

Language and Social Communication Research Program



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CENTER NEWS:

Lab selected as STAART center

We are delighted to announce that the Lab of Developmental Cognitive Neuroscience has been selected as one of eight new autism research centers in the Studies to Advance Autism Research and Treatment (STAART) Centers Program. This new multi-site research center, sponsored by the National Institute of Mental Health (NIMH), will enable us to extend our research program through collaborations with researchers at Tufts/New England Medical Center, Dartmouth University, and the Waisman Center at the University of Wisconsin – Madison.

The STAART Center grant will provide funding for four new research projects. In these projects, some conducted at Boston University and some at our collaborating institutions, we will investigate the effects of raising an autistic child on other members of the family, the anatomy of structures in the brains of people with autism through post-mortem analysis, the activation levels in certain parts of the brain in response to stimuli through functional MRI, and the effects of a new type of treatment on the symptoms of autism. This new center will bring the Lab nearly \$1.7 million per year in new grants, and will result in an expansion in our office space and research team.

We are tremendously excited to be a part of this new autism research program, and look forward to sharing our findings and opportunities for participation in these upcoming research projects. Please visit <http://www.nimh.nih.gov/events/prautismcenters.cfm> for the NIH press release announcing our Lab as one of the new grantees.

New Lab website now live

We are proud to announce the launching of our new lab website! This site contains a special area just for families and participants in our autism research programs, in which you'll find information about our ongoing projects, publications, and research team members, as well as directions to the Lab and how to contact us. We have also made past newsletters and recent publications available in Adobe PDF format.

Please visit our new site at:

<http://www.bu.edu/anatneuro/dcn>

We would like to issue a special thank you to website designer **Rick McEachern**, who did such a beautiful job creating this website for us. For more information about his web design services, email him at rick@mericul.com. We would like to encourage all families to visit and explore the site and send us any questions or feedback you may have. Sharing the web address with other friends and relatives who may be interested in our programs would also be a great way to help them learn more about what we do and ways in which they might participate!

Visiting student joins the Lab

This summer, we will be pleased to host Morehouse College junior **Kamauru Johnson**, who has received special funding from NIH to spend a summer learning more about the field of psychological research. Kamauru, who has a special interest in learning disabilities, will be analyzing some of the data we have collected in our autism and language impairment studies. We look forward to working with him during his internship in our Lab.

RESEARCH NEWS:

New studies begun in autism project

As many of you already know firsthand, our research program is back into full swing. We are very excited about the new set of studies we are conducting this year, which represent both a continuation of past themes and new directions for our research. In our language studies, we are investigating the shared language impairments of children with autism and children who do not have autism in an effort to pinpoint genes that may be shared by both groups. These studies include experiments on phonological processing and grammatical knowledge. In our face studies, we are investigating the attentional, perceptual, and emotional processes that potentially contribute to reduced eye contact in children. Over the next several years, we will build on our initial findings with several follow up studies.

We have interviewed over 80 families so far to see if they match our research participant needs, and we are interviewing new families every day. While we have a busy summer of testing planned, we are also still recruiting new study participants. We would like to invite all types of families to contact us, but we are particularly interested in talking to families of typically developing children, who have no diagnosis of autism or learning difficulties. If you have friends who might be interested in participating in our research program, we would love to hear from them! Please ask them to call Kelley Larrow at (617) 414-1304 or email at klarrow@bu.edu for more information.

Findings presented at IMFAR and SRCD

Since we last wrote to you, our lab has presented several of our research findings at scientific conferences, including the *International Meeting for Autism Research* held in Orlando in November of 2002, the *Cognitive Neuroscience Society* held in New York City in March of 2003, and the *Society for Research on Child Development* held in Tampa in April of 2003. Researchers from our lab presented findings that many but not all children with autism have a significant number of ADHD symptoms accompanied by neuropsychological weaknesses

(e.g., in self-organizing skills) that are overlapping with those found in children with ADHD; that children with autism appear to have weaknesses in using “self-talk” to regulate their behavior; and that children with autism are better at understanding false beliefs than ironic utterances, suggesting that they more readily understand what another person thinks than what another person feels. Posters presented at these conferences are currently on display in the Lab.

Recent Conference Presentations

Deutsch, C., Saunders, E., Lauer, E., Joseph, R., & Tager-Flusberg, H. (2002). *Quantitative Assessment of Craniofacial Dysmorphology in Autism and SLI*. 2nd International Meeting for Autism Research, Orlando, FL.

Evancie, L., Condouris, K., McGrath, L., Joseph, R., & Tager-Flusberg, H. (2002). *Verbal Fluency in Autism and Language Impairment*. 2nd International Meeting for Autism Research, Orlando, FL.

McGrath, L., Joseph, R., Tadevosyan, O., Folstein, S., Tager-Flusberg, H. (2002). *Overlapping ADHD symptoms in autism: Relationship to executive functioning*. 2nd International Meeting for Autism Research, Orlando, FL.

Joseph, R. M., & McGrath, L. (2003). *Do language impairments contribute to executive function impairments in school-age children with autism?* Biennial meeting of the Society for Research in Child Development, Tampa, FL.

Joseph, R. M., & Steele, S. (2003). *Verbal working memory strategies in children with autism: Evidence of a deficit*. Biennial meeting of the Society for Research in Child Development, Tampa, FL.

Pearlman-Avni, S. (2003). *TOM in Williams syndrome and autism: An inconsistent profile of proficiency on false belief attribution and irony understanding*. Tenth annual meeting of the Cognitive Neuroscience Society, New York City, NY.

Recent Journal Articles and Book Chapters (downloadable from our new website)

Deutsch, C., & Joseph, R. M. (2003). Brief report: Cognitive correlates of enlarged head circumference in children with autism. *Journal of Autism and Developmental Disorders*, 33, 209-215.

Tager-Flusberg, H., & Joseph, R. M. (2003). Identifying neurocognitive phenotypes in autism. *Philosophical Transactions of the Royal Society of London, B*, 358, 303-314.

Joseph, R. M., & Tanaka, J. (2003). Holistic and part-based face recognition in children with autism. *Journal of Child Psychology and Psychiatry*, 44, 529-542.

Ozonoff, S., Coon, H., Joseph, R. M., Klin, A., McMahon, W. M., Minshew, N., Pennington, B. F., Rogers, S. J., Tager-Flusberg, H., Volkmar, F. R., & Wrathall, D. (in press). Performance on CANTAB subtests sensitive to frontal lobe function in people with autistic disorder: Evidence from the CPEA Network. *Journal of Autism and Developmental Disorders*.

Steele, S., Joseph, R. M., & Tager-Flusberg, H. (in press). Brief report: Developmental change in theory of mind abilities in children with autism. *Journal of Autism and Developmental Disorders*.

Joseph, R. M., & Tager-Flusberg, H. (in press). The relationship of theory of mind and executive functions to symptom type and severity in children with autism. *Development and Psychopathology*.

Tager-Flusberg, H. (2003). Language impairments in children with complex neurodevelopmental disorders: The case of autism. In Y. Levy & J. Schaeffer (Eds.), *Language competence across populations: Toward a definition of specific language impairment* (pp. 297-321). Mahwah, NJ: Lawrence Erlbaum Associates.

Herbert, M.R., Harris, G.J., Adrien, K.T., Makris, N., Kennedy, D.N., Lange, N.T., Bakardjiev, A., Hodgson, J., Takeoka, M., Tager-Flusberg, H., & Caviness, V. S. (2002). Abnormal asymmetry in language association cortex in autism. *Annals of Neurology*, 52, 588-596.