

Auditory Neuroscience Laboratory

www.brainvolts.northwestern.edu

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



BIOtots: Making a difference, at home and abroad

Happy October! As the leaves turn colors, we're excited to see BIOtots coming up on its 3rd birthday this January. This year we are pleased to bring back our Halloween Costume Contest, a new tradition we are delighted to make a part of the BIOtots experience.

Our families' dedication is making a difference through the unprecedented scientific discoveries they allow us to make. The BIOtots are creating an international buzz. In November Professor Kraus will travel to Berlin for the *Falling Walls* conference to tell world leaders, Nobel-prize winning scientists, visionary artists, and acclaimed journalists about our work, and we are delighted to share with you that the BIOtots project will take center stage. This TED-like event began to celebrate the anniversary of the fall of the Berlin Wall, and asks its speakers which walls will fall next. Our families are single-handedly breaking a new frontier in the biology of language development, and the world is listening.



Our work is also grabbing the attention of pediatricians, speech-language therapists, and audiologists who aim to improve their care for children and their support of language development.

Thanks for your work so far, and here's to what we learn next!

--the BIOtots team

Researcher Spotlight:



Elaine (Ellie) Thompson

Ph.D. candidate

Ellie is a doctoral candidate in the Auditory Neuroscience Lab who has been a member of the BIOtots team since the project's inception. Ellie's research focuses on how auditory development influences language and listening skills. She is particularly interested in how children learn to understand speech in complex, real-world listening environments such as a noisy classroom or cafeteria. In other words, she's the mastermind behind the listening games the BIOtots play!

Ellie has also worked on our lab's collaboration with Harmony Project in Los Angeles, to evaluate the biological impact of music lessons on at-risk children, and traveled to LA as part of the remote testing team.

Her favorite part of the project is forging bonds with families and see the 'tots grow year after year. A Kansas City native (go Chiefs!) Ellie enjoys exploring Chicago, attending concerts of all genres, and teaching swimming to all ages.

We can't wait to see you again this year!

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

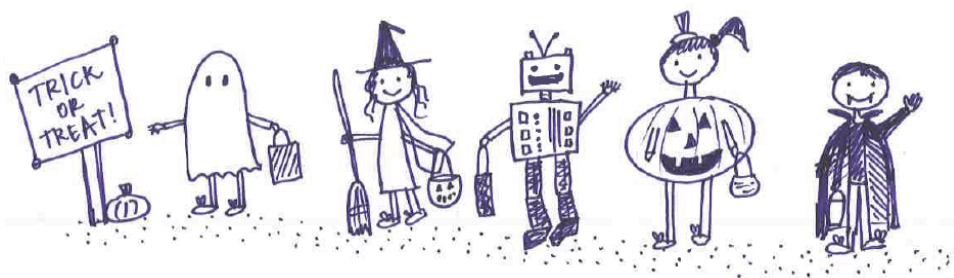
Halloween Costume Raffle



Announcing the second annual Halloween costume contest!

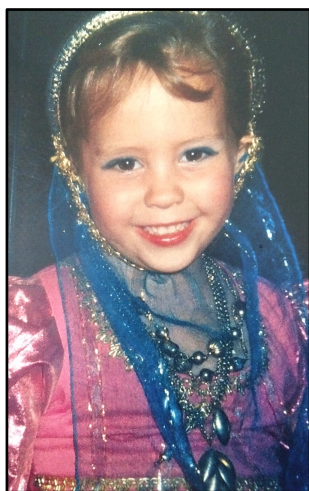
Halloween is approaching, and that means cool costumes!! We want to see you in your costumes, so please send us your pictures. **OR wear them to the lab!!** Each BIOtots who sends in a picture or lets us take a picture of them in their cool costume will be entered in a raffle drawing for a lab t-shirt and a prize. Please send* them to us by November 9th, 2015. Please check back in our holiday newsletter to see the entries and find out the raffle winner!

**Parents, by sending us your child's costume picture you are granting permission for us to use it in this newsletter and other media.*



Meet the BIOtots team members in Halloween costumes when they were your age!

Can you guess their favorite candy?



Ellie, 5yo

Genie

Twizzlers



Evan, 3yo

Dinosaur

Sour Patch Kids



Jess, 5yo

Kangaroo

Mounds



Kali, 3yo

Crayon

Almond Joy



Sebastian, 3yo

Winnie the Pooh

Three Musketeers

Sounds in your Ears

A Healthy Ear is a Noisy Ear!



We hear **sounds** when they travel into our **ears** and make our ears **vibrate**. But did you know our ears can also make sound? They can! The sounds your ears make are called **otoacoustic emissions**.

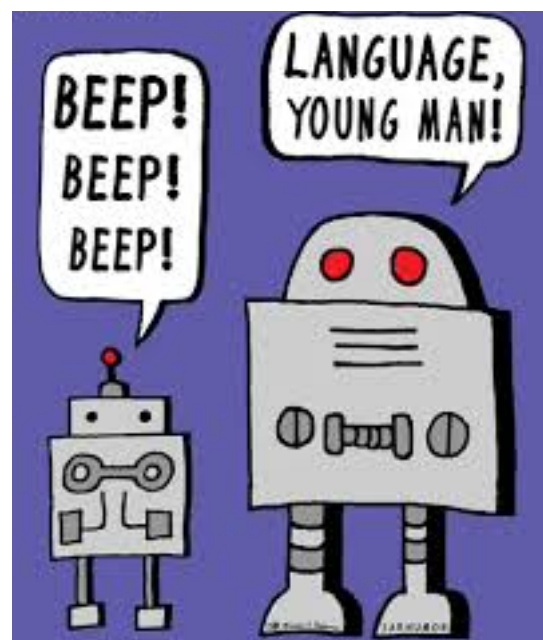
OH-TOE-UH-KOOS-TICK
EE-MISH-UNS

Those are really big words, so we just call them “**OAEs**”.

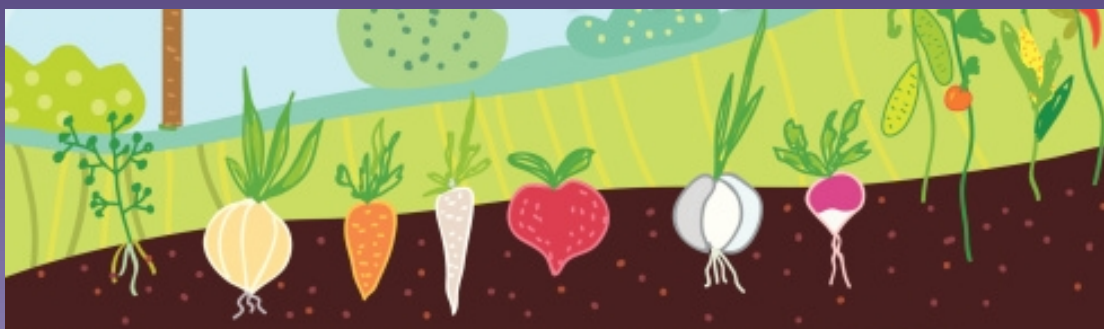
Do you remember the robot sounds game? Or maybe you call it the ear racing game? When we play the robot sounds in your ear, **tiny** little things deep inside your **ear** called **hair cells** (they look like itty-bitty hairs!) dance around to help you hear **sounds**. These dancing little **hair cells** also make **sound**, just like the strings of a little guitar!

So why don't you **hear** the sound your ear makes? It's because the tiny little **hair cells** are so tiny! This means the sound they make is very tiny too, like a **whisper**. Only our robot sound machine can **hear** them whispering. This sound your **ear** makes competes against other sounds in the room, and we see who wins!

We can't wait to see you again and see who wins the ear robot game this time!



Our BIOtots family is growing!



Our BIOtots family is growing! Joan and Jess have been working hard to recruit new families. They have visited preschools, libraries, and community centers in Evanston and surrounding areas to tell potential families about our study and to get them excited about brain research. Sebastian has been working to spread the word around the Northwestern University campus. We are still looking for more families with 3- and 4-year-olds who are interested in coming to the lab to play games with us. Do you have friends who want to join the BIOtots family? Tell them about us, we'd love to have them!

We want to keep in touch!

Moving? Have a new e-mail or phone number? Update your contact information by sending an email to biototsresearch@gmail.com or calling (847) 491-2457.

We're looking forward to seeing you this year!

