

Auditory Neuroscience Laboratory

www.brainvolts.northwestern.edu

Discovering early markers of language development by studying brain activity, listening, and learning



Happy Holidays Thanks for another great year!



It's hard to believe that 2014 is coming to a close! We've had a great year in the lab and the study, and it's thanks to all of you. Our families' ongoing dedication to our research is unique, and has positioned us to make big discoveries we think will have a tangible impact on neuroscience and education. We hope you're looking forward to coming in next year—we've got lots of new games (in addition to some old favorites).

Some exciting things have happened recently. Our lab's director, Nina Kraus, went to the White House for a meeting on President Obama's BRAIN Initiative! Our lab also continues to receive international attention from foundations, media outlets, and more. We're committed to telling anybody and everybody about our findings, and in that vein in this month's newsletter we shine our Research Spotlight on Joan Hargrave, our Outreach Director. We also introduce a new member of the Biotots team we're sure you'll all love getting to know, and tell you about some of the exciting things coming next year.

Happy holidays!

-- *The Biotots research team*

Researcher Spotlight:



Joan Hargrave, MS, CCC-SLP

Clinical Research Coordinator & Outreach Director

Joan Hargrave joined the Auditory Neuroscience Laboratory last summer, bringing over 40 years' experience in speech-language pathology, learning disabilities, and child language development. She has worked in all areas of speech-language pathology, including articulation, voice disorders, English second language, autism spectrum disorder, and cleft palate. Although Joan spent the bulk of her career training speech therapists at Boston University, she returned to the US this summer following an eight-year stint at an international school in Beijing.

In the Lab, Joan contributes her clinical perspective to our research and works as Outreach Director to communicate our discoveries to clinicians, educators, foundations, policymakers, and popular media. She is passionate about disseminating our findings to broad audiences and working with us to develop the next generation of diagnostic tools and interventions. Joan is always around and delighted to speak with parents about their children's progress.

A Hyde Park native, Joan recently made the transition to Andersonville. It remains to be seen whether living up north has made her a Cubs fan.

We hope you had fun playing with us!

If you have any questions about the project or would like to share photos of your child with us, please call or email: (847) 491-2457 biototsresearch@gmail.com

Hearing in Noise



In our lab we study how kids **hear**! Did you know, we use both our **ears** and our **brains** to **listen**? Sometimes, it's hard for us to **listen**, because **noisy** things are happening all around us. For example, think of a birthday party, or a classroom. Our friends, our classmates, our teacher, or maybe even the pencil sharpener could be **noisy**, making it difficult for us to **hear**! As scientists, we know that to hear in a **noisy** background, our **brains** work very hard! We call this **speech-in-noise perception**.

Do you remember the fun game we play with **Mickey Mouse**? We have to listen closely for Mickey's voice, because women are being noisy, talking and trying to confuse you. That's a game of **speech-in-noise perception**! We have some **FUN NEW listening GAMES** to play with Mickey when you come back this year.

Now you know when things get loud around you, you can count on your **brain** to help you **listen**!



Halloween Raffle Winner!!

Congratulations to **Paxton** for winning this year's BIoTot Halloween Costume Raffle! We received so many wonderful pictures of BIoTots in their Halloween 2014 costumes this year. Check out Paxton as Darth Vader and a few other creative costumes:



A BIoTots Scientist's Toolkit

A BIoTots scientist always has to be prepared! Here are some of the things that a scientist has on standby whenever a 'tot comes by ...



Crayons

You never know when it's coloring time.



Stopwatch

We need to time our learning games very carefully!



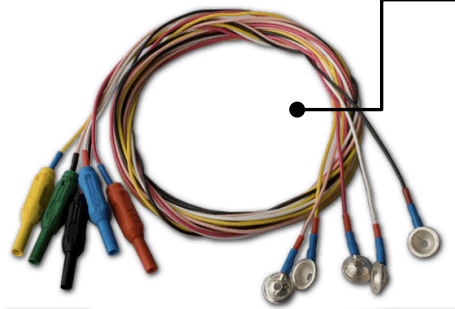
Cleaning supplies

Lots of people come in and out of the lab every day!



Sound Level Meter

We want to make sure all the sounds we play are the same volume for everybody!



Electrodes

How else would we measure brain activity?

Pens & Pencils

Need to record all of the data from our learning and listening games!



Join us in welcoming our newest BIoTots team member, Manto!

We're excited to introduce a new member of the BIoTots team! Manto ("mah-doe") Agouridou came to the USA from Athens, Greece to attend Mercer University in Georgia on a full scholarship to study cello performance and psychology. She's a music lover who loves the amazing opera, ballet, symphony, and jazz performances Chicago offers. Manto is excited to meet the BIoTots children! She says, "the BIoTots families are giving us the chance to compare the brain waves of children with the brain waves of the adolescents and adults we've tested. It's a great gift to see how the brain responses change over time!"

We can't wait to see you in 2015!



We're unveiling a new t-shirt design for 2015! We can't wait for you to see it when you come to the lab to play our games.



To learn more about our work, visit our website:

www.brainvolts.northwestern.edu

start under "slideshows" to learn about our current projects



We want to keep in touch!

Moving? Have a new e-mail or phone number?

Update your contact information with us by shooting an email to biototsresearch@gmail.com or calling us at (847)-491-2457.

We're looking forward to seeing you in 2015!

