Acadiana may benefit from gene research

Genome map could unlock secrets of Friedreich's, Usher syndrome.

Staff and wire reports

LAFAYETTE - A map of the human genetic code, the completion of which is expected soon, could lead to more effective treatment for two debilitating diseases that prey on Acadiana people.

Experts have called the decoding of the human gene structure a scientific milestone with some experts referring to it as the biological equivalent of the Apollo 11 moon landing. President Clinton, speaking in anticipation of an announcement Monday said "the whole landscape of health care" will be changed forever by decoding the human genetic pattern.

But that change won't come easily, or quickly, the experts say. It may take another two years to finalize the genome map, and even that will still just be only a beginning — just as learning to read simple words is only the beginning of an education. Whole libraries of new knowledge await medical researchers.

Understanding the human genome could lead to new drugs, better techniques for diagnosing disease and advanced treatment of genetically related diseases such as cancer and heart disease.

People with Friedreich's ataxia and Usher syndrome, genetic diseases found more frequently in people of Acadian ancestry than in the general population, could also benefit from the research.

Dr. Bronya Keats, acting head of neurology at the LSU Health Sciences Center in New Orleans, said the work could enable doctors to treat the underlying genetic causes of the diseases.

"We have an enormously valuable tool of a model of how (the genes) react," she said. "It's certainly not the end of the process, but it's a bright new beginning."

Friedreich's ataxia usually appears in children at about age 9. It first manifests itself as a lack of coordination. Patients are usually confined

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to wheelchairs by age 20.

Usher syndrome patients are born deaf and later lose eyesight because of deteriorating retinas.

While excited about the possibilities for new treatments, Keats acknowledged that the secret to better treatment for the rare disorders is still “several years down the road.”

Dr. Joseph E. Neigel, a geneticist at the University of Louisiana at Lafayette, said while it took considerable effort to reach this point in the research, he said now more biochemical study and clinical studies are ahead.

“We have to figure out what all of this information means,” Neigel said. “It gives us a lot of data, but analyzing it is the next step.”

The genome project’s goal is to sequence correctly the 3.1 billion DNA subunits that make up the human genome and put those sequences into the correct order within the 23 pairs of human chromosomes.

The publicly financed human genome project has already cost about $300 million and officials say it is about 90 percent complete.

The human genome project was started 10 years ago by publicly financed agencies in four countries and more recently by a private Maryland firm.