Spotlight: Roberto Ferrari, MD, PhD, FESC

“To Find Someone Who Is Able to Develop an Innovative Research Programme and to Write an Article Is Very Difficult”

Professor Roberto Ferrari, chair of cardiology, University of Ferrara, Italy, and Cardiovascular Research Centre, Salvatore Maugeri Foundation, IRCCS Gussago (BS), Italy, and the new president of the European Society of Cardiology, talks to Jennifer Taylor, BSc.

Despite his current dedication to cardiology, as a young boy Roberto Ferrari, MD, PhD, FESC, wanted to be an architect. But the late 1960s represented a difficult time for the Faculty of Architecture in Italy, as it was more involved in political issues than in teaching architecture. So, he chose medicine. He now serves as professor of cardiology at the University of Ferrara, director of the clinical cardiology department at the University Hospital of Ferrara, and director of the Centre of Cardiovascular Research S. Maugeri, part of the S. Maugeri Foundation. However, he still maintains an interest in design, as is shown by his many innovative and colourful books and publications.

Born in 1950 in La Spezia, a small nonuniversity seaside city in Italy, Ferrari wanted to study in a big city such as Geneva or Paris, but his father would not allow it. “I was not particularly good at school, and my father was a rather conservative person from a small town.” He describes his early schooling as “a disaster.” This led him to a college in Parma, which, in Italy, seemed like a form of punishment. However, he pursued his medical studies in nearby Bologna, between 1969 and 1974, and graduated with distinction. He then went to the University of Parma, attending the Postgraduate School of Cardiology between 1974 and 1976. He returned to Bologna between 1977 and 1980 to attend the Postgraduate School of Radiology. “At that time in Italy, it was unclear whether the haemodynamic should be done by a cardiologist or by a radiologist,” he explains. “So, I thought it was a good idea to become a radiologist, in order to continue to do catheterisation, which I liked.” Professor Ferrari describes the satisfaction of catheterisation: “You are young, you put on the gloves, you think you are doing something good for the patient and the results are immediate”. But of course, getting older, he realised that there are many other important aspects of medicine that make a difference to the patient.

A Limited Knowledge of English Led to an Exciting Time in Research in London

Between 1978 and 1983, Ferrari pursued a PhD in cardiac metabolism at the Cardiothoracic Institute, National Heart Hospital, University of London, London, United Kingdom. This was a turning point in his career. Unable to speak English very well, the department felt reluctant to let him see patients, so, he was sent to language classes and to the laboratory to work with rabbits. “You don’t have to talk with them,” he says. He enjoyed doing experiments on molecular changes during ischaemia and reperfusion, and it sparked an interest in basic cardiological science. Meanwhile, his English improved, and he took on some clinical work as well. The institute had a multinational aspect, which enlarged his vision and allowed him to fully appreciate both

On other pages...

**Spotlight: Barbara Mulder, MD, PhD, FESC**
Barbara Mulder, professor of cardiology, Cardiology Department, Academic Medical Centre, Amsterdam, the Netherlands, and president-elect for the International Society of Adult Congenital Cardiac Disease, talks about her serendipitous career path, which has led to her pioneering work in congenital heart disease.

Page f45

**About Circulation: Cardiovascular Interventions**
*Circulation: Cardiovascular Interventions* is the fourth of 6 new subspecialty journals to be spawned from *Circulation* to reflect the changing needs of cardiovascular researchers and cardiologists worldwide.

Page f48
science and medicine. “England taught me to see life in a different way: be part of the world and not only of Italy.”

While in London, Professor Ferrari was able to continue his passion for design, and he was lucky enough to be introduced, by his wife, to Alan Fletcher, one of the founders of the famous Pentagram design studio. “Alan gave me a new dimension in expressing the sometimes boring results of research.” An example of this is the Atlas on Cardiac Metabolism, a book which uses the London Underground map to explain all of the different steps of the cardiac metabolism. The book won several prizes.1 Another of Professor Ferrari’s mentors in London was Peter Harris, MD, PhD. “Peter, who is sadly no longer with us, was firstly my teacher of life, secondly my teacher of cardiology, and thirdly a good friend. Peter was not a prototype English professor. He came from a very simple background but he was a real deep thinker, always going to the root of the issue, a philosopher. Together, we did 2 research projects which I’m proud of,” he says.

One of these research projects challenged the common idea that the neuroendocrine response to heart failure is beneficial. “It was strange for Peter that nature would have been so kind as to give human beings a response to improve the condition of heart failure,” Professor Ferrari says. So, together with their Indian colleague, Inder Anand, MD, they went to Punjabi, India, to study patients with severe heart failure who had not received any drug therapy as would have been the case in the West. This study was necessary to establish the real neuroendocrine response to heart failure because drug therapy affects the response. The results of their research allowed them to understand that the response is not specific but a stereotypical one aimed to maintain blood pressure, and to allow mammals to survive bleeding and to hunt. It is extremely useful in the short term, but it is dangerous in chronic conditions such as heart failure. They published several seminal papers on their findings.2–7 This research allowed a complete change in treating heart failure using drugs able to block the neuroendocrine response like angiotensin-converting enzyme inhibitors and β-blockers.

The second project studied the reason why few animals, despite living at very high altitude, do not develop pulmonary hypertension. For this, the 3 of them, with a pathology professor, Donald Health, MD, travelled to the Himalayas and to the Andes to study the yak and llamas; this represented an exciting time in Professor Ferrari’s life.

“Une Empasse” at the University of Brescia Took Professor Ferrari to Ferrara.

On finishing his PhD, Professor Ferrari was offered a permanent position in England, but he opted to return to Italy, the centre of his life and family. Professor Visioli, his Italian chief, was taking on a role as professor of cardiology at the University of Brescia, Brescia, Italy, and Ferrari had the opportunity to join him as an associate professor. In Brescia, Professor Ferrari set up an institute for basic research in cardiology, the Centre of Cardiovascular Research S. Maugeri. The centre was built in just 6 months, with the support of the S. Maugeri Foundation, a private foundation that has 13 hospitals in Italy, and this new centre allowed Professor Ferrari to continue what he had learned so far.

Work on the Hibernating Heart

Ferrari worked on true translational research ranging from cell to humans, which attracted Shahbudin Rahimtoola, MD, FACC, the “father” of hibernation, to Brescia several times.8,9 Despite the success of his research and clinical work in Brescia, the University opted for another candidate as chair of cardiology. When the University of Ferrara offered him the chair and the leadership of the cardiology department of the hospital, he accepted at once and with joy. Professor Ferrari says, “Ferrara is the third-oldest university in Italy, and currently the best performer in research. I moved to Ferrara, and I transferred the Cardiovascular Centre from Brescia to Ferrara. I am the only cardiologist here. We have clinical responsibility for the entire city and its province. I joined together the hospital and the university cardiologists, forming a unique friendly group working towards the same goal. I am proud to say that this is a rare example in Italy.”

Professor Ferrari now splits his time between clinical work, research, and teaching, which has included opening the first school in Italy for clinical and epidemiological research and a centre for multinational independent clinical trials, which is very active.10–12 His wife, Claudia Florio, works as a film director, and they have 1 daughter.

A Dedicated President of the ESC Focussing on National Societies and Promoting Research

In the next 2 years, as president of the European Society of Cardiology, Professor Ferrari says, “I would like to bring the ESC closer to the national societies, and particularly to those in transition.” He intends to do so by visiting them all and by attending their annual national meetings. He hopes to meet, when appropriate, local politicians and administrators to assist in the development of a good cardiological system in those countries where this is still lacking and to promote the free circulation of cardiologists throughout Europe. He will also promote the importance of research through the growth of the European Heart Research Foundation. The mission of the Foundation will be to promote cardiovascular research through members and affiliates of the ESC and “this is needed,” Ferrari says, “to restore the enthusiasm of young people towards research; research is curiosity—medicine without research is dull. I am afraid that the new generation has lost its curiosity, and this needs to be reinforced.” A third aim will be to develop, together with UEMS (European Union of Medical Specialists) and EBSC (European Board for the Specialty of Cardiology), an accreditation e-platform for assessment of cardiology training and revalidation for European cardiologists.

Professor Ferrari adds, “In general, I am not in favour of globalisation. I understand that it has its benefits but I believe that each country should maintain its soul and originality. We should take advantage of the differences, but, when necessary, we need to be unified, and this is the spirit of the ESC.”
Spotslight: Barbara Mulder, MD, PhD, FESC

A Career That Could Never Have Been Planned

Barbara Mulder, professor of cardiology, Cardiology Department, Academic Medical Centre, Amsterdam, the Netherlands, and president-elect for the International Society of Adult Congenital Cardiac Disease talks to Jennifer Taylor, BSc, about her serendipitous career path that has led to her pioneering work in congenital heart disease.

I think there is some kind of male dominance in the upper layers of various organisations, and I think you do need special antenna to understand the male language.” So says Barbara Mulder, MD, PhD, FESC, professor of cardiology in the Cardiology Department, Academic Medical Centre, Amsterdam, the Netherlands, about the world of cardiology. Her husband now acts as “a translator of male talk.” She met Ernst van der Wall, MD, head of the Cardiology Department, in Leiden, the Netherlands, in 1986, and they married in 1988. “I was already a cardiologist when we married,” she adds, “I still don’t get it. That’s typical male talk. Why doesn’t he ask right away?”

“When my husband heard that I had answered ‘my family life,’ he said, ‘How can you say to your head of department that you choose your family life? Of course, you should say, ‘I choose my career.’ The next day, I went back to my boss, and I said, ‘I changed my mind; I choose my career.’” This represented the first step toward her professorship, which she gained in November 2004. “But, she adds, “I still don’t get it. That’s typical male talk. Why doesn’t he ask right away?”

“Agendas, but I Don’t Like It”

The approach had seemed completely at odds with Professor Mulder’s own behaviour. She describes herself as straightforward, direct, and honest, with no hidden agendas—a personality that has its advantages but that, politically, might not seem very useful. “In the political world, everyone has hidden agendas, but I don’t like it at all,” she says. “I’m not very good in negotiations, where I immediately say what I think. That’s not very handy; that’s not the way you should behave in that aspect.”

Professor Mulder’s personality also influences the way she practises cardiology. “I’m quite straightforward also to my patients, quite direct. I discuss exactly how it is. I’m not making stories—with diagnosis, with options, with the

References

Jennifer Taylor is a freelance medical journalist.
future; I’m quite straight. I try to adjust, of course. If I notice that the patient doesn’t like to hear, then I stop—it’s not that I push it.” She explains that these personality traits come from the general education she received from her parents—her father worked as a judge, as vice president of the court of justice, and her mother also studied law. “It gave me the strong sense of justice. I still cannot bear, cannot easily cope with, unfairness.”

“My Life Is Not One That Has Been Planned Far Ahead; It’s Mostly Seeing Opportunities and Taking Them When They Come Along”
Born in the Netherlands in 1953, Mulder had no doctors in her family, but she found the human body interesting. So, the studies, rather than the job at the end, attracted her to medicine. Cardiology had not yet interested her—rather, she was thinking more of something “quite low key” such as a general practitioner or school doctor. “I was not at all very career minded at that time,” she admits. She couldn’t wait to leave home, and in 1971 she went to the School of Medicine, State University Leiden, Leiden, the Netherlands, becoming an MD in 1978. “As soon as I entered university, I decided to stay as long as possible. I liked it a lot—I liked the study, and I liked the life as a student. But, again, when I got my degree, I had no idea what to do.” Such a pattern would run throughout her career; she describes this pattern as “keep left lane, but look right.” It emphasises keeping ahead while looking around at the same time. She explains, “For me, I think my life is not one that has been planned far ahead; it’s mostly seeing opportunities and taking them when they come along.”

At that time, Professor Mulder’s parents went to Curaçao for 3 years for her father’s job, so she decided to visit them and have a holiday. When she arrived, she asked the hospital whether they needed anyone, to which they responded affirmatively. So, from January to July 1979, she served as a resident in internal medicine at the Elisabeth Hospital in Curaçao. “I thought, ‘Internal medicine—that’s a good idea because, for any job or any direction or any specialisation, it’s useful. It’s very general, very basic.’” She remembers this as a good time, with a mixture of local doctors and Dutch doctors, combined with the tropical atmosphere. “From 12 to 3 PM, the hospital was closed, and everyone went to the beach. Before, I thought, ‘Internal medicine—that’s a hard job; it’s not what I like.’ But, when I was there, I thought, ‘Well, if it’s like this, I don’t know what else I should do.’”

On returning to the Netherlands, Professor Mulder went for the same job, this time at the Diaconessen Hospital, Voorburg, where she stayed from January to November 1980. But, she says, “It was not at all what I thought it would be. It was completely different. Of course, the content of the job was the same—it was the same specialisation, but I didn’t feel happy.”

Yet again, coincidence and opportunity presented themselves. A female colleague worked as a resident in cardiology and described it as a good job with nice people, so Professor Mulder phoned up the Academic Hospital in Leiden, which said she could begin straightaway as a resident in training for cardiology. She liked the atmosphere, the people, and the work. “What I liked about cardiology was the combination of practice and thinking and working and speed.” And cardiologists? “I think every speciality has its own characters. Neurologists are different from cardiologists, and surgeons are different again. Cardiologists are quite proactive people, and direct. They’re fast and they’re practical: something in between internal doctors and surgeons.” Professor Mulder remained at Leiden from 1981 to 1985, when she gained registration as a cardiologist. She then became a sports cardiologist at the University of Pavia, Pavia, Italy. She explains, “That was more driven by the fact that I had an Italian boyfriend. So, in fact, I cannot say that my career was planned far ahead. I had to leave again because the relationship ended. So, I went back to Holland again.”

Amsterdam “Is the Place to Be When You Start a New Life”
A cardiologist post at St Jozef Hospital in Gouda followed, from July 1985 to January 1986. In the same year, she moved to the Academic Medical Centre in Amsterdam (where she still works, more than 20 years later) to become a cardiologist in the coronary care unit. She hadn’t wanted to return to Leiden; she says that Amsterdam “is the place to be when you start a new life.”

Having moved to an academic institution, Professor Mulder decided she should finish her PhD thesis, which she had begun during her fellowship as a trainee with Henk ter Keurs, MD, a physiologist and cardiologist. Professor ter Keurs had gone to Calgary, Canada, at the same time that Professor Mulder had gone to Italy. So, she went to the University of Calgary as a research associate in the Department of Physiology from September to December...
1988 to finish her laboratory work on arrhythmias in rat hearts, and she received her PhD in June 1989. In April 1990, she won the ICI Pharma Award for the Best Cardiovascular Thesis 1989, assigned by the Interuniversity Cardiology Institute of the Netherlands.

**Pioneering Work in Adult Congenital Cardiology**

Meanwhile, Professor Mulder met her husband, and on the day she defended her thesis, she was 3 months into her first pregnancy. She became head of the outpatient clinic at the Academic Medical Centre in 1990, a post she held for 6 years. She started to work part-time—and still does—and moved her career toward congenital heart disease, where she could do most of the work in the outpatient clinic. Again, the career switch had more to do with grasping an opportunity than with planning ahead. The head of the Cardiology Department at the time, Ad Dunning, MD, asked her to take up the speciality. She says, “He actually convinced me to change and to choose congenital cardiology because he needed one [a specialist in congenital cardiology] at the time, and he thought it could be well combined with the part-time job.”

Professor Dunning served as one of Professor Mulder’s mentors. She liked how Professor Dunning did not just focus on cardiology but remained open to other influences. He had wide interests that encompassed medical, political, and ethical issues. Other mentors have been Professor ter Keurs, who was completely the opposite and who taught Professor Mulder how to focus and persevere; Professor Lie, who showed her how to deal with strategic and political (“male”) issues; and her husband. The present head of department, Arthur Wilde, MD, offers the platform on which Professor Mulder can currently carry out her research activities.

Although the change to adult congenital cardiology did not come as a planned career move, Professor Mulder has grown to love the speciality. “I think that’s the story of my life. I didn’t choose everything so [far] in advance, but I started to like most things as soon as I grew into them.”

**Spearheading Collaborations**

In 1998, Professor Mulder founded and became chair of the Netherlands Society of Cardiology’s Working Group on Adult Congenital Heart Disease—a position she held for 8 years. Advances in heart surgery in the 1970s led to the creation of a new patient group. Previously, children with congenital heart disease had often died before reaching adulthood, but in the 1990s they could survive. “There were not many cardiologists involved in that kind of thing,” says Professor Mulder. “So, I thought, ‘Let’s cooperate, let’s join forces, let’s come together once in a while to discuss difficult problems.’ So it was more the idea of a joint venture in a new and difficult and unknown area.” Ten years on, the group has 20 active members, “all motivated, all wanting to work together,” and represents “maybe the most active working group of our society.”

Professor Mulder’s latest venture involves her new role as president-elect for the International Society of Adult Congenital Cardiac Disease. “I think that gives me the opportunity to create an extensive and fruitful worldwide network for cardiologists. I think that’s my aim for the next years: to go for international collaboration in the global sense, with Australians, Asians, North and South Americans, and Europeans.”

**A Career That Could Never Have Been Planned**

Although her present position is a presidential one, Professor Mulder feels happy with the ways she has managed to combine her career with family life, and she feels that she has taken the best of both lives and both worlds. Ironically, had she tried to plan her career, she would have thought her present situation impossible. She works mornings in the hospital and afternoons at home when her sons are there, and she manages to combine seeing patients with involvement in educational activities and research, and she adds, “It goes without saying that my job also requires a lot of time investment during the evening at home.” She says, “I don’t like the work stress and the political issues, but they become peanuts when you get home, when you have to join the children at the soccer field or tennis court or when they lose their bike key. It’s such a completely different life that I think I relax from both worlds in the other life.”

Jennifer Taylor is a freelance medical journalist. Photo on page f45 copyright © 2008 Caroline Hogervorst.
About Circulation: Cardiovascular Interventions

“The Known and Respected Quality of Circulation Will Be a Large Draw for the Readership”

David P. Faxon, MD, FAHA, Vice Chair of Medicine for Integrated Clinical Services Department of Medicine, Brigham and Women’s Hospital, Harvard Medical School, Boston, MA, and Chief, Cardiovascular Division, West Roxbury Veterans Administration Medical Center, West Roxbury, MA, serves as editor.

The premier issue of Circulation: Cardiovascular Interventions is included with this issue of Circulation and is the fourth of 6 new journals from the American Heart Association and Lippincott Williams & Wilkins, a division of Wolters Kluwer Health.

David P. Faxon, MD, FAHA, the journal’s editor and an associate editor for Circulation: Journal of the American Heart Association says, “The field of interventional cardiology is rapidly growing, particularly in the areas of interventional therapy for structural heart disease, including valvular disease and congenital heart disease, and for vascular disease. There has been a limited number of journals that have focused on this area and the majority of high-quality articles have appeared in general cardiology journals. At least 50% of cardiologists practice either invasive or interventional cardiology and without any of the current journals considered a prestige journal in the field, the clinician and academician need an excellent journal in this area. The known and respected quality of Circulation will be a large draw for the readership.”

Joseph Loscalzo, MD, editor-in-chief of Circulation and the Circulation subspecialty journal family says, “Under the stewardship of its editor, Dr David Faxon, this journal will become a primary source of cutting edge information in the rapidly expanding field of cardiovascular interventions.”

Dr Faxon says, “Areas of focus for Circulation: Cardiovascular Interventions will be interventional techniques that pertain to coronary artery disease (eg, angioplasty and stents), structural heart disease (valvular heart disease and congenital heart disease), and vascular disease (including peripheral vascular disease, and aortic, renal and cerebral vascular disease). The sections will be ‘Original Research,’ ‘Advances in Cardiovascular Interventions,’ ‘Reviews in Cardiovascular Interventions,’ and ‘Images in Cardiovascular Interventions,’ as well as ‘Editorials.’”

Each issue is available in print and online. The journal Web site, http://circinterventions.ahajournals.org, will present “Publish Ahead of Print” articles and other online features. To find out how to submit a manuscript, log on to http://circ.ahajournals.org/misc/ifora_interventions.shtml.

American Heart Association/American Stroke Association Premium Professional members have free, full-text access to journal articles through December 31, 2008. The first issue of each of the 6 new journals is available to the public as a free sample.

Contributions From Europeans in Issue 1

- **Original Research Article** Drug-Eluting Stents Versus Bare-Metal Stents For “Off-Label” Indications: A Propensity-Score Matched Outcome Study David Austin, MD, FRCP; Keith G. Oldroyd, MD, FRCP, FSCAI; Alex McConnachie, PhD; Rachel Slack, MPH; Hary Eleiba, MD, FRCP, FACC; Andrew D. Flapan, MD, MRCP; Kevin P. Jennings, FRCP; Robin J. Northcote, MD, FRCP, FFSM; Alastair C.H. Peil, MD, MRCP; Ian R. Starkey, FRCP; Jill P. Peil, MD, FESC; 1 Section of Public Health and Health Policy, University of Glasgow, Glasgow, United Kingdom; 2 Western Infirmary, Glasgow; 3 Robertson Centre for Biostatistics, University of Glasgow, Glasgow; 4 Glasgow Royal Infirmary, Glasgow; 5 Edinburgh Royal Infirmary, Edinburgh, United Kingdom; 6 Aberdeen Royal Infirmary, Aberdeen, United Kingdom; 7 Victoria Infirmary, Glasgow; 8 Monklands Hospital, Airdrie, Lanarkshire, United Kingdom; 9 Western General Hospital, Edinburgh.

- **Contemporary Reviews in Interventional Cardiology** Anatomy of the Aortic Valvar Complex, and its Implications for Transcatheter Implantation of the Aortic Valve Nicolo Piazza, MD; Peter de Jaegere, MD, PhD; Carl Schultz, MD; Anton Becker, MD, PhD; Patrick W. Serruys, MD, PhD; Robert Anderson, MD, FRCP; 1 Department of Cardiology, Thoraxcenter, Erasmus Medical Center, Rotterdam, the Netherlands; 2 Department of Pathology, University of Amsterdam, Academic Medical Center, Amsterdam, the Netherlands; 3 Cardiac Unit, Institute of Child Health, University College, London, United Kingdom.

- **Images and Case Reports in Interventional Cardiology** Unstable Angina as a Result of Coronary–Subclavian Steal Syndrome M. Lelek, MD; T. Bochenek, MD; J. Drzewiecki, MD, PhD; M. Tusz-Gluza, MD, PhD Department of Cardiology, Silesian Medical University, Katowice, Poland.

- **Images and Case Reports in Interventional Cardiology** Giant Coronary Artery Aneurysm: Imaging Findings Before and After Treatment With a Polytetrafluoroethylene-Covered Stent Parham Eshtehardi, MD; Stéphane Cook, MD; Igal Moarof, MD; Hans-Jürgen Triller, MD; Stephan Windecker, MD Department of Cardiology and Radiology, University Hospital Bern, Bern, Switzerland.

The opinions expressed in Circulation: European Perspectives in Cardiology are not necessarily those of the editors or of the American Heart Association.