CHILDHOOD APRAXIA OF SPEECH ASSOCIATION OF NORTH AMERICA
AWARDS TREATMENT RESEARCH GRANT TO HASKINS LABORATORIES

PITTSBURGH, PA, July 5, 2011 –The Childhood Apraxia of Speech Association of North America (CASANA), through its Childhood Apraxia of Speech (CAS) Treatment Research Grant Program, has awarded Jonathan Preston, Ph.D., CCC-SLP, and Nicole Landi, Ph.D., on their collaborative proposal, Biofeedback Training for Children with Persisting CAS: Articulatory and Neural Changes.

“There is substantial need for developing evidence-based interventions for children with CAS. Some children may show relatively slow gains in therapy, and speech production problems may persist into adolescence,” said Dr. Preston, a Scientist at Haskins Laboratories and Assistant Professor for Communication Disorders at Southern Connecticut University.

Childhood Apraxia of Speech (CAS) is a very challenging and complicated speech disorder in children, making it difficult or impossible for children to accurately produce sounds, syllables and/or words despite having a good understanding of language. This novel research, funded by CASANA, will examine whether visual biofeedback of speech movements improves the accuracy and consistency of speech for school-age children with apraxia of speech. The goal of the biofeedback, which will be provided through a form of ultrasound, is to increase the participants’ awareness of the position of the tongue during speaking tasks by providing visual information that coincides in time with the child’s speech movements. Participants will receive pre-treatment and post-treatment testing of speech and language. The biofeedback treatment will be provided twice a week for duration of nine weeks.

Dr. Preston, the principal investigator on the funded study, says he hopes to demonstrate that persisting speech problems associated with CAS can be effectively treated. Although there is very limited research on this topic, he says a few studies have used biofeedback approaches with other types of speech impairments and have found some success. Their goal is to implement a biofeedback approach through the use of ultrasound, giving children a visual display of what is happening in their mouth.

“When they see a visual display of their tongue in real time (as they talk), we hope to be able to use this to teach children how to create speech sounds and to coordinate speech movements,” said Dr. Preston.

In a second part to the study, researchers will employ Electroencephalography (EEG), a measure of brain waves as well as a test providing evidence of how the brain functions over time, before and after treatment. This will determine if change can be observed in the neural aspects of speech motor-programming as a result of the treatment.

Even with a successful outcome, Dr. Preston believes there will still be challenges along the way. “We are starting nearly from ‘square one’ with this project. We are developing our own intervention protocols from the ground up,” he said.
The future of this research project’s outcome will be “worth the investment if we can help many children achieve good speech outcomes in a short period of time,” said Dr. Preston.

“We eventually will need to show that investing in the technology up front will have long-term economic benefits if children can ‘graduate’ from speech therapy in a shorter time, resulting in cost savings,” said Dr. Preston.

The proposal, awarded to Dr. Preston, was through a competitive application process managed by CASANA’s Research Review Committee. Funds for CASANA research projects are generated by the efforts of volunteers and donors in the Walk for Children with Apraxia.

Dr. Preston says he is very grateful for CASANA’s commitment in helping children with CAS. “We are very thankful for their continued work toward their mission of funding treatment research,” he said. “CAS clearly impacts many families, so there is a huge need for viable treatment options.”

**About CASANA**

The Childhood Apraxia of Speech Association of North America (CASANA) is the only national non-profit public charity exclusively dedicated to the needs and interests of children with apraxia of speech and their families. CASANA, founded in 2000, strives to improve the systems of support in the lives of children with apraxia so that each child is afforded their best opportunity to develop speech and to achieve to their potential. CASANA works toward this mission through promoting international awareness of childhood apraxia of speech; providing high quality information and support to families and professionals; conducting multiple educational workshops, webinars and conferences each year; and supporting as well as funding treatment research. For more information on CASANA and Childhood Apraxia of Speech, visit the Apraxia-KIDS website at [http://www.apraxia-kids.org](http://www.apraxia-kids.org).

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