

#### IN THIS ISSUE...

- New Videotape for Adults and Teenagers Offers Help and Hope
- Study on Biological Basis of Stuttering
- ♦ Family Genome Project Update

# Studies on the Biological Basis of Stuttering—An Update

by Anne L. Foundas, M.D.

Preliminary results from two studies recently completed at Tulane University School of Medicine are summarized below. These studies, presented at the ASHA Convention in San Antonio, November 22, 1998, are supported by a National Institutes of Health grant.

#### Study 1—Atypical Anatomy of Cortical Speech-Language Regions in Adults with Persistent Developmental Stuttering: A Volumetric MRI Study

It is well established that anatomical asymmetries exist in cortical speechlanguage areas. These regions include the pars triangularis, a portion of the classic Broca's area, and the planum temporale, a portion of Wernicke's area. There is a consensus that most right-handed adults have a larger left planum temporale. Asymmetries in Broca's area are not as well established, although recent data suggest that the pars triangularis is also larger in the left hemisphere in most right-handers. These asymmetries have functional relevance as anatomical asymmetries of the pars triangularis and planum temporale are highly correlated with language dominance (Foundas et al, 1994, Foundas et al, 1996). Orton (1928) and Travis (1931) suggested that stuttering may be the result of anomalous cerebral dominance, and recent functional neuroimaging studies have demonstrated that atypical activation of Broca's and Wernicke's areas may occur in some adult stutters (for review, Watson & Freeman, 1993). This study was undertaken to investigate whether the pars triangular (PTR) and planum temporale (PT) area anatomically anomalous in adults with persistent developmental stuttering.

Participants included adults with persistent developmental stuttering (n = 8, 7 males, 5 right-handers) and a group of fluent adults matched for age, education, and hand preference (n = 21, 14 right-handers, 7 left-handers). Volumetric MRI measures of the PTR and PT were performed using a computer guided cursor to trace the region of interest. Overall there was a significant

Continued on page 8

# New Video Offers Help and Hope to Adults and Teens

by Jean Gruss

Chris Vacca and Dennis Berry had to learn to say their names over again.

For the three million Americans who stutter saying their own name is just one of the many challenges confronting them as they start their day.

Speech is how we order a pizza and ask directions and make our way

through life. It's how we debate and converse. If you don't stutter, you've probably never thought about what it means to struggle—mouth open—just to get a word out.

Vacca, Berry, and a dozen other adults who stutter discuss how they have coped successfully with stuttering in a new videotape produced

by the Stuttering Foundation of America called *If You Stutter: Advice for Adults.* 

"It's meant to give stutterers some insight into the tools they need to begin dealing with stuttering and offers good ideas for families, speech-language pathologists, and health care professionals," said Barry Guitar, Ph.D., a University of Vermont professor and one of the experts featured in the video.

In the 55-minute program, men and women discuss how stuttering has affected their everyday lives and how they've learned to deal with it. They discuss challenges like using the telephone, interviewing for a job and shopping in a store.

Between real-life examples, experts identify ways people who stutter can manage the problem and become more fluent speakers.

"We focus on demonstrating a variety of therapy strategies that are appropriate

in working with adults and teens," said the University of Colorado's Peter Ramig, Ph.D. "We also answer questions about stuttering and present examples of therapy sessions showing how stuttering can be reduced."

The video helps people understand what stuttering is, how to improve their

speech, and how to regain fluency even when they relapse.

"Because many people are unable to get therapy or aren't aware of its benefits, we wanted to produce a video that would show the results of effective programs and also give some self-therapy ideas," Guitar said.

Therapy must be tailored to an individual's needs, and it's important to find the right program. As the video points out, there are several valid approaches to therapy that can be used individually or in

Continued on page 5

# **SFA Videotapes to be** Featured in Taiwan

Two videotapes produced by the Stuttering Foundation, Stuttering and Your Child: A Videotape for Parents and Do You Stutter: Straight Talk for Teens, will be seen on educational television throughout Taiwan.

"We thank the SFA for your kindness to help children who stutter in Taiwan," writes Chung-Yao Liu of



Harvest Entertainment, Ltd. in Taipei, Taiwan. "This is their good fortune," he added, "and we are excited to offer these informative videotapes to our viewers."

"The outreach to this country with a population of over 22,000,000 is a real milestone for us," noted SFA President Jane Fraser.

SFA NEWSLETTER

# First Annual Southeastern Workshop Makes Impact

The first annual Stuttering Foundation of America Southeastern Workshop was held June 10–14, 1998, at the University of North Carolina-Greensboro. The twenty workshop participants, selected from 150 applicants, came from Virginia, North and South Carolina, Georgia, and Tennessee.

The participants were selected based largely on their interest in stuttering and their involvement with children who stutter. They were intentionally a diverse group, people from different types of employment settings within speech-language pathology but all who shared a strong interest in stuttering. Applicants included university faculty, public school clinicians, hospital and rehabilitation therapists, and private practitioners.

The workshop began with a theoretical framework for stuttering in pre-school and elementary school-age children presented by Dr. Susan Dietrich of UNC-Greensboro and Dr. Sheryl Gottwald of the University of New Hampshire.

These two presenters then discussed practical methods to diagnose stuttering. Treatment suggestions were illustrated by videotaped examples of cases.

Workshop participants also had an opportunity to work with local children and their parents during the workshop. Said Susan Dietrich, "It was a learning experience for us to see how our ideas were taken by a number of seasoned professionals and used in new and creative ways with the children."

Dr. Peter Ramig made a guest appearance to present additional helpful information on stuttering modification. He delighted the participants with segments from the new SFA videotapes and discussed methods for managing stuttering when it coexists with other disorders such as cluttering and phonological disorders. Said Workshop Director Susan Dietrich, "Dr. Ramig is one of our favorite speakers because his information is so practical."

Other presenters included Vicki McCready and Perry Flynn of UNCG who lectured on transfer and maintenance of therapy techniques.

Workshop participants reported enjoying the opportunity to practice the techniques with children during the workshop. "This was an experience that all attendees won't soon forget," said Susan Byrne from Centreville, Virginia. "Now it is time to utilize what we have learned in the workplace."

"I learned an incredible amount during those five days and benefitted greatly from it," said Roshni Noronha of Anderson, South Carolina. Sally Pidge of Charlotte, North Carolina, added, "The vast amount of knowledge I gained at the workshop will help me serve individuals in the Charlotte area and provide them with the most up-to-date information about stuttering."

"I am already using my expanded knowledge effectively and shared information with colleagues," noted Gina Dwyer-Urban of Richmond. "I feel privileged to have had the opportunity to participate in this comprehensive and informative program," she added.

An excellent article about the workshop by reporter Steve Gilliam was featured in many newspapers throughout the state. Headlines such as "Stuttering affects all ages, races, religions," and "Therapy helps manage stuttering," caught readers' eyes in towns like Lexington, Kinston, Southern Pines, and Brevard, North Carolina, as well as in Greensboro itself.

Local businesses in Greensboro showed the entire community's interest in the workshop by making generous



Barbara Guryan, Susan Byrne, Lynn Fox



Vicki Gaul and Joanna Stith



Susan Eichhorn and Claire Dickey



Sally Pidge and Joanna Stith



Lisa Nixon, Roshni Noronha, Georgia Kingsley



Jane Fraser recounts SFA history for the group. On screen are Charles and Katy Van Riper

donations of goods and services. Businesses and people contributing or discounting their services were: Walmart, Waccamaw Store, Friendly Flower Center, Rose Harbor, Toys & Co., Office Depot, Jane Long, Grand Rental Station, and Kinko's.

For more information on this exciting workshop which will be held again in 1999 in Greensboro, call SFA at 1-800-992-9392.



Back row: Claire Dickey, Roshni Noronha, Sally Pidge, Georgia Kingsley, Sharon Eichhorn, Vicki Gaul, Liz Agee, Lisa Fox, Peter Ramig, Nancy Thompson, Barbara Guryan. Middle row: Julia Trask, Gina Dwyer Urban, Beth Griffin, Janice Wright, Susan Byrne, Lisa Finkbeiner, Bobbie Boyd Lubker Front row: Susan Dietrich, Jane Fraser, Mary Beth Hemphill, Joanna Stith, Sheryl Gottwald, Vicki McCready.

## **New Videotape Offered Free to Public Libraries**

The new 55-minute videotape, If You Stutter: Advice for Adults, is getting rave reviews from adults and teenagers who stutter, speech-language pathologists, teachers, university professors, and physicians. The tape is an excellent resource and is certain to further the understanding of stuttering and what can be done.

It was produced by Barry E. Guitar, Ph.D., and Carroll Guitar, M.L.S., University of Vermont, and Jane Fraser



of SFA in collaboration with Hugo H. Gregory, Ph.D., North-western

University, and Peter Ramig, Ph.D., University of Colorado. Footage was also provided by Catherine Otto Montgomery, M.S. of New York and Deborah Kully, M.S. of the



University of Alberta. The film is expertly narrated by speech-language pathologist June Campbell of Northwestern University.

For the past five years, the Stuttering Foun-

dation has sent its videotapes free to thousands of public libraries. "There are few more distressing problems for teenagers and adults than stuttering. We are delighted to be able to make this invaluable resource, If You Stutter: Advice for Adults, available to them," said Neola Breckinridge, director of the Stockton Public Library. Alice D. Harris of The Stuart Library in Stuart, Florida, was also enthusiastic. "I believe that this video is a valuable addition to our present collection."

The Johnson County Library in Shawnee Mission, Kansas, has six copies of all SFA videotapes available for patrons. Patricia Yannarella of the Boone County Public Library in Kentucky adds that the tapes have been in much demand.

The SFA will continue to offer free tapes to public libraries, and the newest videotape for adults and teenagers is no exception. If your library would like

a copy, have the librarian call the Foundation at 1-800-992-9392, or write to



the address on the back of the Newsletter.

Once the library has shelved the tape, SFA will send a press release to local newspapers to apprise people of its availability.

SFA launched its Web site, http://www.stutterSFA.org, a year ago. We share a few of the comments from around the world with you here.

"Thank you for such an informative website. I am the mother of a four year old who has been stuttering for about a year. I have been a frequent visitor of your website. It has been a source of up-to-date information which can be hard to find. Thank you for your service."

—Chris Altmix in Quincy, IL

"Your website was very useful for me today. I work on a diagnostic pediatric team and have found your materials to be invaluable. We use your written material and videos frequently to help parents understand stuttering and how they can intervene with their preschoolers. As a matter of fact, we can't keep enough of your materials in stock because we loan them

out and they are usually not returned. This I think is evidence that parents really benefit from the information. We are wanting to reorder and it occurred to me to check the Internet.

Thanks for being so available."

—Jennie Robertson in Charlotte, NC

■ "I am the parent of a 15-year-old teenager who stutters. Recently in *The Times* newspaper printed daily here in Malta, there was an interesting article about the Stuttering Foundation of America. We took the opportunity to contact your foundation, and after sending you an e-mail, we received



Stuttering Foundation of America's Web Page. valuable information which shows that you are a very organized and efficient Foundation."

"You can't imagine how pleased we were to read the pamphlets that were sent to us by Coordinator Anne Edwards. Once again I thank you for your great service and the Web site is simply great!" —Frank Tartiglia in Malta

"I found your Web site to be most helpful and inclusive. Thank you for taking the time to help others. God bless you all." —Val Sumner

#### New Book Available at www.stutterSFA.org!

A Family Bond is a compelling story about a family in which every member, all seven, have a history of stuttering. Dr. Lloyd Hulit of Illinois State University authored the book together with Gay E. Semanko and Krista A. Yeoman-Humphrey.

"The messages that come through this story are several," says Dr. Hulit, "and they are all important."

"First, there is reason for people who stutter and their families to hope for improvement. Second, there is a need to seek help and to work hard if fluency is to be achieved. Third, there are consequences to be paid if stuttering is not acknowledged and not addressed. Fourth," he explains, "stuttering is not the beginning, middle, and end of a stutterer's identity. Rather, it is something a person does, not who he is."

If you have access to the Web, you will find this interesting and remarkable story at www.stutterSFA.org.

# New England Workshop Lauded and Oversubscribed!

#### Third Annual New England Workshop Held July 29-August 2, 1998

Boston, MA - "It was a terrific learning experience! I'm excited about putting the new ideas to use with my clients, and I have already shared much of my knowledge with some of my colleagues!" said Linda Lanning, a participant of the third annual Stuttering Foundation of America New England Workshop.

Here twenty speech-language pathologists from the Northeast and Missouri, selected from over 150 applicants, spent five days in Boston, Massachusetts, honing their skills in diagnosing and treating early childhood stuttering.



Kristin Helms and Diane Parris



Linda Lanning, Denise Wittpenn, and Lynn Mayo.

The participants represented a wide range of therapy settings and experience, but all showed a strong interest in stuttering. "The workshop was so valuable. And I learned a lot from other participants as well," said a recent graduate in the field who works in a public school. Noted Kristin Helms of Salem, Massachusetts, "I am seeing steady progress in my patients thanks to the strategies and direct methods we were instructed to carry out."

The workshop began with an overview of the theoretical framework of stuttering presented by Dr. Susan Dietrich, Ph.D., of the University of North Carolina at Greensboro, and Sheryl Gottwald, Ph.D., of the University of New Hampshire. Next, the presenters shared practical ideas for diagnosis and therapy.

Dr. Gottwald presented *The Capacities and Demands Model* to help understand and explain disfluency in young children, and Dr. Dietrich presented a direct treatment model, *Tension Control Therapy*, that provides visual and proprioceptive feedback that students can use to control their speech. Maureen Tardelli, in private practice in Boston, presented information on stuttering and problems which co-exist with it. Diane Parris of Boston University did an outstanding job of coordinating local arrangements for workshoppers.

The guest presenter was Hugo H. Gregory, Ph.D. of Northwestern University. The faculty and attendees heartily agreed that his presentation was an invaluable contribution. He selected a workshop participant to role play a student who stutters and demonstrated his therapy techniques.

"All of the presenters were excellent, well organized and interesting as well as being empathetic human beings," said participant Nancy Jo Rambusch, M.S., of Connecticut. "The workshop sent me home energized and looking forward to the challenge of working with children who stutter," she added.

One afternoon, participants practiced the new stuttering therapy techniques on local children who volunteered to



Martha Lamontagne, Nancy Jo Rambusch, and Kimberly Gilsenan



Guest presenter Hugo Gregory chats with Loy Riley and Sanita D'Souza during reception

help with the workshop. They also had the opportunity to work on their counseling skills with parents. "I'm always surprised at how quickly these professionals acquire new techniques," noted Dr. Sheryl Gottwald. "It's wonderful to see."

"As a result of my participation in this workshop, I have greater insight into diagnostic and treatment strategies for people who stutter and believe I will be a more effective clinician," wrote Denise T. Wittpenn, M.S. of East Setauket, New York. And Linda Mahler of New Hampshire echoed this enthusiasm, saying, "It was an incredible experience. I'd go again in a heartbeat!"



Back row: Mary Ellen Ryan, Nancy Jo Rambusch, Terry Muldoon, Kimberly Gilsenan, Linda Lanning, Lynn Mayo, Linda Mahler, Kristin Helms, Merrilyn Gow, Arlene Feidt, Diane Heath, Denise Wittpenn. Middle row (seated): Sanita D'Souza, Martha Lamontagne, Evelyn Sherman, Diane Parris, Brianne Salzman, Jacqueline Glazer, Julie Hall, Hugo Gregory. Front row: Denise LaBorne, Maureen Tardelli, Julie Haupt, Loy Riley, Jane Fraser, Susan Dietrich, Sheryl Gottwald.

## Stuttering Genetics Project Completes Second Successful Year

by Dennis T. Drayna, Ph.D.

The Stuttering Family Research Project at the National Institutes of Health (NIH) is completing the second year of its research project on inherited factors in stuttering. Sponsored by the National Institute of Deafness and Other Communication Disorders, this project is examining family clusters of stuttering, in order to correlate the



Dennis T. Drayna, Ph.D.

inheritance of stuttering with genetic markers. The goal is to identify markers that are coinherited with stuttering, which is the first step toward identifying the genes which help cause

this disorder in these families. Finding these genes would be a major advance in our understanding of the fundamental causes of stuttering.

"Over the past year, we've had a wonderful response to our appeals for families to participate in this research," said Dennis Drayna, Ph.D., director of the study. "We've now had contacts from over 550 different families, and of these, well over half are qualified to participate. We're still enrolling new families, since the most families we have, the better our information will be."

The big news this year is that the research is expected to move beyond just collecting families. Within the next

3 months, the project will move into the laboratory phase, and begin testing genetic markers in the families enrolled so far. "Even though we're planning to eventually test markers in many more families, we want to get started with the families we have so far," said Dr. Drayna. "If there is a single major gene which has a very large effect in our families, it could easily show up by testing the smaller number of families we've enrolled so far."

Dr. Drayna cautions that this may not be the case, of course, and it may take many more families to be able to find any markers that are clearly associated with stuttering. Nevertheless, the first foray into laboratory testing marks an important new phase of the project, and it demonstrates the NIH's continued commitment to research on stuttering.

For those who are interested in participating, the project seeks families with 2 or more living members who stutter and are over the age of 7. Participation involves donating a cheek swab sample, obtained with cotton swabs, and giving a recorded speech sample. The whole process takes less than an hour, and all information from participants is kept strictly confidential. Interested families may contact the study by dialing toll-free 800-934-8441, or by e-mail at: stutter@nhgri.nih.gov.

#### Video Offers Help and Hope to Adults and Teens

Continued from page 1

combination to achieve lasting success.

"We've seen many people deal with stuttering so effectively that they have become better than average communicators, good listeners, and even excellent public speakers," said Hugo Gregory, Ph.D., a Northwestern University professor who offers advice in the video.

An outstanding example is actor James Earl Jones, the star of the movie *Roots* and well-known voice of CNN. So were others like Winston Churchill and Marilyn Monroe.

"The causes of stuttering remain a mystery," said Jane Fraser, president of the Stuttering Foundation. "Research does <u>not</u> support the idea that psychological problems or lack of intelligence cause stuttering. Rather, recent research is focusing on the way the brain processes and controls speech

and language."

Other experts appearing in the video include June Campbell, M.A., of Northwestern University, Deborah Kully, M.S., of the Institute for Stuttering Treatment Research in Alberta, Canada, and Catherine Otto-Montgomery, MS, of the American Institute for Stuttering Treatment New York, NY

For a copy of the 55-minute videotape, *If You Stutter: Advice for Adults*, send \$5.00 to cover postage and handling to the Stuttering Foundation of America, P.O. Box 11749, Memphis, TN 38111-0749, or call (800) 992-9392.

The Stuttering Foundation, a non profit organization founded in 1947 dedicated to helping people who stutter, offers the video free of charge to all public libraries.

# Stuttering Never Stopped Me From Being "Me!"

The poem below was sent to SFA by Ernest Ciardi. Mr. Ciardi, who tells us that he has been writing and publishing children's poems for many years, is an English teacher and a reading specialist who stutters. He shared with SFA that he had sent for the 15 books on stuttering. They helped him so much, it inspired him to write this poem. "I believe it will be a help to everyone who stutters and has difficulty coping with it or being open about it."

#### Stutter Step

My name is Ernie and I have a stutter.

That means when I talk, I sputter.

Whenever I went to a dance or party,
I couldn't say, "My name is Ernie Ciardi."
I could only say, My name is Ernie Ci-Ci.."

And people looked quite strangely at me.
Someone said, "Well I've heard of Gi-Gi,
And I know the notes are do-re-me-me.
I've even heard someone small called pee-wee,

But I've never heard of Ernie Ci-Ci!"
So I stood there, blushing and stuttering,
While people looked, wondering and
muttering.

Even in class, when I was called to respond, I often took the whole period, and beyond! Sometimes the kids called me Porky Pig, But I laughed it off, I wanted to be big Enough to take their laughter in stride, Though no one really knew how I felt inside. I have trouble with long words, like electricity.

And words that start with "H," like happy and history.

I told my college professor I wanted to teach, But he said, "There's a problem with your speech!

Teachers speak out loud and use microphones!"

But I asked, "What about James Earl Jones? And Marilyn Monroe and Winston Churchill?

They all stuttered and were successful still!" Well, now I've been teaching for twenty-five years.

My stuttering has brought me laughter and tears

But I learned one thing about my disability: It never stopped me from being "Me!"

-Ernest Ciardi, 1998 □

## Nominations Sought for Malcolm Fraser Award

by Dennis T. Drayna, Ph.D.

The Fluency and Fluency Disorders division of ASHA (SID4) is seeking nominations for the 1999 Malcolm Fraser Award which annually recognizes an individual for excellence in the field of stuttering. Nominees should have distinguished careers in speech-language pathology and have made contributions that have had a significant impact on those who stutter.

Nominees' contributions may be in the areas of clinical services, research, support, or professional training and development of clinicians. The SFA will present a plaque and a \$2,000 award to the honoree next spring at the 1999 Annual Leadership Conference of ASHA's Special Interest Division 4: Fluency and Fluency Disorders.

Kenneth O. St. Louis, awards committee chair, said the credentials of recent nominees have been excellent but that the number of nominees has been limited. "There are numerous outstanding scholars and clinicians who could well be serious contenders for the award," he said. "I would encourage

colleagues to think seriously about who could or should be recognized for excellence in stuttering and take the time to nominate them."

Contact St. Louis for nomination guidelines c/o ASHA Special Interest Divisions, 10801 Rockville Pike, Rockville, MD 20852. Information can also be obtained from ASHA's Web site at www.asha.org/announcements/fraser.htm or by calling Fax-on-Demand at 703-531-0866 and requesting document #913.

# NEWSBRIEFS

■ The annual "Stuttering Therapy: Workshop for Specialists" co-sponsored by the Stuttering Foundation and Northwestern University will be held at Northwestern University in Evanston, Illinois, July 12 though July 23, 1999. For more information about the workshop, contact the Stuttering Foundation at 1-800-992-9392, or write Dr. Hugo Gregory, c/o SFA, 3100 Walnut Grove Road, Suite 603, Memphis, TN 38111-0749. This unique workshop brings together speech-language pathologists from all over the world.

■ The Stuttering Foundation of America Southeastern Workshop, "Diagnosis and Treatment of Children Who Stutter: Practical Strategies," directed by Dr. Susan Dietrich, will be held at University of North Carolina-Greensboro, in Greensboro, North Carolina, June 23-27, 1999. Call the

SFA at 800-992-9392 for an application.

- The 5th Oxford Dysfluency Conference will be held July 7-10, 1999, at St. Catherine's College, Oxford. For more information, write Lena Rustin, The Michael Palin Centre for Stammering Children, Finsbury Health Centre, Pine Street, London EC1R 0LP, England. Telephone: +44 (0) 171 530 4238.
- The Third World Congress on Fluency Disorders will be held from August 7-11, 2000 in Nyborg, Denmark. Mark your calendars now. For more information write Per F. Knudsen, The Stuttering Information Center of Denmark, Emdrupvej 101, DK-2400 Copenhagen NV, Denmark or call +45 3969 6633 ext. 2531; fax +45 3969 2464; e-mail: per\_k@dlh.dk.
- For those interested in joining Toastmasters International as a way to improve fluency, communication or public speaking skills, their address is: Toastmasters International, Inc., Attention: Membership Department, P.O. Box 9052, Mission Viejo, CA 92690, Telephone: (714) 858-8255; Fax: (714) 858-1207.
- For those looking to obtain a copy of *Self-Therapy for the Stutterer* in Japanese, write to Dr. Shokichi Nakajima, 2-21-1 Ogawa Machida-shi, Tokyo 194, Japan, telephone/fax: 0427 (96) 5092.

- For those looking to obtain a copy of Self-Therapy for the Stutterer in French, write to the Association des Begues du Canada, 7801 Rue Ste. Claire, Montreal, Quebec, Canada, H1L 1V8. Please enclose \$15.00 Canadian to cover printing, postage, and handling costs.
- Dr. Anne Foundas is looking for adults who stutter in the greater New Orleans area interested in participating in a project to study neuroanatomical models of stuttering. If you are interested in participating or have any questions or comments, contact Dr. Anne Foundas at the following address: Department of Neurology, Tulane University School of Medicine, 1430 Tulane Avenue, New Orleans, LA 70112-2699. Phone: 504-595-5605 (Voice Mail and evenings, ask for Cassie Browning), 504-588-5734 (Days, ask for Laura Cardin)
- The Language Section, National Institute on Deafness and Other Communicative Disorders is seeking individuals to participate in brain imaging study at the National Institutes of Health, Bethesda, Maryland. They are looking for individuals at least 18 years old who were treated as a child or young adult for stuttering but now consider themselves no longer a stutterer. The group has been involved in studies using positron emission tomography (PET) to compare brain activity in people who stutter when they are fluent to when they are not and to people who do not stutter at all. The study will require two days and one overnight and the study will pay travel, a per diem and lodging to and from the NIH. For more information, contact Dr. Allen Braun by e-mail at brauna@nidcd.nih.gov, or Lucila San Jose at 800-944-9830 or 301-435-5140, or write her c/o Language Section, NIDCD, NIH. Building 10/3c716 MSC #1259, Bethesda, MD 20892.
- Speaking Circles—SFA was contacted by Tina Alston, Ph.D., who presents workshops in the Knoxville and Nashville areas. For more information, contact her at (423) 539-4896 or e-mail her at tinaalst@bellsouth.net. She writes, "this work explores the power of relaxed self-expression which naturally emerges when we receive our listeners instead of trying to give to them." For general information about Speaking Circles, visit their web site at www.speakingcircles.com.

#### New Books on Stuttering Available from Bookstores

- Stuttering: An Integrated Approach to Its Nature and Treatment by Barry Guitar, Ph.D., Williams & Wilkins, Baltimore, MD.
- Stuttering Intervention: A Collaborative Journey to Fluency Freedom by David Allen Shapiro, published by Pro-Ed, Austin, Texas.
- Clinical Decision Making in the Diagnosis and Treatment of Fluency Disorders by Walter H. Manning, Ph.D., published by Delmar Publishers, Albany, New York.
- Nature and Treatment of Stuttering: New Directions by Richard F. Curlee, Ph.D. and Gerald M. Siegel, Ph.D., published by Allyn and Bacon, Needham Heights, MA.
- Special Children, Challenged Parents by Robert A. Naseef, Ph.D., published by Carol Publishing Group, Secaucus, New Jersey, 1-800-447-2665.
- Straight Talk on Stuttering, Information, Encouragement, and Counsel for Stutterers, Caregivers, and Speech-Language Clinicians by Lloyd M. Hulit, Ph.D. The publisher is Charles C. Thomas, Springfield, Illinois.
- Stuttering: A Life Bound Up in Words by Marty Jezer. Published by Basic Books, 1997. This book may also be purchased through the NSP, 1-800-364-1677.
- Stuttering and Science by William H. Perkins, Ph.D. It is published by Singular Publishing Group, Inc., in San Diego, California.
- Elements of Stuttering by Courtney Stromsta, Ph.D. Available from Atsmore Publishing Company, P.O. Box 533, Oshtemo, MI 49077. Please send \$19.50 plus \$3.00 handling charge.
- Stuttering: A Search for A Cause and a Cure by Oliver Bloodstein, Ph.D.. It is published by Allyn & Bacon, Needham, MA.
- Does My Child Have a Speech Problem? by Katherine L. Martin. Chicago Review Press, Inc., Chicago, IL.
- Dead Languages by David Shields. New paperback edition now available. Graywolf Press, Saint Paul, MN.
- The Telecommunication Relay Service Handbook by Franklin H. Silverman, Ph.D. Aegis Publishing Group, Ltd., Newport, RI.

#### Studies Update

Continued from page 1

leftward asymmetry of the PTR and the PT in the right-handed adults with no statistically significant asymmetries in the left-handed controls and in the stutters. Whereas 71% of right-handed male controls had a larger left PTR, only 25% of right-handed male stutters were more "typical" with 67% having a larger left PTR. In contrast, left-handed male stutters were more likely to have "atypical" larger right PT (67%), whereas the right-handed male stutterers were more typical with 75% having a larger left PT.

Atypical anatomy in cortical speechlanguage areas was found in some adults with persistent developmental stuttering. Variation from the most "typical" anatomical configuration of a larger left pars triangularis was found to be more common in right-handed adult stutterers, whereas atypical anatomy of the planum temporale was found in left-handed male stutterers. It has been hypothesized that developmental stuttering may be due to anomalous cerebral dominance, and these data suggest that anomalous anatomy of cortical speech-language regions may occur in some adults with persistent developmental stuttering. Further study is underway in a larger sample to confirm these preliminary findings.

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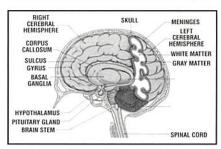
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Watson BC, Freeman FJ, 1996. Brain Imaging Contributions, Chapter 7. In Curlee R and Siegel G (Eds). Nature and Treatment of Stuttering: New Directions. Boston: Allyn & Bacon.

Study 2 — Atypical Auditory Processing in Adults with Persistent Developmental Stuttering: Dichotic Listening Measures of Free Recall and Directed Attention Conditions

Dichotic listening (DL) methods have been utilized extensively in neuropsychology to assess lateralized language



and attentional systems. Stimulus parameters and mode of presentation may affect results. Binaural presentation of consonant vowel (CV) stimuli yields the most robust right ear advantage (REA), in the divided attention or free recall condition. Directed attention can affect ear advantage by enhancing reports from the attended ear, or suppressing reports from the nonattended ear. Two experiments were conducted to explore the effects of free recall and directed attention in a sample of right-handed adults and in a group of adults with persistent developmental stuttering. Anomalous auditory-temporal processing has been found in some studies of adults with persistent stuttering, while others have found no differences when compared to matched controls.

Utilizing dichotic listening methods, two experiments were conducted to

explore (1) differential effects of free recall and directed attention in fluent adults, and (2) to compare performance of adults with persistent developmental stuttering to matched fluent adults. Dichotic presentation of CV's was evaluated in three conditions: free recall, forced right and forced left attention. In Experiment 1 adult right-handers were studied (n = 20, 11 males, 9 females). In Experiment 2 adults with persistent developmental stuttering (n = 12, 9 males, 3 left-handers)were compared to controls (n = 12)matched for age, education, sex and hand preference.

Right handed adults had a significant right ear advantage in the free recall condition, and were able to shift attention when directed to attend to stimuli in the left and right ears. Adults with persistent developmental stuttering were more anomalous than matched controls, with more stutters having atypical left ear advantages or no ear preference in the free recall condition. Attentional effects were less pronounced in adults with developmental stuttering, suggesting that stutterers may have a narrower attentional window and/or may be less influenced by priming than the matched controls. Subgroups emerged as atypical auditory processing was related to linguistic competence in stutterers. Stutterers with minor linguistic difficulties had more difficulty in the directed attention conditions than linguistically intact adult stutterers and controls.

#### Happy New Year from the staff of Stuttering Foundation of America!



Back row: Pat Hamm, Roberta Brugge, Anne Edwards, Tracy Putt. Front row: Jane Fraser, Leslie Harrell. Not Pictured: Don Edwards, Joe Fulcher, John Bell.



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