



HEART NEWS AND VIEWS

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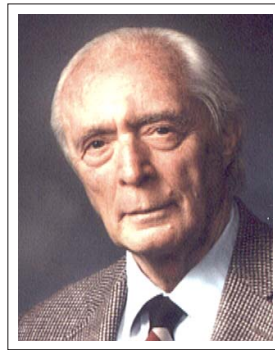
ADVANCES in medical science begin frequently as single observations, growing into enterprises involving millions of dollars. The commercialization of the original discovery depends on luck, salesmanship, and the ability to convert ideas into dollars. As the New York Times stated on Friday, November 22, 2002, "Madison Avenue - whose television ads have helped turn prescription medicines like Viagra, Allegra and Vioxx into billion-dollar products - is expanding its role in the drug business, wading into the science of drug development". By the time commercialization has become successful, the memory of the original idea has receded and its originator may have joined the silent majority. The transit from discovery to therapeutic and financial success can take years, particularly when the new idea competes with an entrenched and already accepted therapeutic procedure.

I present here several examples of how fundamental discoveries, whose origin is hidden in the shadows of the past, have led to therapeutic success and multi-billion dollar industry. Some of these discoveries have been made in the field of hypertension and atherosclerosis such as the discovery of angiotensin inhibitors (ACE inhibitors) and of cholesterol lowering compounds, statins.

L.T. Skeggs, Jr. then at Western Reserve University demonstrated in 1950 that the plasma of hypertensive dogs contains the pressor substance angiotensin. Plasma of patients with severe hypertension sometimes contained more than twenty times the level of angiotensin as compared to normal individuals. Skeggs soon discovered the existence of two forms of angiotensin, angiotensin I and II. He also found that a protein fraction of plasma converts angiotensin I to angiotensin II. He called this fraction "angiotensin converting enzyme" or ACE, which is activated by a chloride ion.

Angiotensin I does not raise the blood pressure, while

Past Truth & Present Poetry



21. Science as Business

angiotensin II is a powerful pressor substance. It was soon found that angiotensin-I-converting enzyme is a zinc-metallo cell membrane peptidase, working as an ectoenzyme, with its catalytic site exposed at the extracellular surface. It acts as a dipeptidyl-carboxypeptidase, converting angiotensin I into the active octapeptide, angiotensin II. Angiotensin II acts as a pro-inflammatory cytokine, increasing reactive oxygen species and inflammatory reactions in atherosclerotic lesions. By the early 1970's efforts were made to block the formation of angiotensin by groups from Sao Paulo in Brazil, the Brookhaven National Laboratory on Long Island, and the Royal College of Surgeons in London. They found that the venom of *Bothrops jaraca* contains enzymes that liberate kinins from plasma kininogen. The venom has two actions, it contains a bradykinin-potentiating factor correlated with the inhibition of kinin-destroying enzyme and it inhibits the peptidase that converts angiotensin I to angiotensin II. The converting enzyme and bradykininase inhibitors are the same enzyme. This finding formed the basis of work at the Squibb Laboratory: a nonapeptide, SQ20 is a specific and potent inhibitor of angiotensin-converting enzyme and is an effective antihypertensive drug. SQ225, captopril, is a powerful angiotensin-converting enzyme inhibitor *in vivo*. With this discovery, the road opened to therapeutic use and to commercialization of ACE inhibitors. It is now known that ACE inhibitors have a favorable effect on survival in patients with symptomatic heart failure and renal disease, reducing morbidity of heart failure as manifested by the reduction in the number of hospitalizations and progression of symptoms. ACE inhibitors are also associated with a reduction of ischemic events, and are beneficial when administered early after myocardial infarction. The commercial value of ACE inhibitors has reached billions of dollars. Yet, few remember the original

discoveries which made it all possible.

Another finding made at the bench which had considerable repercussions in the treatment of disease and brought large monetary gains was the discovery of statins, substances which inhibit the formation of cholesterol. It was first necessary to elucidate the various steps in the formation of cholesterol. This was accomplished by K. Bloch and F. Lynen who received the Nobel Prize.

Bloch, who played a major role in this discovery, was born in Germany, trained with Hans Fischer in Munich, worked in Switzerland and at the College of Physicians and Surgeons, Columbia University, New York. After a period at the University of Chicago, he joined the Department of Chemistry at Harvard. The work for which he was awarded the Nobel Prize together with Lynen, culminated in the elucidation of cholesterol synthesis. Bloch fed acetate, isotopically labeled in its carbon atoms, to rats and found that the synthesized cholesterol contained the isotopic label. All 20-7 carbon atoms of cholesterol were derived from acetyl CoA. An important discovery was the finding that 3-hydroxyl-3-methylglutaryl CoA, an intermediary compound in cholesterol synthesis, can be reduced to mevalonate and that the enzyme catalyzing this step,

3-hydroxyl-3-methylglutaryl CoA reductase (HMG CoA reductase), is the controlling site in cholesterol synthesis which progresses via squalene and lanosterol to cholesterol. Statins (HMG CoA reductase inhibitors) inhibit this step, thus reducing cholesterol synthesis. With this discovery, atherogenesis had become amenable to therapy.

Few physicians prescribing statins today know of the original work which opened a new field in medical therapy, resulting in a billion dollar industry.

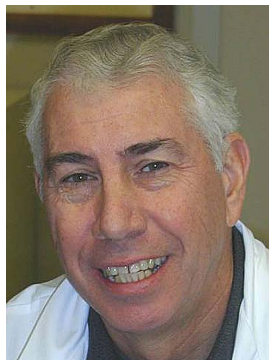
There are other examples of forgotten discoveries in the medical sciences which had a great impact on both science and commerce. Who remembers that the principle underlying echocardiography was discovered by the brothers Pierre and Jacques Curie? As Marie Curie wrote, "It was the result of much reflection on the symmetry of crystalline matter, which enabled the brothers to foresee the possibilities of such polarization". It was Alexis Carrel who made cardiac surgery possible by his technique of end to end anastomosis of blood vessels, and who performed the first experimental coronary bypass surgery in 1912. The discovery of the production and properties of positrons by Anderson from the California

Institute of Technology laid the foundation for the PET scan. Finally, the success of closed chest massage depended on a chance observation by Knickerbocker and Kouwenhoven from The Johns Hopkins Hospital. Knickerbocker relates that when he and Kouwenhoven "were proceeding with their studies in closed chest defibrillation, they observed that there was a rise in intra-arterial pressure when the heart defibrillator electrodes were applied to the chest wall of the dog with ventricular fibrillation. A relaxation and push caused additional increase in arterial pressure". They considered that, "the rhythmic application of pressure to the chest wall might cause the heart to empty and provide circulation".

Many of these pioneers received the Nobel Prize. But their discoveries are often buried under an avalanche of financial data, of giant epidemiological tests, and of deliberations by official agencies. Yet the light of the candle lit by these pioneers has penetrated deep into the darkness. It has made possible new approaches to the treatment of patients; this, after all, is the goal of medical science.

Richard J. Bing, M.D. ■

PRESIDENT'S LETTER



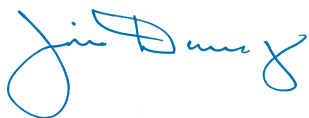
Infrastructure

While the ISHR has become a venerable and respected organization after more than 30 years of existence, it actually has virtually no infrastructure. When I assumed the presidency I received a few file folders from David Hearse, and Roberto Bolli inherited a cardboard box or two of secretarial records. Just to illustrate how thin we are on continuity we have still been unable to compile a complete list of the past Bing awardees for our web site. The ISHR literally exists in the immediate consciousness of the officers. The problem with such a structure is that there is very little continuity from administration to administration. The only thing that holds us together at all is the bylaws that were written in 1976 and to which we have closely adhered. By the way, the bylaws are posted on the ISHR website and we invite you to review them. You will particularly like the part about how to remove an officer if he turns out to be a "lunatic". Of course you should disregard that fact that I occasionally take a fancy to the moon myself. Anyway, our lack of infrastructure has caused the society to drift over the years in its aims and mission.

Few members realize how much work is involved in being an officer in the ISHR. The ISHR has been a 100% volunteer organization. That means that the officers do everything from giving speeches to sweeping the floors (that is if the ISHR owned a floor to sweep). Because of that the ISHR business often gets put aside due to grant deadlines and other crises that constantly interrupt a scientist's life. Over the years I have been involved with the governance of the American Heart Association. Now there is an organization with infrastructure! Their capable staff sees to it that the officers and council members stay on track and do not stray from their appointed mission. Sometimes, it seems like they even tell you when to breath in and when to breath out. Nevertheless, they have been amazingly effective and the AHA's staff is largely responsible for its phenomenal success as a scientific organization. The American Physiological Society has a much smaller but no less effective staff. Marty Frank is a scientist turned administrator who oversees the day-to-day business of the APS. For almost two decades Marty has kept the APS on an even keel as a multitude of APS Presidents have come and gone.

In light of all of the above, the ISHR has taken a truly bold step in hiring Dr Leslie Lobaugh as our first ever executive secretary. Our aim is to hire an employee dedicated to administering the business of the ISHR. Leslie received a PhD in Physiology in 1986 from Duke University. She did her thesis on the *Regulation of the Na/K pump in cultured chicken embryo heart cells* under the direction of the late Melvyn Lieberman. Leslie held a position of adjunct assistant professor at Duke until 2002 when the strain of being both a soccer mom and a working scientist became more of a burden than she chose to bear. Last year we made a concerted effort to identify someone who was capable of filling such a position. We considered some very outstanding candidates but Leslie stood out as she already had extensive experience helping Charles Steenbergen execute the North American Section's secretarial duties. Leslie will now serve as the primary contact person for the International Section's membership services. You can reach Leslie at llobaugh@nc.rr.com. Let's all welcome Leslie and our first step toward creating an infrastructure for the ISHR.

On another matter, I just returned from the Japanese Section meeting in Yamagata. Unfortunately the Japanese Section has had a history of relatively little turnover in leadership. This stagnation is finally starting to affect its membership, down to only 294 members from a high of over 600 just 10 years ago. The Section president, professor Yazaki, has decided to try to change all that with bold new reforms. Principle among them is the creation of a president-elect position. That will ensure that the presidency will turnover every three years. He also is asking that the Section adhere to the age 65 retirement rule which was in the bylaws but loosely enforced. He feels that these changes will attract the young scientists to the Section. Elections are scheduled for this summer, so when professor Mochizuki holds the Section meeting in Tokyo next November a new leadership should already be in place. I am urging all Japanese members to get their students and colleagues to join the ISHR. Let's build the Japanese Section back to its original glory.



James M. Downey

Highlights from the XXIV Annual American Section Meeting (July 24 - 27, 2002; Madison, WI)

In a beautiful setting amidst the two lakes of Madison, Wisconsin, the XXIV Annual Meeting of the American Section

was held at the Monona Terrace Community and Convention Center. Dr Richard L. Moss, Professor and Chair of Physiology, University of Wisconsin chaired the local organizing committee. The meeting was organized by the UW Cardiovascular Research Center. He and his colleagues showed warm hospitality to all participants and created an exciting and stimulating meeting concerning the

new advances in cardiovascular disease research and treatment. Approximately 500 physicians and research scientists from around the world attended this noteworthy meeting.

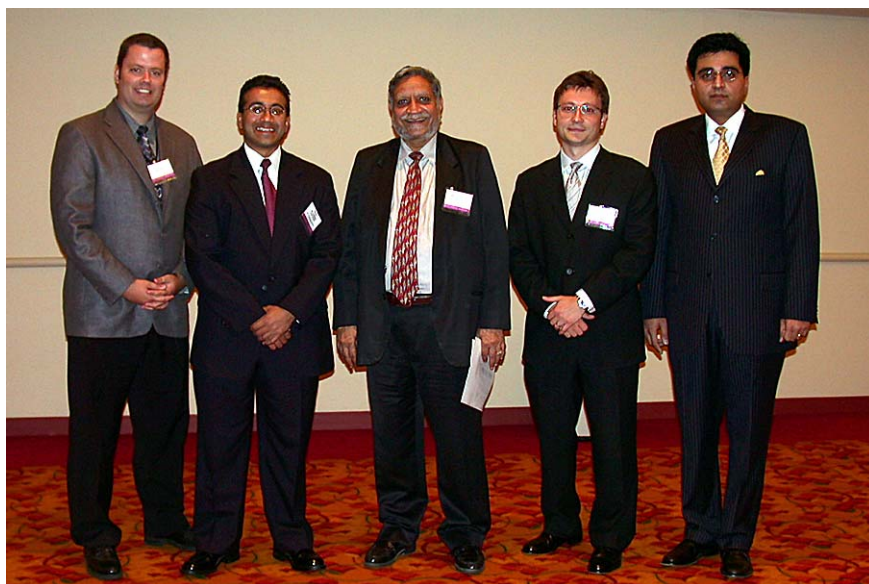
Two highlights of the meeting were the Keith Reimer Distinguished Lecture and the Harry A. Fozzard Symposium. During the past year Keith Reimer, who

served the International Society for Heart Research and its American Section in many roles including President of the American Section since 2000, died after a short illness with renal cell carcinoma (his Memoriam was published in HEART NEWS AND VIEWS 2002; 10(2): 8-9). In recognition of his many contributions to ISHR and cardiovascular research Dr Roberto Bolli, Secretary General of ISHR, presented the first Keith Reimer Distinguished Lecture. After a brief memorial recognizing Keith's contributions Dr Bolli presented his lecture on "Preconditioning: A Paradigm Shift in the Biology of Myocardial Ischemia".

The Harry A. Fozzard Symposium featured a series of presentations on ion channels and cardiac arrhythmias to honor Dr Fozzard on his many contributions to the field and his contributions to ISHR. In recognition of his strong support of the growth of cardiovascular research his colleagues and past fellows from the years gathered to present their own work that in large part emerged from the nurturing and encouragement he had given them in early stages of their careers.

In the well-organized scientific program there were nine topics that the symposia addressed. These included Heart Failure, Ischemia Reperfusion Injury in the Myocardium, Acquired Valvular Disease, Myofibrillar Regulatory Mechanisms, Proteomics, Cardiac Arrhythmias, Endothelin Signaling in Heart Disease, Vascular Biology and Gene and Cell Transfer to the Myocardium. In addition to these stimulating symposia two workshops were held on the topics of Expression Profiling and Genomic Approaches in Cardiovascular Research.

Several Keynote Speakers were interspersed throughout the sessions on current challenging topics. These speakers and their topics were Dr Eduardo Marban: "Gene Therapy for Cardiac Arrhythmias"; Dr Dan Roden: Pharmacogenomics; Dr H. Lee Sweeney: "Blocking the Progression of Heart



ISHR-American Section Young Investigators Competition Finalists: (from left to right) J.D. Barrans, S. Chatterjee, N.S. Dhalla (Chair), P.W.M. Fedak and S. Verma

Failure: Insights and Interventions"; and Dr James Thomson: "Human Embryonic Stem Cells in Cardiomyocytes".

The social activities were well planned starting with the opening reception. Two highlights during the meeting included an evening at the American Players Theater to see Shakespeare's "Taming of the Shrew" and the Keynote Speaker at the closing gala awards banquet. Professor R. Alta Charo from the University of Wisconsin Law School gave an exciting provocative talk on "From Stem Cells to Jail Cells" that describe the policies and politics surrounding human embryonic stem cell therapy. The many diverse views that exist among regions and states within the United States and how this contrasts and compares with other countries kept her audience spellbound and also concerned about the future directions of this portion of biomedical research.

An annual highlight of the American Section meeting is always the Young Investigators' Award Competition. This year had four outstanding finalists for the judges to consider. They were Drs David Barrans, Subhasis Chatterjee, Paul Fedak and Subodh Verma. At the gala awards banquet Dr Subodh Verma was presented first prize for his presentation of "Endothelin Antagonism

and Interleukin-6-inhibition Attenuate the Proatherogenic Effects of c-Reactive Protein, while Dr Subhasis Chatterjee received second prize for his presentation of "The Anti-apoptotic Factors ARC and Bcl-2 Confer Similar Protection Against Apoptosis and Heart Failure after Myocardial Ischemia". Dr Subodh Verma's report will appear in HEARTNEWS AND VIEWS 2003; 11(1).

Another major highlight of this annual meeting was a special satellite meeting on women and heart disease that took place before our opening sessions. To raise awareness of the leading killer and encourage the understanding of key differences between women and men with regard to heart disease, the University of Wisconsin Medical School hosted "Sex Differences in Cardiovascular Health and Disease". This meeting was organized by the Society for Women's Health Research. During the daylong meeting researchers from across the country discussed a variety of topics relating to sex-based biological and physiological differences with regard to cardiovascular disease.

Highlighted presentations included the following: Jacques E. Rossouw, M.D., acting director of the Womens Health Initiative (WHI) at NIH spoke about the WHI's hormone replacement

therapy trial using estrogen and progestin, which was terminated early because of increased risk of heart disease and breast cancer in women using the hormones. He also talked about the identification, treatment and prevention of known risk factors for coronary heart disease. Women and men have similar risk factors for cardiovascular disease, although the impact of some risk factors may vary between the sexes. Risk factors include hypertension, diabetes mellitus, and high cholesterol; Virginia M. Miller, Ph.D., Professor of Surgery and Physiology, Mayo Clinic focused on understanding how endothelial cells and platelets contribute to hardening of the arteries and to a certain type of blood clot in the legs including how estrogen changes the way endothelial cells

respond in women and men during various stages of life; Suzanne Oparil, M.D., Professor of Cardiovascular Medicine and director of the Vascular Biology and Hypertension Program at the University of Alabama at Birmingham reported that premenopausal women have lower blood pressure than men of the same age, but that postmenopausal women have higher blood pressure than their male counterparts suggesting that ovarian hormones may affect blood pressure levels; Richard E. White, Ph.D., Associate Professor of Pharmacology and Toxicology, Medical College of Georgia, stated that sex steroids, such as estrogen, progesterone and testosterone, have been found to relax coronary artery smooth muscle and may explain some beneficial cardiovascular effects of these hor-

mones; Steven N. Ebert, Ph.D., Assistant Professor of Pharmacology, Georgetown University, reported that Torsades de Pointes, a potentially fatal irregular heartbeat, is more common in women than men and his hypothesis on testosterone's protective role.

Overall, the XXIV Annual Meeting of the American Section held in Madison, Wisconsin was considered to be a major success. This was attributed to excellent organization that Dr Moss and his colleagues on the local organizing committee did in preparation for the sessions. Through their efforts the participants left well informed in very latest developments and directions in cardiovascular research.

Colin M. Bloor, M.D. ■

Roberto Bolli Delivers the First Keith Reimer Distinguished Lecture

WE ALL MOURN the untimely death of Keith Reimer but I cannot think of any individual better qualified than Roberto Bolli to be the recipient of an award specifically created as a tribute to the quality and importance of Keith's work. In the way that Keith became a respected world authority in the field of myocardial ischemia and infarction, Roberto Bolli has become the undisputed leader in the field of stunning and ischemic biology in general. Roberto has, almost single handedly, proposed and validated the molecular and cellular mechanisms responsible for stunning and has developed and characterised (often using vast but beautifully orchestrated protocols) numerous interventions that can influence this clinically important phenomenon. In doing this, he has contributed greatly to our understanding of the important role played by oxidant stress during ischemia and reperfusion – work that might open up new

The first Keith Reimer Distinguished Lecture was given by Roberto Bolli (Louisville, KY) during the XXIV American Section Meeting in Madison, WI (July 24-27, 2002).

The second Keith Reimer Distinguished Lecture will be given by Gerd Heusch (Essen, Germany) during the XXIII European Section Meeting in Strasbourg, France (June 21-24, 2003).



Roberto Bolli (left) is receiving a plaque from Jim Downey after delivering the first Keith Reimer Distinguished Lecture

avenues of therapeutic practice. More recently, he has systematically deciphered the molecular basis of the late phase of preconditioning. Like Keith Reimer, Roberto's research hallmarks are a superb focus on the problem and a highly critical approach together with the use of the most appropriate and rigorous methodology. It is not surprising then that Roberto Bolli's work is published in the highest impact journals, that he is generously funded by tough grant awarding bodies and that he is an indispensable part of any meeting of opinion leaders discussing the many manifestations of ischemia and reperfusion. Roberto's drive and organizational skills are legendary – he created a landmark meeting of the American Section of the ISHR in

Louisville and at an institutional level has built up, from scratch, world class research programmes at Baylor and latterly at the University of Louisville. When individuals become the ‘Tiger Woods’ of their field they are often tempted to stay firmly entrenched in

that area – this is not the case with the ‘Tiger Woods of stunning’ who has branched out to embrace new technologies (no more a ‘dinosaur’ of the physiology laboratory!) and challenging new problems. I have no doubt that it will not be long before Roberto is

credited with other major advances in our understanding of the biology and medicine of the heart – something that would, no doubt, please Keith Reimer greatly.

David J. Hearse, D.Sc. ■

XIX Japanese Section Meeting (Yamagata; October 31 - November 2, 2002)

Masao Endoh did an outstanding job organizing the XIX Japanese Section meeting in spectacular Yamagata City. Yamagata, which in Japanese means mountain formation, certainly lives up to its name. It is located about three hours north east of Tokyo by shinkansen (bullet train) in a valley surrounded by beautiful mountains. Three snow-topped peaks stand out in the skyline. Gassan (moon mountain) is a well-known place for summer skiing. The Asaihi mountains are rugged and wild. Finally, Mount Zhao is closest to the city and the school of medicine and is also a skier’s paradise. Unlike Tokyo or Osaka, Yamagata is natural. The city of about 250,000 does not have the crowded subways or skyscrapers that we normally equate with Japan. Rather the countryside is dotted with fruit trees and rice fields and of course the mountains in beautiful fall colors provide the backdrop. This is Japan’s breadbasket.

The meeting was held in the new Terrsa convention center just a hundred meters from the railway station in the city center. Many of the delegates stayed in the modern new Metropolitan Hotel which is actually located inside the train station and very convenient for the meeting venue. The meeting occupied two full days and there was a satellite meeting, “Current Therapy of Ischemic Heart Disease and Heart Failure”, organized by Masao Endoh and Masafumi Kitakaze on the third day. Two hundred registered delegates attended

the meeting. There were two simultaneous sessions during both days in which six symposia and four oral sessions were presented. Many young Japanese doctors were included in the sessions. Also, 42 submitted abstracts were presented as posters. For the first time in a Japanese section meeting all of the communications were in English. The all-English program went surprisingly well and was certainly appreciated by the many foreign delegates. Invited speakers from abroad included Derek Yellon and David Eisner from England, Gerd Hasenfuss from Germany, and Ed Lakatta, Rick Walsh, John Solaro, and Jim Downey from USA.

Any Japanese meeting is usually most memorable for the staggering array of food that is put before you and the Yamagata meeting was no exception. At the banquet an impressive spread was laid out along with plenty of Japanese beer and rice wine to wash it down. The following night the foreign speakers were taken out to a formal Japanese

dinner at Nonomura, a very old traditional restaurant in Yamagata where we again ate like kings.

At the council meeting the upcoming election of officers was discussed at length. It was decided to change the bylaws and create a new position of president-elect similar to that in many other Sections. That change will now effectively limit the president’s tenure to a single three-year term. That will also ensure a smooth transition from one administration to the next as the president-elect will have three years to learn the job before he actually takes office. After stepping down, the past-president will continue to serve officially on the council as past-president for an additional three years. Council also announced that the next Section meeting will be held on November 22-24, 2003 in Tokyo at the Jikei University Campus. The meeting will be organized by Seibu Mochizuki at Jikei.

Jim Downey, Ph.D. ■



Dr Haruaki Nakaya (left) and Dr Masayasu Hiraoka (center) discuss science while Dr Derek Yellon (right) decides on dessert.

The ISHR -European Section / SERVIER Research Fellowship

THE EUROPEAN SECTION of the International Society for Heart Research and SERVIER invite submissions for the third ISHR-ES / SERVIER Research Fellowship. The purpose of this Fellowship is to support the initiation and development of scientific collaborations between outstanding groups in the field of cardiovascular biology by providing a young investigator from a European laboratory with one-year post-doctoral support allowing him/her to carry on a research program in another European country. The term European refers not only to the countries of the European Community but to all countries belonging to the European Section of ISHR.

Details of the competition are as follows:

1. Candidates must be members (or have applied for membership) of the ISHR-ES (membership application forms are available at the ISHR-ES website www.biomed.cas.cz/fgu/ishr_es/ or can be obtained from Dr Frantisek Kolar, Secretary of the ISHR-ES, Institute of Physiology, Academy of Sciences of the Czech Republic, Videnska 1083, 142 20 Prague 4, Czech Republic. *Tel.* +420 2 475 2559; *Fax* +420 2 475 2125; *E-mail* kolar@biomed.cas.cz).
2. Candidates must have defended their Ph.D. thesis not earlier than 1 January 2001 and be less than 35 years of age on 1 July 2003.
3. Applications must include the following:
 - Curriculum vitae (family name, first name, date of birth, current employment and position, summary of previous positions, degrees, special area of interest and expertise, other activities, publications);
 - Research program of a maximum of 10 pages (including one page summary and references) detailing the research program (title, aims, rationale, working hypothesis, scientific expertise of each group, preliminary results if any, plan of investigation detailing the scientific procedures and role of each investigator of each group and the precise role of the candidate in the proposed program and funding);
 - Letters of the candidate's current immediate supervisor and future immediate supervisor (Division Heads, Department Chairmen, or Institute Directors) detailing why the collaboration between the two research groups is essential for the success of the research program and why, among all other potential applicants, the applicant is the most appropriate candidate for the Fellowship, and offer rationale for their opinion.
4. Eight copies of the application should be received by Dr Gerd Heusch, President of the ISHR-ES, Institute of Pathophysiology, University of Essen, Medical School, Hufelandstrasse 55, 45 122 Essen, Germany, **no later than 31 March 2003. Applications received after this deadline will not be considered.**
5. The two collaborating research groups can submit only one application.
6. The applications will be reviewed in Paris in April 2003 by a committee composed of five members of the ISHR-ES Council and one representative of Servier. The three best applications will be classified. The second and the third will receive one year free electronic subscription to the *Journal of Molecular and Cellular Cardiology*.
7. The winner of the Fellowship will receive a travel grant to cover economy airfare and other travel costs up to 1000 Euro towards his/her attendance at the next annual Congress of the ISHR-ES in Strasbourg, France, 21-24 June 2003. At the Congress, the winner will present his/her research program to the Society. He/she will receive a plaque and check of **20,000 Euro** as a personal support. Any winner who, for any reason, cannot personally present his or her research program at the Congress must withdraw from the competition. Substitute presenters are not allowed.
8. It is expected that the results of the investigation will be presented by the recipient at the annual ISHR-ES Congress in Dresden, Germany, in 2004.
9. Applications will not be returned.

Jean-Jacques Mercadier, M.D., Ph.D.
Past-President and Treasurer of the ISHR-ES

Muscle Mechanics and Energetics - A Comparative View

A Symposium to celebrate the retirement of Professor Colin Gibbs, Professor of Physiology, Monash University, was held in Melbourne Australia on October 31, 2002.

Professor Colin Gibbs, *BSc, MSc, PhD, FISHR* graduated from the University of Sydney, (with majors in pharmacology & biochemistry), and completed a Ph.D. in 1964 in the area of cardiac electrophysiology. He obtained one of the first Overseas Fellowships of the National Heart Foundation of Australia and spent two years at the UCLA Medical School's Heart Research Laboratory. Whilst there he became interested in muscle energetics and learned to measure muscle heat production using thermopiles. He returned to Australia in 1966 joining the Physiology Department at Monash University, was made a Reader in 1974 and obtained a Personal Chair of Physiology in 1991.

Colin is one of the leading authorities on muscle energetics and was the first scientist to measure the heat production of mammalian muscles (cardiac, skeletal and smooth). He has authored the highly valuable chapter on cardiac energetics in the American Physiological Society's 'Handbook of Physiology' in addition to several landmark reviews. He has been on the Editorial Board of *Circulation Research*, *Cardiovascular Research* and *News in Physiological Sciences*. Until the present he has been awarded continuous NHF and NHMRC funding. Since the mid 1980's he has been Deputy and/or Acting Head of the Monash Physiology Department and has recently completed a term as Chair of the Australian Academy of Sciences' National Committee for Physiology. His research contributions have been numerous and of the highest quality, his commitment to excellence in undergraduate teaching and training post-graduate researchers has been exemplary. Colin has remained a mentor and role model to numerous individuals, particularly those in ISHR. Colin was one of the founding members of the Australasian Section of ISHR in 1976, also serving as section secretary. In 2001, Colin was made a Fellow of the ISHR.

The one day symposium was marked with scientific presentations delivered by the many former students, coworkers and colleagues. The key note lecture, "Cardiac energetics: From Emax to pressure volume area (PVA)", was presented by Professor Hiroyuki Suga from the Research Institute, National Cardiovascular Centre, Japan.



Dr Salvatore Pepe (left) and Professor Colin Gibbs

Professor Gibbs concluded the proceedings by speaking on "Cardiac energetics: Trails and trials".

At the celebratory dinner held in Professor Gibbs' honour, Dr Salvatore Pepe, Secretary of the Australasian Section, awarded Colin with an Honorary Life Membership on behalf of the Australasian Section of ISHR, in recognition of his scientific merit, commitment to teaching and service to ISHR.

*Salvatore Pepe, Ph.D.
Melbourne, Australia* ■

In Memoriam

We deeply regret to announce that Professor Peter Harris passed away on the 11th of December, 2002 in London, UK.

An obituary will appear in the next issue of HEART NEWS AND VIEWS.

Founding Fellows

On page 9 we continue publishing brief biosketches of the 82 Founding Fellows of the ISHR.

For a complete list of the Founding Fellows, see HEART NEWS AND VIEWS 2001; 9 (1): 8.

Biosketches already published, can be found in HEART NEWS AND VIEWS 2001; 9 (1): 9-10, 2001; 9 (2): 5-6 and 2002; 10 (1): 10-11.

László Szekeres

ISHR member since first Prague Meeting. Member ISHR Council 1983-1992; Member European Section Council 1983-1992; Founder and President Eastern European Subsection 1984-1993. Promoted Subsection's joining the European Section.

Present position: Professor Emeritus, Inst. of Pharmacology, Medical Faculty of the University of Szeged, Hungary.

Qualifications: MD, PhD, DSc, Dr.h.c. (Cracow, Tübingen), FISHR, FIACS.

Research interests: Mechanism and pharmacological prevention of cardiac arrhythmias and consequences of myocardial ischemia. Endogenous cardioprotective mechanisms.

Major research contributions: First comprehensive analysis of the mode of action of antiarrhythmic drugs. Contributed to elucidation of mechanisms of cardiac arrhythmias, antiarrhythmic and antianginal drugs. Elaborated several "in vivo" models of experimental arrhythmias and angina pectoris for testing antiarrhythmic and antianginal drugs. Discovered drug-induced delayed cardiac adaptation to stress.

Publications: Five books (two edited) and over 300 peer reviewed articles.

Most admired scientist: Albert Szent-Györgyi.

Other major interests (passions): Art (active painter), music (all forms of classic music, including operas), travel, history.



Derek M Yellon

ISHR member since 1978. Past member of the ISHR council.

Current Position: Prof. of Cell. Cardiol. Director of the Hatter Inst. for Cardiovasc. Studies and Head of the Centre for Cardiol. at UCL Hosp. & Med. School. In addition, Director of the Hatter Inst. for Cardiol. at the Univ. of Cape Town and Hon. Prof. in the Dept. of Med. at the Univ. of Cape Town Med. School.

Training: Cape Town and the University of Bath, UK.

Qualifications: PhD, DSc, FACC, FESC, FAHA, FRCP (Hon).

Research interests: Include angina, myocardial protection in basic and clinical setting, the pathophysiology of ischaemic injury and reperfusion-induced injury; molecular aspects of adaptation to both forms of injury; the identification of pro-survival cell signalling targets.

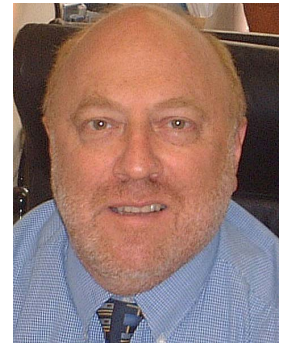
Major research contribution: Studies describing the second window of preconditioning in addition to the first clinical studies to directly demonstrate preconditioning in humans.

Publications: Over 260 peer reviewed articles and 12 books.

Most admired scientist: Prof. Robert Jennings.

Most cited paper: Cardiac stress protein elevation 24 hours following brief ischemia or heat stress is associated with resistance to myocardial infarction. *Circulation* 1993; **88**: 1264-1272.

Relaxation: Reading, music, golf, playing with my children.



Guy Vassort

ISHR member since 1977.

Current post: Head of INSERM U-390 Physiopathologie cardio-vasculaire at Montpellier.

Training: DSc, University of Orsay, Paris-sud, France.

Research interests: Ionic currents and the control of myocardial contractility as modified by neurohormones.

Major research contributions: First description of a second inward current carried by Ca²⁺ (and Na⁺), the "slow inward current", observed in frog heart and reported in Pflügers Arch. (therefore rarely referenced?). Various aspects of Ca²⁺ homeostasis in cardiac, skeletal and smooth muscles or squid axons. Description of voltage dependence and electrogenicity of the Na⁺-Ca²⁺ exchanger and its role in tonic phase and relaxation. Ca²⁺-dependent inactivation of the cardiac Ca²⁺ current and activation of a fast K⁺ current in muscles. In contrast to β-adrenergic stimulation, α₁-adrenergic induced inotropy is mostly due to Ca²⁺-sensitization of cardiac contractile proteins. Long standing interest in signal transduction pathways, recently in those triggered by ATP as a purinergic agonist to control pH_i by Cl⁻/HCO₃⁻ exchanger, Ca²⁺ and TREK currents, contraction and arrhythmias.

Most admired scientist: Silvio Weidmann

Relaxation: Gardening, cooking in my home-made field oven, touring.



Edward Carmeliet

ISHR member since 1975. Member European Council ISHR 1993-1999.

Present position: Professor Emeritus Physiology, University Leuven, Belgium.

Training: University Bern with Silvio Weidmann. Postdoctoral: Downstate Medical School New York (Ch.McC. Brooks and B. Hoffman) and Duke University, North Carolina (E.Johnson and M.Lieberman).

Qualifications: MD, PhD. Dr Honoris Causa University Bern, Switzerland, 1999. Member and Past President Royal Academy of Medicine Belgium, FESC, FISHR, FIACS.

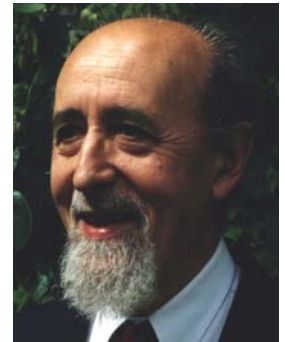
Research interests: Cardiac electrophysiology covering the levels from the whole organ to the single ion channel, with emphasis on the changes in ionic currents during ischemia, the mechanisms underlying arrhythmias and the effect of drugs on ion channels. More recently I participated in the development of a transgenic LQT3 mouse model.

Publications: 200 full papers including reviews.

Recent book in collaboration with Johan Vereecke "Cardiac Cellular Electrophysiology" (2002) in the series Basic Science for the Cardiologist.

Admired scientist: Alan Hodgkin.

Relaxation: Music, choir singing, gardening, bicycling.



Brisbane 2004 !!!

AT THE START of each year, most of us set some goals for the year to come and even further into the future. As ISHR members, we would like you to put the next World Congress in Brisbane down as one of your goals for 2004. To make this easier, we have set up a website at www.heart2004.com which will expand to contain all the information needed for this meeting. Now let me tell you about the plans for this meeting.

The XVIII World Congress in Brisbane will be only the second one held in the Southern Hemisphere – the previous one was held in Melbourne in February, 1986, organised by Winifred Nayler and Michael Clarke. The Brisbane meeting will continue the traditions of excellent science and relaxed fellowship between cardiovascular researchers that have characterised their meetings. The International Scientific Program Committee under the chairmanship of Ed Lakatta is working on an exciting list of symposia that will emphasise the latest advances in cardiovascular research. Over 120 suggestions for symposia were received from members for the 40 available spaces. One of the most exciting areas will be cardiac regeneration with further results from stem cell research eagerly awaited. We are intending to have the full list of symposia available on our website in September, 2003.

This theme of this Congress – *Cardiology from bench to bedside: science and practice* – reflects that this will be a fully integrated meeting with the Cardiac Society of Australia and New Zealand (CSANZ). All sessions of both societies will be held in Brisbane's modern Convention Centre with ISHR and CSANZ members having access to all sessions to allow a positive feedback to members of both societies. This simply reflects reality – basic science is critical to advances in clinical practice and clinical science provides questions for basic scientists to answer.

A further reason to come to Brisbane in August 2004 will be to participate in the 8th World Congress of Clinical Pharmacology and Therapeutics (CPT) which immediately precedes the ISHR Congress at the same venue. In particular, CPT 2004 will be hold-

ing several cardiovascular symposia on the final 2 days, emphasising some of the exciting possibilities in cardiovascular therapeutics.

What can you expect at the conference? We will be starting each day with a plenary lecture leading into 5 or 6 symposia. The midday break will be extended to at least 2 hours to allow thorough discussions with lunch around the posters. The afternoons will start with the named lectures followed by symposia. In the evenings, we are aiming to follow the excellent Winnipeg innovation of a public lecture. There will be one afternoon free for a trip, probably to the Australia Zoo north of Brisbane that is home to Steve Irwin and other native Australians.

The ISHR now has several prestigious lectures named after eminent cardiovascular researchers. This is the opportunity to hear some of the best cardiovascular researchers explain the excitement of their research. As a society, we also have worthwhile awards to encourage the best of the young investigators. Their participation will be encouraged by awards to the best of those members under 32 years of age. Details will be posted on our website. We will also be asking all the Young Investigator finalists from Winnipeg to present their studies since the last World Congress.

To add more to the experience, four satellites will be held around the Brisbane meeting – two before the meeting at the Iguazú Falls on the border of Argentina and Brazil and in Melbourne, Australia with two following the meeting in Hong Kong and at the Kruger National Park in South Africa. These satellites demonstrate that the ISHR is the only international body solely devoted to cardiovascular research. The first satellite (August 1-3, 2004), on *Heart Failure 2004: an integrated basic & clinical approach* will be co-ordinated by Alicia Mattiazzi (ramattia@atlas.med.unlp.edu.ar). The Melbourne meeting emphasising *Cardiovascular ageing: current understanding and new challenges* will be held from August 3-5, 2004. Salvatore Pepe (Salvatore.Pepe@baker.edu.au) will be the main contact person for this meeting. Ricky Man (ISHR-Satellite@hkucc.hku.hk) will be organizing the Hong Kong meeting on *Endothelial Factors and Coronary Disease* (August 13-15, 2004).

The same dates will be used for the satellite on *Cellular injury in ischaemia* in the Kruger National Park – contact Jacques van Rooyen (JVROOY@land.sun.ac.za) for details. These meetings have in common with Brisbane: exciting science in exciting venues!

The next question is how to get to these meetings. The official airline for the meeting is the Australian flag-carrier, QANTAS, which is part of the One World Alliance with British Airways, American Airlines, Cathay Pacific and Lan Chile among others. You can check the details on the QANTAS home page at www.qantas.com.au. You'll be surprised how little extra a round-the-world trip costs compared with a Europe or North America to Australia return ticket. Take the chance to have two stops on the return ticket – Buenos Aires or Melbourne on the way to Brisbane and Hong Kong or Johannesburg on the way home.

Finally, the success of this meeting depends on your active participation. Keep going with that ground-breaking research during 2003 so that we will be unable to resist accepting your abstract. Keep up-to-date with everything you need to know at www.heart2004.com. The ISHR website (www.ishrworld.org) is also an important source of information for members.

Dates to remember:

Deadline for Abstracts: February 29, 2004;

Deadline for Young Investigator Grant applications: February 29, 2004;

Notification of acceptance of abstracts: March 29, 2004;

Deadline for hotel registration: May 31, 2004;

CPT 2004: July 31-August 6, 2004;

Pre-conference satellites:

Iguazú Falls (Argentina/Brazil): August 1-3, 2004;

Melbourne (Australia): August 3-5, 2004;

ISHR2004: August 7-11, 2004;

CSANZ 2004: August 8-11, 2004;

Post-conference satellites:

Hong Kong (China): August 13-15, 2004;
Kruger National Park (South Africa): August 13-15, 2004.

Lindsay Brown, Ph.D.
Brisbane, Australia

ISHR MEETINGS CALENDAR

- June 21-24, 2003. **XXIII Meeting of the European Section, together with Heart Failure 2003 (ESC).** Strasbourg, France. **Enquiries:** ESC, 2035 Route des Colles, BP 179 - Les Templiers, 06903 Sophia Antipolis Cedex, France. *Tel.* +33 4 9294 7600; *Fax* +33 4 9294 7601; *Website* www.escardio.org
- June 28-July 1, 2003. **XXV Annual Meeting of the North American Section.** Mystic, Connecticut. **Enquiries:** Gerald Cordis, Cardiovascular Research - L1086, Department of Surgery, University of Connecticut, School of Medicine, 263 Farmington Avenue, Farmington, CT 06030-1110, USA. *Fax* +1 860 679 4606; *E-mail* gcordis@neuron.uchc.edu; *Website* <http://ishr2003.uchc.edu>
- August 16-18, 2003. **XII Meeting of the Latin American Section.** Buenos Aires, Argentina. **Enquiries:** Dr A. Mattiazzi, Centro de Investigaciones Cardiovasculares, Facultad de Medicina, 60 y 120, 1900 La Plata, Argentina. *Tel./Fax* +54 221 483 4833; *E-mail* ramattia@atlas.med.unlp.edu.ar or aral@sinectis.com.ar
- August 30 - September 3, 2003. **XXV Congress of the European Society of Cardiology.** Vienna, Austria. **Enquiries:** *E-mail* webmaster@escardio.org; *Website* www.escardio.org
- November 9-12, 2003. **Scientific Sessions of the American Heart Association.** Orlando, FL. **Enquiries:** American Heart Association, Meetings and Councils, 7272 Greenville Avenue, Dallas, TX 75231. *Tel.* +1 214 706 1543; *Fax* +1 214 373 3406; *E-mail* scientificconferences@amhrt.org; *Website* www.americanheart.org
- November 22-24, 2003. **XX Meeting of the Japanese Section.** Tokyo, Japan. **Enquiries:** Dr S. Mochizuki. *E-mail* m_seibu@jikei.ac.jp
- August 7-11, 2004. **XVIII World Congress of the International Society for Heart Research.** Brisbane, Australia. **Enquiries:** ISHR 2004 Congress, PO Box 164, Fortitude Valley QLD 4006, Australia. *Tel.* +61 7 3854 1611; *Fax* +61 7 3854 1507; *E-mail* heart2004@ozaccomm.com.au; *Website* www.heart2004.com

THE HEART FAILURE ISHR-ES/ GLAXOSMITHKLINE SCHOLARSHIPS

The European Section of the International Society for Heart Research and GLAXOSMITHKLINE invite submissions for the second ISHR-ES/GLAXOSMITHKLINE Research Scholarships.

The purpose of these Scholarships is to support the initiation or development of scientific collaborations between outstanding groups in the field of cardiovascular research by providing young investigators from a European country with three-months support allowing them to perform a research program in another European country.

The term European refers not only to the countries of the European Union but to all countries belonging to the European Section of ISHR.

Applications should be received by Dr Frantisek Kolar, Secretary of the ISHR-ES, Institute of Physiology, Academy of Sciences of the Czech Republic, Videnska 1083, 142 20 Prague 4, Czech Republic, **no later than 31 March 2003**. Details of the competition can be found at www.usouthal.edu/ishr/GSK.pdf.

Jean-Jacques Mercadier, M.D., Ph.D.
Past-President and Treasurer of the ISHR-ES ■

Nominations for the Officers and Council of the ISHR

The Nominating Committee of the ISHR is charged with providing Council with a list of candidates for the 2004 election of new Officers and Council Members.

Members of the Society are invited to send written suggestions for possible candidates to the Chairman of the Committee: Professor D.J. Hearse, Cardiovascular Research, the Rayne Institute, St Thomas' Hospital, London SE1 7EH, UK.

Suggestions for consideration by the Committee should be received no later than 31st April 2002.

Heart News and Views in Colour

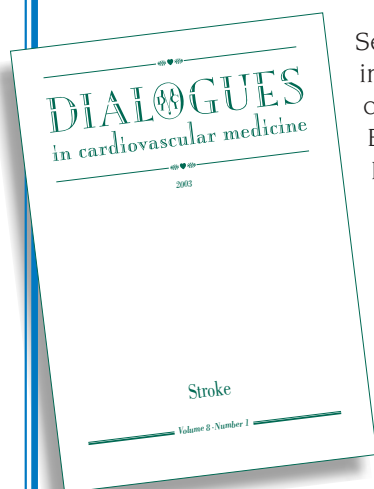
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HEART NEWS AND VIEWS

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Servier supports a number of important projects in the field of cardiology, such as the Education and Training Programs of the European Society of Cardiology.

Servier is also the founding father of The *European Cardiologist Journal by Fax* and *Dialogues in Cardiovascular Medicine*, a quarterly publication with a worldwide circulation edited by

Roberto FERRARI and **David J. HEARSE**.

Dialogues discusses in a comprehensive way issues from the cutting edge of basic research and clinical cardiology.

The forthcoming issue, devoted to
STROKE
will feature articles by:

G. Mancia, G. A. Donnan, J. L. Reid &
M. Walters, J. Bogouslavsky

For further information on
Dialogues in Cardiovascular Medicine please contact:
Mr Thierry Hénane - Servier International
192 avenue Charles de Gaulle - 92578 Neuilly-sur-Seine Cedex - France
or webmaster@servier.com

HEART NEWS AND VIEWS

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