

Speech of  
**PROFESSOR ATTILIO MASERI**  
Winner of the 1992 King Faisal International Prize  
For MEDICINE (Coronary Artery Disease)

Your Royal Highnessess,  
Distinguished Guests,  
Gentlemen,

I am very deeply  
honoured to receive this award and wish to wholeheartedly thank  
the committee for having selected me from all

the other worthy candidates.

The King Faisal International Prize is the greatest honour I have received and comes at a critical time in my career. After 12 exciting years at the RPMS in London, I have recently moved to Rome, where I am setting up an Institute of Cardiology in which I have unlimited scope to develop cardiological practice, research and teaching according to principles that I have formulated over the past 30 years. I am developing an Institute where medical care is focused on the patient and his individual problems, rather than on the disease; where research should help solve the clinical problems that each patient poses rather than follow traditional trends; and where teaching should create specialists who are also family doctors.

I shall now proceed to give a very brief 'philosophical' review of the major research achievements produced by my groups--first in Pisa and latterly in London. There are several ingredients which I feel contributed to the achievements that have led me here today.

The first ingredient was my curiosity to understand why a symptom or disease develops in any individual patient at that particular time in life. During medical school and soon after graduating I avidly read medical text books because they offered plausible explanations to my questions. The second ingredient was my teachers in Pisa, New York and Baltimore who taught me how to interpret critically the text books and scientific articles and to set up research projects. The third ingredient was my co-workers in Pisa and London with their enthusiasm, competence and dedication to research, and last, but not least was the understanding and loving support of my family.

In the early 70s, the first phase of my research into ischaemic heart disease was fuelled by the conditioning I'd had from text books: my dream was to develop methods of imaging blood flow to the heart muscle in order to detect the presence of coronary obstructions. Indeed at that time fixed atherosclerotic coronary obstructions were deemed to be the only respectable cause of impaired perfusion to the heart muscle. However, very soon the clinical observation of patients who reported having angina pectoris without apparent cause, but who could usually exercise without any discomfort, stimulated a series of coordinated studies using continuous monitoring, radionuclides and anglography. Such studies concurred in proving conclusively the role of transient coronary artery spasm. Subsequent studies, first in Pisa and later in London, showed that myocardial perfusion was often impaired transiently by causes other than occlusive spasm of epicardial coronary arteries: causes such as modulation of the severity of coronary obstructions by smooth muscle tone, transient thrombosis and more recently constriction of small distal coronary vessels. All these different mechanisms cause the same symptom: angina pectoris, but all require different forms of treatment. More recently a series of studies in London documented that the cause of myocardial infarction (heart

attack) was different to what I had learned in textbooks. These studies showed that a heart attack does not necessarily occur because of the gradual development of a critical obstruction of a major coronary artery: it can occur unpredictably at the site of moderate, mild or even minimal obstructions, whereas in the majority of patients critical obstructions can remain stable for years.