EDITOR'S NOTE

Dear Friends,

Holiday greetings! Even though it seems like our summer picnic was only a few weeks ago, the chilly weather means that it’s now time to celebrate the holidays with another party! More details about the party are on page 6. We hope to see you there.

Staff at the Center have been doing a lot of traveling in the last few months. We attended the Society for Neuroscience’s Annual Meeting in Chicago, then immediately flew to Boston for the Academy of Aphasia Annual Meeting. Our time spent at these conferences alternated between presenting our most recent projects, hurriedly running from talk to talk trying to absorb the latest new findings in research, catching up with old colleagues, and even exploring the landmarks of Chicago and Boston.

We have also had a number of our international colleagues visit the lab this fall. Dr. Ching Ching Lu is our colleague from Taiwan who collaborates with us on our cross-linguistic studies of aphasia, and she stopped by our lab a few times while she was attending the Linguistic Institute at UC Berkeley. PJ Toussaint, one of our colleagues from Paris, worked in our Center for a few weeks this Fall. While she was here, we worked on analyzing high resolution images taken of brains that had been injured back in the early 1900s, and which were preserved by French neurologist Joseph Jules Dejerine.

We are also pleased to announce that a new member has joined our lab. Ana Soper, Ph.D, is a new clinical post-doc at the Martinez VA, and she will be collaborating with our lab for her study on depression in aphasic patients.

Please don’t forget to join us at our holiday party this year! We look forward to celebrating the holiday season with you!

Sincerely,

Nina Dronkers, Ph.D.
Director
Center for Aphasia & Related Disorders
One of the long-standing challenges in neuroscience is to discern the neural basis of language. One approach taken by scientists is to investigate the brain cells that participate in language. Lesion studies are one type of study that uses this approach. By looking at the brain scans of people with language deficits after a brain injury, scientists can understand which brain areas are critical for language.

Another way for scientists to discern the cortical areas involved in language is by scanning the brains of neurologically-normal participants with functional magnetic resonance imaging (fMRI). This type of imaging shows the relative blood flow changes in different areas in the brain as the participant undergoes a behavioral task; thus, the areas with the highest relative blood flow are thought to reflect which areas are significantly involved during these tasks.

Although these types of studies have yielded important findings, explaining the neural mechanisms of language cannot be completed without an understanding of how these regions are connected to each other. Recent technological advances now allow scientists to image the structures that connect brain regions. Diffusion tensor imaging (DTI) and diffusion spectrum imaging (DSI) show the location and trajectory of individual nerve fiber tracts in the brain. DSI is a particu-
larly sensitive technique, allowing for the imaging of distinct fiber tracts even when overlapped by other fiber tracts. Using DSI, we can look at the effect of disruption to fiber tracts after a stroke. For example, someone may suffer a stroke that damages the fiber tracts connecting two different language regions. This “disconnection” leads to a different type of communication problem than would result from a stroke that affected the language regions themselves.

In addition to imaging the structural network of the brain, scientists can also assess how different brain regions are functionally connected. Resting-state functional magnetic reso-
nance imaging (rfMRI) works under the same principles as fMRI, but the participant does not undergo a task during the scanning process. In rfMRI, the brain regions that are spontaneously active at the same time are thought to reflect a functional connection.

When taken together, structural and functional connectivity measurement techniques can yield converging information to aid in mapping out the broad connectivity of the networks supporting language and cognition.

With thanks to Drs. Mark D’Esposito, Ben Inglis, and Robert Knight.
Stroke Recovery Resources in the Bay Area

**Project Recovery**
This is an adaptive physical exercise program for those with physical disabilities including moderately self-ambulatory, ortho-multi-handicapped, and other health impairments. The program will increase fitness, balance, strength, and range of motion.

Mon/ Wed: 1:30-2:30pm or 2:30-3:30pm  
Tue/ Thur: 2:00-3:00pm or 3:00-4:00pm.

**Location:**
Family YMCA, Mt. Diablo Region YMCA Office  
395 Civic Drive  
Pleasant Hill, CA 94523

**Contact:**
Libby Luxemberg  
(925) 687-8900.

**Stroke Communication Classes**
No-fee, non-credit stroke-communication classes offered to the San Francisco Bay Area for over 25 years.

**Location:**
City College of San Francisco  
1250 Waller St.  
San Francisco, CA 94117

**Contact:**
Joyce Freeman, M.S., CCC-SLP,  
(415) 561-1005  
jforeman@ccsf.edu

**Stroke Support Group of Contra Costa County**

**Location:**
Mt. Diablo Medical Center  
Concord, CA 94520  
or  
John Muir Medical Center  
601 Ygnacio Valley Rd.  
Walnut Creek, CA 94596

**Mailing Address:**
Ann Dzuna  
1174 Alta Mesa Dr.  
Moraga, CA 94556-2042

**Contact:**
Ann Dzuna, B.S., MBA  
(925) 376-6218  
adzuna@comcast.net

**Aphasia Center of California**

**Location:**
200 Grand Ave.  
Oakland, CA 94610

**Mailing Address:**
Roberta Elman, Ph.D., CCC-SLP, BC-NCD  
Aphasia Center of California  
3996 Lyman Rd.  
Oakland, CA 94602

**Contact:**
Roberta Elman, Ph.D., CCC-SLP, BC-NCD  
(510) 336-0112  
rjelman@aol.com  
Website: http://www.aphasiacenter.org

**Cal State University East Bay Aphasia Group**

**Location:**
California University - East Bay  
Speech, Language & Hearing Clinic  
MB# 1097A  
Communicative Sciences and Disorders  
Hayward, CA 94542

**Mailing Address:**
Shelley Simrin, M.A., CCC-SLP  
California State University - East Bay  
Dept. of Communicative Sciences & Disorders  
MB# 1097A  
25800 Carlos Bee Blvd.  
Hayward, CA 94542-3065

**Contact:**
Shelley Simrin, M.A., CCC-SLP, Clinic Director  
(510) 885-4762 or (510) 885-3233  
ssimrin@csuhayward.edu

**Stroke Club San Francisco**

**Location:**
Stonestown Family YMCA Senior Annex  
3150 20th Ave.  
San Francisco, CA 94132

**Contact:**
Kathy Orsi  
(415) 242-7117
Happy Holidays from the Aphasia Center!
Stroke Support Group

Annual Holiday Party!

When
Wednesday, December 9th, 12:30-3:00 p.m.

Where
Rooms E8A&B on the 1st floor of AB21, which is the tallest building at the Martinez VA and is on your right as you enter the VA from Muir Rd.
Address: 150 Muir Rd, Martinez, CA, 94553

What to bring
A dish or drink to share if you can, and an ornament if you would like to participate in the exchange.

Questions? Call Juliana (925) 372-4649

Don’t forget an ornament for the exchange!
Aphasia News
Center for Aphasia and Related Disorders
150 Muir Road 126 (s)
Martinez, CA 94553

http://www.ebire.org/aphasia

Newsletter Information
If you would like to receive this newsletter or you have comments/suggestions, e-mail Juliana at juliana@ebire.org, call her at (925) 372-4649 or write to:

Center for Aphasia and Related Disorders
VA Northern Calif. Health Care System
150 Muir Road 126 (s)
Martinez, CA 94553

We welcome your comments and questions!

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We would also like to thank the members of the Stroke Support Group and their families, the Speech Pathology staff, and the East Bay Institute for Research and Education.

Game Zone Answers

The Center for Aphasia and Related Disorders is supported by the VA Northern California Health Care System, the VA Medical Research Program, the National Institutes of Health, and the University of California at Davis and San Diego, as well as through generous donations from private foundations and individuals. Please feel free to contact Dr. Dronkers at (925) 372-2925 if you would like more information.