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## What Is the BNCD?

It's impossible to live near the University of Kansas and not know the "Rock, Chalk, Jayhawk," cheer that echoes in the halls of sports arenas. However, KU is not just about big sporting events; it is a major research university "where discovery and innovation happen everywhere," says Chancellor Bernadette Gray-Little. Research expenditures at all KU campuses grew to \$224.6 million last year. It is this type grant funding, from the National Institute on Deafness and Other Communication Disorders, that provides life to the Center for Biobehavioral Neurosciences in Communication Disorders (BNCD).

The BNCD is a collection of scientists who conduct studies on the development of abilities that are important to communication and language. Over the past 11 years, these studies have been conducted with adults, infants, and children of all ages and abilities throughout Northeast Kansas and Missouri. Through these studies, the scientists at the BNCD are trying to understand communication disorders as well as the origins of normal communication and language.

The center has three components:

1. The Participant Recruitment and Management Core (PARC)

serves as a connection between BNCD investigators to potential research participants. Most of the investigators associated with the BNCD conduct studies with participants that are difficult to recruit, thus considerable time and energy is expended by investigators to recruit participants. The PARC was designed to assist BNCD investigators with this challenge.

The PARC maintains a database with potential participants that span the developmental range. The database contains mostly typically developing children but also those with communication disorders. As of May 2011, there are 4,818 potential participants from 3,010



Image by Salvatore Vuono

households ranging from infant to 30 years of age. Approximately 60% of the potential participants are under the age of 10. All members receive this publication, and through their added participation in scientific studies make discoveries possible.

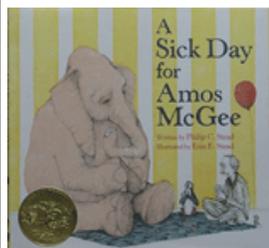
To further assist investigators in the recruitment process, PARC has also created a database of area organizations that is populated with schools, daycares, preschools, facilities serving older adults, etc. This database contains 10,879 entries, some of whom also receive this publication.

2. The Digital Electronics and Engineering Core (DEEC) assists in keeping investigators informed of the continuously evolving world of engineering. DEEC helps investigators measure factors such as brain activity, through cutting-edge methods.
3. The Advanced Techniques and Technology Core (ATT) provides center investigators with technical assistance in using new, high demand, statistical methods.

### In This Issue:

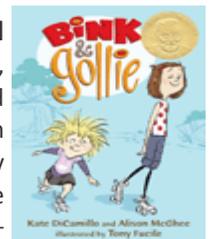
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## 2011 Award Winning Books for Summer

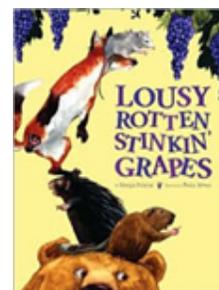
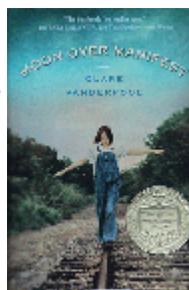


**Caldecott Medal**  
*A Sick Day for Amos McGee*  
by Philip C. Stead  
illustrated by Erin E. Stead  
Ages 3-8

**Geisel Award**  
*Bink and Gollie,*  
by Kate DiCamillo and Alison McGee, illustrated by Tony Fucile  
Age 7+



**Newbery Medal**  
*Moon over Manifest*  
by Clare Vanderpool  
Age 11+



**Bill Martin Jr. Picture Book Award**  
*Lousy Rotten Stinking Grapes*  
by Margie Palatini,  
Illustrated by Barry Moser  
Ages 3-8

## Welcome New BNCD Researchers

The BNCD is proud to announce the addition of a new group of researchers. They represent various disciplines and research interests as seen below.



**Erik Lundquist, Department of Molecular Biosciences since 2000**

Dr. Lundquist's research focuses on proteins involved in the growth and reaction of neurons (brain cells) to their surrounding environment. Understanding neuron growth and movement can help to eventually understand the basis of developmental disorders and recovery after trauma like spinal cord injuries or stroke.



**Yo Jackson, Department of Psychology since 2002**

Dr. Jackson examines the resiliency of children exposed to abuse and maltreatment. She is especially interested in gaining a deeper understanding of factors affecting how a child reacts after trauma. Identifying the ways that children develop coping mechanisms could then help improve treatment of abused children.



**Hinrich Staecker, Department of Otolaryngology, KU Medical Center since 2005**

Dr. Staecker's research focuses on developing treatment for hearing loss. He is currently involved in clinical studies on cochlear implants and a totally implanted hearing aid. Currently, the main effort of his research lab is focused on developing gene therapy for the treatment of an inner ear disease.



**Kristine Williams, School of Nursing since 2007**

Dr. Williams' research aims to improve nursing care for older adults in long term care settings and focuses on improving communication between direct care staff and older adult care recipients. Her research has established that the communication style of nursing care staff is related to older adult behavioral responses, including problem behaviors for older adults with dementia.

### Upcoming Events for Parents and Kids!

Bone Day at the Topeka Zoo

Come every Wednesday and watch as animal keepers present bones to our big cats!



**Date:** 6/8/2011—10/26/2011

**Time:** 9:30 am

**Location:** Topeka Zoo  
635 SW Gage Blvd.

**Admission:** \$5.25— \$3.75

**For more info:** 785-368-9162

Lawrence City Band Summer Concert Series

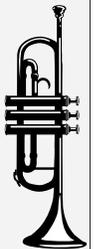
Bring the family and enjoy the annual summer band concerts. Bring your blankets and chairs.

**Date:** June 15, 22, 29

July 6 and 13, 2011

**Time:** 8 pm —9 pm

**Location:** South Park  
1140 Massachusetts  
Lawrence, KS



**Admission:** Free

**For more info:** 785-832-7920

Rainforest Adventure Exhibit

An expedition that introduces children to tropical rain forests around the world. 40 interactive displays including a 9-foot kapok tree and climbing wall.



**Date:** 5/28/2011—9/5/2011

**Time:** 10 am—6 pm M-W

10 am—9 pm Th-F

Noon—5 pm Sun

**Location:** Crown Center  
2450 Grand Blvd.  
Kansas City, MO

**Admission:** Free

## Research Participation Opportunities

### **Do you have an autistic son between the ages of 2-5 years?**

The current study is aimed at examining pupil and salivary responses, using non-invasive means.

#### **Participants:**

2-5 year old boys autism (Autistic Disorder and PDD-NOS, all levels of functioning) are needed to participate in the following study.

#### **Time commitment:**

At home: saliva sample and sleep survey. Two lab appointments including: a second saliva sample, test for eye gaze responses, and a series of standardized tests for IQ and language (results given to parent).

#### **Benefits:**

You will receive \$50 for returning the home collected saliva samples and sleep survey. Then, you will receive an additional \$40 for each lab visit, totaling **\$130 for participation** in this research project.

**Contact:** [autismlab@ku.edu](mailto:autismlab@ku.edu); (785) 312-5345



Image by koratmember

### **Do you want to volunteer for a research study on skin sense to touch and vibration?**

The purpose of this research study is to assess your ability to detect tiny vibrations applied to your lips and hand

**Ages:** 21-70 years, healthy adults with no history of neurologic injury, disease, trauma, or oral surgery/dental procedures affecting the sense of touch in the lower face/hands (approximately 100 participants)

**Time commitment:** Study session will last no more than 1 hour. Scheduled at your convenience at the Communication Neuroscience Laboratories, 1315 Wakarusa Drive, Suite 114, Lawrence KS

**Benefits:** \$20 for your participation in this study

**Contact:** Lalit Venkatesan; 785-331-4345; [lalit@ku.edu](mailto:lalit@ku.edu)

Website: [www.ku.edu/~cni](http://www.ku.edu/~cni)

### **Do you have trouble understanding your child's speech?**

#### **Does your child have difficulty learning new words?**

The purpose of this research project is to examine word learning by preschool children with language or speech sound delays. We want to determine how the organization of words and sounds affects children's ability to learn new words and to develop effective vocabulary teaching strategies.

**Ages:** 4-5 year old children with (1) language delays or (2) speech sound delays

**Time commitment:** 5 weekly sessions lasting 45- to 60-minutes. Sessions will be scheduled at your convenience in a suitable location (e.g., your home, nearby library, KU campus)

**Benefits:** free speech-language evaluation with report; small prizes for your child; compensation for travel expenses

**Contact:** Word & Sound Learning Lab; [785-864-4873](tel:785-864-4873); [wrdlrng@mail.ku.edu](mailto:wrdlrng@mail.ku.edu)

Website: [www.ku.edu/~wrdlrng](http://www.ku.edu/~wrdlrng)

## BNCD INVESTIGATOR HIGHLIGHT

Dr. Steven Warren has a total of three degrees from KU including his PhD in 1977. He says he chose "to return to KU in 2000 because of the university's research strengths in both developmental disabilities in general and especially in areas related to language development and intervention." He has pursued his major research interests in the areas of early communication and language development and the prevention of mental retardation.

In addition to autism research, Dr. Warren is collaborating with KU colleague Nancy Brady, to conduct a long term fragile X study. They are curious about the

effects that a stable, responsive, nurturing parenting style (termed maternal responsivity) might have on the development of children with fragile X syndrome. "My interests in fragile X syndrome began while I was on the faculty at Vanderbilt University in the 1990's. I first started to collaborate with colleagues at the University of North Carolina and these collaborations continued when I came to KU. The role of parenting in the



Steven Warren

development of these children is of great interest because the mothers are themselves carriers of fragile X" and despite showing typical intelligence may exhibit some deficits of the disorder as well. "What makes our research on maternal responsivity interesting and important is that we discovered that high levels of maternal responsivity have significant [positive] effects on language development in these children and these effects appear to grow cumulatively over time. But if you have both fragile X and autism, [like many boys do, the positive] impact of maternal responsivity is lessened."

**Return Service Requested**



**About this Newsletter:**

The BNCD newsletter is designed to keep you informed about the ongoing research projects that are being conducted by BNCD researchers at the University of Kansas. Participants who have been part of recent research projects conducted by BNCD researchers, parents who have expressed interest in participating in future research, and individuals from organizations such as schools and daycare centers that have an interest in BNCD studies will receive this newsletter from time to time to keep them up-to-date about the research activities at the BNCD. If you do not wish to receive future newsletters, please call or e-mail the BNCD to have your name removed from our list. Research at the BNCD is supported in part by grant number 5 P30 DC05803 from the National Institute on Deafness and other Communication Disorders (NIDCD) at the University of Kansas.

## Amazing Maze Mania

Help the mother bird find her egg.

