



# HEART NEWS AND VIEWS

The News Bulletin of the International Society for  
Heart Research

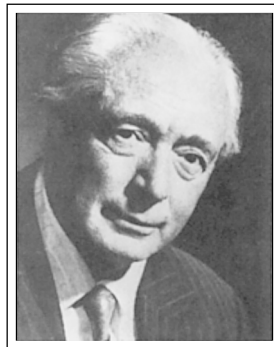
[www.ishrworld.org](http://www.ishrworld.org)

Volume 8, Number 1, 2000

**S**URVIVAL and procreation determine our existence. Sublimation of these biological drives is responsible for artistic and scientific pursuits and the search for meaning of the past and present. The past is the guidepost for the future. The lives, tribulations and triumphs of men and women who preceded us are a most important part of history. From them, we learn that our ancestors faced many of the difficulties which confront us today.

The career of Raymond Ahlquist is an example of life made difficult because of ignorance and prejudice. Ahlquist was the antithesis of venture capitalist scientists whose motivation is not the search for the unknown, but financial and social reward. Raymond P. Ahlquist was born in Missulah, Montana in 1914. He received his Ph.D. degree in pharmacology from the University of Washington. After being affiliated with South Dakota State College, he moved to the Medical College of Georgia where he became Professor and Chairman of the Department of Pharmacology. In 1977 he was appointed the Charbonnier Professor of Pharmacology. He died in 1983. In 1948, he published an article in the *American Journal of Physiology* which was to revolutionize cardiology and pharmacology entitled "A study of the adrenotropic receptors." This paper had a curious history. It was undertaken to find a remedy for dysmenorrhea. A uterine muscle relaxant was therefore needed. Ahlquist had difficulty in publishing this paper, and once published, it remained unnoticed for several years. In this paper, Ahlquist graded the reaction of a series of six sympathomimetic amines on vasoconstriction, the pupil, heart, gut and uterus. He found that their action, inhibitory or excitatory, depended on the site of action. He concluded that the relative density and distribution of two types of receptors (alpha and beta) determines the opposing responses at different locations. This idea challenged the then current opinion of the scientific establishment led by Walter Cannon of Harvard, who had postulated

## Past Truth & Present Poetry



### 12. The Fate of Pioneers

the role of two transmitter substances for adrenergic impulses, sympathin E and sympathin I. I remember a lecture which Dr Cannon gave at the College of Physicians and Surgeons at Columbia University in 1936 in which he stressed the relationship between adrenaline to sympathins. Unquestionably, the reviewers judging Ahlquist's paper belonged to this establishment, and encouraged the editorial rejection slip that followed the first submission of this report to the *Journal of Pharmacology and Experimental Therapeutics*. The paper was also a loser in the Able Award competition, and only could be published in the *American Journal of Physiology* due to Ahlquist's personal friendship with W.H. Hamilton, the editor.

Ahlquist himself compared his fate to that of other pioneers of science, for example, that of Avery, who in 1944, proved that DNA, not protein, was the genetic carrier.

Although Ahlquist's 1948 paper was first ignored, a time came when it was finally noticed, primarily because of the confirmation and extension of his work by Powell and Slater, and by Black. Powell and Slater's discovery in 1958 provided the turning point in the acceptance of the idea of dual receptor mechanism. They found that the dichloro analog of isoproterenol selectively blocked some inhibitory effects of epinephrine and isoproterenol. In 1964, Black, working with the Imperial Chemical Industry at the medical unit of St. George's Hospital in London, synthesized a new adrenergic beta-receptor antagonist, Inderal (propranolol), which satisfies most of the criteria of a beta-blocker. A.C. Witham, from the Medical College of Georgia, wrote that Ahlquist estimated the maximum cost of his experiments to be \$3500. This included about \$3200 for his annual salary, which also provided instruction in pharmacology for the entire class of 65 medical students. About \$300 for supplies, animals, etc., was scraped from the department budget. Dogs from the local compound cost \$1 each. Student laboratory equipment was

used in the experiments. Witham concludes, “No external meddling, no technicians, no research grants, no administrative overhead!”

What does Ahlquist’s scientific history teach? Let us speculate on the answer he might have received if he had submitted a research grant. It is not difficult to guess the contents of the comments returned to him by the reviewers. Some of the remarks: “this is mere speculation,” “goes against the established facts”, “conclusions are based on insufficient experimental evidence.” All this proves the well-known fact that our judgment is often biased against the new and the unusual. Great discoveries can be relatively simple, and need not necessarily involve complicated techniques, although these may be needed. Peer reviewers can separate the very good from the mediocre and bad, but they have often failed to recognize the new, unusual and outstanding, particularly when it is presented without the frills of scientific grantsmanship.

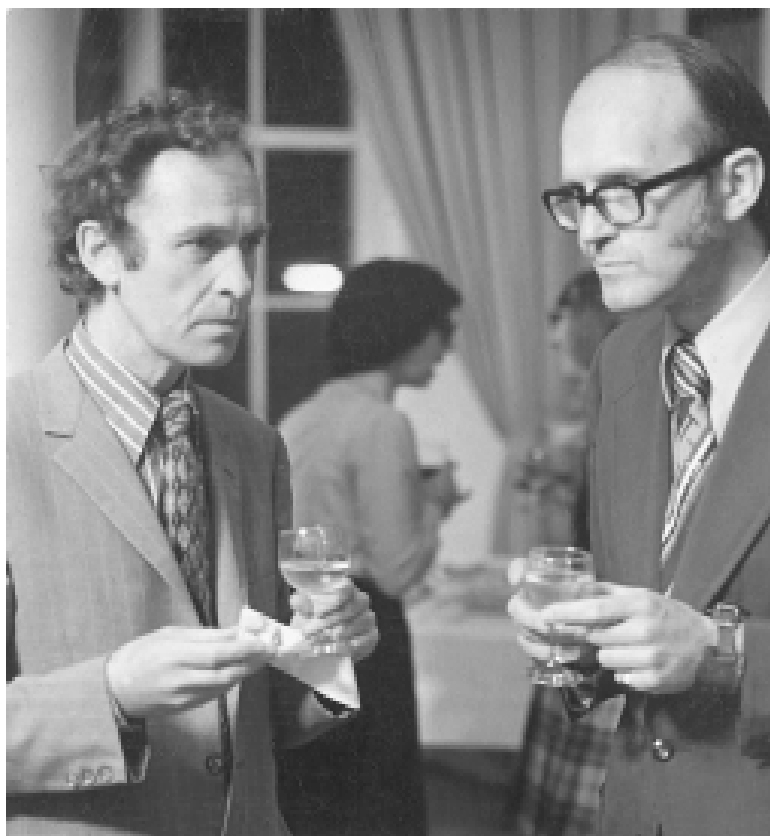
Ahlquist’s struggle also teaches us how research has changed. Like medicine, it has undergone a revolution. In Ahlquist’s time, the motivating force in research was the search for the unknown. Now, the dance around the golden calf of financial success is the driving force. Treatment with alpha and beta blockers or agonists has been introduced for coronary heart disease, hypertension, urological dysfunction and ophthalmological disorders amongst others. While Ahlquist’s expenditure for his experiments was a few thousand dollars, the pharmacological industry has spent millions on his ideas and has earned billions. Admittedly, these efforts of the industry have had advantages, particularly because of the development of new compounds. Ahlquist himself derived little monetary gain from his discovery, although he received the Lasker Award. Ahlquist’s fate is that of many original artists and scientists, yes, of all who present new ideas. As George Bernard Shaw wrote

in his *Saint Joan*, “Oh God that madest this beautiful earth, when will it be ready to receive thy saints? How long, oh Lord, how long?”

*Richard J. Bing, M.D.* ■

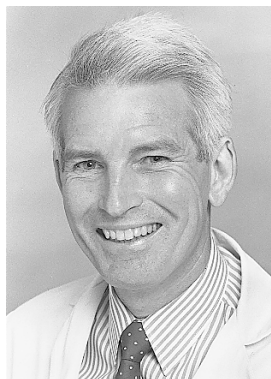
---

This issue contains the second part of Lionel Opie's *A Rosy View of Life through Glucose-Coloured Glasses: the 1998 Peter Harris Award Lecture (Rhodes, Greece)*. The quality of **Figure 1** of the first part of Dr Opie's article (which appeared in HEART NEWS AND VIEWS Volume 7, Number 3, 1999) was not optimal ("Both Peter & I look half-dead" according to Dr Opie). Because of the historical importance of this photograph, which was made approximately thirty years ago, it is printed again.



*Peter Harris (left) and the author*

## PRESIDENT'S LETTER



### Forging Links

Although the ISHR is a large organisation we can always benefit from interactions with other societies. At our World Congress in Greece in 1998, we forged for the first time, an important link with the American Heart Association through sponsorship, support and active participation from several of its Councils. From this initiative has grown a more formal association and it's really good to learn from Roberto Bolli's contribution in this issue of HEART NEWS AND VIEWS (*see page 10*) that we now have cross representation between our Council and that of the AHA Council on Basic Cardiovascular Science; that this AHA Council will play an important role in the forthcoming American Section Meeting in Louisville and that we will have mutual access to each other's publications and membership lists

- something that will be of great value to both of our Societies. Other links are also springing up - the European Section of the ISHR now makes a regular contribution to the programming and symposia of the annual meeting of the European Society for Cardiology. In Brisbane in 2004 our World Congress will be held in association with the annual meeting of the Cardiac Society of Australia and New Zealand - not only is this likely to double the attendance at our Congress but it will also ensure the cross fertilisation of basic science and clinical medicine which is so vital to real advances in our understanding of cardiovascular biology and medicine.

### Helping Young Investigators

Some more good news is that the Trustees of the ISHR International Travel Fund have just voted to make available up to 80 travel awards of up to \$400 to help young members of our Society attend our World Congress in Winnipeg in 2001 and also our Congress in Brisbane in 2004. Details of these awards can be obtained directly from the organisers of those meetings. On the subject of young investigators, it is now timely to remind members about our Richard Bing Young Investigators Competition which will take place in Winnipeg in 2001. In addition to the opportunity to present your best work, this competition carries with it handsome cash prizes for the winner and three runners up.

### Research of Distinction

Thanks to the remarkable effort of Roberto Bolli, our Society now has a major new Research Achievement Award which carries with it a stipend of \$30,000. Details of this tri-annual prize, which will be awarded for the first time in Winnipeg next year, are given in a special announcement by Roberto Bolli in this issue of HEART NEWS AND VIEWS (*see page 9*). The Award is generously sponsored by the Chugai Pharmaceutical Company of Japan and the ISHR is deeply indebted to Chugai for supporting this very important venture.

### Fellowship of the ISHR

I announced details of this new initiative in earlier issues of this bulletin and there has been a superb response with very many nominations for this new distinction. In the first instance, the ISHR will appoint 50 Founding Fellows who will be recognised by their enormous contribution to the advancement of cardiovascular knowledge. Selecting these Fellows will be a challenging task - it will be carried out by an international Credentials Committee chaired by Howard Morgan. Again, the first phase of this initiative will coincide with the Winnipeg World Congress.

### [www.ishrworld.org](http://www.ishrworld.org)

Thanks to the hard and creative work of Jim Downey, Roberto Bolli and their colleagues, the ISHR has a superb and ever growing web site with links to our Sections, our Journal and to other societies. Jim has just launched a new initiative aimed at developing a series of laboratory guides - concise 'how to do' articles on topics such

*(continued on page 4)*

as heart perfusion and myocyte preparation. Details of this valuable new resource are given by Jim elsewhere in this issue of HEART NEWS AND VIEWS (see page 11).

As always, I and the Council of the ISHR, welcome members suggestions for improving our Society and this can now be done by a direct e-mail link to myself and our other officers and details can be found on our web site.



David J. Hearse

---

---

## A Rosy View of Life through Glucose-Coloured Glasses: the 1998 Peter Harris Award Lecture (Rhodes, Greece) - Part 2

This is the second part of an article by **Dr Lionel H. Opie**, the fifth recipient of the Peter Harris Distinguished Scientist Award. The first part appeared in HEART NEWS AND VIEWS 1999:7(3): 3-6.

### New Ischaemic Syndromes

Just when we thought that all the major problems could all be explained by metabolic events surrounding the ischaemic and reperfusion phases, in stepped the New Ischaemic Syndromes. This term, now widely used, was dreamt up in 1996 when I needed to convince a number of outstanding researchers that they would largely have to pay their

own fare to Cape Town for a small symposium on stunning, hibernation and preconditioning. The history of each of these entities goes back for many years, and each deserves a chapter. Heyndrickx and Braunwald gave us stunning, and Rahimtoola gave us hibernation. But I particularly want to emphasize the pioneering work of one of our founding fathers, Bob Jennings, who gave us the term preconditioning,<sup>21</sup>

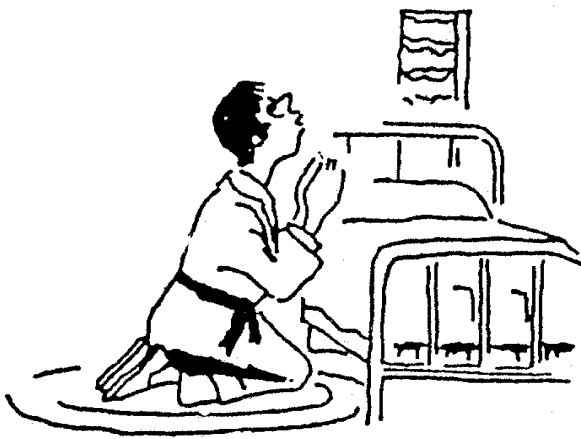
and thereby paved the way for the involvement of a host of prominent workers in this Society. At the risk of collecting flack for leaving out so many, I would like to mention those who came to the first meeting on the New Ischaemic Syndromes held in Cape Town, including Derek Yellon, Roberto Bolli, Gerd Heusch and Roberto Ferrari (Figure 5). Arising from their work and that of others such as Jim Downey (another visitor to Cape Town on another occasion), is the im-

portant new concept that *ischaemia can initiate not only harmful and death promoting events but protective signalling of major sequences*. (For the mysteries of protein kinase C, see **Figure 6**).

New Ischaemic Syndromes is a cover-all-term that has rightly been criticised, but I think is likely to survive because it brings together the essential point that all these new ischaemic syndromes expand the vision of ischaemia and are completely different from the old ischaemic syndromes, such as angina pectoris and myocardial infarction. The Cape Town hypothesis is that glycolysis and calcium play an important role in stunning. In hibernation too, the uptake of glucose (fluoro-deoxy-labelled glucose) is the gold standard to delineate viable myocardium. And in preconditioning, although calcium and glycolysis may not be crucial, it is clear that calcium plays a pivotal role in internal signalling because it activates protein kinase C. Very recent work by Jonassen in the laboratories of Derek Yellon, suggests that insulin and other growth factors may delay or inhibit apoptosis in the reperfusion period,<sup>22</sup>



**Figure 5. Roberto Ferrari,** caught in Rome while working on our conjoint book, Atlas of the Myocardium (Raven Press, New York; 1992). Trained under Peter Harris and Winifred Nayler.



**Figure 6.**

... and help me to understand the signal system in preconditioning.

and thereby help to explain the infarct-limiting effects of preconditioning. This brings me to growth factors and growth of the Cape Town Research Institute.

### Chairs, Institutes and Cardiology at the Limits

With so much research to do, the question became: how to maintain heart research in a new South Africa, when the Medical Research Council unit had perforce to close at my 65th birthday. Cecil John Rhodes on his deathbed said: "So much to do and so little done". But, suddenly a saviour stepped in. Derek Yellon, from London, and I, successfully negotiated for the Roche Chair of Cellular Cardiology, a post which we would fill with a brilliant young molecular cardiologist, Michael Sack. He believes that the answer to maximising glycolysis lies in gene manipulation to upregulate potentially rate limiting enzymes.

Michael Sack is also Director of the Cape Town Hatter Institute, a junior sister of the London Hatter Institute, of which Derek Yellon is Director. Thus, in Cape Town we have access to First World technology that we can't afford, and several major collaborative projects have flourished. As if this were not enough, we have grown also by becoming part of the new Cape Heart Centre, nearly six stories of prime research space. In this Centre there is interactive

work with Professor Peter Zilla (who believes that he can convert polymer proteins into new parts for the heart) and Professor David Marais (an expert on lipids and coronary disease). The Cape Heart Centre has also been recognized by the Medical Research Council as a major component of the Inter-University Cape Heart Research Group. Thereby, we are now officially linked with Professor Amanda Lochner's flourishing group at the nearby Stellenbosch University, and with the developing group of Professor Daneel Dietrich of the University of the Western Cape, working closely with Dr Sack on apoptosis. I might add that Professor Lochner has been a source of great intellectual companionship and interest throughout my career, and is a true innovator. For example, she has delineated the role of protein kinase A (PKA) in preconditioning,<sup>23</sup> when Jim Downey (Figure 7) and many others have been concentrating on PKC. We are about to enter a new era of molecular cardiology, as we are looking at the role of stunning and preconditioning in relation to growth factors and cytokines, including tumour necrosis factor alpha, a particular interest of Michael Sack.

So we can now prophesy a truly exciting future for the Heart Research Group, the Hatter Institute and the Cape Heart Centre. I am truly privileged that the University of Cape Town has extended my stay so that I can, hopefully, continue to contribute in a very creative future. I am privileged to be able to or-

ganise with Derek Yellon the highly regarded annual conference, Cardiology at the Limits, that reflects the productive links between the University of Cape Town and University College London, and their respective Hatter Institutes. Peter Harris is, I am sure, delighted to know that the seeds he planted in 1970 are still bearing fruit in 1999, in the year 2000 and beyond.

### References

21. Murry CE, Jennings RB, Reimer KA. Preconditioning with ischemia: a delay of lethal cell injury in ischaemic myocardium. *Circulation* 1986; **74**: 1124-1136.
22. Jonassen AK, Brar BK, Mjos OD, Sack MN, Latchmann DS, Yellon DM. Cardioprotective effect of insulin at reperfusion - a possible antiapoptotic mechanism (Abstract). *Circulation* 1999; **100**: I-10.
23. Lochner A, Genade S, Tromp E, Podzuweit T, Moolman J. Ischemic preconditioning and the  $\beta$ -adrenergic signal transduction pathway. *Circulation* 1999; **100**: 958-966.

Lionel H. Opie, M.D., D.Phil., F.R.C.P.  
Cape Town, South Africa



**Figure 7.**

Amanda Lochner (PKA ...!) and Jim Downey (PKC ...!).

## Report on The Second International Amsterdam Mouse Symposium (April 13-15, 2000)

From April 13-15 the Academic Medical Center (AMC) in Amsterdam hosted, for the second time, the Amsterdam Mouse Symposium. It was the successor of the one-day symposium held in December 1998. This time the symposium, with support of the ISHR, was advertised internationally. The results presented during the first conference were sometimes preliminary and a lot of participants had just started or wanted to start to use the mouse model. Afterwards it was clear that this conference certainly filled a need and should be continued. This time twice as much time was available and the group of participants had expanded to about 215. Researchers of different nationalities were welcomed who could listen to 33 speakers, half of them from outside the Netherlands. The focus was again on cardiovascular physiology and genetics, and how to implement existing experimental techniques in the mouse. The subject gathered a group of researchers with various backgrounds, who would normally be less likely to meet each other. This interdisciplinary approach provided the molecular biologist with more insight into mouse physiology, and the physiologist with more background information on gene models and techniques. This report will continue with a personal selection of the presentations.

The meeting was opened by the organizers of the symposium. Can Ince welcomed all participants and David Hearse continued with a lecture entitled: *Why mice?* The recent progress in generating transgenic mice suitable for cardiovascular physiology, which specifically allows the study of physiological mechanisms, explains the recent interest in the mouse model. Dr Hearse argued that the mouse would not be the animal of first choice to perform cardiovascular research, considering its size and the gaps in knowledge of its physiology. He expressed his concern about the relatively few studies describing a proper characterization of cardiovascular physiology in the mouse. Instead, most studies seem to extrapolate

physiological parameters from other species to the mouse. Dr Hearse emphasized, therefore, that characterization of the experimental model is essential for a correct interpretation of collected data. Later, Fiona Sutherland from his lab gave a clear overview of the difficulties encountered when setting up Langendorff perfusion of the mouse heart. Several parameters (developed pressure and intraventricular balloon volume relationship, pacing rate,  $[Ca^{2+}]$  of the buffer), which may all influence cardiac physiology, were varied and systematically tested. As a result, several experimentally founded arguments could be provided as to the reason for choosing specific conditions in Langendorff mouse heart perfusion.

The meeting continued with a presentation by Howard Rockmann (Durham, USA) on a mouse knockout model of the muscle LIM protein (MLP), which is considered a genetic model for heart failure and also shows the reduced cardiac responsiveness to catecholamine stimulation characteristic for heart failure. When this MLP knockout mouse was crossbred with a mouse that overexpressed the inhibitor protein of the  $\beta$ -adrenergic receptor kinase, the hybrid did not show downregulation of  $\beta$ -adrenergic receptors. Evidence that the enhanced degradation of phospholipids after ischemia/reperfusion injury was not due to the phospholipase A2 enzyme was given in a presentation on the working mouse heart. In a transgenic mouse in which the expression of this protein was blocked, a similar phospholipid degradation as in wild type mice was found. Next, Sophie Demolombe (Nantes, France) showed the presence of atrioventricular block and long Q-T syndrome in transgenic mice that had a specific mutation in the cardiac K channel comparable to a mutation observed in human disease.

The talks were interrupted by a poster session. Each representative got the opportunity to further explain their poster in a five minute talk. New in this year's symposium was the presence of representatives from several manufacturers demonstrating equipment useful in cardiovascular research.

The session was continued with several talks on more technical aspects of mouse physiology. One talk discussed the technical possibilities and limitations of radio telemetry

to measure physiological parameters in freely moving mice. Another presented specific differences in the anatomy of the mouse cardiovascular system as compared with animals such as the rat and rabbit. Subsequently, an overview of the techniques used to generate transgenic mice was given. Traditional techniques with their pitfalls and new approaches enabling better targeting and expression were compared. In addition, the new possibilities to knockout a gene in a specific organ or pharmacologically silence a gene at a specific time point were discussed. At the end of the day Peter Carmeliet (Leuven, Belgium) showed that the placenta growth factor (PLGF), which resembles VEGF, might be a more promising factor to induce vessel growth. PLGF was found to enhance the effect of endogenous VEGF, but in contrast to VEGF, its administration does not result in hypotension nor has it an effect on neural cells and quiescent endothelial cells.

The following morning started with some technical talks. The consequences of the use of different anesthetics and fluid application on blood pressure, heart rate and organ dry-weight in various mice strains was presented. In the next presentation, microsurgical techniques in mice were discussed. Some instructions for good laboratory practice were given and the need for using aseptic techniques in survival experiments was emphasized. The session was continued with a talk on the technical difficulties (heart rate, size) of developing and improving magnetic resonance imaging in the mouse. This technique allows non-invasive characterization of cardiac anatomy and function within 30 s at a spatial resolution of 0.1 mm.

In the next session various physiological applications of different knockout models were presented. Myocardial  $O_2$  consumption in CK knockout mice was shown to adapt more quickly to a step increase in heart rate than wild type controls. The next speaker demonstrated that  $\alpha$ -glucosidase knockout mice have a reduction in cardiac contractile reserve. Subsequently, Jürgen Schrader (Düsseldorf, Germany) showed that, perhaps contrary to what one would expect, myoglobin knockout mice are viable due to various compensatory mechanisms.



Increased blood clotting was observed in plasminogen activator knockout mice as well as in thrombomodulin knockouts. In an ApoE knockout mouse with hypercholesteremia an endothelin-1 antagonist attenuated the damage after ischemia/reperfusion. Can Ince showed some applications of optical spectroscopy such as imaging the microcirculation by orthogonal polarization spectral (OPS) imaging. The use of polarized light in this new technique of OPS imaging results in clearer images and allows the measurement of the microcirculation of internal organs as it uses an optical fibre.

There were several presentations on the effects of NO on the cardiovascular system. Axel Gödecke (Düsseldorf, Germany) showed, with an endothelial NO-synthase (eNOS) knockout model, that there is a role for NO in bradykinin-mediated coronary vasodilation. However, basal coronary flow is not impaired as P450 monooxygenase seems to compensate for this loss. Daryl Rees (London, UK) presented results on differences in O<sub>2</sub> consumption in septic mice treated with an inhibitor of NO synthesis as compared with controls, indicating an irreversible binding to one of the complexes involved in the respiratory chain. In an inducible model of eNOS overexpression it was shown that increased NO synthesis had no effect on heart rate or blood flow. However, blood pressure was diminished and could be elevated by the NO-synthase inhibitor L-NAME.

After listening to about 16 talks, either side of a poster session, the evening was reserved for the conference dinner, held in a Japanese Teppan Yaki restaurant on the top floor of the “Havengebouw” (Harbour building) in the Amsterdam dock area. From this building a nice overview of the harbour and city center could be appreciated. All participants, provided with kimonos and placed around a fire plate, could enjoy the magician-like on site preparation of Japanese meat, fish and vegetarian delicacies.

With the likelihood of ensuring a good attendance during the Saturday morning, the organizers had scheduled some attractive talks. David Lefer from the USA showed that the compound simvastatin, besides its well known properties of lowering cholesterol, is also able to reduce infarct size of the heart after ischemia/reperfusion. The suggested working mechanism is by stabilizing eNOS mRNA and points to a beneficial role of NO in the development of myocardial infarction (MI). Indeed, a bigger MI was found in eNOS knockouts and no reducing effect of simvastatin was found on MI development. In addition, some talks on new genetic techniques like the generation of single copy transgenics and the analysis of multiple gene expression by DNA microarray and differential display were presented.

The final presentations illustrated the possibilities of altering gene expression for future models of gene therapy. David Roth (San Diego, USA) showed that cardiac di-

rected overexpression of the adenylyl cyclase type 6 isoform improved contractility and survival rate in a murine heart failure model, while heart rate and cardiac activity were the same as in controls. Wolfgang Franz (Lübeck, Germany) showed two additional examples in which cardiac contractility was improved by overexpressing either troponin or the sarcoplasmic calcium-ATPase in a heart failure model. While it still has to be shown what the consequences are for the long term, these first results seem to be promising. However, one of the difficulties that still has to be overcome is both a safe and an efficient transfer of the genetic vector to the targeted organ, as was discussed by Van Zonneveld (Leuven, Belgium). The meeting ended with the presentation of the poster award to Debbie Ceiler from Paris for her study on the application of echocardiography in kallikrein knockout mice.

During the symposium the address of a new website ([www.mousephysio.com](http://www.mousephysio.com)) was announced, which will be used to join and collect further information on mouse cardiovascular physiology. Let us hope that this site will continue the discussions started during the symposium and will generate ideas for the third symposium to be held in February 2002.

*Harold Raat, Ph.D.*  
*Amsterdam, The Netherlands* ■



**T**HE ORGANIZERS of the XVII World Congress are pleased to invite you to the conference in Winnipeg which is designed to blend basic, clinical and epidemiological aspects of cardiovascular diseases. Approximately 400 invited speakers consisting of young and established investigators, distinguished scholars and Nobel Laureates will cover the most recent advances and will set the stage for cardiovascular health in this decade. The scientific program will be comprised of 9 special sessions, 54 symposia sessions, award competitions and about 1 000 poster presentations.

**Topics to be covered:**

- ◆ Hypertension
- ◆ Cardiac hypertrophy
- ◆ Heart failure
- ◆ Cardiomyopathies
- ◆ Myocardial infarction
- ◆ Atherosclerosis
- ◆ Thrombosis
- ◆ Arrhythmias
- ◆ Restenosis
- ◆ Vascular disease
- ◆ Cardiac development
- ◆ Neointimal hyperplasia
- ◆ Endothelial dysfunction
- ◆ Aging heart
- ◆ Transplanted heart
- ◆ Reperfusion injury
- ◆ Oxidative stress
- ◆ Apoptosis and necrosis

**Categories and number of the Scientific Session:**

- ◆ Special lectures and award competitions 9
- ◆ Molecular biology and genetics 9
- ◆ Clinical cardiology and surgical devices 9
- ◆ Electrophysiology and pharmacology 6
- ◆ Pathophysiology and biochemistry 6
- ◆ Signal transduction and metabolism 6
- ◆ Nutrition and exercise 6
- ◆ Risk factors and environment 6
- ◆ Epidemiology and population health 6

In addition, 5 satellite meetings will be held in Banff, Toronto, Burlington, Minneapolis and Montreal, before or following the congress. The annual meetings of the American, European, Latin American Sections of the ISHR, the Japanese Working Group on Cardiac Structure and Metabolism and the International Society for Molecular Nutrition and Therapy will also be held in conjunction with the Winnipeg 2001 Congress. We are, therefore, planning for 3 500 participants including delegates, exhibitors, trainees and accompanying members. The meeting program will be structured to allow for intellectual exchanges both in formal and informal settings. The conference will be held in excellent and spacious facilities at the Winnipeg Convention Centre.

For a broader participation as well as to make the conference accessible to more participants, we are offering a comprehensive, cost-effective registration package. A registration of \$350 U.S. will include scientific sessions, opening reception, two dinners, four lunches and coffee during the sessions. The same package will be offered to trainees and accompanying persons for a reduced price of \$250 and \$200 U.S., respectively. Please mark on your calendar the last date for abstracts with registration, February 1, 2001 and the meeting dates, July 6-11, 2001.

This meeting promises to provide scientifically, socially and culturally enriching times to all visitors. Please plan to attend the Winnipeg 2001 Congress and share this experience with us. In order to receive a hard copy of the registration package, please contact us at: **XVII ISHR World Congress, c/o Institute of Cardiovascular Sciences, 351 Taché Avenue, Winnipeg, Manitoba, Canada R2H 2A6. Tel. +1 204 235 3421; Fax +1 204 233 6723; E-mail ishr@cc.umanitoba.ca; Web site www.heartconference.com** ■

---

# INTRODUCING THE RESEARCH ACHIEVEMENT AWARD OF THE ISHR

AN IMPORTANT MISSION of the International Society for Heart Research is the promotion and recognition of excellence in cardiovascular research. At present, our Society offers two awards designed for this purpose: the Richard Bing Award for Young Investigators (less than 35 years old) and the Peter Harris Award for Distinguished Scientists (not-so-young investigators - although no age limit is stipulated, thus far the recipients have generally been over 60 years old). While these awards have been very successful, they do not quite cover the entire spectrum of the academic landscape, since investigators who are in the intermediate phase of their academic career are excluded. This constituency is not only quite large but also extremely active. It encompasses many prominent scientists who are well-established and are likely to remain active for several years.

IN ORDER TO FILL this “gap”, the Society has created the Research Achievement Award. The purpose of this initiative is to recognize outstanding scientists who have made major and independent contributions to the advancement of cardiovascular science and are likely to further develop their research in the future. Thus, the main criteria for selecting awardees will be scientific excellence and potential for future scientific growth. While the Peter Harris Award recognizes lifelong accomplishments and the Richard Bing Award recognizes young talent, the Research Achievement Award is targeted at investigators who are in the intermediate phase of their academic career. To avoid overlap with the Bing and Harris Awards, eligibility for the Research Achievement Award will be restricted to individuals who are less than 55 years old at the time when the Award is given. The recipient of the Award must be an active member of the ISHR.

THE RESEARCH ACHIEVEMENT AWARD will be presented triennially at each World Congress of the Society. The recipient will be invited to give a special lecture during the World Congress and will be announced in the *Journal of Molecular and Cellular Cardiology* and in HEART NEWS AND VIEWS as well as in our web site. The Award will consist of a plaque and a monetary prize, the amount of which will be decided by the International Council. I am pleased to announce that the monetary prize for the first Award, which will be presented at the 2001 Winnipeg World Congress, will be \$30,000, thanks to the generous sponsorship of Chugai Pharmaceutical Company.

NOMINATIONS for the Research Achievement Award will be sought from members of the International Council, of the Editorial Board of the *Journal of Molecular and Cellular Cardiology*, and of the Councils of individual Sections. In addition, open invitations will be published in *JMCC* and HEART NEWS AND VIEWS and posted on the ISHR web site for members to submit nominations. The nominations will be evaluated by a multidisciplinary Selection Committee composed of at least 10 individuals, representing at least four Sections of the Society. The Selection Committee will include the President, the Editor of *JMCC*, the Secretary General, at least three members of the International Council, and at least one representative from each of four Sections. Additional members (over the limit of 10) may be appointed based upon the need for specific expertise in evaluating nominees.

FORMAL ANNOUNCEMENTS soliciting nominations will be circulated in the next few months to members of the International Council and Section Councils as well as board members of *JMCC* and will also be posted on the web site. I believe this initiative will further strengthen our mission to promote and foster excellence in cardiovascular research while enhancing the profile of our Society.

*Roberto Bolli, M.D.*  
*Secretary General*



---

# ESTABLISHMENT OF A LIAISON BETWEEN THE ISHR AND THE AHA

THE BRITISH SOCIETY FOR  
CARDIOVASCULAR RESEARCH



## BSCR Autumn Meeting 2000 MEDIATORS AND MECHANISMS IN MYOCARDIAL DISEASE

**Dates:** Monday 4<sup>th</sup> and Tuesday 5<sup>th</sup>  
September, 2000  
**Venue:** The Queen's University of  
Belfast – Peter Froggatt Centre  
**Organisers:** Barbara McDermott, David Bell

**Speakers will include:** Ralph Kelly (Boston), Ajay Shah (London), Barbara McDermott (Belfast), Paul Nicholls (Belfast), Håvard Attramadal (Oslo), Sian Harding (London), Jos Lamers (Rotterdam), Michael Böhm (Cologne), Derek Nunez (London), Alun Evans (Belfast); Ken McDonald (Dublin), John McMurray (Glasgow), Hiroshi Ito (Tokyo).

**Major Symposia:** Neurohormonal / autocrine-paracrine activation; Altered receptors and signalling; Genetics, epidemiology and therapeutic aspects.

**Communications:** Part of this meeting will be devoted to the presentation of free communications. Abstracts, on any topic, are welcomed and several abstracts related to the main theme of the meeting will be selected for oral presentation. Accepted abstracts will be printed in the Quarterly Bulletin of the British Society for Cardiovascular Research.

**Abstract deadline: 7 July 2000.**

**Bursaries:** The Society will consider awarding travel grants of up to £150 to *bona fide* PhD students. Application forms are available from the Honorary Secretary (see below).

**Travel:** The Peter Froggatt Centre is behind the Lanyon Building on the main University campus, which is easily accessible from Belfast International Airport (45 min), City Airport (20 min) and Central Station (10 min).

**Accommodation:** Rooms are available at the Queen's Elms Halls of Residence and there are a limited number at the QUB Senior Common Room (most with en suite facilities). A block reservation has also been made in the nearby Wellington Park Hotel.

**Registration:** Free to members, £40 to non-members. The Society's Dinner will be held in Cultra Manor at the Ulster Folk Museum at a cost of £20 per head. Registration and abstract forms are included in the Quarterly Bulletin of the British Society for Cardiovascular Research and can also be obtained from the Conference Secretary:

**Ms. Frances Price, Department of  
Therapeutics and Pharmacology,**  
✉ The Queen's University of Belfast,  
97 Lisburn Rd, Belfast BT9 7 BL  
☎ (0)2890-335770; FAX (0)2890-438346  
✉ f.price@qub.ac.uk

Applications for membership and student bursaries are available from Dr. Gary F. Baxter, Honorary Secretary of the BSCR, The Hatter Institute for Cardiovascular Studies, University College Hospital, Grafton Way, London WC1E 6DB

*CME and PGEA approval: accreditation currently being sought*

I am pleased to report that a liaison has been officially established between the International Society for Heart Research and the Council on Basic Cardiovascular Sciences (CBCS) of the American Heart Association. This was approved by both the International Council of the ISHR and the Executive Committee of the CBCS at their meetings in November, 1999, in Atlanta, Georgia. The rationale for seeking such a partnership is obvious. Both societies are devoted to the promulgation of cardiovascular research and to the dissemination of knowledge in cardiovascular medicine. On the other hand, each society can bring a unique perspective to this mission, with the CBCS being primarily composed of American scientists and the ISHR spanning the entire spectrum of worldwide cardiovascular investigation. By joining forces, the two societies will create significant synergies and momentum, resulting in mutual benefits. The liaison will entail the following:

- Joint sponsorship of scientific symposia and, scientific conferences. This will be inaugurated during the 22<sup>nd</sup> Annual Meeting of the ISHR – American Section in Louisville, Kentucky, which will be scientifically co-sponsored by the CBCS.
- Cross representation for the two Councils, whereby an ISHR representative (currently, Dr Gerd Heusch) attends the Executive Committee meetings of the CBCS and a CBCS representative (currently myself) participates in the ISHR International Council meetings.
- Each society now has access to the entire membership database of the other Society. With over 4,500 members, the database of the CBCS will prove very invaluable for announcing meetings or other activities of the ISHR. For example, announcements for the 22<sup>nd</sup> Meeting of the ISHR – American Section have been mailed to all CBCS members.
- The web sites of the two Societies will be linked. Among other things, this will enable ISHR members to have instantaneous access to the membership database of the CBCS and vice versa.
- Each Society will be allowed to advertise meetings or publish ads in the other Society's newsletter. This year, an ad inviting CBCS members to join the ISHR will be published in the CBCS's newsletter.

I believe the liaison with the CBCS will further evolve and deepen in the future and will benefit members of both Societies. The ISHR looks forward to a long-lasting and productive interaction with the CBCS and, hopefully, other cardiovascular societies as well.

*Roberto Bolli, M.D.*  
*Secretary General*



---

## ISHR MEETINGS CALENDAR

- August 5-9, 2000. **Benchtop Beside the Bedside: Joint Meeting of the Australasian Section and the Cardiac Society of Australia & New Zealand.** Melbourne, Australia. **Enquiries:** Dr S. Pepe, P.O. Box 6492 St Kilda Central, Melbourne, VIC 8008, Australia. *Tel.* +61 3 9522 4352; *Fax* +61 3 9521 1362; *E-mail* salvatore.pepe@baker.edu.au
- October 12-15, 2000. **XI Meeting of the Chinese Section.** Nanjing, China. **Enquiries:** Dr Q. Chen, Nanjing Medical University, Nanjing, China 210029. *Tel.* +86 25 6528 460; *Fax* +86 25 6508 960; *E-mail* qichen@njmu.edu.cn
- November 30 - December 3, 2000. **VII Meeting of the Latin American Section / Scientific Forum X.** Belo Horizonte, Minas Gerais, Brazil. **Enquiries:** Dr O.M. Gomes, Sao Francisco de Assis Cardiovascular Foundation / HSFA, Rua Jacui 1191 - Concórdia, Belo Horizonte/MG, Brazil CEP 31.110-050. *Tel./Fax* +55 31 444 8807; *E-mail* servicor@servicor.com.br
- December 6-8, 2000. **XVII Meeting of the Japanese Section and Satellite Symposium "Molecular Mechanisms of Excitation-Contraction Coupling in the Myocardium".** Osaka, Japan. **Enquiries:** Inter Group Corporation, Builco Building, 3-7-3, Nakatsu, Kita-ku, Osaka 531-0071. *Tel.* +81 6 6375 9477; *Fax* +81 6 6376 2362; *E-mail* secret-1@intergroup.co.jp
- July 6-11, 2001. **XVII World Congress of the International Society for Heart Research.** Winnipeg, Manitoba, Canada. **Enquiries:** XVII ISHR World Congress, c/o Institute of Cardiovascular Sciences, St. Boniface General Hospital Research Centre, University of Manitoba, Faculty of Medicine, 351 Taché Avenue, Winnipeg, Manitoba, Canada R2H 2A6. *Tel.* +1 204 235 3421; *Fax* +1 204 233 6723; *E-mail* ishr@cc.umanitoba.ca; *Web site* www.heartconference.com
- July 1-5, 2001. **International Muscle Energetics Conference.** Burlington, USA. **Enquiries:** Dr N.R. Alpert, c/o Department of Physiology & Biophysics, University of Vermont, College of Medicine, Given Medical Building, Burlington, VT, USA 05405-0068. *Tel.* +1 802 656 2540; *Fax* +1 802 656 0747; *E-mail* alpert@salus.med.uvm.edu
- July 2-5, 2001. **Regulation of Energy Metabolism in the Heart and Vasculature.** Banff, Canada. **Enquiries:** Dr G.D. Lopaschuk, c/o Cardiovascular Disease Research Group, Department of Pediatrics, University of Alberta, 423 Heritage Medical Research Centre, Edmonton, AB, Canada T6G 2S2. *Tel.* +1 403 492 2170; *Fax* +1 403 492 9753; *E-mail* gary.lopaschuk@ualberta.ca
- July 3-5, 2001. **Heart Failure Summit.** Toronto, Canada. **Enquiries:** Dr M.J. Sole, c/o The Centre for Cardiovascular Research, Eaton Wing 13 North - Suite 208, Toronto General Hospital, Toronto, ON, Canada M5G 2C4. *Tel.* +1 416 340 3471; *Fax* +1 416 340 5985; *E-mail* msole@torhosp.toronto.on.ca
- July 12-15, 2001. **Diseases of the Cardiovascular System and Immunity: Interactions and Therapeutics.** Montreal, Canada. **Enquiries:** Dr G. Bkaily, c/o Department of Anatomy and Cell Biology, Faculty of Medicine, University of Sherbrooke, 3001 12E Avenue North, Sherbrooke, PQ, Canada J1H 5N4. *Tel.* +1 819 564 5303; *Fax* +1 819 564 5320; *E-mail* g.bkaily@courrier.usherb.ca
- July 12-15, 2001. **Remodeling and Progression of Heart Failure.** Minneapolis, USA. **Enquiries:** Dr I. Anand, c/o Department of Cardiology, VA Medical Center 111C, 1 Veterans Drive, Minneapolis, MN, USA 55417. *Tel.* +1 612 725 2000, ext. 3723; *Fax* +1 612 725 2262; *E-mail* anand001@maroon.tc.umn.edu

*In Blue: World Congress and Satellite Meetings*

---

## HELP

The ISHR is undertaking a new initiative for its web site. We plan to generate an extensive library of how-to articles and post them on the site. These will range from animal procedures to molecular biology. The series will be known as the *Handbook of Experimental Laboratory Procedures* or simply **HELP**. The articles will be written more in a practical than an academic fashion. They will include a list of pitfalls and troubleshooting tips. They will have illustrations but minimal referencing. The entire collection will be on-line and available to anyone who would like to download them. With the trend towards abbreviated methods

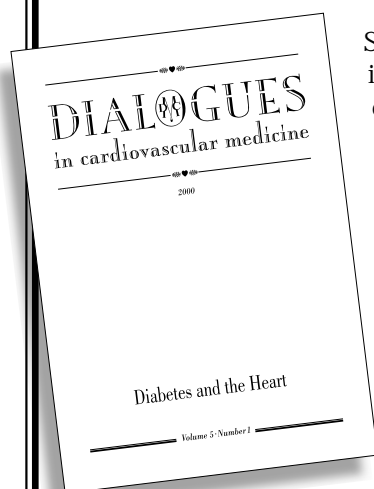
sections, it should eventually be possible to reference the **HELP** articles in your papers. A distinct advantage of the on-line handbook is that any article can be corrected or updated at any time. I have agreed to be the first editor and am currently soliciting material for the site. Our aim is to have an extensive and comprehensive library after a year or two which should be a real asset to the world-wide research community. If you are interested in contributing to **HELP** please contact me by e-mail at [webmaster@ishrworld.org](mailto:webmaster@ishrworld.org).

*James M. Downey, M.D.*  
*President Elect*

## **HEART NEWS AND VIEWS** is published thanks to an educational grant from Servier

a private French pharmaceutical company committed to research in cardiovascular medicine as well as other key therapeutic areas. We have successfully developed products for the treatment of hypertension, heart failure, and ischemic heart disease, which are among the main fields of our scientific interest. A number of landmark studies like PROGRESS, EUROPA, PREAMI, PEP, and HYVET are being conducted in these therapeutic fields, with our support.

The dynamism of our research is ensured by consistent allocation of as much as over 25% of the annual turnover of the Group to search for new molecules and develop their therapeutic applications.



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 **DIABETES AND THE HEART**,  
will feature articles by:

L. Rydén, K.A. Malmberg, L.H. Opie, A.P. Maggioni,  
G. Zuanetti, L.R. Benzaquen, R.W. Nesto, C. Ceconi,  
A.M. Katz, and D. Russell-Jones

For further information on  
*Dialogues in Cardiovascular Medicine* please contact:  
Mr Thierry Hénane - Servier International  
31 rue du Pont - 92200 Neuilly-sur-Seine - France

HEART NEWS AND VIEWS is the official News Bulletin of the International Society for Heart Research and is published every fourth month.

*Editor*

**T.J.C. Ruigrok**  
Utrecht, The Netherlands

*Co-Editors*

**P.K. Singal**  
Winnipeg, Canada  
**B.J. Ward**  
London, UK

*Editorial Board*

**R. Bolli**  
Louisville, KY, USA  
Secretary General  
**J.M. Downey**  
Mobile, AL, USA  
President Elect  
**R. Ferrari**  
Ferrara, Italy  
Treasurer  
**R.J. Gelpi**  
Buenos Aires, Argentina  
Latin American Section  
**Q.D. Han**  
Beijing, China  
Chinese Section  
**F. Kolár**  
Prague, Czech Republic  
European Section  
**T.S. Levchenko**  
Moscow, Russia  
CIS Section  
**S. Pepe**  
Melbourne, Australia  
Australasian Section  
**A.-M.L. Seymour**  
Hull, UK  
**N. Takeda**  
Tokyo, Japan  
**O.N. Tripathi**  
Lucknow, India  
Indian Section  
**A. Végh**  
Szeged, Hungary  
**R.A. Walsh**  
Cleveland, OH, USA  
Editor-in-Chief, JMCC  
**K.T. Weber**  
Columbia, MO, USA  
**W.B. Weglicki**  
Washington, DC, USA  
American Section  
**Y. Yazaki**  
Tokyo, Japan  
Japanese Section

*Editorial Assistant*

**M.I. Fabrie-van de Beek**  
Utrecht, The Netherlands

*Editorial Office*

Heart Lung Institute (Room G02.523),  
University Hospital, Heidelberglaan 100,  
3584 CX Utrecht, The Netherlands.  
Tel.: +31 30 250 7065  
Fax: +31 30 252 2879  
E-mail: t.j.c.ruigrok@hli.azu.nl