Hello from Dr. Nelson

Hello from the Labs of Cognitive Neuroscience! I hope that all of you are enjoying the beginning of the holiday season. Fall is a busy time at the LCN. In addition to our ever growing array of projects, our lab members have been taking part in many community events, from the Newton Harvest Fair to the Great Boston Walk Now for Autism Speaks. It's always such a pleasure to connect with families in the community, especially when we bump into those of you who we already know from your visits to the lab! With cold weather approaching the event season is quieting down, but we look forward to seeing



many of you here at 1 Autumn Street this winter, where things are always warm and toasty!

Whether you have already taken part in our studies or have recently joined our growing Participant Registry, I greatly appreciate your interest in our research. Your support of our work and participation in our studies are invaluable to us in answering many important questions related to infant and child cognitive development. Wishing you all a fun, safe holiday season full of fun, friends, and family!

Warm Wishes,

Charles A. Nelson, Ph.D.

Director of Research, Division of Developmental Medicine Richard David Scott Chair in Pediatric Developmental Medicine Research **Professor of Pediatrics and Neuroscience, Harvard Medical School**

The LCN In the News

"The Two Year Window: The new science of babies and brains--and how it could revolutionize the fight against poverty" The New Republic, December 1, 2011

Take a look at this article featuring the Nelson Lab's Bucharest Early Intervention Project. The article, from the latest issue of The New Republic, looks at how the emerging science on early adversity and brain development may impact efforts to alleviate poverty.

"Is it Really ADHD? Brain activity may provide an objective measure" Vector, November 17, 2011

Click here to read a write up of the Sheridan Lab's study on ADHD in young children. Dr. Sheridan and her colleagues are working with children ages 3-7 in hopes of improving the accuracy of diagnosis in that age group, which is currently at around only 50%. If you or someone you know might be interested in participating, please feel free to contact the lab at adhd.at.chb@gmail.com or 857-218-5220.

Join us on Facebook--help us reach 500 fans!



As many of you know, the LCN now has a Facebook page where families can stay in the loop about lab happenings, new studies, and study results. Parents can also post photos of lab visits with their "Neuroscientists in Training"!

We hope this will also be a way to reach out to new families via those who already know us, so if you are an LCN fan please take a moment to "like" our page! You can find us at www.facebook.com/wherekidshelpkids. Hope to see you there!

Do you have a new addition?

If so, congratulations! We have lots of new infant studies in the works, in addition to current projects for babies of six, nine, and twelve months of age! If you have welcomed a new little one in the past year and would like to stay in the loop about studies for which he or she might be eligible, please let us know! By participating you can learn more about what we're studying, and your baby gets to take home a small toy and one of our "Neuroscientist in Training" onesies, modeled here by one of our littlest research helpers, the adorable Emma! And, don't forget--we have free parking and a toy-filled play room and free child care for big brothers and sisters, so the whole family can come along.



To add your newest family member to our Participant Registry, please contact Rebecca Hansen at 857-218-3011 or rebecca.hansen@childrens.harvard.edu.

To learn more about current infant studies, click here.

Featured Study: Early Neural Markers of Dyslexia, Working Toward an Early Diagnosis

Developmental dyslexia (DD) is a common learning disability affecting 5-17% of children. Children with developmental dyslexia often have difficulties with accurate/fluent word recognition and decoding, meaning that everything from identifying words to figuring out how they should be pronounced can pose a challenge. Currently, the earliest that dyslexia is diagnosed is around second or third grade, when children have already demonstrated difficulty with reading and often have years of struggle and frustration under their belt. Furthermore, there is an unfortunate paradox in dyslexia diagnosis and treatment: although the dyslexia diagnosis typically doesn't happen until later, intervention



studies are widely documented to have their most potent effects in kindergarten and first grade.

The current study focuses on the early identification of children at risk for developmental dyslexia and how their brains develop over time. Ultimately, we aim to make it possible to identify children at risk for DD at a very early age, before reading skills are even present. Previous studies have shown differences in the brain networks of school-age children and adults with a diagnosis of developmental dyslexia, as well as a strong genetic basis for DD. Based in this knowledge, we are working with young children both with and without a family history of dyslexia to investigate how early these brain differences appear, how they develop over time and whether they can be used to identify children who are at risk for dyslexia in pre-school or even infancy.

We are looking for infants 3-14 months of age and children 4-6 years old to participate in this study. The infants will participate in one session. During the session we gather information about the infant's cognitive and motor abilities and take pictures of their brain while he or she is napping. The children will participate in two sessions per year for four years (one session looks at cognitive and reading development and one looks at brain development). Parents will receive a comprehensive report for the cognitive and reading development testing each year. Infants who participate will receive toys and children will receive gift certificates for local book stores.

If you are interested in participating or would like to learn more, please contact Ola Ozranov at

olga.ozranov@childrens.harvard.edu or call us at 617-334-5046!