New Officers to Lead Academy

Dr. Vatner is Director, Cardiovascular Research Institute; Chair, Department of Cell Biology and Molecular Medicine; Chief, Division of Experimental Cardiology, Department of Medicine of the New Jersey Medical School at the University of Medicine and Dentistry of New Jersey in Newark. He definitely has come a long way from Grinnell College in Grinnell, Iowa where he earned his B.A. in Chemistry in 1961. He graduated with his M.D. from New York University. Dr. Vatner was an intern and senior medical resident at University of Virginia and a Post Doctoral Fellow in Physiology & Biophysics at the University of Washington in Seattle.

His academic career has spanned placements at the University of California, San Diego; Harvard Medical School; Allegheny University of the Health Sciences; Penn State College of Medicine; and Brigham and Women’s Hospital in Boston was the location of his hospital appointments.

His extramural professional activities have been incredible. The highlights have been with the American Heart Association, particularly their Council on Circulation. Also, he has served six major journals highlighted from 1991 – 1999 as Editor in Chief of Circulation Research. Dr. Vatner’s publications include 5 books/monographs and 409 articles.

He was awarded an Honorary Doctor of Medicine Degree from the Kagawa Medical School, Kagawa, Japan; Honorary Professor, The Fourth Military Medical University, Xian China; as well as numerous prestigious honors from around the world. He is a Member and officer of many professional societies as well as Vice President, International Academy of Cardiovascular Sciences, 1997 – 2005 before becoming President for a three year term on July 1st, 2005.

As the result of an international election, Sir Magdi Yacoub became the President-Elect of the International Academy of Cardiovascular Sciences on July 1, 2005 for a term of three years after which he will assume the presidency.

Professor Sir Magdi Yacoub FRS, FRCS, FRCP(Hon), DSc(Hon), MCh(Hon), FACC was born and educated in Cairo where he qualified as a doctor in 1957. He came to Britain to take up the position of Consultant Cardiac Surgeon at Harefield Hospital, and developed it to be Britain's leading transplant centre, performing over 200 heart transplants a year. Prof. Yacoub has specialized in working with children with congenital heart malformations and has done pioneering work on the "switch" operation. Sir Magdi's other surgical interests include the homograft and pulmonary autograft aortic valve replacement, as well as the aortic root repair.

Following his retirement from the NHS in September 2001, Sir Magdi continues to head his research program as Founder and Director of Research of the Magdi Yacoub Institute (formerly known as Harefield Research Foundation) and British Heart Foundation Professor of Cardiothoracic Surgery, in an academic capacity. 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, he has focused on treating heart defects afflicting as many as 1 child in every 100 around the world. The quality of these children's lives can be changed dramatically by operations which are performed as a matter of routine in the developed world. Sir Magdi has worked to bring children to the UK and also by sending volunteer teams to their countries to perform many surgeries during their visit and to help develop local facilities. Also, he has linked the Chain of Hope with the Variety Clubs International Children's Lifeline to reinforce their mutual interests in children's heart health in developing countries.

The International Academy of Cardiovascular Sciences was delighted to recognize Sir Magdi Yacoub as a Fellow and recently with the Academy's Medal of Merit.
An international scientific conference Advances in Cardiology Research – Molecular and Genetic Bases of Cardiovascular Diseases was held on June 13-16, 2005 at the Congress Centre of the Slovak Academy of Sciences (SAS) in Smolenice. The conference was organised by the Institute of Heart Research, SAS. Its organization was financially supported by the European Union’s Sixth Framework Program (EU FP6) project SLOVAK, and by the International Academy of Cardiovascular Sciences (IACS), with which the SAS had concluded an agreement on co-operation. The conference’s president and chief organizer was Prof. MUDr. Ján Slezák, DrSc., Fellow of IACS and a member of the recently formed Council of IACS – Europe.

The conference hosted representatives of research teams who by their scientific standards and professional orientation are eligible to potentially enter the FP6 projects launched by the 4th Call of the European Commission in the thematic priority program titled "Life sciences, genomics and biotechnology for health, specifically in the area of combating cardiovascular diseases".

The professional focus of the conference was on modern molecular-genetic approaches to the research and treatment of cardiovascular...
Academy Elects Seven New Fellows

With great pleasure, President Stephen Vatner announces the election of 7 new Fellows who are among 249 of the most outstanding heart health professionals from 40 countries to be elected by the International Academy of Cardiovascular Sciences. All Fellows have outstanding achievements in cardiovascular education and research and have made significant contributions to the health of people around the world.

Ivor Benjamin

Ivor J. Benjamin, M.D., FACC, FAHA is the second individual to hold the Christi T. Smith Endowed Chair in Cardiology Research at the University of Utah. In addition, he is a Professor of Medicine and Chief of the Division of Cardiology at the University of Utah. As the newly appointed Christi T. Smith Endowed Chair, Dr. Benjamin's priority is to build and enhance the Division of Cardiology and to foster the translation of basic cardiovascular research into the clinic at the University of Utah Health Sciences Center.

Dr. Benjamin received his B.A. from Hunter College at the City University of New York in 1978 and his M.D. from the Johns Hopkins University School of Medicine in 1982. He completed a Residency in Internal Medicine at Yale-New Haven Hospital, Yale University School of Medicine in 1985, and a Cardiology Fellowship at the Cardiovascular Institute, Michael Reese Hospital and Medical Center, University of Chicago in 1988. Dr. Benjamin completed an AHA-Bugher Fellowship in Molecular Cardiology at the University of Texas Southwestern Medical Center at Dallas (’90-’92). A recipient of the Established Investigator award from the American Heart Association, Dr. Benjamin has been continuously funded from both private foundations and the National Institutes of Health for over 15 years. In 1999, Dr. Benjamin was elected into the American Society of Clinical Investigation.

Prior to coming to the University of Utah, he served as Professor of Medicine and Education Program Coordinator of the Donald Reynolds Cardiovascular Center at the University of Texas Southwestern Medical Center in Dallas, TX from 2002 – 2003.

In 2005, Dr. Benjamin accepted an invitation to serve as Editor of the prestigious medical textbook, Cecil’s Essentials of Medicine.VII. Among the numerous honors he has received from his colleagues and the larger academic community is the Andreoli Visiting Professorship, for which he presented Medical Grand Rounds at the University of Arkansas Medical School in June of 2005.

Dr. Benjamin has been active in several medical societies including service as President of the Dallas Division of Texas Affiliate, American Heart Association (2001-2002), a member of the Task Force on Council Resources, American Heart Association (1998-present), the Scientific Publishing Committee, American Heart Association (2001-2005), and Vice President, Council for Basic Cardiovascular Sciences, American Heart Association (2003-2004).

Dr. Benjamin and his wife, Carol, have been married for 17 years and have three children.
Chandrasekharan Cheranelllore Kartha

Professor C.C. Kartha, MD (born 1951), is presently the Head of the Division of Cellular and Molecular Cardiology at Sree Chitra Tirunal Institute for Medical Sciences and Technology, Trivandrum, India. He has distinguished himself as an outstanding investigative cardiac pathologist. His studies disengaged the etiopathogenesis of endomyocardial fibrosis, a tropical cardiomyopathy, from a confusing network of hypotheses and placed it in the context of a geochemical cause with the primary tissue response being interstitial in nature. Dr. Kartha has evaluated through experimental and epidemiological studies, the geochemical hypothesis proposed along with Ms. Valiathan. The geochemical view on the causation of endomyocardial fibrosis is currently cited in many textbooks and monographs in cardiology and cardiovascular pathology. He is also credited with establishing the first Molecular Cardiology division in India. In recent times he has focused his attention on human adult cardiac stem biology, the role of hyperglycemia induced endothelial dysfunction in the increased risk for atherosclerosis in type II diabetes mellitus and in understanding the role of endocardial endothelium in the regulation of myocardial interstitium.

Prof. Kartha graduated from Trivandrum Medical College and in the year 1979 took his MD degree in Pathology from All India Institute of Medical Sciences, New Delhi. He joined Sree Chitra Tirunal Institute in its formative years as Lecturer in Pathology and rose to the position of Additional Professor of Pathology in 1988. He was responsible for organizing the cardiac pathology services and an electron microscopy laboratory in the Institute. He was also associated with the indigenous development of blood bags, dental materials, prosthetic heart valve and large diameter vascular graft. In 1993, he was appointed as the Head of the newly created Division of Cellular and Molecular Cardiology. He has also served as the Dean of academic affairs at the Institute from 2000 to 2003. Dr. Kartha was a guest researcher with Victor Ferrans at NHLBI, Bethesda in 1985 and a visiting scientist with Dr. Donald Heath at the University of Liverpool in 1990.

He has published over 80 articles in peer-reviewed journals, authored a book, edited 4 books and contributed chapters in 10 books. He is a member of the editorial board of Current Science, a fortnightly journal of research published by the Indian Academy of Sciences and Indian Journal of Pathology and Microbiology, the official journal of the Indian Association of Pathologists and Microbiologists. He has also served for 5 years, as a member of the editorial board of the Indian Heart Journal, the official journal of Cardiological Society of India. He is a life member of the International Society for Heart Research, the Cardiological Society of India and the Indian Association of Pathology and Microbiology.

Dr. Kartha is an elected Fellow of the National Academy of Medical Sciences (India), Indian Academy of Sciences, National Academy of Sciences (India) and Indian College of Pathology.

Gary D. Lopaschuk

Dr. Gary D. Lopaschuk, Edmonton, Alberta, Canada earned his BSc in Pharmaceutical Sciences; and his MSc and PhD in Pharmacology and Toxicology; all from the University of British Columbia. Currently he is at the University of Alberta, Edmonton where he is Professor of Pediatrics; Professor of Pharmacology; Director, Cardiovascular Research Group; Director, CIHR Group on “Cardioprotection of the ischemic heart”; Director, CFI “Cardiovascular Translational Research Centre”; and AHFMR Scientist.

Dr. Lopaschuk’s research focuses on the regulation of fatty acid oxidation and mechanism by which high rates of fatty acid oxidation contribute to ischemic injury, and how alterations in fatty acid metabolism contribute to cardiovascular disease in the diabetic patient. At a molecular level he has characterized a number of key enzymes important in the regulation of cardiac fatty acid oxidation. He is also investigating how metabolic strategies can be used to protect the heart during and following ischemia.

He was recently Chair of the Scientific Review Committee of the Heart and Stroke Foundation of Canada, as well as the Heart and Stroke Foundation of Alberta, NWT, and Nunavut. He is presently the Vice-Chair of the Research Planning and Priorities Committee of the Heart and Stroke Foundation of Canada. He is a Heritage Medical Scientist, and serves on a number of journal editorial boards, including Circulation Research, Journal of Molecular and Cellular Cardiology, the Canadian Journal of Physiology and Pharmacology, Heart and Metabolism, and Cardiovascular Drugs and Therapy. He has published over 160 original research articles, as well as over 50 reviews and book chapters. He is also the President and CEO of a biotechnology company (Metabolic Modulators Research Ltd.), that is developing novel drugs to treat heart disease that optimize energy metabolism in the heart.

Stephen Schaffer

Dr. Schaffer received his PhD degree from the University of Minnesota in 1971. He then accepted a postdoctoral position with Dr. John Williamson at the University of Pennsylvania. His first faculty position was at Lehigh University but after a few years he moved to the
Schaffer has published more than 100 peer reviewed papers and 40 book chapters and review articles. He has also edited 5 books. He is presently on the editorial board of Molecular and Cellular Biochemistry and serves as section editor of Amino Acids. Dr. Schaffer's research interests have focused on the effects of osmotic stress and diabetes on the heart. He maintains that diabetes has divergent effects on the ischemic heart, with hyperglycemia and osmotic stress serving to precondition the heart and hyperlipidemia and hypertension having adverse effects. His studies have also revealed that hyperlipidemia, hyperglycemia and activation of the renin-angiotensin II system increase myocardial apoptosis of the nonischemic heart through oxidative damage to mitochondrial DNA, resulting ultimately in death via initiation of the mitochondrial permeability transition.

Wolfgang Schulze

Dr. Wolfgang Schulze PhD earned his Diploma (Biology) at the Martin-Luther-University Halle-Wittenberg; PhD (Mathematics and Natural Sciences) at the Martin-Luther-University Halle-Wittenberg; and Habilitation in Comparative and General Zoology at the Humboldt-University, Berlin. From 1956-1971, he was a research assistant and senior assistant, group leader at the Institute of Circulatory Research of the German Academy of Sciences; from 1971-1991, he was Leader of the Department of Cytochemistry and Cell Research at the Central Institute of Cardiovascular Research, Academy of Sciences; and from 1991-1998, he was Senior Scientist and Leader of the Laboratory of Signal Transfer Topology of the Max-Delbrueck-Center, Berlin-Buch. Dr. Schulze retired in 1998 but continues as a co-worker at the Working Group ‘Immunology of Cardiovascular Diseases’ at the Max-Delbrueck-Center, Berlin-Buch. His research work has included: normal and hypertrophical growth and differentiation of cardiomyocytes; enzyme cytochemistry of ATPases, phosphorylases, adenylyl and guanylyl cyclases in normal and pathological myocardium; signal transfer topology including G-proteins, hormone receptors and intracellular targets of second messengers in cardiomyocytes, fibroblasts and endothelial cells; and localization and identification of autoantibodies against G-protein receptors in the heart of patients with several forms of hypertension and cardiomyopathies. His achievements include about 220 scientific peer reviewed scientific papers and more than 300 abstracts; reviews in scientific monographies; methods of electronmicroscopical cytochemistry in a textbook for students; and co-editor of monographies

A. Jamil Tajik

Dr. A. Jamil Tajik is the Thomas J. Watson, Jr. Professor and Professor of Medicine and Pediatrics at the Mayo Clinic College of Medicine in Rochester, MN, U.S.A. He was the Chairman of the Division of Cardiovascular Diseases at the Mayo Clinic from 1993-2002. In 2003 he was appointed as the Director of Mayo Cardiovascular International.

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.

Dr. Tajik is a member of many professional societies and organizations including the American Heart Association, American College of Cardiology, American Society of Echocardiography, and the International Society of Cardiovascular Ultrasound to name a few. He has served on the Board of Directors of the American Society of Echocardiography, the International Cardiac Doppler Society and the International Society of Cardiovascular Ultrasound. He served as the Chairman of the Echocardiography Committee of the American Heart Association and also is the Past Chairman of the Echocardiography Committee of the American College of Cardiology. He is currently serving as the Chairman of Industry Relation Committee for American Society of Echocardiography. He is also the current Chairman of the International Committee of the American College of Cardiology. He has also been a member of the Editorial Board of many prestigious cardiology journals. His bibliography to date includes over 485 articles and book chapters. He has also co-authored five books 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.

Throughout his career Dr. Tajik has had a great interest in teaching students, residents, cardiology fellows, and general cardiologists.
He has been an invited speaker to many institutions in the United States and has been named "Teacher of the Year" by the Cardiovascular Fellows on five different occasions and received the Melvin L. Marcus Memorial Award for distinguished contribution as "Gifted Teacher in Cardiology". 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 countywide (Olmsted County, MN, U.S.A.) primary and secondary prevention project called Cardiovision 2020. He has been the director/co-director of a large number of cardiology courses, both intramural and extramural, including 25 programs at the ACC Learning Center "Heart House" in Bethesda, Maryland; and 40 American College of Cardiology extramural courses including the popular annual courses Echo Hawaii, State-of-the-Art Echocardiography in Arizona, Cardiology at Cancun, and Echo Alaska. Mayo courses that he continues to direct include the Cardiology Board Review Course, Valvular Heart Disease Program, Cardiovascular Update, and an annual program on Echocardiography in Congenital Heart Disease. He has also been a co-director of a bi-annual course in Advances in Echocardiography in Essen, Germany and Madrid, Spain as well as a co-director of a bi-annual Cardiology Update Course in Vienna, Austria. Dr. Tajik was the Co-Director and permanent host of an innovative, award-winning tele-education program entitled "Cardiology Today and Tomorrow". This program was broadcast live to over 1500 sites in the United States and Canada and to 15 sites in foreign countries.

He is much sought after as a speaker and has traveled extensively throughout the world speaking on a variety of topics in cardiovascular medicine and surgery. His major areas of teaching and research include echocardiography, adult congenital heart disease, cardiomyopathies (especially hypertrophic and restrictive), valvular heart disease, pericardial diseases, and heart failure. Most recently he was selected to give the prestigious Edler Lecture at the American Society of Echocardiography, the Herrick Lecture at the American Heart Association meeting of Illinois, the Bishop Lecture at the American College of Cardiology meeting in 2003, and the Population Sciences Lecture at the annual European Society of Cardiology meeting in 2004. Dr. Tajik received the Distinguished Alumnus Award presented by the King Edward Medical College Alumni Association (North America) in 2000. He was also honored and received the most prestigious award of Distinguished Fellow of the American College of Cardiology in 2003. Dr. Tajik was presented the Medal of Excellence by His Majesty late King Hussein of Jordan in 1996. He was inducted as an Honorary Fellow in the Hungarian Cardiac Society in 2003 and in the Italian Cardiac Society in 2005. He received the prestigious Ellis Island Medal of Honor Award in May 2005 (an honour he shares with numerous Past Presidents of the United States). He was elected as a Fellow of the International Academy of Cardiovascular Sciences in July 2005.

Dr. Tajik is married to the former Zeest Sheikh of Lahore, Pakistan and they are the proud parents of 5 children and 1 granddaughter. Their hobby is traveling and through their travels, they have developed many fond friendships throughout the world.

Belma Turan

Dr. Belma Turan is Professor and Head of the Biophysics Department at the Ankara University, School of Medicine, Turkey. She obtained her BS in Physics (1976) at the Middle East Technical University and her PhD (1982) at the University of Ankara School of Medicine, and she has been full professor since 1993. She is a member of the American Biophysical Society, International Society of Heart Research, Union of European Physiological Society, Turkish Biophysical Society, and Turkish Physiological Sciences Society. She began her research in the area of Cardiovascular Sciences after she went to INSERM-France in 1992 as a researcher where she made collaborative studies with this Institute. She has learned recent electrophysiological techniques, such as patch-clamp and microfluorometry in Dr. Guy Vassort's laboratory. Then she set up a research laboratory in her department. Such a laboratory was the first of its kind in Turkey. Her main scientific interest is focused on the role of oxidative stress and underlying mechanisms of heart disease. She has mentored 5 PhD and 5 MS students in her area. Also, she has been giving lectures on Biophysics to undergraduate medical students. She went to Ottawa University, Faculty of Medicine, Department of Physiology, Canada as a visiting scientist in 1995 and she monitored the effect of oxidants on the release of intracellular free zinc ions and its interference with free calcium ions in cardiomyocytes for the first time in the world. She has been awarded with the encouragement prize of the Ankara University Health Sciences in 1997-1998 Academic year with this study. In 2003, she was a visiting scientist at the Institute of Cardiovascular Sciences, Winnipeg, Canada and worked with Dr. N. S. Dhall in his laboratory. During this period, she started the organization of the NATO ARW Workshop with Dr. Jan Slezak with the leadership of Dr. Dhall and the International Academy of Cardiovascular Sciences entitled "Stress-induced biochanges in the heart: from genes to bedside". This vision materialized in February 2005 in Antalya, Turkey including 51 distinguished scientists from all over the world. At this meeting, she was presented with the Academy's Distinguished Service Award. She has been elected to the Council of the International Academy of Cardiovascular Sciences - European Section.
Mars, Incorporated Has Synthesized Flavanol Molecules and Is In Discussions with Pharma Companies to Develop New Medicines

Molecules in cocoa credited for the ‘heart-healthy’ benefits of certain cocoa and dark chocolate may also in the future help treat diabetes, strokes and vascular dementia, and could soon be available to pharmaceutical companies for development into new medications.

Opening a two-day meeting in Switzerland, which was co-chaired by Fellows of the Academy: Norm Hollenberg, M.D., Ph.D., Professor of Medicine, Harvard Medical School; and Thomas Lüscher, M.D., Chief of Cardiology, University Hospital Zurich; researchers said their findings point toward a potential major new class of medications, based on novel synthesized flavanols, to help prevent or treat serious illnesses. “The mounting scientific evidence on cocoa flavanols is extraordinary,” said Dr. Hollenberg, one of the first researchers to identify the potential health benefits of cocoa flavanols. “This is a scientific breakthrough that could well lead to a medical breakthrough.”

Additionally, Mars scientists have discovered that entire “libraries” of cocoa flavanols can be synthesized, and that new flavanols can be developed from natural flavanols, enhancing their feasibility for use in pharmaceutical medications.

The research was discussed among scientists from around the world at a meeting convened by Mars, Incorporated, which has supported cocoa research for more than 15 years. The company confirmed that it is holding serious discussions with large pharmaceutical companies for a licensing or joint venture agreement that could enable some of these compounds to be developed as prescription drugs.

“Our company has a heritage of highly regarded research in nutrition and health science, through partnerships with some of the world’s finest scientists and universities,” said Dr. Harold Schmitz, Chief Science Officer for Mars. “This science is now moving beyond nutrition toward the research and development of important health care solutions.”

Added Schmitz, “Because Mars is a privately held company, we have the freedom to make the long-term research commitments that deliver truly innovative results.”

The Swiss meeting provided an opportunity for scientists from around the world, who are working independently on different cocoa flavanol research, to share their findings in a peer-review setting. The presentations provided new insight into the potential benefits of cocoa flavanols for treatment of serious illnesses such as dementia, diabetes and stroke. This research builds upon more than 80 peer-reviewed publications that have covered, test tube and clinical research on cocoa flavanols.

Among the findings discussed at the two-day meeting:

The specific cocoa flavanol molecules responsible for a beneficial aspirin-like effect (a reduction in platelet aggregation) have been identified for the first time. This has major implications for pharmaceutical applications.
Two clinical trials found that cocoa flavanols can increase blood flow to key areas of the brain, suggesting the potential for treatment of vascular impairment associated with elderly people, including dementia and strokes.

Building on previous findings that cocoa flavanols can boost synthesis of nitric oxide by blood vessels, increasing blood flow, a new clinical study found that such increases can also be achieved among people with diabetes. This suggests that cocoa flavanols could aid in treatment of serious vascular complications associated with long-term diabetes.

The ability to synthesize cocoa flavanols has become a reality, and the mechanisms behind their actions in the body are now becoming understood.

Mars has been actively exploring effective ways of making flavanols available in nutritional foods. On June 30, the company announced creation of a new business unit, Mars Nutrition for Health & Well-Being, which is dedicated to the development of new foods, snacks, beverages and lifestyle support to better serve the nutritional and well-being needs of consumers.

Mars Nutrition for Health & Well-Being has already launched its first great-tasting nutrition bar called CocoaVia available online at www.cocoavia.com and in October '05 in a limited number of stores such as Target and Wal-Mart. With 80 calories per serving and a nutrition profile that combines heart healthy ingredients, vitamins and minerals with a premium chocolate, rich in the natural flavanols preserved by a special process, it is the only global brand purposefully designed to deliver both chocolate pleasure and real heart health benefits. CocoaVia will be followed by a number of food solutions targeting a variety of nutritional needs and benefits in the months to come.

Mars, Incorporated, one of the worldís top processors of cocoa, is a privately held company that produces some of the worldís leading confectionery, food, petcare, beverage, electronics products, and now health & nutrition products, and operates in more than 65 countries. Headquartered in McLean, Virginia, Mars, Incorporated employs more than 7,000 associates in the United States and 39,000 associates worldwide with 15 manufacturing facilities nationally and more than 100 manufacturing facilities globally. The companyís global sales exceed $18 billion annually.

It was a great honour for me to have an opportunity to address such distinguished groups as the Brazilian Society of Cardiology in Rio; the ISHR China Section in Weihai City; the NATO Workshop in Turkey; and the Academy's first World Congress in Belo Horizonte, Brazil. I talked not as a cardiovascular scientist but as a lifetime volunteer for good causes with a principal focus on heart-related activities for the past 30 years. My concern for my own health was magnified by the sudden death of both of my parents as a result of massive heart attacks, when they were much too young. Rather than offer a theoretical analysis, I shared my own unique experiences because I am convinced the disease can be beaten. There seems to be ample evidence that people can have significant influence on their own situation and that community action can be effective. The most dramatic results which I have seen come from Finland's North Karelia Project. Participants were committed to monitoring their blood pressure and cholesterol, improving their diets, avoiding even second-hand smoking and, at least, doing some walking. Their experience with an aggressive prevention program proved that death rates could be reduced by as much as 73%!

While all of us are involved in Heart Health, we must be committed – do you know the difference? It's like bacon & eggs – the chicken is involved … the pig is committed!

I have been increasingly involved in cardiovascular projects since being appointed in 1972 to the Board of Directors of the Heart and Stroke Foundation of Manitoba. Following a chance conversation at a Foundation meeting with Dr. Naranjan S. Dhalla, he has given me a unique opportunity to become fully involved and has encouraged me to share the knowledge I have accumulated. When I first joined the Heart & Stroke Foundation of Manitoba Board of Directors, it was a moribund organization with a budget of less than $250,000 CDN which was granted to them by Winnipeg's United Way, a community-wide fund-raising organization which assisted a variety of not-for-profit causes. I was given the opportunity to become the Chair of the first independent campaign for funds. I believe this initiative was critical to the promotion of Heart Health in Manitoba, as it would be anywhere. Not only did we provide over $600,000 to the Foundation but we built a "team" devot-
ed to all heart causes who agreed to conduct a door-to-door solicitation in February (yes, OUTSIDE in Canada when snowy temperatures could fall below –30°). This fellow shows the risk that being outside holds! Our “Heart Team” initially built to 1,000 people from our population of just over one million and it has grown annually and last year involved 7,500 Manitobans. Not only do these folks give their time freely, but also they must become knowledgeable and most have altered their lifestyle as the Heart & Stroke Foundation recommends. To supplement the office staff, the Foundation has had an expanding program during the campaign, of “Loaned Reps” – skilled personnel provided by local organizations to spend their workdays on the campaign staff, also the companies and agencies assist by raising funds within their organizations. For our campaign, we mobilized all local media to become involved and provide not only editorial coverage but also free public service announcements and advertising. We were able to “blitz” the Province with messages for financial support as well as heart health messages at no cost for space or airtime. Political leaders have been involved to provide not only their names as part of the “team” but also to host and attend promotional activities, news conferences and events. Subsequently, I was elected President of the Foundation. We had continued to expand our fund raising and during my term, we had a budget exceeding one million dollars - more than one dollar from each Manitoban. The expanded financial situation supported research in Manitoba to help build our world-class initiatives, primarily the St. Boniface Institute of Cardiovascular Sciences led by Dr. Naranjan S. Dhalla and his growing staff. Education of the public and professionals has also continued to expand. One achievement of which I am very proud was to aggressively sell my Board to adopt a unique program known as “Jump Rope for Heart”. Our immediate success was exceptional. Schools organized their classes; kids practiced and developed skipping routines. They went door-to-door and collected pledges for the “skip-a-thon”, a one-day event for which they prepared to compete. The public supported financially. “Jump Rope for Heart” continues annually and has been developed across North America with millions of dollars being raised. Most importantly, the kids have learned about charity in addition to developing a life-changing cardiovascular training regimen. None of the successes could have been possible without the thousands of volunteers who have given their energy and countless hours of their time. The Heart & Stroke Foundation of Manitoba owes its success to volunteerism. People from all ranks of life contribute immeasurably their valuable time and expertise. I am delighted to be a leader in the building of such organizations and encouraging focus on the promotion of Heart Health.

In 1977, I was invited by a friend, Sam Cohen to join an initiative, which he mused, was most unique as a prominent Jewish businessman, he found it unusual that the Catholic nuns who own St. Boniface General Hospital had mobilized his creative genius to build the Hospital’s Foundation. He had launched the program with an International Award to Dr. Jonas Salk. In order to focus on the Foundation’s vision to create a Cardiovascular Institute, the 1977 Award was to be presented to heart transplant pioneer Dr. Christiaan Barnard. We hosted an incredible dinner in his honour, which truly put the Foundation on the map as an important force, not only in Winnipeg but also across Canada. Later, I was invited to serve on the Board of the Foundation and helped organize Annual Dinners for such humanitarians as Pope Jean-Paul, Prince Philip, Mrs. Jehan Sadat, and Dr. Eugene Braunwald (at our World Congress in 2001). Interestingly, we had to develop an entirely different format for the 1982 winner – Mother Theresa would not attend a dinner. One of the most memorable days in my life was when the Winnipeg Stadium was the site of a Sunday morning ecumenical service, carried live across Canada on CBC-TV. It was a beautiful July day; while Mother Theresa was waiting for events to commence, I told her we had been concerned that the weather might be a problem but her response was “You didn’t have to worry as long as I am involved – I have very good connections”.

With such support, very soon after that event, construction began on the building of the St. Boniface Research Centre, which became the home for the Institute of Cardiovascular Sciences, which Dr. Naranjan S. Dhalla has led to become one of the world’s leading sources of new developments for improving and understanding Heart Health. They have recently completed the second phase of the 9,300 metre Asper Clinical Research Institute, part of St. Boniface’s dynamic Cardiac and Vascular Project which is a $45-million planned expansion of cardiovascular services at the St. Boniface General Hospital which includes a new research partnership with the famed Mayo Clinic in Rochester, Minnesota. It is important to appreciate that once again, none of these successes would have been possible without the mobilization of vast volunteer resources and incredible donations from the public.

I was invited to join a small group of Manitobans to meet with one of our most famous ‘exports’. Monty Hall, internationally renowned entertainer and philanthropist, encouraged us to start the Variety Club of Manitoba, the world’s greatest children’s charity. Buoyed by a small gift from Monty, I approached Dr. Gordon Cumming and we helped him to begin building the Variety Children’s Heart Centre. It carries on and you can read about it at: http://www.vchc.ca. Over 25 years, more than $18 Million has been raised by Variety and spent in Manitoba and made a major impact on the Heart Health of children. The primary initiative which I chaired many times was the Annual Telethon. We were fortunate to be granted licenses to operate Million Dollar Lotteries. We conceived a fund raiser which has been imitated around the world – with the Winnipeg Jets NHL Hockey Team, we started “Goals For Kids” which mobilized corporate sponsors to pay as did the Norwood Hotel’s $1,000 for each goal Jets’ star Dale Hawrechuk scored – he had a great year and scored 50 goals which directed $50,000 through Variety to the St. Boniface Hospital Institute of Cardiovascular Sciences. In 1989, while I was a Variety International Vice-President, I was introduced to the Gold Heart Pin launched in Great Britain – I committed on the spot to Canada selling 100,000 – since then millions have been sold around the world as Variety’s principal fund raiser.

I like to tell the story of true commitment to good causes starting from the most humble roots which can be emulated anywhere. For our first Telethon, my daughter arranged a hot dog sale for her elementary school. We were able to get product donations and these kids were able to bring a small sack of coins to the Telethon set – they learned that charity is important, as I suggest it is critical to all concerned with Heart Health globally. As the pandemic of cardiovascular disease spreads, it parallels econThe 5th Annual Meeting of the International Academy of Cardiovascular Sciences (the 28th Japanese Working Group for Cardiac Structure and Metabolism) was held on July 16-17th, 2005 at the Congress Center of Act City Hamamatsu, Japan. Prof. Hideharu Hayashi, MD, PhD, from the Third Department of Internal Medicine, Hamamatsu University School of Medicine, was the Chairman.
The Meeting was highly successful, and 111 basic scientists and clinicians from all over Japan gathered and discussed on the recent topics in the field of cardiovascular science. Dr. György Hajnóczky, Department of Pathology, Anatomy and Cell Biology, Thomas Jefferson University, Philadelphia, was invited and made a special lecture on 'Mitochondria in Cardiac Physiology and Pathophysiology'. Two symposia, (1) Calcium signaling, chaired by Dr. Kinya Otsu from Osaka Graduate School and Dr. Hiroshi Satoh from Hamamatsu University School of Medicine, and (2) Gene therapy and regenerative therapy, chaired by Prof. Toyoaki Murohara from Nagoya Graduate School and Prof. Naoki Makino from Kyusyu University, were scheduled. The presentations were of high quality and the discussions were very hot. As an educational lecture, Dr. Takayuki Ozawa, Prof. Emeritus of Nagoya University, talked about mitochondrial genotypes associated with heart failure. Dr. Koh Ono from National Hospital Organization, Dr. Kouichi Tanonaka from Tokyo University of Pharmacy and Life Science, and Dr. Takayuki Inomata from Kitasato University School of Medicine delivered lectures as the special presentations. Topics of the sessions were myocardial ischemia/reperfusion, cardiomyopathy/contraction, DM, cardiac hypertrophy, gap junction/ion concentration, vasculature/atherosclerosis. The 37 presentations were all impressive and of high quality.

The contest for the Young Investigators Award was also held for the first time. From 17 young researchers under the age of 40 who competed for the Award, Dr. Toshihiro Takeda from Osaka University Graduate School of Medicine was the winner.

The next conference is planned as the 2nd IACS World Congress in Sapporo, Hokkaido, Japan in July, 2006, The Chairman is Prof. Hideaki Kawaguchi, Hokkaido University Graduate School of Medicine, Japan.
brain, interacts with the cardiac ryanodine receptor (RyR2) in the heart. PS2 knockout (PS2KO) mice showed the enhanced cardiac contractility by increasing peak Ca2+ transients. Elevated Ca2+ attenuated the association of RyR2 with PS2, and the enhanced Ca2+ transients and contractility in PS2KO mice were observed at low Ca2+ but not at high Ca2+. These data indicate that PS2 plays an important role in E-C coupling.

Sarcolipin (SLN) is a homologous protein of phospholamban (PLN), but has no obvious phosphorylation site. SLN overexpression in the heart inhibited SERCAa through stabilization of SERCAa-PLN interaction in the absence of PLN phosphorylation and through the inhibition of PLN phosphorylation. Inhibition of SERCAa impaired contractility and calcium cycling. Isoproterenol largely restored contractility and stimulated PLN phosphorylation to wild-type levels in intact hearts. Responsiveness to ß-adrenergic agonists may prevent progression to heart failure.
Introduction

Coronary Heart Disease (CHD), a disease that was in the past rare in developing countries is a gradually increasing problem worldwide, including developing countries. The chronic nature of CHD coupled with the relatively high cost of treatment makes CHD a significant public health problem in poor countries where health infrastructures are still underdeveloped and infectious diseases still account for a large part of national health burdens.

The 2002 World Health Report warns that the allies of poverty and ignorance are joining forces with the new formidable enemies of health; describing epidemiologic transition from infectious diseases to that of non-communicable diseases. All parts of the world except sub-Saharan Africa (SSA) have well-established epidemics of CHD and stroke (1). Hypertension also contributes to significant mortality and is a leading problem.

However, limited information is available on the burden and trend of CHD in developing countries. Such countries have an added advantage of learning from the past experiences of the developed countries, enabling them to concentrate on preventive aspects which are feasible and affordable to them.

Prevalence of CHD in Tanzania

The disease burden of CHD will be difficult to demonstrate if the prevalence of associated risk factors (hypertension, diabetes mellitus, obesity, smoking and dyslipidaemias) are not known within corresponding societies. Several risk factors for CHD disease were found in Tanzanian adolescents, but levels were much lower than in studies reported from developed nations. The challenge is to maintain these low levels as the population becomes more urbanized and more affluent (2).

Little representative data exists on the prevalence of CHD and its associated risk factors in Tanzania. In a cross sectional study conducted by Swai et al found that 6.6% of men and 7.5% of women in Kilimanjaro region, an area representing an affluent society in the country had hypertension, compared to 3.3% and 4.7% in Morogoro, and 2.6% and 3.4% in Mara regions. Cigarette smoking was found in 42.2% of men in Kilimanjaro region, 28.2% of Morogoro region and 8.6% in Mara region. Less than 4% of women smoked in all three regions. (3).

Main Objective

This study was undertaken so as to make the Tanzanian population aware of the possible increasing burden of CHD and some of its associated risk factors. Local evidence using data collected from the Kilimanjaro Christian Medical Center (KCMC), a tertiary referral hospital serving an estimated population of 6.4 million in northeastern Tanzania shows an increase in number of patients diagnosed with CHD, diabetes mellitus, stroke and hypertension.

Results

Figure 1 demonstrates a progressive increase in number of patients suffering from Diabetes Mellitus, Cerebrovascular Accidents, Hypertension and CHD by sex at the KCMC. In all the cardiovascular diseases represented more...
male patients have been diagnosed compared to female patients.

In Figure 2 most patients diagnosed to have CHD in each year are middle-aged (60-90 years).

The plot shows that there is a gradual increase in the number of patients diagnosed with CHD from 40 years to a maximum of 90 years. Furthermore, the data shows that the number of CHD cases is the lowest in 1994 and highest in 2003.

Discussion

This survey shows that over the past ten years the absolute number of patients diagnosed with CHD including other cardiovascular diseases has increased at the KCMC. This increase is likely to have been underestimated due to several reasons. First, as in industrialized countries many deaths occur before the patients reach the hospital. In addition, the number of deaths that occur suddenly without apparent symptoms in the Tanzanian community that are eventually confirmed to result from CHD or CVA at autopsies, are also increasing. Furthermore, a possibility of selection bias resulting from the relatively high cost of medical care at the KCMC might have hindered some patients with symptoms to seek medical care at this center; such patients remain under the primary or secondary health facilities. This selection bias is compounded by lack of adequately qualified and skilled staff who misdiagnose, coupled with lack of infrastructure.

Education and wealth have strong influences on the epidemiologic transition and may serve as a double-edged sword of benefit and risk. While improved education and enhanced resources are necessary to reduce infectious, parasitic and perinatal diseases, these factors are also associated with deleterious health behaviors, which lead to atherosclerotic diseases.

On the contrary, the uneducated poor may adopt these unhealthy lifestyles later, but once that occurs, patients are left with higher risk and burden of cardiovascular disease. Such data is missing in this cross sectional survey of retrospective records and hence the socioeconomic status and education levels of the participants have not been correlated to disease occurrence. Such information would have been more demonstrative of effects of improved socioeconomic and education levels among patients diagnosed to be suffering from CHD.

Despite these limitations, the goal of improved education and eradication of poverty in Tanzania and other African countries should not and need not carry the unhappy consequence of cardiovascular disease epidemic (4).

The scientific advances being anticipated in the next 15-20 years i.e. use of stem cells to repair organs and even clone organs (1) still remain a dream in many poor countries like Tanzania where infectious diseases including, malaria, TB and HIV/AIDS are main health concerns that still over burden the health services. However we can still make use of such advances by learning from the experiences of the developed countries and adopt lifestyles that will enable the LDCs leap the NCD monster.

Much as the global burden of non-communicable disease is also affecting the poor countries, a forgotten agenda in cardiology scientific research is rheumatic disease (RHD) must not be overlooked as RHD continues to claim many lives from young populations and takes a later toll in the health services and in these countries.

Recommendations

A number of recommendations result from this cross sectional data so the burden associated with CHD and other non-communicable diseases in Tanzania may be minimized.

Primary Prevention

This can be achieved by integrated management of non-communicable disease in the training curricula of health care personnel especially at primary care (clinical officers, assistant medical officers, nurses and paramedics) in order to make them search for risk factors when confronted with patients as well as to recognize those who are already affected. These categories of personnel are usually the first
to see the majority of patients; they will be equipped with skills to diagnose patients early and refer them or provide them with education on preventative aspects. Staff at primary health facilities need the skills for early recognition of risk factors. Blood pressure measurements need to be conducted as an integral part of patient care.

Furthermore, there is a need to incorporate patient education by clinicians from primary to tertiary levels including the private health care sector so as to increase patient awareness of the detrimental effects of smoking, physical inactivity, excessive alcohol, obesity and unhealthy diets.

**Secondary Prevention**

Screening programs for at risk populations. According to Dr James T Willerson a world leading cardiologist, if one has a father who had a heart attack under the age of 50 years, some of the younger family members will have the same problem occurring in the same month (5). He added that a good lifestyle won't be enough to prevent the disease from being expressed if one is at maximal risk. Clinicians have a role in identifying such individuals so that they can be given appropriate treatment.

**Tertiary Prevention**

Improving infrastructure, in particular at the tertiary level, will enable affected individuals to receive optimal treatment. The ECG remains integral to the diagnosis of acute coronary syndromes including myocardial infarction. Recognition of CHD and its ECG manifestations is one step on the path to decreasing resultant morbidity and mortality.

Although in this survey there has not been data collected on those who died, many patients diagnosed with CHD are not able to receive the appropriate treatment due to cost limitation. A very small proportion of the survivors sometimes go abroad for mechanical revascularization. It is high time that health authorities envision having a center that will cater for CHD patients within the country.

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**References**

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