

## Special Events for Families . . .

### Films in the Field

Mark your calendars for Saturday, August 12, 2006 at 8:00 p.m. on the West Campus Recreational Fields adjacent to the Waisman Center! A family-oriented movie will be projected onto a 20-foot by 40-foot inflatable screen. Bring a blanket and enjoy this FREE outdoor movie under the stars! Film T.B.A. This 3rd annual event is sponsored by the Friends of the Waisman Center. For additional information, call Teresa at (608) 263-5837 weekdays or palumbo@waisman.wisc.edu

### Children's Theatre

This series, sponsored by American Girl Fund for Children and presented by the Friends of the Waisman Center, features live performances geared to young children and their families. The entertaining and educational events are staged in the Waisman Center's auditorium and outdoor Discovery Garden (in warmer weather!). For a complete schedule, go to [www.waisman.wisc.edu](http://www.waisman.wisc.edu)

## research & resources

• WAISMAN CENTER NEWS FOR FAMILIES •  
UNIVERSITY OF WISCONSIN-MADISON

Published by the Research Participation Core. If you would like your name added to or removed from our mailing list, please contact us.

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Dear Friends, Families and Colleagues,  
Best wishes for the New Year! With this being a season of reflection, I can vividly recall the winter day in 1998 that Robin Chapman, investigator with the Waisman Center Communication and Cognitive Processes Group, walked into my office and told me about her new research project. I was a little worried about recruiting for the study when she said that it would involve an initial 3 hour visit, followed by six weekly visits lasting about two hours each! Such a time commitment with so many visits essentially meant that families had to live fairly close to the Waisman Center. It also meant that families would need to give research participation a high priority in their busy lives. And to make matters even more complicated, the Research Participation Core already had two other research projects recruiting adolescents with Down syndrome from its research registry! It all worked out, however, reflecting the creativity and perseverance of Dr. Chapman and her team, the obvious importance of the research to clinical practice, and the passionate commitment to research of so many of our Waisman Center families.

We are pleased to provide a summary of Dr. Chapman's final report from her study in this issue of *Research & Resources*! After much hard work, the final results were generated by comparing language data from 20 adolescents with Down syndrome, 18 typically developing children and 16 adolescents with cognitive impairment of unknown origin. The Research Participation Core thanks the many families who made such a large commitment and generous donation of their time in order to participate in this project. You certainly went "above and beyond" the call of duty!

Dr. Chapman is now a Professor Emerita of Communicative Disorders. Please read about her illustrious career on the next page. Although Dr. Chapman has retired, the Waisman Center's commitment to research on Down syndrome continues. You can read about a new research project on Down syndrome in this issue as well.

Sincerely—Susan Vial, Research Participation Core Staff Coordinator

## New Outlook For Language Development in Individuals with Down Syndrome

The key findings of Dr. Chapman's study extend current understanding of language development in individuals with Down syndrome. Children with Down syndrome are

typically slower to learn language than are their typical age peers. It was previously thought that the development of language plateaus, or stops, as the child with Down



syndrome reaches adolescence. Because of this, educational opportunities often placed less emphasis on language learning for individuals with Down syndrome once adolescence was reached. However, results from Dr. Chapman's study indicate that, although skills in language comprehension for individuals with Down syndrome level off or show losses in young adulthood, language expression skills, such as the ability to tell a story, continue to improve with age.

Dr. Chapman's research project focused on evaluating learning skills and memory abilities relevant to language. Spoken comprehension tests and story-telling tasks were used to measure the ability to both understand language and to speak it. Standardized tests were

administered to assess vocabulary development, understanding of language, short-term memory, and problem-solving. In addition, participants were asked to tell stories from picture books and single pictures, hide or manipulate novel objects with novel names, and complete computer activities involving listening to sentences and following directions.

After a highly detailed analysis and comparison of the participants' performance, the results of Dr. Chapman's study indicated that expressive and word learning language skills continue to improve into and beyond young adulthood. The amount of improvement depends on the individual's initial level of language comprehension skills, with better comprehension being associated with better growth in

language expression later. She also found, however, that comprehension of grammar actually declined with age in many individuals with Down syndrome. Dr. Chapman, therefore, recommends that parents and teachers maintain an emphasis on language learning through adolescence and young adulthood, though levels will differ for comprehension and production. She stresses that educational planning for adolescents and young adults with Down syndrome should take this into account. By cultivating comprehension skills in adolescence, and by teaching complex language and storytelling skills, language expression can continue to develop. The National Institutes of Health and the National Down Syndrome Society funded this research.

## Research and Beyond: A Small Sample of Dr. Chapman's Many Accomplishments

Dr. Chapman earned her bachelor's degree from Swarthmore College in 1964 and her PhD in psychology from the University of California-Berkeley in 1967. She has had an illustrious career in academia as a principal investigator at the Waisman Center and as a faculty member in the Department of Communicative Disorders at the University of Wisconsin-Madison. Dr. Chapman's research has explored children's language development and disorders, including specific language impairment and Down syndrome. Her work has been published in many well-known scholarly journals, including *Journal of Speech, Language, and Hearing Research*; *Journal of Child Language*; and *Journal of Psycholinguistic Research*, and she is frequently cited by colleagues across the country in publications relating to language disorders, language development, and interventions. She also co-authored a computer program, SALT: Systematic Analysis of Language Transcripts, which allows clinicians and researchers to collect, analyze and interpret language samples.

In addition to her notable career in academia, Dr. Chapman is also a prolific artist with a particular passion for poetry. Her poems have been featured in several anthologies, including *Poetry Comes Up Where It Can* and *The First Yes*, and have been published in literary magazines and other publications, including *The Christian*

*Science Monitor* and *The Hudson Review*. Dr. Chapman has also authored several books of poetry: *Distance, Rate, Time* (1989), *Learning to Talk* (1991), *The Way In* (1999), *The Only Everglades in the World* (2002) and has one poetry CD entitled *Banff Dreaming*. She co-authored *Images of a Complex World: The Art and Poetry of Chaos*, published in November of 2005, in which her poems provide a new way of thinking about science and mathematical systems. Dr. Chapman feels that her poetry has been beneficial to her research because it emphasizes the importance of language in the life of children and for individuals who have difficulty learning language (*Wisconsin Week*, 8/24/05).

## Project on Speech and Feeding Development in Individuals with Down syndrome and Individuals with Cerebral Palsy

My name is Erin Wilson and I recently received my Ph.D. from the Department of Communicative Disorders at the University of Wisconsin. I am currently a post-doctoral trainee at the Waisman Center doing research to help better understand the development of speech and feeding skills in individuals with Down syndrome and individuals with Cerebral Palsy. This fundamental work is necessary to develop improved therapeutic interventions for children with speech and/or feeding difficulties.

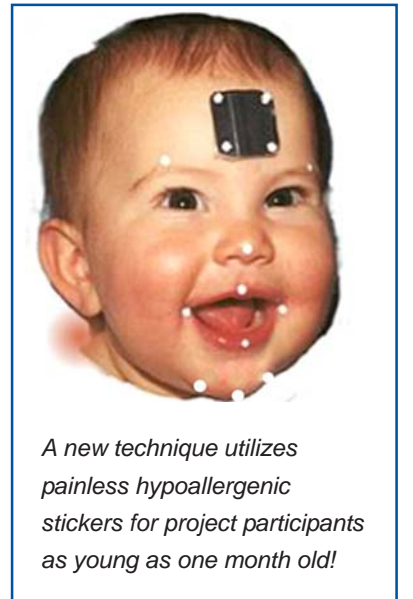
During my doctoral training, we developed a new and exciting way to measure speech and feeding skills in children as young as one month of age. We make use of a 3-dimensional motion capture system similar to what was used by film makers to create animated characters in many recent movies, including *Polar Express* and *Lord of the Rings*. The system allows us to non-invasively track motion in

the face, lips, and jaw during speech and feeding simply by placing tiny hypoallergenic stickers on the faces of the infant and children participants. **We are currently enrolling participants of all ages in this innovative one-hour, one-visit investigation.** Participants will be compensated \$20 and free parking is close and readily available. If you are interested in participating or would just like additional information about the project please contact me at:

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(608) 263-7273  
<http://www.comdis.wisc.edu/facstaff/ewilson/index.htm>

Or visit our website at:  
[http://www.comdis.wisc.edu/facstaff/ewilson/project\\_abstract\\_home.htm](http://www.comdis.wisc.edu/facstaff/ewilson/project_abstract_home.htm)



A new technique utilizes painless hypoallergenic stickers for project participants as young as one month old!

Do you have any questions about research projects at the Waisman Center? Call the Research Participation Core TOLL-FREE!

**OUR NEW TOLL-FREE PHONE NUMBER IS 1-800-965-9205.**