

Profiles in Cardiology

This section edited by J. Willis Hurst, M.D., and W. Bruce Fye, M.D., M.A.

Michael B. Gravanis

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Michael B. Gravanis (Fig. 1) was born on January 27, 1929, in Krokylion, Doridos, Greece, high in the mountains of Roumeli. He attended First High School of Thessaloniki, Greece, from 1940 to 1946 and received his medical degree from Areststelian University in Thessaloniki in 1952. He then spent two years as a surgical house officer in the Laikon Hospital in Thessaloniki before serving as an intern at the Baptist Memorial Hospital in San Antonio, Texas, from 1959 to 1960. He completed his residency in pathology at the Indianapolis General Hospital in Indianapolis, Indiana (1959–1960); at Western Ontario University, London, Ontario, Canada (1960–1961); and at McGill University, Montreal, Quebec, Canada (1961–1963). He then completed a fellowship in pathology at the Baptist Memorial Hospital, University of Texas in San Antonio from 1963 to 1964.

Gravanis joined the faculty of Emory University School of Medicine in Atlanta, Georgia, in 1965. When Dr. John Ellis, who was then chairman of pathology, moved to Cornell in 1969, Gravanis was selected as the new professor and chairman of the Department of Pathology at Emory University, a position he held until 1985. Since then, he has continued teaching as professor of pathology and cardiology.

When Gravanis was being considered for the chairmanship of the Department of Pathology at Emory University, the general surgeons were pleased because they viewed him as one of theirs. The orthopedics saw him as favoring their work and the cardiologists recognized his unusual interest in cardiovascular disease. As time passed, it was clear—he was competent in all areas but was a cardiovascular pathologist. The reason Gravanis was chosen for a profile in *Clinical Cardiology* is

that he is one of a very few pathologists who can correlate and integrate the knowledge of anatomy, pathology, and physiology into a single concept. Not only is he able to do that, but he enjoys teaching others how to do it. Therefore, he joins a select school of expert pathologists that includes Edwards, Lev, Hudson, Davies, and Roberts.

Gravanis has published over 100 scientific articles, most of which are related to heart and vascular disease. A few of the articles are listed in the references. He has written and co-authored 37 book chapters and edited three books on heart disease.

As soon as Dr. Andreas Gruentzig began to perform angioplasty at Emory in 1980, Dr. Gravanis became involved in the potential complications of the procedure. Along with other members of the interventional cardiology team, Gravanis initiated studies in experimental models about the pathophysiologic events leading to acute coronary artery closure immediately after angioplasty and the histopathologic findings of restenosis. Such studies revealed beyond any doubt that the initial success of the procedure was not due to compression and redistribution of the atheromatous plaque, as was initially believed, but instead due to stretching of the nonatheromatous segment of the arterial wall.^{1, 2} Furthermore, these studies revealed that the fibrointimal thickening that characterizes restenosis was due to proliferation and migration of medial smooth muscle cells in response to stimuli generated at the site of dilatation (barotrauma). These findings led to a series of additional experiments, primarily in pigs, in which antiproliferative agents were administered after angioplasty with an oversized balloon.^{3–6}

Dr. Gravanis played a crucial role in the evaluation of the effects of application of low dosages of γ or β irradiation (brachytherapy) at the site of angioplasty in experimental animals.^{7–9}

Dr. Gravanis' contribution to the understanding of post-transplant cardiac vasculopathy was significant. His studies in postmortem material revealed that besides the involvement of the humoral immune phenomena and the alloreactivity of the donor endothelium, cellular immunity also played an important role in chronic vascular rejection.^{10–12}

His seminal article about hypersensitivity myocarditis in patients listed for heart transplantation was the first to bring to the attention of the medical community the frequency (>5%) of this disorder in the category of patients receiving multiple

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Received: February 16, 2004

Accepted: February 16, 2004



FIG. 1 Michael B. Gravanis, M.D.

medications for class IV heart failure.¹³ Dr. Gravanis also made significant contributions to the pathophysiology of idiopathic dilated cardiomyopathy and the syndrome of prolapse of the mitral valve.^{14–16}

During his long distinguished career in the United States, Dr. Gravanis has not overlooked the medical needs of his native country. He returns to his beloved Greece several times each year as a visiting lecturer and as consultant to the Greek Minister of Health in matters regarding the reorganization of laboratory medicine. Over the last 30 years he has become a valuable link between Hellenic learning institutions, cardiology societies, and Emory University.

Dr. Gravanis was instrumental in the establishment and organization of two new medical schools, in Patras and Ioannina, in order to decongest the existing ones. In 1999, the Mayor of Thessaloniki, the second largest city of Greece, from whose medical school Dr. Gravanis graduated, honored him as an outstanding citizen. He has also received the highest honor from Greece, that of being elected to the Academy of Athens, the supreme intellectual institution of the country.

Dr. Gravanis and his wife, Lena, have a son and a daughter. He surprised his Emory colleagues by writing poetry about the heart. His book of poems entitled *Pulsations* was printed in 2000. I wrote the following as part of the foreword to the book of poems.

Now as he writes more poetry and does less pathology, I wonder what went on in his mind all those years he examined the hearts of patients who did not make it. I know the answer to my question—romantic that he is, he saw and felt more than he wrote on the scientific report he filled out for the record. He undoubtedly always saw the heart as both an anatomic structure and a metaphoric symbol. Hence his poetry.

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