

AT REED ARENA ON THE **TEXAS A&M UNIVERSITY CAMPUS**

Thursday, October 11, 2001 • 10:00 - 4:00 (Come and Go at your leisure)

Find out how YOU can create the Perfect Special Event, Meeting/Conference, Wedding or Reunion

> How WE can help bring your Association's Meeting to Bryan/College Station!

Representatives from local conference & meeting planning services will be on hand to answer all of your questions! Meeting Venues Hotels/Motels Restaurants Entertainers Caterers Transportation Companies B&B's and many more!

Bring Business Cards Door Prizes will be given away throughout the day!

GRAND PRIZE DRAWING: 2 Round Trip Airline Tickets compliments of Contine to anywhere in the United States!

Hosted by: The Bryan/College Station Convention & Visitor Bureau, Reed Arena, and Clear Channel Communications!

For more information please contact Erin at 260-9898





Wednesday, October 10, 200 lednesday, Oct

Genetic clue connects biology and language

By MELISSA BRADDOCK THE BATTALION /

The speed and ease of language development in children has long suggested to researchers that some genetic aspect must be involved.

Now, in work published in the Oct. 4 issue of the journal Nature, a team of British geneticists and linguists have identified the fifst gene to be directly linked with speech and language.

The researchers, led by Dr. Anthony Monaco of the University of Oxford, studied a large British family in which many members display a severe language disorder.

Within the "KE" family, 15 of 37 members spanning three generations display the same symptoms of garbled pronunciation and the inability to grasp grammatical rules.

Inheritance patterns indicated to researchers that the disorder was likely caused by a mutation in a single dominant gene.

A few years ago, Monaco and his team identified a 100gene region on Chromosome 7 as a likely location for such a mutation.

Then, the researchers searched

for Chromosome 7 abnormalities in an unrelated young boy with the same language disorder.

This led them to a defect in a specific gene, known as FOXP2, that was known be involved in fetal brain development.

Monaco then identified the precise mutation on the FOXP2 gene that results in this language disorder. The observed mutation involves a substitution of a single nucleotide out of 6,500 in one of the two copies of the FOXP2 gene

Looking back at the KE family, the scientists found this same mutation in all the affected family members, but not in any unaffected family members or healthy volunteers.

In the Nature article, the Monaco proposed that this single replacement alters the gene's protein product enough to impair its function and ultimately "...leads to abnormal development of neural structures that are important for speech and language.

The study authors cautioned that the FOXP2 gene's precise function is not yet clear, and that it is probably only one of many genes directly or indirectly involved in speech and language. FOXP2 is not specifically a

gene that triggers speech ability. In fact, its similarity to other known genes suggests that it likely produces a transcription factor — a protein that modulates the activity of other genes, in this case genes involved in

early brain development. If a baby inherits a mutated FOXP2, these genes will not be properly controlled and the developing brain will fail to make the circuits needed to process language.

Over the next few years, Monaco hopes to identify these "downstream" genes and gain further insight into the molecular underpinnings of language.

Although the team's discovery supports the basic concept that language has a genetic element, it does not resolve the long debate among cognitive scientists over whether or not genes "hard wire" grammar circuits in the brain.

In an accompanying Nature commentary, Dr. Steven Pinker, a cognitive scientist at the Massachusetts Institute of Technology and an advocate of genetically "hard-wired" grammar, wrote that this discovery is likely to greatly contribute to the understanding of how the

brain processes language an how human language evolve 11111111111111 While he does not be

Immediate language can be linked to as gle gene, Pinker points out this provides strong eviden All five of the for a genetic basis of at least er team's ti language disorder.

season. They The FOXP2 gene is like ite the retu play "a causal role in the dea ers from last opment of normal brain circ six players w ry that underlies language from inju speech," Pinker wrote. mann Awar

Many other scientists ky Thrasher. more conservative and feelt)f the 23 goa genes such as FOXP2 mer M this sease regulate a general develop tal process rather than spec rity of those language abilities. d Linsey John

This is one of a family team in almos genes that also exists in of gories with sev animals. We need to find sts and 19 poir what effect similar mutat With seven gan would have in other species ore the Big 1 order to understand more abo hnson has a ch what this gene does," said nie Csizmadia Colin Allen, a Texas A&Mp gord of 13 goals losophy professor and cognit Johnson and science expert. anda Burke 1

"It may be relatively specific starting lineu for language abilities, or this season. Bu may merely be a second sts on the sea effect," Allen said. "Regardle en 13 shots. Defender Shar this finding gives researchers started seven important starting point uncovering what is happening

es. Labhart career g r on a im from midfie



