



HEART NEWS AND VIEWS

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IT HAS BEEN SAID that death and taxes are inevitable and dreaded evils.

As scientists we can add a third, the writing of a grant proposal. Why is the business of writing a grant proposal so disliked? There are a number of reasons: the PI, as he is called to lower his self esteem, must compress his ideas into a mold which has been ordained by the granting agencies; he must express his ideas in an idiom with which he may not be familiar; he must be mindful that he must please the reviewers, whose scientific interest and experience may be that of a competitor; he must realize that the reviewers in order to appear intelligent, must find fault with his application; finally to be successful, the proposal should deal with a subject of current interest, not necessarily his own. A scientist who can wrap his ideas into the mantle of sophistication, without interfering or competing with the reviewers territory, is endowed with the specific gene of grantsmanship. The location of this gene is not known and it has as yet not been cloned. This gene can be absent in great scientists and the defect is compatible with scientific excellence. An example is Clair C. Patterson (1922-1995). The Archives of the California Institute of Technology possess in their files an interview with Clair C. Patterson who was a member of the division of geology and planetary science at the California Institute of Technology. Despite his missing gene he was a great scientist. His scientific life was highly successful, although he was congenitally unable to get his work funded. His scientific career is a triumph of will over an inborn genetic defect.

Patterson was born in Iowa, attended Grinnell College, moved to the University of Iowa, and then to the University of Chicago to work on the Manhattan (Atomic Bomb) project. He transferred to Oakridge, Tennessee to continue on the Manhattan project, where he became familiar with the mass spectrometer, a technique which became the basis of his

Past Truth & Present Poetry



19. Dr Patterson and his missing Gene

there. The proportions of lead and uranium and thorium would change for millions and hundreds of millions of years at different areas and the lead within would have a different isotopic composition and you could track this. You could follow it". This work also led to his second discovery, the contamination of the earth with lead; he estimated the lead concentration in blood of many Americans to be over 100 times that of the natural level and within a factor of two of the accepted limit for lead poisoning. He discovered that leaded gasoline was partially responsible. This finding did not endear him to the oil industry, which quickly withdrew funding. This got Patterson in trouble, particularly since he also published a warning on the amount of lead entering the food chain.

The first symptom produced by the missing gene for grantsmanship appeared when Patterson, after getting his PhD, asked for funds to measure the age of the earth and get the lead out of the meteorite. "So I wrote a little proposal to the U.S. Atomic Energy Commission — since they had financed us for work that led up to this. — They turned me down, because they were not interested in measuring the age of the earth." His chief rewrote the proposal in his name;

future research. He also became acquainted with Harrison Brown, the geophysicist

who was interested in meteorites to define the elemental abundance of the solar system. Harrison Brown, his mentor and chief, had worked on the concept that lead in iron meteorites was the kind that existed in the solar system when it was first formed. Patterson was able in 1953 to measure the isotopic composition of primordial lead, from which he determined the age of the earth: "But we could do it because the isotopic composition of the lead was changing — it was dynamic because uranium was decaying all the time and there were three radioactive progenitors of three different isotopes in this lead that were being added all the time the earth was

“You know, he is very good in explaining things to people in a nonscientific way — so he wrote the darn thing. Boom. I was awarded a fellowship, a postdoc”. Apparently Dr Harrison Brown's genome fully expressed the gene for grants-manship!

Patterson then wanted to study the evolution of the earth by determining the isotopic composition of lead in rocks. His request for funding was not approved; “they were trying to prove that I was wrong”. Again his chief came to the rescue and obtained money from the Atomic Energy Commission; he told them that there was enough uranium in rocks, so they would get enough to use it in an atomic generator. Apparently this sales pitch was successful. Patterson bemoans his inability to please the granting agencies. He wrote a paper stating that lead is coming from leaded gasoline; “When they stopped my research they went around and tried to stop all my funding”.

How did Patterson compensate for

his missing gene? He would go to other universities and submit joint co-operative proposals. Others would write the proposals and his name would be on the joint proposal and part of the money would come to him. As he wrote: “I have been turned down throughout the years. If I wrote a proposal with science — down, no way out”.

Recently I received a pamphlet from a medical school, which proudly reports an advance in their rating, because research grants had increased by millions of dollars. Their pride is justified; bad research is usually not funded, a good application has to be well organized and sophisticated. And yet — there is the case history of Dr Patterson and others like him with the missing gene. There are also those who have a brilliant idea, not yet clothed in the mantle of sophistication! The only solution for those with this missing gene is to hitch their scientific wagon to someone whose genome is intact. Otherwise there is only the satisfaction

that goes with the creation of a new idea. Alas, there is no dollar sign attached!

The author expresses his appreciation for the help and encouragement from the Archives of the California Institute of Technology. All quotations are from an interview with Dr Patterson held at the California Institute of Technology in March 1995. The Caltech Archives have issued permission for publication.

Richard J. Bing, M.D. ■

The Society is saddened by the sudden passing of Dr Keith A. Reimer, President of the ISHR American Section. An obituary will appear in the next issue of HEART NEWS AND VIEWS.

PRESIDENT'S LETTER



IT WAS A QUIET DAY here in the oval office at the ISHR headquarters. To kill a little time I decided to give the ISHR's IT (information technology) operation a visit. Among a room filled with mainframe computers and spinning tape drives the ISHR's IT staff explained the fine points of our web site to me. For those of you who have not yet visited the ISHR web site I think a pleasant surprise awaits you. You can find us at www.ishrworld.org. Unfortunately, the International Society for Human Rights beat us to the preferred web address of ishr.org and hence the “world” suffix. Still, [ishrworld](http://ishrworld.org) is pretty easy to remember. The web site is designed to be functional and as a result it has a minimum of graphics. The paucity of graphics is primarily to enhance loading speed, recognizing that many of our members still access the site on relatively slow dial up connections. As broadband becomes more universal then we will jazz up the home page accordingly. At the

top of the page are portals to the sites for the various sections. On the side bar are timely links to sites and features that we want to draw specific attention to.

The home page lists a menu that is pretty self-explanatory. The visitor can learn about the ISHR, its history and its mission. There is a list of officers both for International as well as the Sections. Council members are listed as are past-presidents going all the way back to our first, Richard Bing. An important feature is the calendar of upcoming meetings. The list includes meetings sponsored by the ISHR as well as some that are not. If you know

of an upcoming meeting that should be listed, send details to myself or Roberto Bolli. Obviously you should not send us information of your upcoming family reunion as only functions within the general interest of the ISHR membership will be posted.

An important feature of the web site is the online membership directory. We have a database of approximately 2500 individuals worldwide making up the membership list. You can search for a listing by typing in the family name of an individual and all members with that name will be listed. If you are not sure of the spelling just a several letters that you are sure of will suffice. For example entering just “dow” will bring up my listing as well as JW Dow, HF Downey, SE Downing, ED Lewandowski, and RT Dowell. Obviously if you enter only “e” it will dutifully list every member who’s family name includes an “e” but be prepared for a long list. The problem with maintaining a membership directory is that it goes out of date quickly. If a member moves to a new institution or even gets a new email address, informing the ISHR of the changes is at the bottom of his to-do list. This drives our IT staff crazy and a considerable amount of effort is made to keep track of our members. The best thing you can do is to stop reading this and immediately go to the web site and (1) see if you are even listed and (2) check to see if your entry has any errors. If it does have errors, send the corrections to me via my email address which is listed on the search page and we will correct it.

An other thing you will find on the site is a really neat employment agency. Right now the site is open to everybody, members and non-members alike. You can list yourself as looking for employment or you can list an open position that you would like to fill. There is no charge for the service and the listing runs for 3 months after which it is flushed. Amazingly we have not had any crackpot adverts show up on the site yet. I am sure it will come and then we may have to tighten up access to the site. Right now, however, it is wide open. It is possible to search for both level of employment (all the way from technician to faculty member) as well as geographical preference. The next time you are looking to recruit a fellow for the lab, check out the employment service and you just might find the perfect candidate. As of this writing we have had 160 jobs offered on the site and 144 persons looking for employment since opening the site 3 years ago.

One particularly interesting feature on the ISHR site is the HELP page. This was the brainchild of Gerd Heusch. We thought that a laboratory methods site could be a very useful aid to the ISHR members. Gerd came up with the name Handbook of Experimental Laboratory Procedures which I think is really about as clever an acronym as one could ever find. To start the page off we included some of the integrative procedures that we in the ischemia business use such as infarct size, isolated heart and cardiomyocyte methodology. These pages are meant to be very practical with lots of pictures, tables, useful tips, and hyperlinks to all of the suppliers of the equipment and chemicals that are mentioned. The advantage of such a page is that it becomes a living document that can be updated as needed. Mistakes can be corrected and advances in methodology can be incorporated at any time. Try doing that to that paper that you published 5 years ago in a bound journal with your name misspelled! Finally, we are committed to maintaining the HELP site for years to come and therefore it is fair game to cite one of these pages in the methods section of your next manuscript. For example: infarct size was measured with triphenyltetrazolium by the method described by Downey at www.ishrworld.org/help/tetrazolium. We are now looking for a permanent editor to solicit additional material for the HELP page. If you are interested in applying for the position or know someone who is, contact me. We would like to see the HELP pages eventually cover all aspects of cardiovascular research and to become the ultimate authority on methodology.

Next issue I will explain some of the hidden features of the web site and how the site is actually implemented. Until then, enjoy the summer meetings season. For those of you in the Southern hemisphere, have a happy winter.



James M. Downey

“Bad Nanny” Hurts the Heart

Choosing Basic Biomedical Science over Clinical Practice. Like many China-born graduate students, I had been engaged in scientific research for many years and had a successful early career in biomedical sciences in China before admission to a graduate program in the US in 1995. A question often raised in my interviews for either postdoctoral fellowship or faculty position in the US was “why did you choose to do basic sciences instead of practicing clinical medicine?” Well, in my final year as a medical student in Hubei Medical University (now Wuhan University School of Medicine), Wuhan, China, I found I did not like clinical practice. So, I chose to pursue an advanced degree in cardiovascular pathophysiology instead of becoming a cardiologist after graduating from the medical school. It was my first scientific research project that truly got me hooked on basic research. Along with Professor Chuanren Dong, my MS mentor in China, I discovered an interesting link between epidemic erythralgia, a peripheral vascular disease, and the *El Nino* phenomenon in 1987 when perhaps most biomedical scientists did not know about the *El Nino*. The paper was published in the most prestigious Chinese medical journal (*National Medical Journal of China*) in the following year. This happened in the final year of my first graduate school experience and really encouraged me to further pursue a career in science. So far, most of my research has focused on the heart as illustrated by my postdoctoral studies on the desmin-related cardiomyopathies.

Expansion from Desmin to Crystallin

Like most other cells, heart muscle cells have a well-developed cytoskeleton. The typical cytoskeleton consists of microfilaments, microtubules and intermediate filaments. In various tissues, microfilaments are formed mainly by actin and microtubules by tubulins. The intermediate filaments are, however, composed of proteins that are tissue-specific. The muscle-specific intermediate filament protein is desmin. During my PhD thesis studies, performed in Dr A. Martin Gerdes' laboratory at the University of South Dakota School of Medicine, Vermillion, SD, in an effort to screen for expression-altered proteins in a chronic pressure overloaded heart; I found a significant progressive up-regulation of desmin protein and filaments in the cardiomyocyte cell population. A natural follow-up study, as indicated in my PhD

dissertation, was determining the contribution of increased desmin to the progression of cardiac hypertrophy and failure. This is one of the reasons I applied for a postdoctoral fellowship in the laboratory of Dr Jeffrey Robbins at Children's Hospital Research Foundation, Cincinnati, Ohio. I was very fortunate to be accepted by Jeff. Upon deciding my postdoctoral research projects, I was very happy to learn that Jeff was interested in desmin as well, although he was more interested in mutant forms of the desmin gene. About that time, several desmin mutations were associated with the human desmin-related myopathies (DRM), a group of heterogeneous myopathies that are featured by the presence of aberrant desmin-positive aggregates in the muscle cells and often affect the heart. Consequently, we decided to make transgenic mice that over expressed



Xuejun Wang, M.D., Ph.D.

either wild type or a human DRM-linked mutant desmin specifically in the heart to explore their cardiac pathogenesis [1].

Shortly after Jeff and I decided to study desmin, I noticed in the literature that a missense mutation (R120G) in the alpha B-crystallin (CryAB) gene was also linked to DRM and exhibited an autosomal dominant inherent pattern [2]. As the first heat shock protein mutation ever linked to muscle disease and especially the disease that desmin mutations are also linked to, the CryAB mutation immediately drew my attention. CryAB was initially discovered in the lens of the eye about a century ago. In the early 1990's, CryAB was found to be expressed in many non-lenticular tissues including skeletal and cardiac muscle and appeared to be a molecular chaperone. In fact, CryAB turns out to be the most abundant small heat shock protein expressed in cardiac myocytes. Earlier studies disclosed that CryAB translocated from the cytosol to the cytoskeleton, especially the intermediate filaments when the cell is under stress. The linkage of R120G-CryAB to human DRM therefore implicates that CryAB protects desmin filaments from stress damage. CryAB protein expression is altered in many diseases including cardiac hypertrophy and failure, but the pathophysiologic significance of gain- and loss-of-function of CryAB was unknown before our studies. To address this issue and also to verify whether R120G-CryAB can cause DRM in the mouse, I convinced Jeff to allow me to expand my project to cover CryAB by

creating transgenic mice expressing wild type and the mutant CryAB in the heart.

Is it Fetal Attraction? Not Crystal Clear

As was the case for the transgenic lines that over expressed the normal desmin protein, mice overexpressing wild type CryAB specifically in the heart at up to 5-fold the endogenous levels displayed no discernible morphological and functional abnormalities, suggesting up-regulation of CryAB is not by itself, detrimental to the heart. However, mice expressing modest levels of the mutant CryAB developed desmin-related cardiomyopathy. Myocytes expressing R120G-CryAB form abnormal CryAB as well as desmin aggregates. The mouse line carrying 3 copies of the R120G-CryAB transgene developed compensated concentric cardiac hypertrophy at 3 months, progressed to dilated cardiomyopathy by 6 months, and invariably died of congestive heart failure soon after [3]. An important pathogenic question relates to the mechanisms by which expression of mutant CryAB causes aberrant aggregation of desmin protein. One appealing hypothesis was that the mutation causes CryAB misfolding and renders the mutant protein prone to abnormal aggregation. The aberrant CryAB aggregates might thus also attract desmin protein [4]. However, EM and immuno-EM analyses did not support the hypothesis. Two types of aggregates were observed in the cardiac myocytes expressing R120G-CryAB. Type I aggregates were usually larger but less electron-dense, having a clear boundary and regular shape. They were immuno-positive for CryAB but not desmin. Type II aggregates were usually smaller and had a higher electron density and irregular shape with less obvious boundaries. They were immuno-positive for both CryAB and desmin. There was no direct physical interaction between the two types of aggregates. None of the aggregates were membrane-bound. Interestingly, we failed to detect desmin

protein in the immediate surrounding area of all the CryAB-positive type I aggregates or inside most of the type I aggregates although the type II aggregates contained both CryAB and desmin proteins. These observations suggested to us that the CryAB seen in type I aggregates was mainly mutant CryAB protein that failed to interact with desmin protein. Interaction between CryAB and desmin filaments is probably required for CryAB to protect desmin filaments. The chaperone function of CryAB depends on formation of proper CryAB polymers and this property is compromised by the presence of mutant CryAB protein [5]. Therefore, the formation of the desmin positive aggregates likely occurs when desmin protein and filaments lose proper protection from CryAB and aged, damaged, or misfolded desmin protein molecules can not be efficiently and properly repaired or degraded, thereby forming aggregates. It is unlikely that this is caused by a direct “fatal attraction” from the “bad nanny”.

Stories to be Continued

The creation and initial characterization of CryAB mice demonstrated R120G-CryAB can cause desmin-related cardiomyopathy in mice. Disruption of normal CryAB function and accumulation of aberrant protein aggregates are apparently among the major pathogenic processes in this disease. Notably, aberrant cardiac protein aggregation occurs in congestive heart failure resulting from idiopathic dilated cardiomyopathy, but the pathogenic role of aberrant protein aggregation in the heart remains elusive. The formation of these “aggresomes” is widespread in a variety of disease processes and may be a general process that either causes or results from multiple and diverse cellular insults. Therefore, the mutant CryAB as well as mutant desmin mice provide us with important animal models, not only for further dissection of DRM but also for deciphering the pathogenic significance of aberrant protein aggre-

Xuejun Wang (Sioux Falls, SD, USA) was the winner of the Young Investigators Award of the American Section at the XVII World Congress of the ISHR (Winnipeg, Canada; July 6-11, 2001).

The other finalists of this competition were:

Martin E. Young (Houston, TX, USA): Clock genes in the heart: Characterization and attenuation with hypertrophy;

Michael Hill (Louisville, KY, USA): Nitroglycerin induces early and late preconditioning against myocardial infarction in conscious rabbits despite development of nitrate tolerance;

Abdelkarim Sabri (New York, NY, USA): Dual actions of the Gq agonist *Pasteurella multocida* toxin to promote cardiomyocyte hypertrophy and enhance apoptosis susceptibility.

gation in the heart. These models can also be used for therapeutic exploration. As an independent investigator, my laboratory at the Cardiovascular Research Institute at the University of South Dakota, Sioux Falls, SD is continuing to explore the pathogenesis of these proteins.

The Award Honors More than the Young Investigator

In July 2001, I presented this work at the XVII World Congress of the International Society for Heart Research as part of the American Section Young Investigator Award competition. Perhaps with the help of my interrupted slide show, I was selected as the winner of this prestigious award. While I received the award plaque and check, I truly believe the award honors a much larger group of people than just myself. I would like to take this opportunity to express my sincere gratitude to Dr Jeffrey Robbins, my postdoctoral mentor, to Dr

A. Martin Gerdes, my PhD advisor, and to Dr Chuanren Dong who led me into the scientific research kingdom. I want to thank all my collaborators including people from the Robbins' and Gerdes' laboratories. For the past eight years, I have not been able to go back to see my parents who are both over 70 now. I appreciate their nurturing in my early years and their understanding that science means working hard. Last, but not least, my appreciation goes to my wife, Yipin and family for their support and encouragement throughout.

It is with great grief that we share the news with the members of our Society that Professor Maria Sophia Koltai, a good friend and colleague, passed away suddenly in November, 2001 at the age of 52. Her sudden death was unexpected; only her family and a few of her closest friends knew that she carried hepatitis virus C with which she was accidentally infected taking blood from one of her patients 18 years ago. She treated her illness as a personal problem and we, her colleagues and friends, were shown only the cheerful and kindly surface of a lady successfully fulfilling scientific ambitions resulting in significant achievements. She was gifted with intelligence, a sense of humor, sympathy for people in need and modesty in both her private and scientific life. She was present but never pushed herself to the middle of the circle. It is with regret that we realize she carried the burden of her illness alone, but we appreciate the greatness of her human spirit in doing so.

Sophia was a good daughter, wife and mother, an active doctor surrounded by many patients, and a successful scientist. Her main research interest was the diabetic heart. Professor Koltai was recently appointed to the position of the Director of the Research Department at the National Institute of Cardiology in Budapest. She and her predecessor,

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In Memoriam



Maria Sophia Koltai

Professor Gábor Pogátsa, were the leading authorities in Hungary in the study of diabetes and its role in the cardiovascular disease. She mentored many Ph.D. students, fellows and visiting scientists. Sophie had broad national and international scientific links to various research groups and individual scientists. She had particularly long-term collaborative research projects with Dr Rösen in Düsseldorf, Attila Ziegelhöffer and Tanja Ravingerova in Bratislava and with Jutta Schaper in Bad Nauheim.

Dr Schaper visited Maria Sophia in Budapest at least once a year since 1987. "I always enjoyed her kind personality and scientific alertness and

scrutiny. I also admired her ability to combine clinical and basic science work, in addition to taking care of her family including her old mother and aunt. She was a lady of quiet charm who lived in harmony with herself and with others. We spent many hours together, in the lab and in her home, and I always was delighted to meet with her".

Dr Koltai also actively participated in the life of various societies. She became a member of the ISHR in the early 80's, and also coordinated the work of the Experimental Group of the Hungarian Society of Cardiology.

For the ISHR, Dr Koltai and Dr Pogatsa organized the successful European Section meeting in Budapest (1987) with great organizational talent, skill and care, and the European Section truly appreciated all the efforts undertaken by the organizers on their behalf.

Agnes and Jutta, and all her many other friends, are still shocked that she left us and we miss her very much. The entire ISHR will miss her kind personality, warm smile and her presence at Society meetings.

Ágnes Végh and Jutta Schaper
Szeged, Hungary and Bad Nauheim,
Germany



ANOTHER STEP IN THE EVOLUTION OF THE ISHR: THE CREATION OF THE SCIENTIFIC PROGRAM COMMITTEE

AS YOU KNOW, the major factor that will determine the future of our society is the quality of our scientific meetings. In today's competitive environment in which scientists can choose among an increasing number of conferences, every major society that wants to retain or augment its membership must critically rethink the way its meetings are planned and organized. An excellent example of this process of self-improvement is provided by the American Heart Association, whose Program Committee reevaluates every aspect of the AHA Scientific Sessions every year in a never-ending quest to enhance the appeal of the meetings to the membership. The ISHR should be no exception. If we are to maintain our position as a leading scientific society, it is necessary that we focus our efforts on making our meetings more competitive with those of other societies. Simply put, the success of the ISHR will depend on the quality of our main product – our meetings.

In line with this philosophy, last July I proposed to Council the establishment of a Scientific Program Committee that will provide assistance in the organization of Section meetings and World Congresses. This Committee is not in any way intended to control the program or format of the meetings. The Committee has only advisory functions. It is composed of individuals with experience in planning and coordinating scientific conferences, and its purpose is to give advice, assistance, and support to the ISHR meeting organizers. This proposal was unanimously approved by Council and has now been implemented. The main functions of the Program Committee are as follows:

- To provide a standard packet of information and advice (derived from the experience of previous meetings) to new meeting organizers, so that they will not have to learn the process from scratch. Thus, the Committee will serve as the “memory” of the ISHR. By sharing their broad experience in meeting organization and program development, the Committee will save the organizers time, effort, and frustration.
- To coordinate the dates of Section meetings and World Congresses so as to avoid overlap or close temporal proximity.
- To formulate suggestions to the meeting organizers regarding the inclusion of outstanding speakers and timely topics in the program.
- To help the organizers of Section meetings and World Congresses to prepare the conferences in a timely fashion (*e.g.*, a detailed scientific program including speakers and topics should be posted on the web site at least 12 months prior to the meeting).
- In carefully selected cases (and depending on the availability of funds), to allocate financial support to meetings that are in financial difficulty. The funds will be used to sponsor individual speakers or symposia that will enhance the program.
- To assist the organizers in reviewing abstracts and selecting those that are worthy of publication in *JMCC*.

The Program Committee is made up of representatives of at least four Sections of the ISHR and includes the Presidents of the three largest Sections (European, North American, and Japanese). The following persons were elected by Council to serve on the Program Committee for the 2001-2004 term: Jim Downey, Richard Walsh, Michael Schneider, Jean-Jacque Mercadier, Gerd Heusch, Masao Endoh, Yoshio Yazaki, and Lindsay Brown. The Committee is chaired by the Secretary General.

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This new component of our society is already at work. Last year, the Program Committee approved the award of \$15,000 to support the XXIInd Annual Meeting of the European Section that will be held in Szeged, Hungary, July 3-6, 2002. This year the Committee approved \$5,000 for the XIIth Meeting of the Latin American Section that will be held in Buenos Aires on June 20-23, 2003. In addition, the Committee is preparing a packet of information and advice for meeting organizers.

The establishment of the Program Committee brings the ISHR in line with other major scientific societies and will be useful to future meeting organizers, many of whom (particularly at the Section level) have not had prior experience in preparing scientific conferences. It is hoped that this Committee will be viewed as an invaluable resource that the International Section of the ISHR makes available to all of its members. As always, I welcome your comments and suggestions (rbolli@louisville.edu or fax +1 502 852 6474).



Roberto Bolli, M.D.
Secretary General and Treasurer, ISHR

Jutta Schaper - an Appreciation

JUTTA and Wolfgang Schaper, that cardiological husband and wife team par excellence, grew up in that part of Hitler's Germany which later became a communist state. They both studied medicine at the Martin Luther University in Halle. When Wolfgang graduated in 1957, with the degree of Doctor of Medicine, Jutta still had three years to go to complete her studies. There was some family opposition to the marriage primarily because of Jutta's age. In the end, not only did the marriage take place but the day became a real family affair with Jutta's sister marrying Wolfgang's brother. They moved to Magdeburg where a daughter was born and where Wolfgang became interested in psychoanalysis. The two incidents are not related! He was allowed to travel twice a week to West Berlin to study psychoanalysis (remember there was no Berlin Wall in 1959) and this exposed him to good medical textbooks and to Western literature. They decided to

attempt to leave East Germany. Of course this was not easy. How they eventually did so is like an incident from a John Le Carré spy thriller. In 1960, the Janssen Research Foundation made contact with Wolfgang and he managed to fly to Düsseldorf in West Germany from whence he was taken to Beerse, in Belgium. Three days later Jutta managed to cross the border with their small daughter and awaited a message from Wolfgang, which came through a public call box. She brought few possessions; it would have been suspicious of course to have crossed the border with a suitcase. Very few people knew of their proposal to escape. As Jutta has remarked 'life with Wolfgang is never boring'. A few months later any thought of leaving the East would have been impossible because in 1961 the Berlin Wall was erected. The years which Wolfgang and Jutta spent working with Paul Janssen in Beerse marked, for both of them, the beginning of eminent

careers in basic heart research and in clinical cardiology.

It says something for Jutta's determination and enthusiasm for medical science that, although by the time they settled in Belgium a second child was on the way, and despite severe financial considerations, she continued her medical studies in Düsseldorf, commuting from her home in order to do so. She then joined the cardiovascular laboratories of the Department of Physiology and Pharmacology at the Janssen Research Foundation and at the same time studied electronmicroscopy at the University on Antwerp, where she was for a time on the staff of

During the XVII World Congress of the ISHR (Winnipeg, Canada; July 6-11, 2001) Honorary Membership was given to Drs Jutta Schaper (Bad Nauheim, Germany) and Naranjan S. Dhalla (Winnipeg, Canada) in recognition of their exceptional merit and contributions to the International Society for Heart Research.

the Department of Anatomy. After several years as the Head of the Department of Electronmicroscopy at the Janssen Research Foundation she moved with Wolfgang in 1972 to the Max Planck Institute for Physiological and Clinical Research at Bad Nauheim in Germany where she still heads the Department of Electronmicroscopy, as well as being a Professor of Experimental Cardiology at the University of Giessen Medical School, where she had been earlier awarded the degree of Doctor of Philosophy.

Professor Jutta Schaper's particular interest is in the ultrastructural alterations that take place during myocardial injury (for example during ischaemia and reperfusion) and during repair and, more recently, in the changes that take place in the failing human heart. One of the foremost recent advances in clinical cardiology has been the rapid reopening of occluded coronary arteries by dissolving the offending thrombus and allowing the reflow of blood to the dying myocardial tissue. One of the debates, to which Jutta Schaper has made significant contributions, is whether this reperfusion itself results in further myocardial injury. Perhaps her most outstanding contributions have been to our understanding of the ultrastructural changes that take place in the failing human heart. Using a combination of electron microscopy, immunofluorescence microscopy with monoclonal antibodies, and *in situ* hybridisation for the detection and localisation of mRNA, she has shown, in a wonderful series of papers, that it is the excessive deposition of structural material (in the cytoskeleton or scaffolding), as well as the degeneration of the cardiac myocytes, that are responsible for end-stage cardiac failure resulting from dilated cardiomyopathy. These patients will die of congestive heart failure unless treated with transplantation surgery. In collaboration with the cardiac surgeons at the Max Planck (in the Kerckhoff Clinic), she was among the first to describe the cellular changes that take place in



Schaper and Schaper, 2002
Jutta and Wolfgang at the ISHR European Section Meeting in Szeged, Hungary; July 3-6, 2002 (Photo: Maria Szegedi)

chronic heart failure. Incidentally, some of the coloured photomicrographs in Jutta's papers are real works of art; one of these (that she turned into a Christmas card several years ago) still has a place of honour in my study at home.

In some areas of research it is not easy to separate the relative contributions of Jutta and Wolfgang. Indeed, at International Congresses they have been known to give one another's lectures! This is particularly true of their joint work on angiogenesis, that is how blood vessels grow in response to ischaemic injury. This is a real husband and wife team. If I was allowed to select one particular paper that demonstrates Jutta Schaper's remarkable ability in this field it would be the one in which she studied the small blood vessels of the diabetic heart, and outlined the hypothesis that cardiac vulnerability in diabetes is connected with inadequate adaptive development of new blood vessels; this seems to be related to changes in the autonomic nerve terminals. This is beautiful, painstaking and careful science.

In 1981 Jutta Schaper was elected Secretary General of the European Section of the International Society for Heart Research, a position which essentially combined those of secretary

and chairman. It was no surprise when the world scientific community in heart research elected her their President, a task she commenced at the World Congress of the International Society for Heart Research in Prague in 1995. She was a popular choice, not only because she is an excellent scientist but because all she does is with grace, a concern for individuals and a great enthusiasm for science. Her scientific achievements have already been recognised by receiving the Arthur-Weber Prize of the German Cardiac Society, by the award, in 1995, of the JE Purkinje Gold Medal of the Academy of Sciences of the Czech Republic, the highest honour the Academy can bestow and by, also in 1995 and together with Wolfgang, the award of the degree of Doctor of Science *honoris causa* of the University of Strathclyde in Glasgow.

Last year she celebrated 20 years of active service on the European Council of the Society and it is particularly appropriate that she was honoured by the Society in this special way. We salute a delightful person, gracious, wise and a wonderful friend to many of us!

Jim Parratt
Glasgow, UK

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 and 2001; 9 (2): 5-6.

Makoto Nagano

ISHR member since 1973. Secret. Gen. Japanese Section '77-'89. President Japanese Section '90-'98. Secret. Gen. XIV ISHR World Congress, '92, Kobe. Member of ISHR Council '92-'98.

Current position: Prof. emeritus, Jikei Univ. School of Med., Tokyo. Medical Adviser of Austrian (since '68) and German Embassy (since '71) in Tokyo. Medical Adviser of Canon Inc. *Training:* Dept. of Internal Med. and Biochem. Central Lab., Jikei Univ. School of Med. Dept. of Internal Med., Univ. of Wuerzburg, Germany. Dept. of Internal Med., Univ. of Tokyo. *Major research contributions:* Cardiac energy and electrolyte metabolism. Metabolic cardiac insufficiency before mechanical heart failure. Pentose monophosphate cycle in the acute overloaded and chronic hypertrophied heart. Diabetic cardiomyopathy. *Positions in scientific organizations:* President of Japanese Working Group on Cardiac Structure and Metabolism since 1976. Chairman, Board of Directors of the International Academy of Cardiovascular Sciences. *Books and Monographs:* 25 Volumes of Cardiac Structure and Metabolism and 2 Volumes of Experimental Cardiology (Japanese). 8 Books edited together with N.S. Dhalla. *Most admired scientists:* Hideo Ueda and Ernst Wollheim. *Hobby:* Protecting endangered small freshwater fish.



R. John Solaro

Current position: Distinguished University Professor and Head, Department of Physiol. and Biophys., University of Illinois at Chicago, College of Medicine.

Training: BSc, Univ. of Cincinnati, Coll. of Pharmacy; PhD, Univ. of Pittsburgh, Coll. of Med.; Fellow of Am. and Brit. Heart Found. with Prof. SV Perry.

Fogarty Senior Internat. Fellow with Prof. David Allen.

Research interests: Mechanisms responsible for regulation and modulation of the activity of the contractile myofilaments of heart muscle cells. Linkage of hypertrophic myopathies to sarcomeric protein mutations has raised awareness of the importance of this area in understanding cardiac function. One focus is on the molecular switch, troponin. Question: What events signal switch function and how is the switch modulated by myofilament structure, chemistry, mechanical state, and drugs? For example, we have cloned, and expressed wild type and mutants of one element in the switch: troponin I. We exchange native myofilament TnI for the mutants *in vitro* or in transgenic animals. We measure force, shortening and energy transduction in the myofilaments, and in intact single and multi-cellular preparations including the heart *in situ*. An endpoint has been the development of "myofilament Ca²⁺-sensitizers" in the treatment of heart failure.

Relaxation: Enjoying all the arts in Chicago.



Edward G. Lakatta

Current positions: Director Lab. of Cardiovasc. Science, National Inst. on Aging, NIH. Professor, Dept. of Physiol., Univ. Maryland School of Med., and Cardiol. Div., Johns Hopkins School of Med.

Training: MD, Georgetown Univ. School of Med. Cardiol. fellowship, Georgetown and Johns Hopkins Univ. Schools of

Med. Basic research training at the NIH, and Dept. of Physiol., Univ. Coll. and Cardiothorac. Inst., London, UK.

Publications: Over 250 peer reviewed articles; over 150 reviews/book chapters; over 300 invited lectures.

Research interests: (i) Modulation by surface receptor signaling pathways of cardiac E-C coupling; (ii) Mechanisms of normal and abnormal function of vascular smooth muscle and endothelial cells; (iii) Mechanisms of age-associated changes within the cardiovascular system; (iv) Interaction of age with chronic disease states; (v) Potentials and limitations of gene transfer techniques.

Awards and positions in scientific organizations: Eli Lilly Award in Med. Science; Paul Dudley White Award in Cardiol.; Allied Signal Achievement Award in Aging; Novartis Prize in Gerontol.; Irving Wright Award of Distinction, Am. Fed. for Aging Res.; Honorary Degree, Universite d'Áuvergne in Clermont, France. Chairman Scientific Program Committee, ISHR World Congress (1998 and 2004).



ISHR MEETINGS CALENDAR

- October 31 - November 2, 2002. **XIX Annual Meeting of the Japanese Section and Satellite Symposium on "The Forefront of Current Therapy of Ischemic Heart Disease and Heart Failure"**. Yamagata, Japan. **Enquiries:** Dr Masao Endoh, Department of Pharmacology, Yamagata University School of Medicine, 2-2-2 Iida-nishi, Yamagata 990-9585, Japan. *Tel.* +81 23 628 5234; *Fax* +81 23 628 5235
- November 4-9, 2002. **Meeting of the Chinese Section.** Guangzhou, China. **Enquiries:** Dr X.Y. Yu, Guangdong Provincial Cardiovascular Institute, 96 Dongchuan Road, Guangzhou 510080, China. *Fax* +8620 8387 5453; *E-mail* xiyongyu@yahoo.com
- November 17-20, 2002. **Scientific Sessions of the American Heart Association.** Chicago, IL, USA. **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
- November 28, 2002. **XI Meeting of the Latin American Section.** Belo Horizonte, Brazil. **Enquiries:** Dr O.M. Gomes, Fundacao Cardiovascular Sao Francisco de Assis, Rua Jacui, 1.191-Concordia-Belo Horizonte-MG-CEP: 31.110-050. *Tel./Fax* +55 31 3442-7488; *E-mail* servicor@servicor.com.br
- 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 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.baker.edu.au/ISHR

Richard A. Walsh

ISHR member since 1988. Editor-in-Chief, *Journal of Molecular and Cellular Cardiology* 1999-present.

Current position: John H. Hord Professor and Chairman, Department of Medicine, Case Western Reserve University and Physician-in-Chief, University Hospitals of Cleveland.

Training: Georgetown University and University of North Carolina.

Societies: ASCI, AAP, IGFA.

Research interests: Molecular mechanisms for physiologic and pathologic myocardial growth and function. Quantitation of cardiovascular function at multiple levels. Phenotypic characterization of genetically engineered mice.

Publications: Over 200 scientific papers and four books.

Most cited article: Targeted overexpression of protein kinase C β 2 isoform in myocardium causes a cardiomyopathy, *Proc Natl Acad Sci* 1997; **94**: 9320-5.

Most admired scientist: Felix Z. Meerson.

Relaxation: Salt water big game fishing, reading, jogging.

Favorite dish: Peking Duck; *wine:* pomerol; *composer:* Johann Sebastian Bach; *painters:* Claude Monet, Jon Miro; *authors:* Ernest Hemingway, Yasunari Kawabata.



Masao Endoh

ISHR member since 1979. Member of ISHR Council since 1990.

Current post: Professor of Pharmacol. and Dean of Yamagata Univ. School of Medicine.

Training: Pharmacol., Tohoku Univ. School of Med., Sendai (Prof Koroku Hashimoto); Pharmakologisches Institut der Gesamthochschule Essen, Germany (Prof Hans Joachim Schumann); Pharmacol., Mayo Clinic, Rochester, MN, USA.

Qualifications: MD, PhD.

Research emphasis: Cardiac regulatory mechanisms, receptor-mediated regulation of Ca²⁺ signaling, mechanism of action of cardiotonic agents.

Major research contribution: The discovery that myocardial α -adrenoceptor stimulation induces the positive inotropic effect via an increase in myofilament Ca²⁺ sensitivity.

Publications: Over 200 refereed papers.

SCI most cited paper: Actions of sympathomimetic amines on the Ca²⁺ transients and contractions of rabbit myocardium. *Circ Res* 1988; **62**: 247-65.

Most admired scientist: John R Blinks.

Relaxation: Walking, watching baseball, baroque music.

Favorite dish: raw fish; *wine:* Japanese cold rice wine; *composer:* Georg Friedrich Handel; *painter:* Paul Klee; *authors:* Soseki Natsume, Sai-ichi Maruya.



HEART NEWS AND VIEWS

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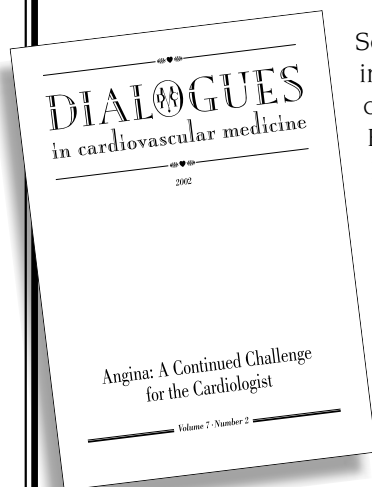
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