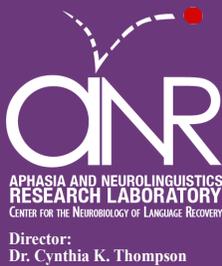


SUMMER 2015 NEWSLETTER



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Neuroplasticity: How to teach an adult brain new tricks *by Matthew Walenski (Research Associate)*

One of the most exciting concepts in neuroscience is plasticity – the idea that your brain’s wiring is not set in stone for your adult life, but is capable of change in light of practice and experience.

For such an essential organ, the brain is relatively slow to develop. Indeed, your brain continues to grow long after you are born, adding new cells, forging connections between them, pruning away extraneous connections, and organizing itself into efficient networks of cells that work together to carry out the complex computations that define a functioning brain. While the majority of this development takes place in infancy and early childhood, some parts of your brain don’t reach full maturity until your mid-20s. For a long time, scientists thought that once the brain was mature, that was the end of the story.

But it turns out that even a mature brain has a few tricks up its sleeve. Adults aspiring to become taxi drivers in London are required to learn a tangled network of more than 25,000 city streets to pass their licensing exam. This extensive training, which may take a few years to complete, caused the hippocampus (a memory center) to grow, at least in a group of drivers who passed the exam. Their experience and learning actually led to physical changes in their brains.

One interpretation of this hippocampal growth is that

the brains of the successful exam takers sprouted new nerve cells (a process known as neurogenesis) to help them learn the maze of city streets. An alternative possibility is that their brain growth reflected an increase in the number of synaptic connections between existing nerve cells, not the creation of entirely new cells.

This latter possibility may be more relevant when damage to the brain leads to compromised brain function. Unfortunately the brain doesn’t appear able to regrow large numbers of lost cells: Once a part of the brain is gone, it’s gone. However, it may still be possible for brain function to recover by changing the connections between existing cells in nearby undamaged regions, enabling them to perform the function of the cells lost to brain damage. For this functional reorganization to happen, the brain finds new pathways and forges new connections between cells to accomplish the tasks previously handled by the damaged areas. Over time and with practice, these new connections and pathways are reflected in physical changes to the brain and (at least some) restoration of the lost function.

It is an active and ongoing area of research to determine the maximum effectiveness of functional reorganization, to identify and overcome limitations of the brain’s natural plasticity, and to explore whether large-scale neurogenesis might one day be possible.

A New Aphasia Center is Coming to Northwestern this Autumn

A new Aphasia Center will be opening this Fall at Northwestern University. The Center will offer opportunities for people with aphasia, their family members and friends, to interact with one another to improve social communication and quality of life.

Group activities will be offered two days a week. Some groups will meet once a week, while others will

meet twice a week. Activities may include book club, exercise club, karaoke, board/card games, conversation and speech practice, and improving computer skills among others. If you have an idea for an activity/group that you would like to participate in, please feel free to contact the lab and let us know! More information about the Center will be posted online in early Fall.

COMMUNITY & CURRENT EVENTS

COMMUNITY EVENTS:

-----June:-----

Ravinia Music Festival
June 13th–Sept. 12th in
Highland Park
www.ravinia.org

Jazz at the Aquarium
Wednesdays June 17th-
September 9th at the
Shedd Aquarium

Grant Park Music Festival
June 17th–August 22nd
at Grant Park
www.grantparkmusic-festival.com

Chicago Pride Festival
June 20th–21st along
the Halstead strip. Parade on June 28th.

Dragon Boat Race for Literacy
June 27th at Ping Tome
Memorial Park, 300 W
19th Street.

-----July:-----

Fireworks Shows
July 4th
For list of shows by
location: <http://fireworksinillinois.com/by-date/2015-07-04/>

NIKE National Invitational Basketball Tournament
July 10th - 12th at McCormick Place

Disability Pride Parade
July 18th at 11am
www.disabilityprideparade.com

Evanston Ethnic Arts Festival
July 18th-19th at Dawes Park

Northshore Art Festival
July 25th-26th at Westfield Old Orchard Shopping Center in Skokie

-----August:-----

Evanston Lakeshore Arts Festival
August 1st – 2nd
at Dawes Park

Windy City Rubber Ducky Derby
August 6th at the Columbus Drive bridge

Kite Festival
August 8th – 9th at the Chicago Botanic Garden

Chicago Air and Water Show
August 15th-16th at North Avenue Beach

Body Mind Spirit Expo
August 15th-16th at North Shore Center for the Performing Arts in Skokie

Chicago Dance Festival
August 25th-29th in multiple venues in downtown Chicago

Circus in the Parks
August 29th-30th
<http://midnightcircus.net/>

-----September:-----

Chicago Jazz Festival
September 3rd-6th at Millennium Park

Free access to Science Museum
September 5th – October 18th (except for weekends) at Museum of Science and Industry - show IL ID.

Opera in the park
September 11th at Millennium Park

International Exposition of Contemporary and Modern Art Expo
September 17th - 20th at Navy Pier.



IN THE NEWS:

The iPad app “Constant Therapy” provides Aphasia sufferers with personalized speech therapy at their fingertips. (www.sunriseseniorliving.com/blog/may-2015/ipad-app-may-help-stroke-patients.aspx)

Multi-site research study creates brain map for language impairments in aphasia following stroke. (<http://www.themunicheye.com/news/Brain-Map-for-Language-3175>)

Researchers explore how the brain separates our ability to write and speak. (<http://hub.jhu.edu/2015/05/06/language-reading-writing>)

Podcast: Battling the isolation and communication barriers that often come with aphasia, a discussion with neuroscientist Myrna Schwartz of the Moss Rehabilitation Institute. (Listen at: <http://www.newsworks.org/index.php/local/the-pulse/76084-battling-the-communication-barriers-and-isolation-that-come-with-speech-aphasia->)

Transcranial direct current stimulation may improve aphasia outcomes in primary progressive aphasia. (<http://www.neurologyadvisor.com/transcranial-direct-current-stimulation-may-improve-aphasia-outcomes/article/410572/>)

A mediterranean diet helps protect against cognitive decline, according to a recent study. (<http://www.wsj.com/articles/mediterranean-diet-boosts-brain-power-study-finds-1431356748>)

A young woman’s brain tumor turned out to be her “evil twin”. (<http://www.indystar.com/story/news/2015/05/08/mysterious-brain-tumor-turned-womans-evil-twin/26975899/>)

Scientists identify region of the brain involved in Seasonal Affective Disorder. (<http://psychcentral.com/news/2015/05/11/scientists-id-brain-region-involved-in-sad/84504.html>)

PEOPLE TO KNOW & SUPPORT GROUP INFO

MEJRIMA (MARY) COSIC, PROJECT MANAGER

Mejrma Mary Cosic has been working at Northwestern University since November 1999. She joined the Aphasia and Neurolinguistics laboratory directed by Dr. Cynthia Thompson in July 2005 as a Research Project Coordinator.

Born and raised in Bosnia and Herzegovina until 1992, Mary had been living in Germany for six years before moving to the United States in March 1998. She graduated with a degree in Economics in Bosnia. Mary likes working in the Aphasia lab; she enjoys watching patients' recovery and progress and sharing the happiness with their family and caregivers. Her favorite part of her job is working with young people in the lab and watching them transform their lives through education and hard work.

When not at work Mary loves to spend time with her family and friends. She is a fan of film, music, art and good people.



APHASIA SUPPORT GROUP UPDATES:

Past Meetings:

In January, Dr. Borna Bonakdarpour from the Northwestern Cognitive Neurology and Alzheimers Disease Center visited the group and answered questions about the brain over the course of recovery from stroke, and encouraged staying active. Each attendee shared short- and long-term communication goals.

In February, Monica Dougherty, M.A. returned for a second time to host an art therapy session, during which the group used watercolors to create mandalas.

In March, Rosemarie King, PhD, RN from the Rehabilitation Institute of Chicago came and shared the results of her research on stress and coping in caregivers, and her recommendations for how to

manage the social-emotional challenges of caregiving.

In April, Marissa Artman, MA, CCC-SLP came and delivered a presentation on apps for people with aphasia, and attendees got to try out her top picks of apps on an iPad.

In May, doctoral student Eddie Europa, who is also pursuing clinical SLP training, visited the group. Attendees discussed their wishes for the new Northwestern Aphasia Center.

Upcoming Meetings:

- June 13th
- July 11th
- September 12th
- October 10th
- November 14th

GENERAL INFORMATION:

Aphasia Support Group Meetings are held the second Saturday of the month from 10:30am to 12:00pm in Room 3-417 (3rd floor of the Frances Searle Building - 2240 Campus Drive). Please contact Mary Cosic for more info at 847-467-7591 or m-cosic@northwestern.edu

PUBLIC TRANSPORTATION:

The lab is located three blocks east of the Noyes Stop on the Purple Line.

CTA: 1-888-968-7282
www.transitchicago.com

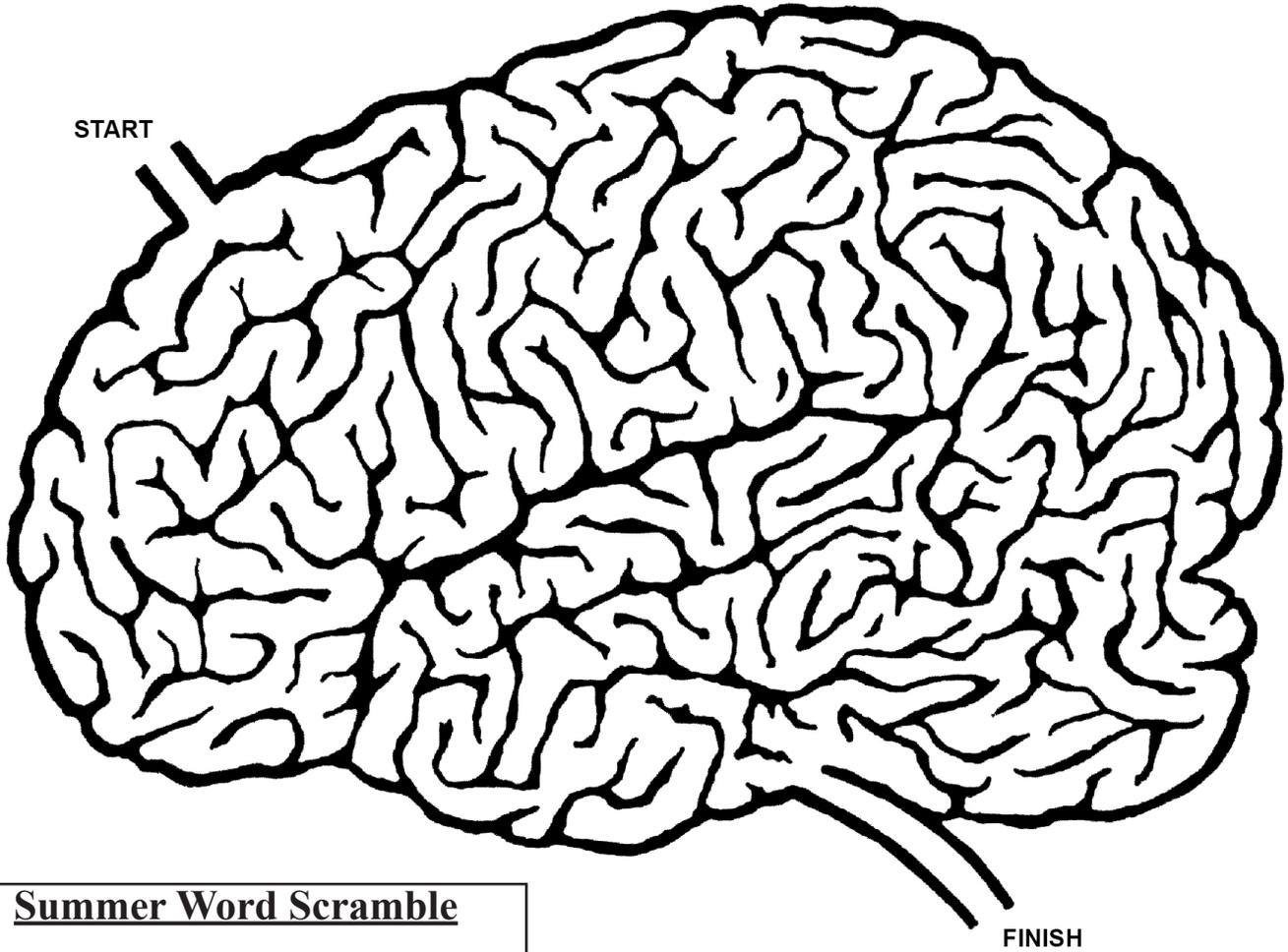
RTA: 1-312-836-7000
www.rtachicago.com

Do you have a story to tell?

We'd like to know!

If you would like submit a piece to be featured in an upcoming ANRL newsletter, please contact Stephanie or Brianna at 847-467-7591. Possible topics include: tips and advice, hobbies (e.g. cooking, crafts, etc.), health, research, and your personal experience with aphasia.

ACTIVITIES CORNER



Summer Word Scramble

Questions:

1. CABHE _____
2. OTRSHS _____
3. WMAR _____
4. SGHNFII _____
5. NSU _____
6. GNCMIAP _____
7. IVNCAAOT _____
8. SIMW _____
9. THO _____
10. ELWOT _____

Answers:

1. Beach
2. Shorts
3. Warm
4. Fishing
5. Sun
6. Camping
7. Vacation
8. Swim
9. Hot
10. Towel

5			8		2		
	3		9	1			
		1					8
8	2			9		6	
	9		1			5	3
4						5	
			5	3		1	
		6		2			4