

Interview: Dr. Marco A. Martinez Rios

General Director, National Institute of Cardiology, Mexico



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Dr. Marco A. Martinez Rios, General Director of the National Institute of Cardiology in Mexico elaborates on the institution's rich history in Mexico and its contributions to cardiology through research, teaching and treatment.

As the general director of the National Institute of Cardiology, could you introduce yourself to our international readers as well as the key purpose of the Institute in Mexico?

We are very proud to say that the institute is the first national institute devoted to cardiovascular diseases in the world. Professor Chavez, who was trained in France in the cardiology area, founded the institute in 1944. The institute has since attracted cardiologists from around the world, mostly from Canada and the United States and several Nobel Prizes were awarded to scientists here.

The institute focuses on three key pillars: research, teaching and treatment. In terms of research we have nearly 100 researchers located in two buildings as well as numerous animals from mice to dogs that facilitate their research. In terms of teaching we have taught over 3000 cardiologists that are located around the world. On the campus, currently we have over 100 young physicians in a competitive three-year cardiology program and we have 250 residents in short term clerkships from other institutions around the world. In terms of treatment, we treat patients from all stages of life, from newborns through elderly patients. We treat over 130 thousand patients a year and conduct

more than 1500 cardiac operations a year, with at least 1600 interventional cardiology procedures. Our legacy from Professor Chavez was to take care of patients with warmth and respect. Patients are not numbers here and we are proud of how we treat our patients.

We are the only cardiovascular institute in the country and we receive patients from all over Mexico. We take care of patients that do not have resources and we take care of the poor people that do not have any insurance. We only have a fixed number of personnel and a fixed number of beds and we choose to take the most critical patients, which includes some of the most complex cardiovascular cases.

Considering that 53 per cent of patients with cardiovascular disease are not diagnosed, what needs to be done to increase the awareness of this disease?

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Cardiovascular diseases present an enormous issue in Mexico and we urge the media to highlight the gaps and the urgency of the situation. In medicine it is not a competition against other diseases, but rather we are all working for the health of the patients. We see how different campaigns raise awareness and funding for research in the country, such as the breast cancer awareness campaign. This is good work and something the chronic cardiovascular diseases could learn from. Women after 50 years old are dying more from cardiovascular diseases now than from cancer. More can be done in terms of prevention. We have made strides in terms of creating awareness for the impact of smoking and the importance of a low sodium diet and exercise. In research we have several projects that study prevention and we have many educational programs, but prevention is the most important area in which we need to do more.

We get involved on a national level, not only by training many physicians, but also through educational measures for the population such as through the distribution of educational material.

In what ways does the institute support innovation within Mexico and incorporate innovations to drive efficiencies?

We are an innovative institute and a prime example is that we are making our own cardiovascular valves on site. Imported heart valves can cost more than USD 2,000, but we are taking measures to produce our own supplies. We are working not only in prosthetic heart valves but also in other cardiovascular devices such as coronary and peripheral stents. That being said, the real innovation is in how we conduct research and transfer it to our students so that we can make progress in terms of preventing and treating cardiovascular disease. We have professors and groups that collaborate with universities in order to facilitate the transfer from our research to students, which is a major contributor to innovation. Our students and our residents are at the forefront of these measures.

In what ways do you collaborate with other institutes and connect with other therapeutic areas?

We have programs with all the National Institutes of Health of Mexico, I highlight as an example, just three. We have close relationship and a special collaboration program with the National Institute of Oncology, devoted to patients that develop cardiovascular disease after cancer treatments. Another program is related to intrauterine treatment of congenital heart conditions in collaboration with Perinatology Institute and Pediatric Hospitals. Other relevant program is the signed collaboration with Neurology Institutions who provide us with hearts and kidneys donated from patients that have died from neurological diseases. We have a strong relationship with them and these transplants save many lives.

In what ways do you partner with the industry?

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We have several research programs with pharmaceutical companies around the world. Many multicentric clinical trials are performed in our institution, providing evidence to large international clinical trials. He have also worked with device producers to test new advances in their devices, such as pacemakers, mechanical heart assistance devices, prosthetic valves and many other bioengineering developments.

You have 220 international and national publications, 718 bibliographic quotes, Type II level Member of The National Researchers System, 4 books, and over 40 years of teaching. What do you want your contributions to be remembered?

I want to be remembered as a reperfusion in myocardial infraction enthusiast, working over 35 years in this field. I had the privilege to be part of the first developments of cardiac catheterization in Latin America and soon after my training in the United States; I became a pioneer of direct coronary angiography in Mexico and developed the modern Department of Interventional Cardiology in the National Cardiology Institute of Mexico. These achievements gave me the opportunity to found the first society of interventional cardiologist in Latin America: SOLACI (Latin America Society of Interventional Cardiology).

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