

November 18, 1981

# News

The University of Texas Health Science Center at Dallas  
5323 Harry Hines Boulevard Dallas, Texas 75235 (214) 688-3404

CONTACT: Susan Rutherford  
Office: 214/688-3404  
Home: 214/349-7820

\*\*\*\*\*Physician-scientist offers synthesis  
of neurologic and genetic information.

DALLAS--How many of our neurological ills are handed to us in our genes?

A growing list, including multiple sclerosis, myasthenia gravis, depression, defects in the metabolism of fat, sugars and protein--and possible alcoholism and suicidal behavior--has been compiled by Dr. Roger Rosenberg, an expert in genetics and neurology, for a recent article in the New England Journal of Medicine.

In undertaking a massive cataloging of neurological diseases with proven and possible genetic bases, Rosenberg, who is chairman of the Department of Neurology at The University of Texas Health Science Center at Dallas, also offers clues that are now available at the biochemical level for treatment of some of them. Further, he has detailed research ideas of his own and from literature that might soon yield important insights into the causes of several major neurological diseases. He encouraged specific research tacks that he believes will uncover new information leading to therapy of certain diseases.

"Familial occurrences of multiple sclerosis, myasthenia gravis, parkinsonism and even brain tumors have been reported," writes Rosenberg, "and HLA (chromosomal) linkage or other genetic predisposing loci will become more important as these interactions are explained at the molecular level."

In an interview amplifying the article, Rosenberg emphasized the need for the physician to keep up with the rapid swell of biochemical information in human genetics and ultimately take it to the patient's bedside. "For every individual with a genetic disease there may be hundreds of other family members who are at risk of having the disease and are pre-clinical for it.

"While treatment for certain genetic diseases may not exist, often there are molecular markers detectable by amniocentesis. If these markers are found to be abnormal, genetic counseling can be utilized and can ensure only healthy, normal children to be born to families with serious genetic disease."

Rosenberg was one of two scientists responsible for tracing a mysterious fatal disease that plagued generations of residents coming from a small Atlantic island in the Azores. With geneticist Dr. William Nyha of the University of California, San Diego Medical School, Rosenberg traced the Joseph family through 329 descendants in eight generations. Out of 106 children born to affected parents, the disease developed in 51--all associated with an abnormal increase in two specific brain proteins found by Rosenberg.

Having at least three variants, "Joseph disease" was found to produce three markedly different groups of symptoms that appeared at three different decades of the patients' lives.

"The physician must be made aware that a genetic disease can take several clinical forms and still be due to the same molecular cause within a single family. Careful studies of large families have documented this phenomenon."

##

DISTRIBUTION: AA,AB,AC,AF,AG,AH,AI,AK,SC,SL

TEAR SHEETS APPRECIATED