

Civitan International Research Center

April 2017



UPCOMING EVENTS

B'ham Sci Café – John's Diner
April 18 – 6:00 p.m.
Forum re: Human Genome
May 15 – 6:00 p.m.
Influences of Neighborhoods

CIRC Symposium
April 20, 2017

Centennial Celebration
June 24 – 27, 2017

THIS EDITION

100th Anniversary 1
Research Spotlight 2
CIRC Bldg 3
Upcoming Events 4
Tours 6

DIRECTORS

Alan Percy, MD
Interim Director

Lucas Pozzo-Miller, PhD
Scientific Co-director

Rita Cowell, PhD
Director
Communications and
Outreach

Vicki Hixon, BS
Managing Director



100th Anniversary Celebration!

The Civitan Club of Birmingham held a 100th Anniversary Celebration at the Civitan International Research Center on March 9, 2017. Celebrating 100 years of service, the Civitan founders wanted to make a difference in the world. The Civitans have made a difference, which resulted in a proclamation from Governor Robert Bentley proclaiming March 17, 2017 as Civitan Centennial week.

Several speakers were featured including Dr. Alan Percy, interim director of the Civitan International Research Center. Dr. Percy spoke about some of the top accomplishments at the Research Center due largely in-part from the support of Civitan International. Establishing the UAB Rett Syndrome Clinic and the UAB PEERS program are just two of the major achievements. Every research success only exposes how much more work there is to do. There are more medical mysteries than will ever be solved but as the Research Center continues daily trying to answer some of the questions, the common goal is to look for answers one by one and share discoveries with other researchers as information becomes available.

Attendees from various Civitan Clubs attended the event and enjoyed light Hors d'oeuvres and delightful conversation about upcoming events. Excitement continues to build in anticipation of the Centennial Convention to be held in Birmingham on June 24 - 27, 2017.

CBS 42 shot a PSA at the event and can be viewed at: <https://vimeo.com/207888300>

Civitan International Neuroimaging Laboratory (CINL) Turns One Year Old!

See highlights of the CINL first year of work:

<https://www.youtube.com/watch?v=yI2Cq1C5ArA>

Wadiches Publish Brain Plasticity

Brain plasticity: How adult-born neurons get wired-in - by Jeff Hansen

It appears that new cells compete to ‘win’ synapse connections away from old cells, which promotes network plasticity.

One goal in neurobiology is to understand how the flow of electrical signals through brain circuits gives rise to perception, action, thought, learning and memories.

Linda Overstreet-Wadiche, Ph.D., and Jacques Wadiche, Ph.D., both associate professors in the University of Alabama at Birmingham Department of Neurobiology, have published their latest contribution in this effort, focused on a part of the brain that helps form memories — the dentate gyrus of the hippocampus.

The dentate gyrus is one of just two areas in the brain where new neurons are continuously formed in adults. When a new granule cell neuron is made in the dentate gyrus, it needs to get ‘wired in,’ by forming synapses, or connections, in order to contribute to circuit function. Dentate granule cells are part of a circuit that receive electrical signals from the entorhinal cortex, a cortical brain region that processes sensory and spatial input from other areas of the brain. By combining this sensory and spatial information, the dentate gyrus can generate a unique memory of an experience.

Overstreet-Wadiche and UAB colleagues posed a basic question: Since the number of neurons in the dentate gyrus increases by neurogenesis while the number of neurons in the cortex remains the same, does the brain create additional synapses from the cortical neurons to the new granule cells, or do some cortical neurons transfer their connections from mature granule cells to the new granule cells?

Their answer, garnered through a series of electrophysiology, dendritic spine density and immunohistochemistry experiments with mice that were genetically altered to produce either more new neurons or kill off newborn neurons, supports the second model — some of the cortical neurons transfer their connections from mature granule cells to the new granule cells.

This opens the door to look at how this redistribution of synapses between the old and new neurons helps the dentate gyrus function. And it opens up tantalizing questions. Does this redistribution disrupt existing memories? How does this redistribution relate to the beneficial effects of exercise, which is a natural way to increase neurogenesis?

Funding for this research came from Civitan International Emerging Scholars awards, and National Institutes of Health awards or grants NS098553, NS064025, NS065920 and NS047466.

For the complete article visit: <http://www.uab.edu/medicine/circ/news?start=8>

PEERS Program to Relocate

Renovations have begun and upon completion, the Program for the Education and Enrichment of Relational Skills (PEERS) will be moving from the Sparks Building to the Civitan 1st floor suite. PEERS is a 14-week parent-assisted social skills intervention for motivated teens with Autism Spectrum Disorders who are interested in learning ways to help them make and keep friends.



Atrium Updates

The Atrium has undergone some changes to include seating spaces to accommodate students needing a place to gather and families needing a place to wait on patients being seen in the clinics. The updated area provides a casual atmosphere which will be enjoyed for years to come.



Upcoming Events

Thursday, April 20, 2017

**Civitan International
Simpson Ramsey
Neurodevelopment Symposium**

Hill Center

8:30 a.m. – 3:00 p.m.

Poster Session

The Edge of Chaos

3:30 p.m. – 5:30 p.m.

The event will feature keynote speakers along with UAB researchers who will share knowledge about their on-going research.



Celebrating 100 Years!

**Civitan International Centennial Celebration
Birmingham, Alabama
June 24 – 27, 2017**



Excitement is growing in anticipation of the Centennial Celebration to be held at the beautiful Sheraton Birmingham Downtown Hotel.

For more information visit:

<http://www.civitan.org/convention2017/ConventionInformation2017.pdf>

Civitan International Research Center

TOURS



Tours of the Civitan International Research Center are conducted on an ongoing basis. To schedule a tour contact: Vicki Hixon at vhixon@uab.edu

