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News

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****Heart pathologist named first
A.J. Gill Professor of Pathology

DALLAS--Dr. L. Maximilian Buja, professor of Pathology at The University of Texas Health Science Center at Dallas, was named the first A.J. Gill Professor of Pathology at the health science center in an announcement ceremony March 26.

One of the outstanding academic cardiovascular pathologists in the world today, he has concentrated his research efforts on the response of the heart muscle to injury, serving as an integral part of UTHSCD's well-known nuclear cardiology team. He has been responsible for pathologic studies to evaluate the nuclear heart imaging technique developed there by Dr. Frederick Bonte, director of the Nuclear Medicine Center; Dr. James Willerson, director of the Ischemic Heart Center, and Dr. Robert Parkey, chairman of the Department of Radiology.

Buja has been most interested in the sequence of events that causes a healthy heart to have irreversible damage. Angina pectoris causes temporary and reversible heart damage, but a major heart attack (myocardial infarction) causes irreversible damage. And both conditions are related to an interruption in the blood supply to the heart muscle itself.

Damage to cell membranes is the key to heart damage. The membranes of damaged cells increase in permeability, that is, they allow leakage of vital ions so that the internal milieu of the cell is altered. And Buja has documented different stages in the process of cell damage.

Most damage occurs in the first few hours after a heart attack. At first damaged cells lose potassium and gain sodium, chloride and water. At this stage, the damage is probably reversible.

At the next step, going into irreversible injury, the cells pick up calcium. The calcium balance in heart cells is a finely tuned mechanism for contraction and relaxation of the muscle, and a reduced blood flow to the cells affects this delicate balance.

Most of Buja's work with both animals and humans has been to document basic information the mechanisms of heart damage, but he is also interested in evaluating drugs that have potential for stabilizing muscle cells and preventing heart attack damage.

With more fundamental knowledge of how the heart works, Buja believes future directions of research in heart disease will focus on the genetics and immunology of heart disease and molecular biology of the heart. Because of his interest in the impact of arteriosclerosis on the heart, he has recently begun work on the pathology of homozygous familial hypercholesterolemia, a rare genetic disease that is always fatal.

A member of the editorial board of the American Journal of Pathology, Buja also serves on the Cardiology Advisory Committee of the National Heart, Lung and Blood Institute and on the Program Committee of the Council on Basic Science of the American Heart Association. He holds memberships in numerous scientific and professional organizations and has co-authored more than 90 scientific articles, two books and some 50 book chapters and other publications.

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With funds made available by Gill's fellow members in the Pathology Department as well as gifts from other faculty and friends, the professorship was established in 1977 on the retirement of the late Dr. Atticus James Gill, dean of Southwestern Medical School from 1955 till 1967. Gill was responsible for the medical school's early building program at the present location as well as for attracting faculty members now nationally recognized in academic medicine. He has also been credited with the excellent relationship between faculty and private physicians in the Dallas area.

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