SOUTHWESTERN NEWS

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NIH RENEWS KIDNEY-STONE RESEARCH FUNDING

DALLAS — September 27, 1993 — A $6.27 million federal grant for kidney-stone research at The University of Texas Southwestern Medical Center at Dallas has been renewed for five years, making it the longest and largest continuously funded kidney-stone research effort in the nation. The National Institutes of Health's Institute of Diabetes and Digestive and Kidney Diseases has been funding UT Southwestern's kidney-stone research since 1972.

The latest program-project grant includes funding for four research components.

"Our program was rated in the top 4 percent in the last review by the NIH," said Dr. Charles Pak, chief of mineral metabolism and director of the Robert T. Hayes Center for Mineral Metabolism Research.

In 1972, the year he joined UT Southwestern, Pak received UT Southwestern's first NIH funding for kidney-stone research, an individual research grant of approximately $150,000 a year.

Five years later funding increased to $1 million a year for five years to support a specialized center of research at UT Southwestern. In 1982 the NIH funding was replaced by a program-project grant, which has been renewed ever since.

Over the years UT Southwestern kidney-stone research has led to federal Food and Drug Administration approval of several drugs for kidney-stone management and correction of the underlying metabolic abnormalities that cause kidney stones to form.

"We probably have more orphan drugs approved by the FDA than any pharmaceutical company or university in the nation," said Pak. His research with UroCit-K recently was picked by the NIH as a key research effort resulting in cost savings.

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Pak's mineral metabolism group also is responsible for formulating diagnostic criteria and a diagnostic kidney-stone risk profile now used by physicians nationwide. Overall, the work by Pak's research group has contributed greatly toward diagnosis and prevention of kidney stones in most patients suffering from the painful malady.

The four components of the latest grant are:

—**Vitamin D receptor research.** Dr. Joseph Zerwekh, professor of internal medicine, is principal investigator on a study of the molecular biology of the Vitamin D receptor gene. Dr. Neil Breslau, professor of internal medicine, is principal investigator on a study of the clinical role of Vitamin D in kidney-stone treatment.

—**Renal citrate metabolism research.** Dr. Robert Alpern, professor of internal medicine, is principal investigator on an effort to clone the gene for sodium citrate co-transporter, a potential genetic factor in kidney-stone development.

—**Shock-wave lithotripsy.** Dr. Pei Zhong, instructor of urological surgery, is principal investigator on a study aimed at identifying optimal conditions for crushing kidney stones while minimizing kidney damage.

—**Drug studies.** Pak will lead studies of three drugs developed in UT Southwestern's mineral metabolism center. One study is designed to see if long-term treatment with UroPhos-K can correct and prevent kidney-stones. Another is a randomized clinical trial of potassium-magnesium citrate, and a third will test use of a potassium-magnesium citrate supplement to help prevent recurrence of stones in patients taking thiozide.

Dr. Khashayar Sakhaee, associate professor of internal medicine, is principal investigator on a fourth drug study, which will include both pharmacologic and clinical trials of Rimatil, an investigational drug to lower the level of cystine in the urine of people with cystinuria, an inherited defect characterized by formation of cystine stones from excessive urinary levels of cystine.

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