General of the European Section of the ISHR. Dr. Dhall was extremely interested in the well being of all the different Sections of the ISHR and therefore he attended most of their meetings. We usually had long conversations at these occasions, especially at European meetings, during which he introduced me to his philosophy of handling a scientific society and its members and to his philosophical understanding of life in general. Since the ISHR has members of all parts of the world, we were often confronted with the difficulties experienced by members from disadantaged countries in obtaining scientific information and most of all money to attend meetings. Dr. Dhall always felt the need to help members from unprivileged areas of the globe and strongly supported them.

Dr. Dhall was, and still is, strongly convinced that the members of a scientific society should come first in the considerations of their officers and that this principle should dictate their dealings with problems arising in the society of which they are leaders. He felt, moreover, that this basic principle should not only be applied to a scientific community but also to the human society at large. This is a truly democratic attitude that made a deep impression on me and on all the colleagues who were part of the many discussions held at various congresses all over the world. The practical consequence of this view of life was the fact that the entire ISHR developed as a veritable democratic body where the members come first in all considerations and the officers serve the Society with dedication.

I admire Dr. Dhall's loyalty to causes that he considers to be important for the general public and his loyalty to his fellow men, be these his family, his coworkers and colleagues or the members of a scientific society such as the ISHR and, more recently, the International Academy of Cardiovascular Sciences.

Dr. Dhall is a very active, energetic and determined person and so it was to be expected that he would engage himself into the development of another organization after he completed his duties with the ISHR. He founded the International Academy of Cardiovascular Sciences, with the intention to promote "Cardiovascular Education, Research and Patient Care". He will now further continue his efforts to promote the Academy such as was stated in one of the recent CV network bulletins: "Dhall ending one career but expanding another". Dr. Dhall has all his life been deeply devoted to all his tasks, causes and challenges and so it is to be expected that he will take on his new duties with similar energy and devotion. We hope to experience his leadership in cardiovascular science for many years to come and we wish Dr. Dhall the strength and fortitude as well as health and happiness to continue with the matter that is so very important to him.
Dr. Naranjan Dhalla – a man dedicated to promoting cardiovascular sciences all over the world, is a distinguished personality. Dr. Dhalla has devoted his life to develop an Institution, which has contributed tremendously for the basic research at molecular level, applied aspects and novel techniques to conduct research for the health of heart. The most remarkable contributions of Dr. Naranjan Dhalla include: bringing ISHR to international prominence; Journal of Molecular and Cellular Biochemistry; human resource development in cardiovascular sciences (more than 150 students, faculty and staff members); publication of 40 books and of 300 research publication; setting up the world-renowned Institute of Cardiovascular Sciences; and organizing world’s best conferences in cardiovascular sciences (both in respect of sciences and social events). Naranjan Dhalla is a man of promises, friend of friends and a most humble person. The most remarkable contribution of Naranjan Dhalla is the creation of International Academy of Cardiovascular Sciences for the promotion of Heart Health and recognizing cardiovascular achievements all over the world. Professor Naranjan Dhalla has been instrumental for the establishment of ISHR & IACS and India Sections.

I send my greetings to a great person for his outstanding contributions and feel proud to be associated with such a great personality. On my own behalf and my wife Manju Gupta we pay a tribute for being associated with him. I wish him all the success in his future endeavors. IACS India section sends greetings on this great occasion.

From: Dr. S.K.Gupta
Dean, Indian Council of Medical Research

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**Laudatio from Japan**

The first time I met Prof. Naranjan S Dhalla was in 1974, at the 7th World Congress of the International Study Group for Research in Cardiac Metabolism (ISGRCM) in Quebec, Canada. I attended the business meeting of this Congress as the representative of the Japanese Section to present a plan to hold the 8th World Congress in Japan. At that time, Prof. Dhalla was General Secretary of the Society. Due to his big help, the 8th World Congress would be held in Tokyo in 1976. Since that time, we developed our good friendship like an internationally growing family.

Ever since then, Prof. Dhalla organized many international conferences all over the world in which my wife, Brigitte and I participated, and he in turn attended various congresses and meetings in Japan. His devoted energies to promote cardiovascular science and heart health have had permanent inspiring influence on Japanese researchers. With Prof. Dhalla, I was able to hold many symposia and publish monographs about our work together.

As a special achievement, I would like to mention 3 Symposia for ISHR: Canon, Bayer- Yakuhin and Kaito-Symposium, which Prof. Dhalla and I contributed to in 1992 to help ISHR financially. Since then, these 3 Named Symposia are held at every ISHR World Congress, contributing to basic cardiovascular research.

In 1996, Prof. Dhalla founded the International Academy of Cardiovascular Sciences (IACS) to promote the Scientific Basis of Cardiovascular Medicine. Since then I am making efforts as TH chairman of the Academy. As one of the first international sections, the Japan Section joined the Academy. It developed out of the Japan Working Group on Cardiac Structure and Metabolism, founded in 1962 by Prof. T. Kobayashi (Chairman of 8th World Congress ISGRCM) and Prof. Y. Ikoh (Chairman of 14th ISHR World Congress in 1992). The Japan Section IACS is holding an annual meeting intensively. This year, 2006, the Japan Section was able to hold the 2nd World Congress of IACS in Sapporo, Japan. This congress was a successful meeting thanks to the cooperation of each section of IACS under the imaginative leadership of Prof. Dhalla.

I also remember enjoyable traveling with Prof. Dhalla through India; his lovely wife, Ranjit, and his sons accompanying him to Japan; and us visiting Winnipeg many times, also with our son and his family.

Many unforgettable scientifically productive years and a longtime deep and happy friendship! All the best, dear Naranjan! OMEDETO from The Naganos.

Prof. Emeritus Makoto Nagano, MD, PhD
President of Japan Section of IACS
Building on IACS’s Success

It seems remarkable that 10 years have already passed since the creation of the International Academy on Cardiovascular Sciences. Growing out of Winnipeg’s vibrant health sciences community, the organization has come to play a key role in facilitating the exchange of information and ideas among scientists worldwide in the area of cardiology. The Academy does exactly what it was created to do and it does it well. The success of IACS lies with its founder—our colleague Dr. Naranjan Dhalla. It was his vision for the Academy that led to its birth. And under his tireless leadership it has become an important resource within the international cardiovascular scientific community.

The Journal of the IACS, Experimental and Clinical Cardiology, was first published in 1996, because, as the editor Bohuslav Ostádal explained, there was a need “for a new journal providing experimental and clinical cardiologists, particularly in countries where English is not the first language, with a greater opportunity to publish their work. This journal has become a vehicle for scientists, especially those whose first language is not English, who might not have had the opportunity to make their work available.

Through the last ten years the Academy has facilitated countless meetings, formal and informal, contacts have been made, ideas and discoveries shared. Each of these has contributed to improving heart health in some way.

Through it all Dr. Dhalla has managed to maintain his own solid reputation as a scientist, teacher and prolific writer. Indeed, leading IACS is only one on a very long list of his accomplishments over the years.

Back in 1978, the Medical Research Council set up the first Centre of Excellence in Heart Research in Canada under the leadership of Dr. Dhalla. He has only just stepped down as Director of the Institute of Cardiovascular Sciences at the St. Boniface General Hospital Research Centre after almost 20 years as its Director/Head. He has worked closely with students, scientists and researchers, mentoring and guiding them in a fascinating and challenging field. In short he has left his mark in the field of cardiovascular sciences internationally and his influence will continue to be felt for years to come.

I am confident that as Dr. Dhalla focuses his efforts in other areas, the work of the IACS, will continue to grow. It is this scientific underpinning that supports the entire discipline. Without it, we risk slipping backwards. With it, we all benefit - scientists, physicians and, ultimately and most importantly, the patients whose very lives depend upon this work.

But overall heart health is best achieved by preventing cardiovascular disease in the first place. This means understanding the risk factors involved in terms of genetics, diet, stress and lifestyle, among others. It involves health promotion, not just illness prevention.

This is a public health approach, as opposed to a medical approach - a major shift from costly hospital care that now predominates in many nations to primary health care. But in an era of ever-tightening resources, combined with the increasing demands of an aging population, we need solutions that target the root problems.

The scientific contributions made by the Academy combined with innovative policy approaches can only help to as we continue to wrestle with cardiovascular disease.

Let us remember that another very special anniversary is being celebrated at this event - Dr. Dhalla’s 70th birthday. I want to take this opportunity to thank him for the many years he has given to the cardiovascular scientific community.

Happy Birthday Naranjan! I look forward to seeing the new paths you will forge and the contributions you will continue to make.

From: Sen. Wilbert Keon OC, MD, FRCSC
Ottawa, Canada

I would love to express, on behalf of the Chinese Association of Pathophysiology, our warmest wish to Dr. Dhalla for his 70th birthday.

One of the objectives of the International Society for Heart Research (ISHR) is to disseminate knowledge and promote cooperation internationally in the field of cardiovascular research. With his years of tireless efforts, Dr. Naranjan Dhalla has made tremendous contribution to the realization of this goal. Here, I am particularly thankful to my old friend Dr. Dhalla for the significant help he gave China. He used visit China several time. With his facilitation, Chinese Association of Pathophysiology successfully joined ISHR. As the Executive Director of the International Academy of Cardiovascular Sciences International Academy of Cardiovascular Sciences (IACS), he again achieved in adding China to IACS Sections. At the same time, Dr. Dhalla is an enthusiastic educator. He has admitted many talented young Chinese as his students, many of whom have grown into influential scientists in China and even around the world. These remarkable contributions demonstrate his kindness as well as his vision to enhance the development of scientific research, especially heart research.

Qi-de Han
President, China Association for Science and Technology
President, Chinese Association of Pathophysiology

Once-in-a Lifetime Activities while you’re in Winnipeg this week

1. Evening migration of thousands of Canada Geese to their sanctuary FORT WHITE ALIVE – weekend evenings at sunset

2. Visiting Exhibition of Sculpture by RODIN and painting from the Prairies including Ivan’s pal, the late Tony Tascona – Winnipeg Art Gallery – DAILY – 11:00 am – 5:00 PM

3. Touring Company performing PHANTOM OF THE OPERA – Centennial Concert Centre – Tues – Sat – 8 PM; Sat and Sun 2:00 PM
Naranjan S. Dhalla  
Institute of Cardiovascular Sciences  
St Boniface General Hospital Research Centre  
University of Manitoba, Faculty of Medicine  
351 Tache Avenue, Winnipeg, Manitoba  
R2H 2A6 CANADA

Dear Professor Naranjan Dhalla,

First of all, we would like to express our sincere appreciation for your most kind invitation to the symposium scheduled from 12 October. It is our honor to be invited to such a wonderful meeting and it would be a privilege to meet the famous scientists.  

We, including Dr. Kumamoto, Mr. Koyanagi tried to rearrange our previous engagement in the middle of October, however we sincerely regret that we will be unable to attend the meeting. Alternatively, we would like to cerebrate your 70th birthday in Fukuoka in November.  

We are very much looking forward to meeting you at Fukuoka.

Yours sincerely,

YOSHIMASA YOSHIDA

Yoshimasa Yoshida  
Executive Officer, General manager  
Marketing Department  
Mitsubishi Pharma Corporation.  
2-5-6, Awaji-machi, Chuo-ku, Osaka  
541-0047, Japan  
TEL +81 6 6227 5201  
FAX +81 6 6233 2761

Hideo Kumamoto, D.V.M.,  
Deputy General Manager  
Business and Marketing Department  
Mitsubishi Pharma Europe Ltd  
Jupiter House, Triton Court, 14 Finsbury Square,  
London ECA 1BR, U.K.  
TEL(Switchboard) +44(0)20 7065 5000  
TEL+44(0)20 7065 5001  
FAX+44(0)20 7065 5050

Yoichi Koyanagi  
Manager  
Product Planning & Information Department  
Mitsubishi Pharma Corporation  
2-5-6, Awaji-machi,Chuo-ku,Osaka  
541-0047, Japan  
TEL +81 6 6227 5201  
FAX +81 6 6233 2760  
E-Mail Koyanagi.Yoichi@mk.m-pharma.co.jp
2nd Academy World Congress

by Lorrie Kirshenbaum, Winnipeg, Canada

The 2nd World Congress of the IACS, hosted by the Japanese section of IACS, was held in the historic city of Sapporo Japan, July 17th to July 20th, 2006. Dr. Hideaki Kawaguchi from Hokkaido University Graduate School of Medicine, Sapporo, Hokkaido, Japan was the outstanding Chairman for the meeting. The meeting attracted more than 300 international speakers from IACS constituents from Brazil, Canada, United States, Slovak Republic, Czech Republic, Japan, Argentina, India, Russia and Europe who participated in four concurrent sessions over the course of the four day meeting. In addition to the always delightful Japanese sushi and Sapporo beer, a memorable highlight of the meeting was the presentation to several speakers with distinguished honors and awards for their service and contribution to cardiovascular research. Details about the winners are provided below. The meeting was considered to be a major success and Dr. Kawaguchi 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 and a favorable taste of Sapporo Japan. Dr. Hideaki Kawaguchi performed an outstanding service to the IACS as the Chairman of the 2nd World Congress. To recognize his efforts, IACS President Stephen Valter presented a Distinguished Service Award to Dr. Kawaguchi in Sapporo.

Since 2000, he has been Professor at the Department of Pathophysiology and Laboratory Medicine, Hokkaido University Graduate School of Medicine. In 1966, he graduated from Hokkaido Kuriyama High School; in 1973, the Hokkaido University School of Medicine; in 1983 the Hokkaido University Graduate School of Medicine; then studied abroad from 1980-1981, Department of Biochemistry, Karolinska Institute, Stockholm, Sweden; and 1981-1982, Department of Biology, College of Pharmacy, University of Minnesota, Minneapolis, USA. His professional experience: 1973-1974 - Resident, Internal Medicine, Hospital of Hokkaido University School of Medicine; Cardiovascular Medicine, Hospital of Hokkaido University School of Medicine; 1974-1979 - Resident, Cardiovascular Medicine, Hospital of Hokkaido University School of Medicine; 1983-1993 - Assistant, Cardiovascular Medicine, Hospital of Hokkaido University School of Medicine; 1993-1995 - Lecturer, Cardiovascular Medicine Hospital of Hokkaido University School of Medicine; and 1995-2000 - Professor, Laboratory Medicine, Hokkaido University School of Medicine. He is a Fellow of the International Academy of Cardiovascular Sciences and a number of other international organizations.

AWARD WINNERS:

Dr. R. John Solaro is the winner of the 2006 Makoto Nagano Award for Distinguished Achievements in Cardiovascular Education. He has been Head of the Department of Physiology and Biophysics in the College of Medicine at the University of Illinois at Chicago since 1988. In 1998, he was appointed Distinguished University Professor. He is also Co-director of the UIC Center for Cardiovascular Research.

Dr. Solaro graduated from the University of Pittsburgh College of Medicine with a PhD degree in 1971. He held faculty positions at the Medical College of Virginia and the University of Cincinnati and was at University of Birmingham as a British-American Heart Fellow and at the University College of London as a Fogarty Fellow. Dr. Solaro has published 240 papers in the areas of cellular and molecular mechanisms controlling the contraction of the heart and how these mechanisms are altered by pathological conditions and by pharmacological interventions. The emphasis of these studies is on sarcomeric proteins. He is currently the holder of a 10-year NIH Merit Award and is the Principal Investigator on an NIH Program Project Grant, and an NIH RO1 Award.

Dr. Solaro has a long track record in the teaching of research. He served or is serving as supervisor for 21 pre-doctoral and 40 post-doctoral trainees. He is principal investigator of an NIH Training Grant on Cellular Signalling now in its 17th year of funding. This grant has provided research support for 100 trainees.

Apart from teaching medical students for over 30 years, Dr. Solaro has served as an invited speaker in teaching workshops sponsored by the American Physiological Society. He was also a principal lecturer in the Baltic Summer School on Cardiovascular Physiology in Lund, Sweden. Dr. Solaro also gave a series of lectures entitled “The Human Genome: The Heart of the Matter” to high school biology teachers in Chicago in the Wilson Scholar’s Program: Chicago Teachers as Scholars sponsored by Newberry Library.

In Sapporo, Dr. Seiyo Sugiiwa was honoured with the 2006 Norman Alpert Award for Established Investigators in Cardiovascular Sciences. Since 2002 he has been Professor, Graduate School of Frontier Sciences, University of Tokyo and he works in their Biomechanics Laboratory in the Department.
of Human and Engineered Environment. He was educated at the University of Tokyo and earned his B.S. in Chemical Engineering, and M.D. and Ph.D. in Medicine. In addition to post-graduate training at University of Tokyo Hospital, he worked as a Research Fellow, Department of Biomedical Engineering, Johns Hopkins University, Baltimore, MD.

His research interests include Cardiac Mechanics (from molecules to organ), Cardiac Muscle Physiology, and Computational Modeling and Clinical Cardiology. Dr. Sugiura’s memberships include Japan Society of Internal Medicine, Japanese Circulation Society, Japanese College of Cardiology, Japanese Society of Medical Engineering, Japanese Society of Interventional Cardiology, International Society of Heart Research, and he is a Fellow of the American Heart Association.

Dr. Balwant Tuana is the 2006 winner of the Naranjan Dhalla Award for Young Investigators in Cardiovascular Sciences. He was schooled in England and received his BSc (Hons) degree in Biochemistry from the University of Liverpool in 1977. He then moved to the University of Manitoba to study for his PhD in the Department of Physiology in the laboratory of Dr. N.S. Dhalla from where he graduated in 1982. He undertook postdoctoral training at the Charles Best Institute, University of Toronto in the laboratory of David MacLennan in the molecular biology of muscle. He was recruited as Assistant Professor in the Department of Pharmacology at the University of Toronto in 1985 where he started to explore and contributed to the understanding of the biochemical/molecular nature of the calcium channel and excitation-contraction coupling. He moved to the University of Ottawa in 1988 where he is a Professor in the Department of Cellular and Molecular Medicine. Dr. Tuana has published numerous original articles on research dealing with membrane biology of signaling. In particular, his laboratory has defined the structure and expression of novel genes of the cardiovascular system including calcium channels, protein kinases, transcription factors and membrane proteins. His laboratory discovered the SLLMAP gene which encodes a family of tail-anchored membrane proteins that are highly expressed in the cardiovascular system. The work demonstrated the presence of a single SLLMAP gene in the human genome which resides on human chromosome 3 p21 and is alternatively spliced to generate a large family of proteins in the myocardium. These proteins appear to regulate diverse functions including mitosis, cell cycle, membrane biology of excitation-contraction coupling and membrane fusion. The deregulated expression of SLLMAP has been linked to cardiovascular dysfunction. His laboratory has also discovered a muscle specific isoform of a calmodulin dependent protein kinase (CaMKII beta4) and its anchoring proteins in myocardium and muscle. The CaMKII was found to target the sarcoplasmic reticulum and proteomic analysis indicated that it can assemble the glycolytic enzyme complex and exert calcium dependent regulatory effects on GAPDH activity. The CaMKII is an important player in the regulation of cell growth and E-C coupling but may also define the redox state and local membrane ATP levels in response to calcium signals. The work in his laboratory is also defining the biology of E2F6, a transcriptional repressor in terms of cardiac growth and remodeling heart failure post-MI. His laboratory is funded by the Canadian Institutes of Health Research and the Heart and Stroke Foundation of Canada. He has served as Chair and grants panel member of the various national funding agencies and has been supported by a career investigator award from the Heart and Stroke Foundation.

Dr. Heinz-Gerd Zimmer, MD was the recipient of the 2006 Howard Morgan Award for Distinguished Achievements in Cardiovascular Research. He is Professor of Physiology & Chair and Director, Medizinische Fakultät, Carl-Ludwig Institut für Physiologie, Universität Leipzig, Leipzig, Germany. He is extremely active as Chairman of the graduate commission, Member of the research commission, Member of the animal protection commission, Chairman of the habilitation commission with Dr. Dietrich Ebert, Member of the commission for experimental kardiologie of the German Society for Kardiologie/Heart and Cycle Research, Member of the Council on Cellular and Molecular Cardiology, International Society for Heart Research, and a Fellow of the IACS with which he organized and chaired the 83rd Meeting of the German Physiological Society, Leipzig, Germany, March 14-17, 2004.
Ten Years of the IACS

The International Academy of Cardiovascular Sciences is truly honoured that the following exceptional cardiologists, scientists and cardiac surgeons have accepted appointment as Fellows who serve the Mission of the Academy to promote cardiovascular education of professionals and lay people and to recognize major cardiovascular achievement throughout the world.

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Professor of Cardiology & President
Egyptian Society of Atherosclerosis
Cairo, Egypt

Dr. Krishna C. Agrawal, PhD
Professor & Chair
Department of Pharmacology
Tulane University Health Sciences Center
New Orleans, LA

Dr. Giuseppe Ambrosio, MD, PhD
Director, Dept. of Internal Medicine
Division of Cardiology
University of Perugia School of Medicine
Perugia, Italy

Dr. Inder Anand, MD
Director, Heart Failure Clinic
director, and Professor of Medicine, VA Medical Center
Minneapolis, MN

Dr. Aubie Angel, MD, FRCPC
University of Toronto
Toronto, ON

Prof. James A. Angus, PhD
Head, Department of Pharmacology
University of Melbourne
Victoria, Australia

Dr. Piero Arvinda, MD
Prof. & Vice-Chairman, Department of Medicine
Director, Cardiovascular Research Institute
New York Medical College
Valhalla, NY

Dr. Paul W. Armstrong, MD
Professor of Medicine, Division of Cardiology University of Alberta
Edmonton, AB

Dr. Fause Attle, MD
General Director,
National Institut. of Cardiology “Ignacio Chavez”
Mexico D.F., Mexico

Dr. Ivor J. Benjamin, MD
Christi T. Smith Professor of Medicine & Chief, Division of Cardiology
University of Utah Health Sciences Ctr.
Salt Lake City, UT

Dr. Richard J. Benge, MD
Director, Experimental Cardiology
Huntington Medical Research Institute
Pasadena, CA

Dr. Sanford P. Bishop, MD
Emeritus Professor of Pathology
University of Alabama at Birmingham
Birmingham, AL

Dr. Colin M. Bloch, MD
Professor & Director
Department of Pathology
University of California - San Diego
La Jolla, CA.

Dr. Roberto Boll, MD
Professor & Chief, Division of Cardiology
University of Louisville
Louisville, KY

Dr. Domingo M. Braile, MD, PhD
Full Professor São José do Rio Preto University
Medical School/CEO Braile Cardiocirurgia Clinic
São Paulo, Brazil

Dr. David P. Brasil, MD, MSc
Professor of Medicine & Coordinator, Clinical Research & Unit
of Cardiovascular Prevention Faculty of Medical Sciences of
Minas Gerais
Belo Horizonte-MG, Brazil

Dr. Eugene Braunwald, MD
Vice President for Academic Programs
Partners HealthCare System
Brigham and Women’s Hospital
Boston, MA

Dr. Pavel Bravely, MD, DSc
Professor, Department of Physiology
Masaryk University, Faculty of Medicine
Brno, Czech Republic

Dr. Dirk L.E. Brutsaert, MD
Professor, Department of Cardiology
University of Antwerp
Edegem, Belgium

Dr. L. Maximilian Buja, MD
H.Wayne Hightower Distinguished Professor
The University of Texas-Houston Med. School
Houston, TX

Dr. John A. Cains, MD
Professor & Dean, Faculty of Medicine
University of British Columbia
Vancouver, BC

Dr. Claudio Marcello Caldarera, MD
Professor & Director of the Consorzio Interuniversitario Per la
Ricerca Cardiovascolare
Alma Mater Studiorum – Universita di Bologna
Bologna, Italy

Prof. Dr. Ernesto Carasoli, MD
Dipartimento di Chimica Biologica
Università degli Studi di Padova
Padova, Italy

Dr. Edward E. Carmeliet, MD
Professor Emeritus
K.U. Leuven University
Leuven, Belgium.

Dr. James B. Caufield, MD
Professor, Department of Pathology
Division of Anatomy & Pathology
University of Alabama at Birmingham
Birmingham, AL

Dr. Suphabai Chatthiraphan, MD
Prof. of Medicine and Consultant
H.M. Cardiac Centre, Siriraj Hospital
Bangkok, Thailand

Dr. Karu Chatterjee, MD
Lucie Stern Professor of Cardiology
Chatterjee Center for Cardiac Research
University of California, San Francisco
San Francisco, CA

Dr. Eugene I. Chazov, MD
General Director
Russian Cardiology Research Complex
Moscow, Russia

Dr. Patrick Choy, MD
Assoc. Dean (Research)
Fac. of Med., University of Manitoba
Winnipeg, MB

Prof. Dr. Horacio Cingolani, MD
Centro de Investigaciones Cardiovasculares
Universidad Nacional de La Plata
La Plata, Argentina

Dr. Richard A. Cohen, MD
Professor of Medicine, Physiol. & Pharmacol.
and Director, Vascular Biology Unit
Boston University Medical Center,
Boston, MA

Dr. Jay N. Cohn, MD
Professor of Medicine, Dept. of Medicine, Cardiovascular Division
University of Minnesota Medical School
Minneapolis, MN

Dr. Sergio Dalla-Volta, MD
Ordinario di Cardiologia nella
Università di Padova
Policlinico Universitario
Padova, Italy

Dr. Dipak K. Das, PhD
Professor & Director, Cardiovasc. Research Ctr., University of
Connecticut Health Center
School of Medicine
Farmington, CT

Dr. Jean Davignon, MD
Clinical Research Institute of Montreal
Montreal, PQ

Dr. Michael E. DeBakey, MD
Chancellor Emeritus, Baylor College of Medicine
Houston, TX

Dr. Adolfo J. de Bold, PhD
Professor of Pathology & Lab. Med. and of Cellular &
Molecular Medicine, Fac. of Medicine
University of Ottawa Heart Institute
Ottawa, Ontario

Dr. Jacques de Champlain, MD
Professor, Dept. of Physiology
Faculty of Medicine
Universite de Montreal
Montreal, PQ

Dr. Prakash C. Deedwania, MD
Clinical Professor, Internal Medicine Prog.
Veterans Affairs Central
California Health Care Systems - UCSF
Fresno, CA

Dr. Walnor C. De Mello, MD
Department of Pharmacology & Toxicology
University of Puerto Rico
San Juan, Puerto Rico

Dr. Naranjan S. Dhalla, PhD, MD (Hon)
Distinguished Professor
Institute of Cardiovascular Sciences
St. Boniface General Hospital Research Centre
Winnipeg, MB

Dr. Wolfgang H. Dillmann, MD
Prof. of Medicine, Div. of Endocrin./Metabolism
University of California - San Diego
La Jolla, CA 92033-0618, USA

Dr. Paolo Di Nardo, MD
Laboratory of Molecular & Cellular Cardiology
Department of Internal Medicine
University of Rome Tor Vergata
Rome, Italy

Dr. Raul Domenech, MD
Professor, Department of Physiology
East Area, Faculty of Medicine
University of Chile
Santiago, Chile
<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Institution</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. James M. Downey, PhD</td>
<td>Professor, Department of Physiology</td>
<td>University of South Alabama, Mobile, AL</td>
<td></td>
</tr>
<tr>
<td>Dr. Victor Dzau MD</td>
<td>Chancellor for Health Affairs at Duke University and president and CEO of the Duke University Health System</td>
<td>Durham NC</td>
<td></td>
</tr>
<tr>
<td>Dr. Istvan Edes, MD</td>
<td>Professor &amp; Director</td>
<td>Institute of Cardiology</td>
<td>University of Debrecen, Debrecen, Hungary</td>
</tr>
<tr>
<td>Dr. David A. Eisen, MD</td>
<td>BHF Professor of Cardiac Physiology</td>
<td>Unit of Cardiac Physiology</td>
<td>University of Manchester, Manchester, England, U.K.</td>
</tr>
<tr>
<td>Dr. Masao Endo, MD, PhD</td>
<td>Prof. &amp; Chairman, Dept. of Pharmacology</td>
<td>Yamagata University School of Medicine</td>
<td>Yamagata-shi, Japan</td>
</tr>
<tr>
<td>Dr. Mark L. Entman, MD</td>
<td>Professor of Medicine &amp; Biochemistry</td>
<td>Chief, Section of Cardiovascular Sciences</td>
<td>Dept. of Medicine and Scientific Director, The DeBakey Heart Center</td>
</tr>
<tr>
<td>Dr. Edgardo Escobar, MD</td>
<td>Professor of Medicine</td>
<td>Santiago, Chile</td>
<td></td>
</tr>
<tr>
<td>Dr. Wafa Elieba, MD</td>
<td>Professor, Department of Cardiology</td>
<td>Al-Azhar University</td>
<td>Cairo, Egypt</td>
</tr>
<tr>
<td>Dr. Alexandre Fabioal, MD</td>
<td>Professor, Department of Physiology</td>
<td>Medical College of Virginia</td>
<td>Richmond, VA</td>
</tr>
<tr>
<td>Dr. Carlos M. Ferrario, MD</td>
<td>Prof. &amp; Dir., Hypertension &amp; Vasc. Disease Ctr, Wake Forest University Baptist</td>
<td>Winston-Salem, NC</td>
<td></td>
</tr>
<tr>
<td>Dr. Wagner C. Pádua Filho, MD</td>
<td>Professor and Coordinator (Cardiovascular Division)</td>
<td>Research and Postgraduate Center</td>
<td>Faculty of Medical Sciences of Minas Gerais</td>
</tr>
<tr>
<td>Dr. Alfredo Inacio Fioreli, MD, PhD</td>
<td>Heart Transplantation Dept. Coordinator</td>
<td>Heart Institute (INCOR/HC-FMUSP)</td>
<td>Sao Paulo – SP Brazil</td>
</tr>
<tr>
<td>Dr. Luis E. Fotte, MD, PhD</td>
<td>Full Prof. and Head Cardiology Dept. Uruguay University Medical School</td>
<td>Montevideo, Uruguay</td>
<td></td>
</tr>
<tr>
<td>Dr. Gary S. Francis, MD</td>
<td>Director, Coronary &amp; Intensive Care Unit</td>
<td>Department of Cardiology</td>
<td>The Cleveland Clinic Foundation</td>
</tr>
<tr>
<td>Dr. Jean-Charles Fruchart, MD</td>
<td>Unite de Recherche sur les Lipoproteines et l’Atherosclerose, Institut Pasteur de Lille Calmette Lille, CedeX, France</td>
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<tr>
<td>Professor Nirmal K. Ganguly, MD</td>
<td>Director General, Indian Council of Medical Res.</td>
<td>New Delhi India</td>
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<tr>
<td>Dr. Pallab K. Ganguly, MD, PhD</td>
<td>Professor and Chairman</td>
<td>Department of Anatomy</td>
<td>American University of Antigua, Antigua (Caribbean)</td>
</tr>
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<td>Dr. Detlev Ganten, MD, PhD</td>
<td>Professor, Der Vorstandsvorsitzenende</td>
<td>Campus Charite Mitte</td>
<td>Berlin, Germany</td>
</tr>
<tr>
<td>Dr. Keith D. Gaird, PhD</td>
<td>Professor, Dept. of Biochem. &amp; Mol. Biol.</td>
<td>Oregon Graduate Institute of Science &amp; Tech.</td>
<td>Beaverton, OR</td>
</tr>
<tr>
<td>Dr. Junpo Ge, MD</td>
<td>Professor of Medicine/Cardiology</td>
<td>Department of Cardiology</td>
<td>Zhongshan Hospital</td>
</tr>
<tr>
<td>Dr. Riccardo J. Geis, MD</td>
<td>Departamento de Patologia</td>
<td>Laboratorio de Fisiopatologia Cardiovascular</td>
<td>Facultad de Medicina</td>
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<tr>
<td>Dr. Sidney Goldstein, MD</td>
<td>Division of Cardiovascular Medicine</td>
<td>Henry Ford Hospital</td>
<td>Detroit, MI,</td>
</tr>
<tr>
<td>Dr. Otino Moreira Gomes, MD, PhD</td>
<td>Full Professor University of Minas Gerais Medical School /</td>
<td>Scientific Director Cardiology and Cardiovascular Surgery</td>
<td>FCSFA - ServCor</td>
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<tr>
<td>Dr. Ramesh K. Goyal, PhD</td>
<td>Professor, Dept. of Pharmacology</td>
<td>L.M. College of Pharmacy</td>
<td>Ahmadabad, India</td>
</tr>
<tr>
<td>Dr. Garrett J. Gross, PhD</td>
<td>Professor, Dept. of Pharmacology &amp; Toxicology</td>
<td>Medical College of Wisconsin</td>
<td>Milwaukee, WI</td>
</tr>
<tr>
<td>Dr. Sigmundur Gudbjamason, PhD</td>
<td>Professor, Science Institute</td>
<td>University of Iceland</td>
<td>Reykjavik, Iceland</td>
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<td>Dr. Suresh K. Gupta, PhD</td>
<td>Dean, Institute of Clinical Research India</td>
<td>New Delhi, India</td>
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<tr>
<td>Dr. Pavel Harnet, MD</td>
<td>Director of Research</td>
<td>Centre Hospitalier de l’Universite de Montreal</td>
<td>Montreal, PQ</td>
</tr>
<tr>
<td>Dr. Qi-de Han, MD</td>
<td>Prof. &amp; Academician, Chinese Academy of Sci. and Executive Vice President</td>
<td>Institute of Vascular Medicine</td>
<td>Peking University, Third Hospital</td>
</tr>
<tr>
<td>Dr. Gerd Hasenhüss, MD</td>
<td>Professor &amp; Director</td>
<td>Abteilung Kardiologie und Pneumologie</td>
<td>Herz Zentrum Gottingen</td>
</tr>
<tr>
<td>Dr. Hideharu Hayashi, MD, PhD</td>
<td>Professor, The Third Dept. of Internal Medicine</td>
<td>Hamamatsu University School of Medicine</td>
<td>Hamamatsu-shi, Shizuoka, Japan</td>
</tr>
<tr>
<td>Dr. Michael L. Hess, MD</td>
<td>Prof. of Medicine and Chairman of Cardiopulmonary Laboratories &amp; Research</td>
<td>Medical College of Virginia Campus</td>
<td>Richmond, VA</td>
</tr>
<tr>
<td>Dr. Thomas Henry Hintze, PhD</td>
<td>Professor and Chairman</td>
<td>Department of Physiology</td>
<td>New York Medical College</td>
</tr>
<tr>
<td>Dr. Masayasu Hirata, MD, PhD</td>
<td>Prof. &amp; Chairman, Medical Research Institute</td>
<td>Department of Cardiovascular Diseases</td>
<td>Tokyo Medical and Dental University</td>
</tr>
<tr>
<td>Dr. Norman K. Hollenberg, MD, PhD</td>
<td>Professor, Department of Medicine &amp;</td>
<td>Director of Physiologic Research</td>
<td>Brigham and Women's Hospital</td>
</tr>
<tr>
<td>Dr. Bruce J. Holub, PhD</td>
<td>Professor, Department of Human Biology &amp; Nutritional Sciences</td>
<td>University of Guelph</td>
<td>Guelph, ON</td>
</tr>
<tr>
<td>Dr. Ruti Hui, MD</td>
<td>Professor,</td>
<td>Fujita Hospital</td>
<td>Beijing China</td>
</tr>
<tr>
<td>Dr. M. Mohsen Ibrahim, MD</td>
<td>Professor Emeritus</td>
<td>Cardiovascular Medicine</td>
<td>Cairo University Hospitals</td>
</tr>
<tr>
<td>Dr. Issie Imanaga, MD, PhD</td>
<td>Professor and Chairman, Department of Physiology</td>
<td>Fukuoka University School of Medicine</td>
<td>Fukuoka, Japan</td>
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<td>Prof. Dr. Ruthard Jacob, MD</td>
<td>Tubingen, Germany</td>
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<td>Dr. Joseph S. Janicki, PhD</td>
<td>Professor of Physiology &amp; Pharmacology</td>
<td>&amp; Assoc. Dean, Research &amp; Graduate Studies</td>
<td>Auburn University, College of Veterinary Med.</td>
</tr>
<tr>
<td>Dr. Michel J. Jamse, MD</td>
<td>Professor, Cardiovascular Research Institute</td>
<td>Amsterdam Academic Medical Center</td>
<td>Amsterdam, The Netherlands</td>
</tr>
<tr>
<td>Dr. Robert B. Jennings, MD</td>
<td>James B. Duke Professor of Pathology</td>
<td>Department of Pathology</td>
<td>Duke University Medical Ctr. &amp; Health System, Durham, NC</td>
</tr>
<tr>
<td>Prof. Dr. Jasbir S. Juggi, MD, PhD</td>
<td>Professor, Department of Physiology</td>
<td>Faculty of Medicine</td>
<td>Kuwait University</td>
</tr>
<tr>
<td>Prof. Dr. Han-Young Just, MD</td>
<td>Vorsitzender der Ethik-Kommission und Sprecher des Zentrums für Ethik und Recht in der Medizin (ZERM)</td>
<td>Universitätsklinikum Freiburg</td>
<td>Freiburg, Germany</td>
</tr>
<tr>
<td>Dr. Philip J. Kadivist, PhD</td>
<td>Professor, Dept. of Pharmacology</td>
<td>Tulane University Health Sciences Center</td>
<td>New Orleans, LA</td>
</tr>
<tr>
<td>Dr. Sérgio E. Kaiser, MD, PhD</td>
<td>President Brazilian Soc. of Hypertension</td>
<td>Rio de Janeiro - RJ, Brazil</td>
<td></td>
</tr>
</tbody>
</table>
IAJCS – FELLOWS

Dr. Hideo Kanaide, MD, PhD
Prof. & Chairman of Molecular Cardiology
Research Institute of Angiocardiology
Graduate School of Medical Sciences
Kyushu University,
Fukuoka, Japan

Dr. Sjark Karim, MD
National Cardiovascular Centre
Harapan Kita Hospital - Slip - Jakarta Barat, Indonesia

Dr. C.C. Kartha, MD
Head, Div. of Cell & Mol. Cardiology
Sree Chitra Tirunal Institute
for Medical Sciences & Technology
Trivandrum, Kerala, India

Dr. Arnold Katz, MD
Norwich, VT

Dr. Hideaki Kawaguchi, MD
Dept. of Pathophysiology and Laboratory Medicine
Hokkaido University Graduate School of Medicine
Sapporo, Hokkaido, Japan

Dr. Wilbert J. Keon, OC, MD, FRCS
Senator
Ottawa, ON

Dr. Gavin Kessler-Isakson, PhD
Head, Cellular & Molecular Cardiology
Felsenstein Medical Research Center
Tel Aviv University
Tel Aviv, Israel

Dr. Keld Kjeldsen, MD
Professor & Head of Cardiology
The Heart Centre - Righospitalet
Copenhagen, Denmark

Dr. Robert A. Klener, MD
Director of Research & Professor of Cardiology,
The Heart Institute
Good Samaritan Hospital
Los Angeles, CA

Dr. Frank靠 Kober, MD
1st Clinic of Internal Medicine
2nd Medical Faculty, Charles University
Prague, Czech Republic

Dr. Borivoj Korecky, MD, PhD
Dept. of Cellular and Molecular Medicine
University of Ottawa, Faculty of Medicine
Ottawa, Ontario

Dr. Evangie G. Kranias, PhD
Professor and Director, Cardiovascular Biology
Department of Pharmacology & Cell Biophysics
University of Cincinnati College of Medicine
Cincinnati, OH

Dr. Ernst-Gerhard Krause, PhD
Professor in Biochemistry
Max-Delbrueck-Center for Molecular Medicine
Berlin, Germany

Dr. Rakesh C. Kukreja, PhD
Professor of Medicine, Physiology, Biochemistry and Emergency Medicine
Virginia Commonwealth University Med. Ctr.
Richmond, VA

Dr. Satoshi Kurhara, MD, PhD
Department of Physiology
Jikei University School of Medicine
Tokyo, Japan

Dr. Antonio L’Abbate, MD
CNR Institute of Clinical Physiology
Istituto di Fisiologia Clinica Del Cnr
Pisa, Italy

Dr. Edward G. Lakatta, MD
Dir., Laboratory of Cardiovascular Science
Department of Health & Human Services
NIH/NIA, Gerontology Research Center
Baltimore, MD

Prof. Dr. Jos M.J. Lamers, PhD
Department of Biochemistry
Cardiovascular Research Institute COEUR
Erasmus University Rotterdam
Rotterdam, 3000 N Netherlands

Dr. Glenn A. Langer, MD
Prof Emeritus of Medicine & Physiol.
UCLA School of Medicine
Little River, CA

Dr. Frans H.H. Leenen, MD
Professor, Dept. of Medicine & Pharmacology
Director, Hypertension Unit
University of Ottawa Heart Institute
Ottawa, Ontario

Dr. Robert J. Lefkowitz, MD
James B. Duke Professor of Medicine
Howard Hughes Medical Institute, Res. Lab.,
Duke University Medical Center
Durham, NC

Dr. Claude Lentert, MD
Gainesburg, MD

Dr. Bernhard Levy, MD
Inserm, Unite 541
Biologie et Physiologie Moleculaire de la
Parsio Vascular, Hopital Lariboisiere
French Institute of Health & Medical Research
Paris, France

Dr. Bohdan Lewartowski
Prof. in Physiology, Dept. of Clinical Physiology
Medical Ctr. of Postgrad. Ed.,
Warsaw, Poland

Dr. Martin M. LeWinter, MD
Prof., Dept. of Medicine, Cardiology Unit
University of Vermont
Burlington, VT

Dr. Depei Liu, PhD
Professor, Chinese Academy of Engineering, Institute of Basic Medicine Science
Beijing China

Dr. Guoping Liu, PhD
Professor, Institute of Cardiovascular Science
Beijing, P.R. China

Dr. Peter P. Liu, MD
Dir. & Heart & Stroke Poli Chair Professor
Assoc. Dir., Division of Cardiology
University of Toronto,
Toronto, Ontario

Dr. Amanda Lochner, PhD
U S Professor, MRC Chief Specialist Sci.,
Dept. of Medical Physiology & Biochemistry Faculty of Health Sciences
University of Stellenbosch,
Tygerberg, South Africa

Dr. Gary G. Lopaschuk, PhD
Professor, Department of Pediatrics
Cardiovascular Disease Research Group
University of Alberta
Edmonton, Alberta

Dr. Benedict R. Lucchesi, MD, PhD
Professor, Department of Pharmacology
University of Michigan Medical School
Ann Arbor, MI

Dr. Thomas F. Lüscher, MD, FRCP
Professor and Head of Cardiology
University Hospital - Zurich, Cardiology Cardiovascular Center
Zurich, Switzerland

Dr. Bernard Maisch, MD
Chairman of Internal Medicine-Cardiology
Heart Center Marburg, Philippus Univ. of Marburg
Marburg, Germany

Dr. Nadji Makino, MD, PhD
Professor and Head
Division of Molecular and Clinical Gerontology
Department of Molecular and Cellular Biology
Kyushu University, Med. Inst. Bioregulation
Beppu, Japan

Dr. Ricky Y.K. Man, PhD
Professor & Head, Dept. of Pharmacology
and Associate Dean, Faculty of Medicine
University of Hong Kong
Hong Kong

Dr. Douglas L. Mann, MD
Professor of Medicine & Director
Winters Center for Heart Failure Research
Veterans Affairs Medical Center
Houston, TX

Dr. Mordechai Manor, PhD
Department of Physiology
Tel Aviv University Medical School
Tel Aviv, Israel

Dr. Mario F. de Camargo Maranhão, MD,
Professor,
Batel Curitiba - PR, Brazil

Dr. Attilio Maseri, MD
Professor of Cardiology
Director, Cardio-Thoracic & Vascular Dept.
University Vita-Salute San Raffaele
Milan, Italy

Dr. Bruce McManus, MD, PhD
Prof. & Co-Director, The CAFTURE Centre
UBC McDonald Research Laboratories,
Vancouver, BC

Dr. Dennis B. McNamara, PhD
Professor Emeritus, Dept. of Pharmacology Tulane University
Health Sciences Center
New Orleans, LA

Dr. John H. McNeill, PhD, FRSC
Professor and Dean Emeritus
Division of Pharmacology & Toxicology
Faculty of Pharmaceutical Sciences
The Univ. of British Columbia,
Vancouver, BC

Dr. Jawaher L. Mehta, MD
Professor of Internal Medicine & Physiology
Stebbins Chair in Cardiology and
Director, Division of Cardiovascular Medicine
University of Arkansas for Medical Sciences
Little Rock, AR

Prof. Dr. Nazir Ahmed Memon, MD
Professor & Chairman, Faculty of Cardiology
Iqraat University of Medical & Health Sciences
Hyderabad, Pakistan

Dr. Jean-Jacques Mercadier, MD
Department of Physiology and INSERM U460
Group Hospitaler, Bichat - Claude Bernard
Paris, France

Dr. Seiichi Mochizuki, MD, PhD
Professor & Chairman, Division of Cardiology
Jikei University School of Medicine
Tokyo, Japan

Dr. Terence Montague, MD
Montreal, PQ,

Dr. Josef Moravec, MD
Professor, Energetique et Cardiologie Cellulaire EMI 0226,
Faculté de Medecine
8 Ave. Rockefeller 69373
Lyon, France
<table>
<thead>
<tr>
<th>Name</th>
<th>Title and Affiliation</th>
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<tbody>
<tr>
<td>Dr. Howard Morgan, MD</td>
<td>Winfield, PA, Director, Cardiovascular Devices Division</td>
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<tr>
<td>Dr. Tofy Musavvid, PhD</td>
<td>Professor of Medicine and Physiology</td>
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<tr>
<td>University of Ottawa Heart Institute, Ottawa, Ontario</td>
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<tr>
<td>Dr. Reginaid Nadeau, MD</td>
<td>Professor of Medicine and Physiology</td>
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<tr>
<td>Hospital du Sacre-Coeur de Montreal, Montreal, PQ</td>
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<tr>
<td>Dr. Ryozo Nagai, MD, PhD</td>
<td>Professor &amp; Chairman, Department of Cardiovascular Medicine</td>
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<tr>
<td>University of Tokyo, Tokyo, Japan</td>
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<tr>
<td>Dr. Makoto Nagano, MD</td>
<td>Professor Emeritus, Jikei University School of Medicine</td>
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<td>Tokyo, Japan</td>
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<tr>
<td>Dr. K. Gopal Nair, MD, PhD</td>
<td>Medical Director, Holy Family Hospital Hospital of Minas Gerais, Belo Horizonte, MG, Brazil</td>
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<tr>
<td>Dr. Akimori Noma, MD, PhD</td>
<td>Professor &amp; Chairman, Dept. of Physiology Graduate School of Medicine and Faculty of Medicine, Kyoto University, Kyoto, Japan</td>
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<tr>
<td>Dr. Eric N. Olson, PhD</td>
<td>Professor &amp; Chairman, Nancy B. and Julie L. Hamon Center for Basic Research in Cancer, Dept. of Mol. Biol. University of Texas S.W. Medical Ctr. at Dallas, TX</td>
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<tr>
<td>Dr. Robert E. Olson, MD, PhD</td>
<td>Professor, Department of Pediatrics University of South Florida, Palm Harbor, FL</td>
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<tr>
<td>Dr. Shunzo Onishi, MD, PhD</td>
<td>Professor Emeritus, Osaka University Amagasaki, Japan</td>
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<tr>
<td>Dr. Juarez Ortiz, MD</td>
<td>President, CMNI CONI Medicina Diagnostica and Consultorio Sao Paulo - SP, Brazil</td>
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<tr>
<td>Prof. Dr. Bohuslav Ostadal, MD</td>
<td>Institute of Physiology Czech Academy of Sciences Department of Developmental Cardiology, Prague, Czech Republic</td>
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<tr>
<td>Dr. Takayuki Ozawa, MD, PhD</td>
<td>Professor Emeritus, Nagoya University Shima-shi, Japan</td>
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<tr>
<td>Prof. Rodolfo Pacietti, MD</td>
<td>Director, Dept. of Pharmacological Sciences University of Milan Milan, Italy</td>
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<td>Prof. Julius G. Papp, MD, PhD</td>
<td>Honorary President Hungarian Society of Cardiology Albert Szent-Gyorgyi Medical University Szeged, Hungary</td>
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<tr>
<td>Dr. Keyur Parkh, MD</td>
<td>45 World Business House Nr Parimal Garden, Ellis Ahmedabad 580 006, India</td>
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<tr>
<td>Dr. William Parmley, MD</td>
<td>241 N. Vine Street, 110E Salt Lake City, UT 84103, USA</td>
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<tr>
<td>Dr. James R. Parratt, PhD</td>
<td>Prof. Emeritus, Dept. of Physiol. &amp; Pharmacol. Strathclyde Institute for Biomedical Sciences 27 Taylor Street Glasgow, G4 ONR, Scotland, U.K.</td>
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<tr>
<td>Dr. Grant N. Pierce, PhD</td>
<td>Executive Director, St. Boniface Hospital Research Centre, Winnipeg, MB</td>
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<tr>
<td>Dr. Arie Pinson, MD</td>
<td>Professor, Laboratory for Myocardial Research Institute of Biochemistry The Hebrew University, Hadassah Med. School Jerusalem, Israel</td>
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<tr>
<td>Dr. Bertram Pitt, MD</td>
<td>Professor, Department of Internal Medicine Division of Cardiology University of Michigan Health System Ann Arbor, MI</td>
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<tr>
<td>Dr. Philip A. Poole-Wilson, MD</td>
<td>Professor of Cardiology, British Heart Foundation, Simon Marks Chair of Cardiology and Head, Dept. of Cardiac Medicine National Heart &amp; Lung Institute, London, England, U.K.</td>
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<tr>
<td>Dr. Laurentiu M. Popescu, MD</td>
<td>Professor of Cellular &amp; Molecular Medicine Editor, JCMJ “Carol Davila” Univ. of Medicine &amp; Pharmacy Bucharest, Romania</td>
</tr>
<tr>
<td>Dr. Kailash Prasad, MD, PhD</td>
<td>Professor Emeritus and Adjunct Prof. of Med. Department of Physiology, College of Medicine University of Saskatchewan Saskatoon, SK</td>
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<tr>
<td>Dr. Vijay K. Puri, MD</td>
<td>Professor &amp; Head, Dept. of Cardiology CSM Medical University Lucknow, India</td>
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<tr>
<td>Dr. Babeth Rabinowitz, MD</td>
<td>Professor, Moshav Sheva, Israel</td>
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<tr>
<td>Dr. Sir George K. Radda, CBE, FRS</td>
<td>University Laboratory of Physiology Cardiac Science Centre University of Oxford Oxford, England, UK</td>
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<tr>
<td>Dr. Shahbudin H. Rahimtola, MD</td>
<td>USC George C. Griffith Professor Keck School of Medicine University of Southern California Los Angeles, CA,</td>
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<tr>
<td>Dr. B. Soma Raju, MD</td>
<td>Chief of Cardiology, Care Hospital Exhibition Road, Nampally Andhra Pradithesh, Hyderabad, India</td>
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<tr>
<td>Dr. Karek J. Rakusan, MD, PhD</td>
<td>Emeritus Professor, Cellular &amp; Molecular Medicine University of Ottawa Ottawa, Ontario</td>
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<tr>
<td>Dr. José Antonio F. Ramires, MD</td>
<td>Head, Professor of Cardiology Clinical Division, Director Heart Institute (InCor), HCFMUSP Sao Paulo - SP, Brazil</td>
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<tr>
<td>Dr. Robert Roberts, MD</td>
<td>President and CEO University of Ottawa Heart Institute Ottawa, ON</td>
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<tr>
<td>Dr. Janet D. Robishaw, PhD</td>
<td>Senior Scientist, Weis Center for Research Geisinger Health System Danville, PA</td>
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<tr>
<td>Dr. Peter Rösen, MD</td>
<td>Professor, Deutsches Diabetes-Zentrum Dusseldorf, Germany</td>
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<tr>
<td>Dr. Leonid V. Rosenshtaukh, PhD</td>
<td>Laboratory of Heart Electrophysiology Institute of Experimental Cardiology Cardiology Research Center Moscow, Russia</td>
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<tr>
<td>Dr. Elizabeth Roth, MD</td>
<td>Professor &amp; Head, Dept. of Surgical Research &amp; Techniques University of Pécs Medical School Pécs, Hungary</td>
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<tr>
<td>Dr. Heinz Rupp, PhD</td>
<td>Professor, Medizinische Forschung Philippus University of Marburg Marburg, Germany</td>
</tr>
<tr>
<td>Dr. Hari N. Saba, PhD</td>
<td>Prof. of Medicine, Case Western Reserve Univ., &amp; Director of Cardiovascular Research Henry Ford Heart &amp; Vascular Institute Detroit, MI</td>
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<tr>
<td>Dr. Valdor A. Saka, PhD</td>
<td>Professor Bioenergetique Fonduante et Applique Universite Joseph Fourier, Grenoble, France</td>
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<tr>
<td>Dr. Tomas A. Salemo, MD</td>
<td>Professor of Surgery, and Chief, Division of Cardiothoracic Surgery Jackson Memorial Hospital Miami, FL</td>
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<tr>
<td>Dr. Ismail Sallam, MD, PhD</td>
<td>Professor, Department of Cardio Surgery Ein Shams University Cairo, Egypt</td>
</tr>
<tr>
<td>Dr. Nizal Sarraf-Zadeegan, MD</td>
<td>Director, Isfahan Cardiovascular Research Ctr. Isfahan University of Medical Sciences Isfahan, Iran</td>
</tr>
<tr>
<td>Dr. Shigehiak Saayama, MD</td>
<td>Director, Hamamatsu Rosai Hospital Kyoto University Hamamatsu City, Japan</td>
</tr>
<tr>
<td>Dr. Stephen W. Schaffer, PhD</td>
<td>Professor, Department of Pharmacology University of South Alabama, Mobile, AL</td>
</tr>
<tr>
<td>Dr. Jutta Schaper, MD</td>
<td>Professor, Abteilung fur Experimentelle Kardiologie, Max-Planck-Institute fur Physiologische und Klinische Forschung Bad Nauheim, Germany</td>
</tr>
</tbody>
</table>
IACS – FELLOWS

Dr. Wolfgang Schaper, MD
Director, Abteilung für Experimentelle Kardiologie, Max-Planck-Institut für Physiologische und Klinische Forschung, Bad Nauheim, Germany

Ernesto L. Schiffrin MD, PhD, FRCP
Physician-in-Chief and Chair, Department of Medicine, SMBD Jewish General Hospital, Montreal, Quebec,

Dr. Wolfgang Schulze, PhD
Max-Debreuck-Center
Berlin, Germany

Dr. Arnold Schwartz, PhD
Professor and Director, Institute of Molecular Pharmacol. & Biophysics, University of Cincinnati, College of Medicine
Cincinnati, OH

Dr. Kent Schwartz, MD
Professor, INSERM U 153
Institut de Myologie, Batiment J. Babinski
Groupe Hospitalier Pitié-Salpétrière
Paris, France

Dr. Peter J. Schwartz, PhD
Professor and Chairman, Dept. of Cardiology
University of Pavia and Politecnico S. Matteo Pavia, Italy

Dr. Enn Sappelt, PhD
Professor, Chairman
Department of Pathophysiology
University of Tartu, Faculty of Medicine
Tartu, Estonia

Dr. Ajay M. Shah, PhD
BHF Professor of Cardiology & Head of Cardiovascular Division
King’s College London
London, England

Dr. Bal K. Sharma, MD
Emeritus Professor Internal Medicine
Haryana, India

Dr. Shahryar A. Sheikh, MD
President, Asian Pacific Society of Cardiology
Lahore, Pakistan

Dr. Nobuiko Shibata, MD, PhD
Department of Medicine
The Center for Cancer & Cardiovasc. Diseases
Osaka, Japan

Dr. Mohammed A.Q. Siddiqui, PhD
Professor & Chairman
Department of Anatomy and Cell Biology
State University of New York
SUNY Health Sciences Center at Brooklyn
Brooklyn, NY

Prof. Dr. Manfred Siess, MD
Institute of Pharmacology
University of Tübingen
Tübingen, Germany

Dr. Pawan K. Singal, PhD, DSc
Professor, Institute of Cardiovascular Sciences
St. Boniface General Hospital Research Centre
Winnipeg, MB

Dr. Bramah N. Singh, MD
Department of Cardiology,
Wadsworth V.A. Hospital
Los Angeles, CA,

Dr. Manjeet Singh PhD, FIASc, FIPS
Professor of Cardiovascular Pharmacology
I.S.F. Institute of Pharmaceutical Sciences & Drug Research, Moga, Punjab, India.

Prof. Dr. Jan Slezak, MD
First Vice President
Slovak Academy of Sciences
Bratislava, Slovak Republic

Prof. Vladimir N. Smirnov, PhD
Director, Institute of Experimental Cardiology
Cardiology Research Center
Moscow, Russia

Dr. Eldon R. Smith, MD
Professor, Department of Medicine
University of Calgary, Faculty of Medicine
Calgary, AB

Dr. Hugh C. Smith, MD
Professor of Medicine
Mayo Clinic College of Medicine
Rochester, MN

Dr. Burton Sobel, MD
E.L. Amidon Professor & Chair
Department of Medicine
University of Vermont
Colchester, VT

Dr. R. John Solaro, PhD
Dist. University Professor & Head
Dept. of Physiol. & Biophysics
University of Illinois at Chicago
Chicago, IL

Dr. Michael J. Soll, MD
Professor of Medicine and Physiology
Department of Medicine, Div. of Cardiology
Toronto General Hospital, Univ. Health Network
Toronto, Ontario

Dr. Avi1. V. Somlyo, PhD
Professor of Molecular Physiol. & Biol. Physics, and Professor of Pathology
University of Virginia
Charlottesville, VA

Dr. Edmund H. Sonnenblick, MD
Professor & Head, Division of Cardiology
Jack D. Weiler Hospital
Albert Einstein College of Medicine
Bronx, NY

Dr. Nicholas Sperelakis, PhD
Joseph Eibberg Professor
Department of Molecular & Cellular Physiology
University of Cincinnati Medical Center
Cincinnati, OH

Dr. Hiyoshi Sugita, MD, PhD
Director General,
National Cardiovascular Center
Research Institute
Osaka, Japan

Prof. Tsuneki Sugimoto, MD, PhD
Professor Emeritus, University Tokyo
Tokyo, Japan

Dr. Rajender K. Suri, MD
Consultant Cardiovacular & Thoracic Surgeon
Chandigarh, India

Dr. Bernard Swynghedauw, MD
Research Director
INSERM
Paris, France

Dr. László Szekeres, MD
Professor Emeritus of Pharmacology
Institute of Pharmacology
Albert-Szent-György Medical University
Szeged, Hungary

Dr. Heinrich Taegmeyer, MD
Professor of Medicine
Dept. of Internal Medicine, Div. of Cardiology
University of Texas Houston Medical School
Houston, TX

Dr. A. Jami Tajik, MD
Professor, Division of Cardiology
Mayo Clinic Scottsdale
Scottsdale, AZ

Dr. Nobuakira Takeda, MD, PhD
Professor and Director
Department of General Medicine
Ato Hospital
Jikei University School of Medicine
Tokyo, Japan

Dr. K.K. Talwar, MD
Professor and Director
Postgraduate Institute of Medical Education & Research
Chandigarh, India

Dr. Chaoshu Tang, MD
Professor, Department of Physiology
Peking University Health Science Center
Beijing, China

Dr. Sadagopan Thanikachalam, MD
Professor, Cardiac Care Centre
Sri Ramachandra Medical College & Research Centre, No. 1
Chennai, India

Dr. Naresh K. Tehlan, MD
Department of Microbiology
Escorts Heart Institute and Research Centre
New Delhi, India

Dr. Paulo J.F. Tucci, MD, PhD
Professor Physiology Dept.
UNIFESP Medical School
Sao Paulo - SP, Brazil

Dr. Bélma Turan, PhD
Department of Biophysics
University of Ankara
Ankara, Turkey

Dr. M. Sankaran Variaithan, MD
Honorary Advisor and Vice-Chancellor
Manipal Academy of Higher Education
Manipal, India

Prof. Paul M. Vachoule, MD, PhD
Distinguished Visiting Professor
Department of Pharmacology
The University of Hong Kong
Hong Kong

Dr. Guy Vassort, MD
Professor, Physiopathologie Cardiovasculaire
INSERM
Montpellier, France

Dr. Stephen F. Vatner, MD
President, I A C S
Director, Cardiovascular Research Institute, UMDNJ, New Jersey Medical School
Newark, NJ

Prof. Dr. Ágnes Vigh, PhD
Dept. of Pharmacology & Pharmacotherapy
University of Szeged
Szeged, Hungary

Prof. Dr. Panangipalli Venugopal, MD
Director, All India Institute of Medical Sciences
New Delhi, India

Dr. Daniel Villaereal, MD
Professor, Department of Medicine and Chief, Division of Cardiology
SUNY Upstate Medical University
Syracuse, NY

Dr. Richard A. Walsh, MD
Professor & Chairman of Medicine
University Hospitals of Cleveland
Cleveland, OH

Dr. Xian Wang, PhD
Professor, Department of Physiology
Peking University Health Science Center
Beijing, China
### IACS - Fellows

| Dr. Karl T. Weber, MD |
| Neuton Stern Prof. of Cardiovascular Medicine, Director, Division of Cardiovascular Diseases |
| University of Tennessee College of Medicine |
| Memphis, TN |

| Dr. William B. Weglicki, MD |
| Professor, Dept. of Physiol. & Exp. Medicine |
| George Washington University Medical Center |
| Washington, DC |

| Dr. Myron L. Weisfeldt, MD |
| William Osler Professor of Medicine |
| Chairman, Department of Medicine |
| Johns Hopkins University |
| Baltimore, MD |

| Prof. Dr. Karl Werdan, MD |
| Director, Klinikum Krolewitz |
| Martin-Luther-Universität Halle-Wittenberg |
| Halle (Saale), Germany |

| Dr. C. Kern Wildenthal, MD |
| President |
| University Texas Southwestern Medical Center |
| Dallas, TX |

| Dr. James T. Willerson, MD |
| President, Department of Internal Medicine |
| University of Texas, Health Sci. Ctr. at Houston |
| Houston, TX |

| Dr. Ruiiping Xiao, PhD |
| Professor, National Institutes of Health |
| National Institute on Aging |
| Gerontology Research Center |
| Baltimore, MD |

| Sir Magdi Yacoub, FRSS |
| President-Elect I A C S |
| Professor, Imperial College London |
| The Magdi Yacoub Institute |
| Harefield, Middlesex, UK |

| Dr. Noboru Yamazaki, MD, PhD |
| Professor Emeritus |
| Hamamatsu University School of Medicine |
| Hamamatsu-shi, Japan |

| Dr. Yoshio Yazaki, MD, PhD |
| President, International Medical Center of Japan |
| Tokyo, Japan |

| Dr. Salim Yusuf, DPhil, FRCP |
| Professor of Medicine |
| Director, Population Health Research Institute |
| McMaster University, Hamilton Health Sciences |
| Hamilton, ON |

| Dr. Yuyi Zhang, MD, PhD |
| Professor, Institute of Vascular Medicine |
| Peking University, Third Hospital |
| Beijing, China |

| Dr. Ding-Liang Zhu, MD |
| Professor, Shanghai Institute of Hypertension |
| Shanghai, China |

| Dr. Attila Zieglerhoff, PhD, DSc |
| Professor, Institute for Heart Research |
| Slovak Academy of Sciences |
| Bratislava, Slovak Republic |

| Dr. Heinz-Gerd Zimmer, MD |
| Professor of Physiology & Chair and |
| Director, Medizinische Fakultät |
| Carl-Ludwig-Institut fur Physiologie |
| Universität Leipzig, Leipzig, Germany |

### Awards

#### Awards Presented by Academy:

<table>
<thead>
<tr>
<th>Award</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
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<tbody>
<tr>
<td>Distinguished Service</td>
<td>Pavel Braveny, Otoni Gomes, Elizabeth Roth</td>
<td>V. K. Puri, S.K. Gupta, Fause Attie Cury, Daniel Villarreal</td>
<td>Ramesh K. Goyal, Belma Turan, David Brasil</td>
<td>Wagner Padua Filho, Dennis McNamara</td>
<td>Hideaki Kawaguchi</td>
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<tr>
<td>Nagano</td>
<td>C. C. Liew</td>
<td>Bal K. Sharma</td>
<td>Bruce McManus</td>
<td>Karl Weber</td>
<td>John Solaro</td>
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<tr>
<td>Alpert</td>
<td>Jan Slezak, Bohuslav Ostadal</td>
<td>N.K. Ganguly</td>
<td>K.K. Talwar</td>
<td>Seiyo Sugiuera</td>
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<tr>
<td>Morgan</td>
<td>Laszlo Szekeres, K. Gopal Nair</td>
<td>Shunzo Onishi, Roberto Bolli</td>
<td>Heinz Gerd Zimmer</td>
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<tr>
<td>Dhalal</td>
<td>Aiji Sakamoto, Luiz Souza</td>
<td>Sukhinder Cheema, Richard Schulz</td>
<td>Balwant S. Tuana</td>
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<tr>
<td>Distinguished Achievement</td>
<td>Jacques Genest, Ruth Collins-Nakai</td>
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<tr>
<td>Lifetime Achievement</td>
<td>Newman Stephens, Onkar Tripathi, Keld Kjeldsen, Bohuslav Ostadal</td>
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<tr>
<td>Japan Young Investigator Award</td>
<td>Toshihiro Takeda</td>
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<tr>
<td>N K Ganguly Young Investigator Award (India)</td>
<td>Leena Kuruvilla</td>
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<tr>
<td>Biehringer Ingelheim Young Investigator Award (to be presented in 2007)</td>
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Ten Years of IACS Meetings held around the World!

1996
1. Manitoba Cardiovascular Forum Angiotensin II Receptor Blockade: Physiological and Clinical Implications, Winnipeg, Canada (October 18-20) - Chairman: Robert Beamish and Naranjan Dhalla
2. Intropin Agents and Heart, Tokyo, Japan (November 18-19) - Chair: Nobukira Takeda

1997
1. 5th Annual Research Symposium, Cardiovascular System, Commonwealth of Dominica, West Indies (March 6-11) - Chair: S.S. Parmar
2. Conference on Prevention and Treatment of Cardiovascular Diseases, Smolence, Slovak Republic (September 17-20) - Chair: Jan Sleziak
3. First Asia-Pacific Congress on Hypertension, Surat, India (December) - Chair: S. Vajpayee
4. Cardiovascular Scientific Forum VII, Belo Horizonte, Brazil (December 10-14) - Chair: Otoni Gomes

1998
1. International Symposium on Heart Disease, Cairo, Egypt (May 18-24) - Chair: Mohsen Ibrahim
2. Yoshito Ito Memorial Symposium at the XVI World Congress of the International Society for Heart Research, Rhodes, Greece (May 27-31) - Chairmen: Makoto Nagano and Naranjan Dhalla
3. International Conference on Heart in Stress, Helsinki, Finland (June 28 - July 3) - Chairmen - D.K. Das and C.K. San
4. International Conference on Cardiac Hypertrophy, Tokyo, Japan (October 7-9) - Chairmen: M. Nagano and N. Takeda
5. Scientific Forum on Heart Failure, Belo Horizonte, Brazil (December 11-15) - Chair: Otoni M. Gomes

1999
1. International Conference on Antioxidant Therapy in Heart Disease, Bombay, India (January 7 - 8) - Chair: K.G. Nair
2. International Conference on Diabetes and Cardiovascular Disease, Winnipeg, Canada (June 4 -7) - Chairmen: A. Angel and Naranjan Dhalla
3. International Congress on Atherosclerosis, Hypertension and Coronary Artery Disease, New Delhi, India (October 14-16) - Chair: S. Rastogi
4. Asia-Pacific Congress, Lahore, Pakistan (October 17-22) - Chair: S.A. Sheikh
5. Scientific Forum on Heart Failure, Belo Horizonte, Brazil (December) - Chair: O. Gomes

2000
1. Developing Heart Conference, Prague, Czech Republic (May 18) - Chair: B. Ostadal
2. International Conference on Pathophysiology and Drug Therapy of Cardiovascular Disorders, Patala, India (January 22-26) - Chair: M. Singh
3. XVII World Congress of the International Society for Heart Research, Frontiers in Cardiovascular Health Winnipeg, Canada (July 6-11) - Chair: Naranjan Dhalla
4. 1st Annual Public Heart Forum, Winnipeg Canada (July 6) Coordinator: Ivan Berkowitz
5. 1st Annual Meeting of IACS, Japan/24th Annual Meeting of the Japanese Section of Cardiac Structure and Metabolism, Beppu, Japan (December 2-9) - Chair: N. Makino

2001
1. International Symposium and Workshop Advances in Cardiovascular Research, Trinidad, West Indies (March 4-8) - Chair: Junor Barnes
2. 2nd Annual Public Heart Forum, Winnipeg Canada (May 25) - Coordinator: Ivan Berkowitz
3. The Failing Heart Symposium organized by the Slovak Academy of Sciences, Stara Lesna, the High Tatras, Slovakia Republic (July 1-3) - Chair: Tania Ravangerova
4. 2nd Annual Meeting of IACS - Japan/25th Annual Meeting of the Japanese Section of Cardiac Structure and Metabolism, Sapporo, Japan (July 19-20) - Chair: Hideaki Kawaguchi
5. 1st IACS World Congress - South America/Scientific Forum XII, Belo Horizonte, Brazil (November 29 -30) - Chair: Otoni Gomes

2002
1. India Section – IACS sponsored the Annual Conference of ISHR, Chandigarh, India (February 7 -8) - Chair: Anil Grover
2. 3rd Annual Public Heart Forum, Winnipeg Canada (June 7) - Coordinator: Ivan Berkowitz
3. 3rd Annual Meeting of IACS - Japan/26th Annual Meeting of the Japanese Section of Cardiac Structure and Metabolism, Tokyo, Japan (July 19-20) - Chair: Tetsuhiko Toyok-oka
4. Mendel Symposium: Genes and the Heart, Brno, Czech Republic (August 26 - 29) - Chair: Pavel Braveny
5. 2nd Brazilian Symposium on Experimental Cardiology, Sao Paulo, Brazil (September 21) - Chair: Otoni Gomes
6. IV International Symposium on Myocardial Cytoprotection, From Basic Science to Clinical Perspectives Pecs, Hungary (September 25-27) - Chair: Elizabeth Roth
7. 1st IACS World Congress/II Annual Meeting ICAS – South America/Scientific Forum XIII – Belo Horizonte, Brazil (October 11 - 15) - Chair: Otoni Gomes

2003
1. International Symposium on Pharmacotherapy of Heart Failure, New Delhi, India (January 7-9) Chair: Suresh Gupta
2. Joint Conference with ISHR (Indian Section), Lucknow, India (January 9-11) - Chair: V.K. Puri
3. 83rd Meeting of the German Physiological Society, Leipzig, Germany (March 14-17) - Chair: Heinz-Gerd Zimmer
4. gracio Chavez Rivera Symposium on Cardiovascular Disease, Mexico City, Mexico (April 30) - Chairs: Daniel Villarreal and Angel Zarain-Herzberg
5. 1st Annual National Research Forum for Young Investigators in Circulatory and Respiratory Health Winnipeg, Canada (May 6-8) - Chair: N.S. Dhalla
6. 4th Annual Public Heart Forum, Winnipeg Canada (June 12) - Coordinator: Ivan Berkowitz
7. Sudden Unexpected Cardiac Death – new diagnostic modalities and treatment. Genetics in cardiovascular disease, Copenhagen, Denmark (June 14-18) - Chair: Thomas A Schmidt
8. 4th Annual Meeting of IACS - Japan/27th Annual Meeting of the Japanese Section of Cardiac Structure and Metabolism, Osaka-Senri, Japan (July 17-18) - Chair: Ryoji Matoba
9. Cardioforum - SBC-FUNCOR 2004 - International Seminar on Promotion of Cardiovascular Health, Rio de Janeiro, Brazil (September 26) - Chair: David Brasil
10. III Annual Meeting IACS – South America/XXXII Argentine Congress of Cardiology Symposium, Buenos Aires, Argentina (October 8) - Chairs: Ricardo Gepli and Celina Morales
11. CardioGlobal International Intensive Cardiology Education Program Alpha Villa, Brazil (October 13 – 17) – Chair: Raimundo Nascimento
12. Teaching Course Faith and Disease - Focus on the importance of faith in heart disease, Rome, Italy (December 1-9) – Chair: Thomas A Schmidt
13. Scientific Forum XIV – Belo Horizonte, Brazil (December 2-5) - Chair: Otoni Gomes
14. Joint International Conference of International Academy of Cardiovascular Sciences and International Society for Heart Research (Indian Section) Bench to Bedside in Gandhi's Gujarat Ahmedabad, India (December 31-January 2) - Chair: Ramesh Goyal,

2004
1. NATO Advanced Research Workshop Stress-Induced Biochanges in the Heart: From Genes to Bedside, Antalya, Turkey (February 2-7) - Chairs: Bela Turan and Jan Sleziak
2. 2nd Annual National Research Forum for Young Investigators in Circulatory and Respiratory Health Winnipeg, Canada (May 6-8) - Chair: N. S. Dhalla
3. Advances in Cardiology Research – Molecular and Genetic Bases of Cardiovascular Disease, Smolence, Slovak Republic (June 13 – 16) – Chair: Jan Sleziak
4. 5th Annual Meeting of IACS - Japan/28th Annual Meeting of the Japanese Section of Cardiac Structure and Metabolism, Hamamatsu, Japan (July 16-17) - Chair: Hideharu Hayashi
5. HEART FAILURE SYMPOSIUM - Recife, Brazil (September 9-10) - Chair: Domingos Melo
6. SIMPÓSIO INTERNACIONAL BRASIL-CANADÁ 2005 Porte Allegro 2nd Annual Cardio-Global (September 18-21) – Chair: David Brasil
7. IV Annual Meeting IACS – South America/XXXII Argentine Congress of Cardiology Symposium, Buenos Aires, Argentina (October 7) - Chair: Ricardo Gepli
8. Scientific Forum XIV – Rio de Janeiro, Brazil (December 8-10) - Chair: Otoni Gomes

2005
1. Joint International Conference of International Academy of Cardiovascular Sciences and International Society for Heart Research (Indian Section), Chennai, India (Jan. 12 - 14, 2006) Chair: Suresh Kumar
2. 3rd Annual National Research Forum for Young Investigators in Circulatory and Respiratory Health, Winnipeg, Canada (May 4-7) - Chair: N. S. Dhalla
3. From Vascular Biology to the Atherosclerosis Prevention: An Eastern European Perspective, Satellite Symposium of the XIV International Symposium on Atherosclerosis, Belgrade, Serbia (June 15-16) - Chair: Dragan Djuric
4. 2nd ICAS World Congress, Sapporo, Japan (July 14 - 16) - Chair: Hideaki Kawaguchi
Scientific Forum XVI

International Congress on Cardiovascular Sciences

- 26th ACCERJ CARDIOVASCULAR SURGERY CONGRESS
- INTERNATIONAL CONGRESS OF EXTRACORPOREAL CIRCULATION
- ECUMENIC FORUM VIII
- XXIV BRAZILIAN CONGRESS ON EXTRACORPOREAL CIRCULATION
- AM. SOC. ANGIOLOGY BRAZ. CHAPTER • 11 INTERNAT. MEETING

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December
7 - 10
2006
Rio de Janeiro - Brazil
Riu Othon Palace Hotel

February 8 - 10, New Orleans, USA
Southern Society for Clinical Investigation along with the SAFMR, SSPR, SSGIM, and APA. For the coming year (2007), the North American Chapter of the International Academy for Cardiovascular Sciences will be joining the meeting.

For details, please contact IACS North America
President: Karl Weber, Memphis, TN
Tel: (901) 448-5759 / 5750
Fax: (901) 448-8084
E-mail: ktweber@utmem.edu
Web site: http://ssciweb.org/meetings.php

Announcement

Joint Annual Conference of
International Society for Heart Research &
International Academy of Cardiovascular Sciences
Bikaner (Rajasthan), India, Feb 16-18th 2007

Applications are Invited for Young Investigator Awards
NIRMAL K. GANGULY AWARD FOR CLINICAL RESEARCH
NARANJAN DHALLA AWARD FOR BASIC SCIENCES

for outstanding Research in Cardiovascular Sciences to be presented at Annual Conference, Bikaner 2007

For Further Information
Professor S.K. Gupta, Secy. IACS
E-mail: skgupt@hotmail.com, sk.skkgupt@gmail.com

International Academy of Cardiovascular Sciences North America
Young Clinician Scientist Award
Friday, February 9, 2007
Hotel InterContinental
New Orleans, LA

Eligibility
- Persons holding an MD degree or an MD/PhD and who are within eight (8) years of having graduated medical school.
- A letter from the candidate’s mentor verifying the candidate’s standing and his satisfaction with the candidate.
- An abstract of the study consisting of objectives, methods and results, and currently under the AHA-SRHA Research Committee Review.

Submission Deadline: Monday, October 16, 2006

For more information, visit http://www.cardio.org/members/awardinfo/ or call 1-800-253-7062.

Dr. Raja Babu Pamwar
Organising Chairman
Prof & Head, Department of Cardiology, S.P. Medical College, Bikaner
Ph: 0091-151-2020886
Email: panwarraja@rediffmail.com

Dr. R.P. Agrawal
Organising Secretary
Associate Professor
2, Adarsh Colony, Bikaner-334003
Ph: 0091-151-2020431, Fax: 0091 151 2302131
Email: rpagrawal@sanchamet.in, agrawalrp@datainfoys.net
Dhalla’s Incredible Work Carries On!

Do not believe the rumours that Naranjan Dhalla’s 70th Birthday is even a hint that he is ready to retire! He is working as hard as ever on his own research, writing, editing and traveling... what a lecturing schedule which includes in the near future: Hungary, India, Japan, Brazil and now Cuba. Dr. Dhalla has made it clear that he wants and needs no Birthday gifts. However, he is most anxious to encourage the continuity of the international education he has tirelessly facilitated in 65 countries. He envisions that the vehicle for such work is the International Academy of Cardiovascular Sciences.

Buoyed by the excellent on-going response to my suggestion that his friends honour Dr. Dhalla’s Birthday with contributions to the IACS’ “N. S. Dhalla Fund”, I am delighted to announce that we are able to make the first contributions from the Fund. We will assist the participation in the Global Conference on Heart Health and Disease by delegates from Mongolia, Jordan, India, Nigeria, Turkey and from Cuba, Dr. Delfin Rodriguez Leyva will at nd his fourth meeting in Winnipeg. Through the Dhalla Fund, the International Academy of Cardiovascular Sciences will assist Dr. Leyva to organize an international symposium in 2007.


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I want to honour Dr. N.S. Dhalla with a donation to fund the Academy’s Dhalla Award

Enclosed is $ __________

OR, I attach my initial donation of ________________ and will pay ________________ for the next ____ years.

Payable by cheque or money order to credit of International Academy of Cardiovascular Sciences and mail to Personal Attention of:

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An appropriate receipt will be issued. We will acknowledge all donors to Dr. Dhalla.