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UCSB PROFESSORS GIVEN GRANT TO STUDY STUTTERING

Speech pathology researchers Roger and Janis Ingham have devoted much of their professional careers to tracking down the causes of stuttering, a speech disorder that afflicts an estimated 2.5 million Americans and 60 million people worldwide. And the UC Santa Barbara husband-wife research team feels a solution to the disabling condition may be just a decade or two away.

“I am getting more and more confident that we are closing in on understanding and fully controlling it,'” Roger Ingham said. “I suspect that genetic investigations and the current neurobiology initiatives are going to get close to cracking this before our careers are over.”

The Inghams, who are in their 50s, hope to take the hunt a step further over the next three years thanks to a $921,000 grant just awarded them by the National Institutes of Health. They and fellow researcher Peter Fox of the University of Texas Health Science Center plan to use the money to conduct tests aimed at locating the neural structures and processes in the brain where stuttering is produced.

Scientists have believed since the 1920s that stuttering has roots in abnormal neurologic functioning. Subsequent research has shown that the cortex, basal ganglia, thalamus and other regions of the brain play roles in speech production. Studies by the Inghams and others seem to suggest that the malfunctioning system is harbored in the premotor, motor and auditory association regions of the cortex.

Their current research will look at speech activity in those areas.

The experiments, to be done over the next three summers in Fox's lab in San Antonio, Texas, will employ positron emission tomography (PET) to trace cerebral blood flow in test populations of stuttering and non-stuttering persons. Since increased blood flow has been shown to be indicative of increased activity in a cerebral area, the Inghams will be able to map where brain activity occurs during normal and stuttered speech and then compare the maps for differences. The stuttering group will be examined while at rest, while speaking spontaneously, and also while using speech-control techniques designed to induce fluency.

The Inghams' current project will also look for the first time at a test group of women who stutter. Statistics show that women are four times less likely to stutter than men. And three years hence, they hope to be closer to the ultimate goal of research into the problem: relief to its millions of victims.

Research advances of recent decades — though they have not cured stuttering — have nonetheless brought some peace to the minds of those afflicted, say the Inghams. Deeply involved in development of new treatments for stuttering, the couple provide such clinical services to suitable adult and children patients. And many of those patients took great comfort in the revelation that stuttering appears to have a physiologic cause, not necessarily a psychologic one.

"(People who stutter) got very excited about that," Janis Ingham said. "They said, 'I always knew it was something in my brain; I knew I wasn't crazy.' "

About UC Santa Barbara

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