

Auditory Neuroscience Laboratory

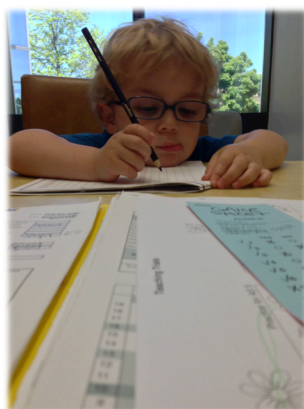
www.brainvolts.northwestern.edu

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



It's summer in the lab ...

... and we're grateful to see so many familiar faces—albeit faces a year older! We've had a terrific time reconnecting with families as we're deep into the second year of our study. It's amazing how much the Tots have grown in 12 short months!



Summer is a busy time for our lab, as we work with multiple kids each day, each of whom teaches us so much about the developing brain. Our study is unique. There are very few longitudinal investigations of pre-school development, and even fewer that incorporate measures of brain activity. We are so grateful to our BIOtots families for their commitment to the research. We're on the path to major discoveries, and these are only possible thanks to our Tots and their families.

If you've come into the lab this year, thanks! If not, we look forward to seeing you and learning all the things your kids—and their brains—have been up to.



—The BIOtots team

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

Researcher Spotlight:



Trent Nicol

Research Associate, Lab Manager

Trent Nicol has been Research Associate and Lab Manager of the Auditory Neuroscience Lab for 25 years. He is involved in all lab projects, from initial conception to final execution; Trent was instrumental in developing the technology behind many of the tests and measures used in BIOtots and shares multiple patents for his inventions.

During his time in the lab he has been involved in a wide range of studies, spanning clinical audiology, speech perception, literacy, and music. For BIOtots, Trent divides his time between developing new analytic techniques for our data and providing oversight and management for the project and team.

Trent lives in Libertyville with his wife, twin three year olds, and cat. He enjoys spending time with his family and restoring antique radios.

Introducing our newest team members!

We're excited to introduce two new members of the Biotots team!

Evan Davies



Evan Davies is a Michigan State University graduate who loves basketball, football, and ice hockey... and Chicago, especially when he finds new Vietnamese restaurants that he can bike to.

What is your favorite thing about the BIoTots project?

"Everything! I love meeting each child and playing games with them. Also, getting to know their parents and siblings is a treat. Lastly, making them feel special, because they all are!"

What's your favorite movie to watch with BIoTots kids?

"Despicable Me!"

Joan Hargrave



Joan Hargrave is a speech-language pathologist who grew up in Hyde Park but has been away for many years, living in Montreal, Munich, Boston and Beijing. She's glad Chicago still has great pizza!

She is humbled by the commitment of the Biotots' children and their parents who are helping the lab learn about the brain.

What's your favorite movie to watch with BIoTots kids?

"Hmm, I'm not sure," Joan said, "but can somebody please tell how the Barbie Mermaid movie ends?"

...and we bid a fond farewell to our long-time team member, Emily Spitzer.

Emily Spitzer



Emily began working in our lab in 2010 during her freshman year at Northwestern. She is moving to begin a clinical audiology doctorate program at UNC Chapel Hill this fall. Emily has been with the BIoTots project itself since its inception and has worked with over 30 families!

What will you miss most?

"I've loved working with the kids, and I'll especially miss the sweet and funny things the BIoTots say!"

Hey Tots: Why do we do the movie watching?



Did you know that even though we **listen** with our **ears**, we also hear with our **brains**?

Just like how a doctor looks at your bones with an x-ray, we can “look” at how your brain listens by using the little stickers and funny hat! These tiny, little buttons are called “**electrodes**”, and when we stick them to your head and play the sounds in your ear, we are studying how the **brain** works.



The silly **sounds** we play while you watch the movie are **speech** sounds, and we play them for about 20 minutes each so we can really hear what your brain says. (At first, the brain is quiet but if you give it some time, you can see what it says loud and clear!).

Remember how we play the statue game and sit super still? This is because your **brain** is as quiet as a mouse and we need to be quiet to hear it.



But, the good news is we can watch our favorite **movies** because your brains are hard workers! While you’re having fun watching the movie, your brains are telling us what they think about the **sounds** in your **ear** *at the same time!* (You would think they’d tell us what they think about Despicable Me or Cloudy With A Chance of Meatballs – but actually that’s your job!)

Parents – if you’re interested in learning more about our technology, check out our website for a friendly (and brief) overview and demonstration:

<http://www.soc.northwestern.edu/brainvolts/projects/clintech/index.php>



Recent news from the Auditory Neuroscience Laboratory

Nina Kraus went to Washington, D.C. with a delegation from the National Association of Music Merchants Foundation as member of a “STEM to STEAM” (science, technology, *arts*, and math education) lobbying initiative. She met with dignitaries including House Speaker Boehner, Rep. Suzanne Bonamici, and House, Senate, and Department of Education staffs to advocate for music and arts education in our schools, and provide a perspective from neuroscience.



The delegation also included visual artist Chuck Close, Chad Smith (from the Red Hot Chili Peppers), and baseball-legend-turned-Latin-jazz-guitarist Bernie Williams!



We want to keep in touch!

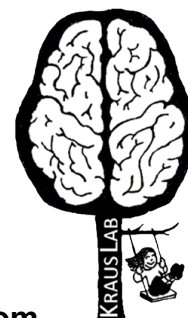
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Update your contact information by sending an
email to biototsresearch@gmail.com or calling us
at (847)-491-2457.

We're looking forward to seeing you this year!