Topic: PATHOPHYSIOLOGY OF CHRONIC HEART FAILURE

The 2002 King Faisal International Prize for Medicine is awarded to:

Professor Finn Waagstein
Professor of Cardiology, Sahlgrenska University Hospital, Sweden

Professor Eugene Braunwald
Professor of Cardiology, Harvard Medical School, USA

Professor Waagstein, was born in 1938 in Copenhagen. He is the first investigator to discover the potential benefit of beta-adrenergic blocking agents in congestive heart failure. His first publication in 1976 discusses in detail mechanistic possibilities which particularly address the potential harmful effects of excess catecholamine stimulation and how beta-blockade therapy might favorably modulate these and enhance outcome. Despite skepticism from the medical community, he pursued his belief in the beta blockers with a series of clinical trials which ultimately lead to a major, landmark, mortality trial. His contribution is the greatest recent breakthrough in heart failure therapeutics: beta-blocker treatment is now well known.

Professor Waagstein has also made other contributions to our understanding of the pathophysiology of chronic heart failure, including recent studies on myocardial energetics in small animals; He has more than two hundred scientific papers published in renowned international journals.

Professor Eugene Braunwald, distinguished Hersey Professor of Medicine and Faculty Dean for Academic Programs at the Brigham and Women's and Massachusetts General Hospitals, Harvard Medical School, is a USA citizen, born in 1929. He has had a long and distinguished career over the past 40 years and has been at the forefront of the investigation of congestive heart failure and the acute coronary syndromes. He contributed to
more than 1100 publications and is the editor of a textbook of cardiovascular medicine that has been highly successful and editor of Harrison's Principles of Internal Medicine. Professor Braunwald and his colleagues explored, identified and established the role of the sympathetic nervous system in congestive heart failure. They developed a novel model in animals for congestive heart failure that has been used by many Laboratories to evaluate pathophysiologic studies and effects of therapy. Professor Braunwald was amongst the first to delineate the importance of idiopathic hypertrophic sub-aortic stenosis and the physiologic abnormalities of this myopathic process. He and Robert Kioner were the first to develop the concept of post-Ischemic left ventricular dysfunction after temporary reduction and coronary flow. This key concept relating to reversible left ventricular dysfunction, its causes, consequence and opportunities for modulation remains a contemporaneously important issue.