Chair’s Report
Robert M. Carey, MD, MACP, FAHA
Chair, HBPR Council

The Council for High Blood Pressure Research has completed an exciting and highly productive 2004, and we eagerly anticipate an equally stimulating 2005. I am indeed honored and pleased to become your chair. I wish to pay the highest possible tribute to our immediate past chair, Dr. Ernesto L. Schiffrin, who has led our Council in exemplary fashion for the past two years.

The 58th Annual Fall Conference and Scientific Sessions held in Chicago October 9–12, 2004, set a Council record for abstract submissions and meeting attendance. Under the program leadership of new vice-chair Dr. L. Gabriel Navar, the upcoming Fall Conference in Washington, DC (September 21–24, 2005) promises to be an intellectually enriching experience.

The Council is actively engaged in generating several important scientific statements affecting clinical practice. These include: (1) recommendations for blood pressure measurement in humans (published January 2005); (2) recommendations for blood pressure measurement in animals (published in February 2005); (3) sleep apnea and cardiovascular disease: implications and management; (4) detection of chronic kidney disease in patients with cardiovascular disease; and (5) prevention and treatment of cardiovascular disease in patients with chronic kidney disease. In addition, we are planning scientific statements on (1) the treatment of hypertension in the prevention and management of ischemic heart disease and (2) the identification and management of resistant hypertension.

For the first time, the Council has conducted a continuing medical education program for practicing physicians on hypertension. This was a one-day meeting in New Orleans in November 2004, sandwiched in between the American Heart Association Scientific Sessions and the Southern Medical Association meeting. Feedback from attendees was outstanding, encouraging us to replicate this program in other settings. I thank Drs. Michael Moore and Daniel Jones for their leadership.

I wish each of you a most productive year and look forward to seeing you in Washington, DC, this fall.

Lifetime Achievement Award — John C. McGiff, MD, FAHA
Robert M. Carey, MD, MACP, FAHA
Chair, HBPR Council

At the 2004 Council for High Blood Pressure Research’s annual meeting in Chicago, John C. McGiff was presented with the Lifetime Achievement Award for his long and productive career in the investigation of arachidonic acid metabolites in the regulation of blood pressure. Dr. McGiff, as usual, gave an extremely entertaining and insightful acceptance speech that has several important messages for all of us, particularly the young investigator. The text of that speech follows.

“I’m honored and gladdened to be recognized by the Council which has been the centerpiece of my scientific associations. The Council for High Blood Pressure Research of the AHA has always offered a wonderful cast of characters. I thank the Awards Committee for making this a non-posthumous Award! I have received permission from my designated eulogist to include his remarks today.

I used to good advantage the official letter declaring that I was the recipient of the Lifetime Achievement Award. I immediately sent a copy to the Dean with the note:

Dear Dean:
I just received this official notification from the highly esteemed Council for High Blood Pressure Research of the American Heart Association. Of course, I won’t use it as leverage to extract large concessions from your congenial administration.
Sincerely, Jack McGiff

The AHA has been there at critical junctions in my scientific journey: In the beginning, four decades ago, I received an Established Investigator Award which gave me a special status as a young investigator, at least in the eyes of my chairman.

A remarkable event occurred in the late 1960s in which Howard Weisberg of the AHA played a big role in enabling us to address prostaglandin-related vascular mechanisms. Our studies in progress on hormonal regulation of the renal circulation suggested a prostaglandin-dependent mechanism. RIAs and chemical methods had not been developed to measure prostaglandins. John Vane had published seminal papers in the emerging field of prostaglandin research based on the blood-bathed organ (BBO) technique, a bank of animal tissues selected for their ability to detect prostaglandins in biological fluids. J. Harold Burn, recently retired chairman of pharmacology at Oxford, introduced me to John Vane by letter. Dr. Burn, who was visiting his daughter in St. Louis, suggested that I learn the...
BBO technique by spending time at the Royal College of Surgeons in John Vane’s laboratory. Since I was unable to go to England, John Vane graciously routed Kevin Ng and his family via St. Louis on returning to their home in Singapore. Kevin had just completed his PhD and had used the BBO method to good effect in defining the circulatory dynamics of the renin-angiotensin system (RAS). I had to find the money to support Dr. Ng, his wife and two sons for a two-month period in St. Louis. I called Howard Weisberg at the American Heart Association offices and requested the use of funds in my AHA grant to support the Ng family. This included rent of a two-bedroom apartment, car rental, etc. I sent a short letter of purpose and expectations for my request to Howard Weisberg; he promptly approved with a wish for speedy transplantation of the BBO from the UK to the USA. Howard Weisberg eliminated unnecessary administrative barriers. He was a man of vision, strength and character.  

A brief aside about the BBO method (blood cascades over rat stomach strip, rat colon and chick rectum) for detection of circulating prostaglandins. On presenting our findings with the BBO method (we identified the renal vasculature as a critical site of RAS-prostaglandin interactions), many important scientific eyes of the American Scientific Establishment rolled up into their sockets, registering the view that these studies are low-tech, if not unscientific, something akin to alchemy. The studies of John Vane and colleagues at the Royal College of Surgeons as well as our own, gave testimony to the triumph of the intellect over technology (ideas trump gadgetry). This is not to say that high-tech was irrelevant to pursuing our scientific objectives; rather, it wasn’t available. Moreover, the use of a bioassay technique, which registers the time course of changes in biologically active substances in the circulation, provides a “real-time picture” of the hormonal system under study in a dynamic manner. A splendid example of the versatility of the BBO method is found in John Vane’s Gaddum Lecture of 1968, which addressed the lung as a metabolic organ that both activated and inactivated key hormonal systems involving amines, peptides, and prostaglandins. These studies established the lung as much more than a gasbag and altered our perception of the vital contribution of the lung as both a modulator, terminator, and generator of circulating hormones.  

Our scientific careers require periods of deep thought, and we do our best to avoid these demands. However, opportunities arise to escape the awful prospect of a life in which thinking is essential. For those of us who are disinclined to think, a career in either the dean’s office or in industry beckons. “There is no expedient to which a man will not resort to avoid the real labor of thinking.” (Joshua Reynolds, the 18th century English portrait painter)  

Science offers the opportunity to continue the predilections of childhood. For those who are reluctant to give up their toys, a career in science is recommended. Alexander Fleming said as much concerning the discovery of penicillin, “I was just playing about.” The English physiologist Starling described research as “the greatest game on earth.” This method, if indeed letting the imagination run wild can be considered methodical, provides the fuel for discoveries. It is the essence of the Dionysian approach to problem-solving and draws heavily on intuition, guessing, day-dreaming — in brief, the stuff of children’s games. Chance and intuition are far more important than reason and logic. Worse, what passes as reason has been used to maintain traditional views and oppose new discoveries. Yet, it is precisely that mental faculty, sweet reason, and its implementation, the well-reasoned grant that the Review Committees at the National Institutes of Health hold in highest esteem. I turn to that most difficult passage in our scientific careers, writing Research Grants. I recently addressed, once again, this most onerous and necessary of activities. Like drug discovery, grant writing resembles the contest between the Trojan priest, Laocoön, and the serpents which beset him and his sons for incurring the wrath of the gods.  

The Hungarian scientist and Nobel Laureate, Szent-Györgyi, said it well, based on the Nietzschean dichotomy, Apollo vs. Dionysius: “In science the Apollonian tends to develop established lines to perfection, while the Dionysian rather relies on intuition and is more likely to open new, unexpected avenues for research”. Discoveries are the way of Dionysius, the god of wine, not
Apollo, the god of light. “Research is to see what everybody has seen and think what nobody has thought” (Szent-Györgyi).

And now a message to Study Sections regarding their favorite descriptive phrases, fishing expeditions and focus:

1) The Portuguese word for research is “pesquisas,” meaning “fishing.”

2) To quote Julia M. Cameron, a 19th century photographer: “What is focus and who has the right to say what focus is the legitimate focus?” “Take my lens. I bequeath it to my descendents. See that it is always slightly out of focus.”

3) Conclusion: The Best of Photography and Grant Writing are art forms… “blurriness included.”

I owe much to many. First, to my father, John Francis, who put me on the right path and planted the seed of intellectual curiosity. Second, to Sara Leighton Babb, (I was her husband) who was always “at the ready” to move on short notice because of my native capacity to alienate key figures. Sallie calmed troubled waters and produced civilized discourse. Third, to my children, who have gladdened my years after a rough start. Let’s not forget NIH and NHLBI, who provisioned the Voyage of Discovery. The exemplary staff of NHLBI distributes public funds with a keen eye on outcome and a high regard for our efforts. And, of course, to Science and its practitioners.

Science is the King’s Highway, the Royal Way, that delivered me from the troubled waters and produced civilized passengers. Some of these are known to you: Tito Nasjletti, K.U. Malik, Patrick Wong, Alicia and Norberto Terragno.

The Future: Aging, as it unfolds, reveals essential affinities to survivors. For me, it has brought recognition of the supremacy of: Willie Nelson over Luciano Pavarotti; port over gin; a week in Florence over a year in Florida; and Dachshunds over most living things.

And what does the future hold? I favor: “Eat, Drink and Be Merry” and its companion, “Wine, Women and Song”. I plan to enjoy life with a pre-dinner martini, wine with dinner, a juicy porterhouse steak, steak fries and a slice of cheesecake. Let’s not forget the cigars and brandy after dinner!”

References:

2004 AHA Lewis K. Dahl Memorial Lecture

Ernesto L. Schiffrin, MD, PhD, FAHA
Immediate Past Chair, HBPR Council

Dr. Rhian M. Touyz presented the Lewis K. Dahl Memorial Lecture at the AHA Scientific Sessions in November. Dr. Touyz is associate professor, department of medicine, University of Montreal, and laboratory director and physician in the hypertension unit at the Clinical Research Institute of Montreal, Montreal, Canada. She received her medical training and subsequent degrees from the University of the Witwatersrand, Johannesburg, South Africa. She has received numerous academic and research awards, including the Young Investigator Awards from the American Society of Hypertension, Canadian Society of Hypertension and the Quebec Society of Hypertension. Dr. Touyz chairs the Subcommittee on Lifestyle Modifications, is co-chair of the Evidence-Based Recommendations Task Force and is on the Executive Committee of the Canadian Hypertension Education Program (CHEP). She is also the scientific chair of the Canadian Hypertension Society National Meeting. Her research is funded by the Heart and Stroke Foundation of Canada and the Canadian Institutes of Health Research. Dr. Touyz is a member of the Cardiovascular Committees of both agencies and is supported by a scholarship award from the Fonds de recherche en santé du Quebec. She has recently been awarded the Senior Canada Research Chair in Hypertension at the University of Ottawa. In addition, she is on the many editorial boards including Hypertension, Journal of Hypertension and American Journal of Physiology. She is editor of the issue on Vascular Mechanisms in Current Hypertension Reviews and on Pathophysiology of Hypertension in Current Opinion in Nephrology and Hypertension. Dr. Touyz has published over 150 peer-reviewed papers in her field. She is particularly interested in translational research in hypertension, bridging the gap between bench and bedside.

In her Lewis K. Dahl Memorial Lecture, Dr. Touyz addressed the cellular and molecular mechanisms that lead to changes in vascular smooth muscle cells caused by hypertension. Among the many factors involved, Ang II appears to be one of the most important. Ang II, a multifunctional peptide with pleiotropic actions, modulates vasomotor tone through its vasoconstrictor effects, it regulates cell growth and apoptosis/anoikis, it influences cell migration and extracellular matrix deposition, it is proinflammatory and it stimulates production of growth factors and vasoactive agents. These effects are mediated via complex intracellular signaling pathways. Ang II induces many of its (patho)physiological effects by stimulating reactive oxygen species that influence downstream signaling molecules. Although there has been major progress in the elucidation of Ang II-mediated signaling, little is known about specific molecules underlying aberrant signaling in hypertension. Dr. Touyz’s work has suggested that c-Src is a putative candidate because it is rapidly activated by Ang II and because it is a common upstream modulator to multiple Ang II-stimulated signaling pathways. Targeting such molecules/pathways could prevent or regress vascular damage, thereby potentially improving outcome in hypertension, a major cause of cardiovascular morbidity and mortality.