

## Building Awareness About Autism

April 2008

Approximately one out of every 150 eight-year-olds in the United States has autism or a closely related disorder, according to the Centers for Disease Control and Prevention. With autism and the milder autism spectrum disorders (ASD) affecting so many children, research into new treatments for these conditions is now more important than ever. To help bring attention to this complex disease, April has been designated as National Autism Awareness Month. Thanks to crucial funding from the National Institutes of Health (NIH), the nation's medical schools and teaching hospitals are on the front lines of this critical research.

To kick off National Autism Awareness Month on April 1, the NIH announced the latest awardees in the Autism Centers of Excellence program, designed to support studies covering a broad range of autism research areas. Three of the four award recipients are based at U.S. medical schools:

- **Ami Klin, Ph.D., Yale University School of Medicine**, employs eye-tracking technologies and other tools to quantify social processes with the ultimate goal of detecting autism or ASD earlier in a child's life—possibly even before symptoms emerge.
- **Diane Chugani, Ph.D., Wayne State University School of Medicine**, will work with her network of researchers to study the effects of buspirone, a drug that stimulates serotonin production, in promoting more normal brain growth and development in autistic children.
- **Daniel Geschwind, M.D., Ph.D., David Geffen School of Medicine at UCLA**, will study 400 families that have one child affected by autism in order to identify rare genetic variants, mutations, and abnormalities that affect a person's risk for autism. Half of the families in the study will be African American, so that researchers may determine whether African Americans share the same genetic risk factors for autism as white Europeans.

### More NIH-funded autism research advances from U.S. medical schools and teaching hospitals:

#### Premature babies may have higher autism risk

Premature infants born weighing less than 1,500 grams have an increased risk for showing early signs of autistic features, according to a study conducted at **Children's Hospital Boston**. The findings suggest that early autistic behaviors may be under-recognized in infants with very low birth weights, and that early screening for signs of autism could be warranted for all preterm infants.

<http://www.childrenshospital.org/newsroom/Site1339/mainpageS1339P1sublevel413.html>

#### Thinner bones seen in boys with autism and ASD

Unconventional diets could put boys with autism and ASD at a higher risk of having thinner, less-dense bones than boys of the same age who do not have autism. Researchers from **Cincinnati Children's Hospital Medical Center** believe that boys with autism and ASD are

### Mark Your Calendars! May 19, 2008

#### Fulfilling the Promise Capitol Hill Briefing "Autism: What Do We Know? What Do We Need?"

**Thomas R. Insel, M.D.**  
Director, National Institute of  
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"Fulfilling the Promise" is a special AAMC initiative highlighting the collaboration between the National Institutes of Health (NIH) and academic medicine. As research engines of the U.S. health system, the nation's medical schools and major teaching hospitals are awarded more than half of all NIH grants to scientists through its extramural research program.

[www.aamc.org/ftp](http://www.aamc.org/ftp)  
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at risk for poor bone development for several reasons, including lack of exercise, reluctance to eat a varied diet, digestive problems, and diets that omit casein, a protein found in dairy products. Casein-free diets are thought by some to lessen the symptoms of autism.

[http://www.nichd.nih.gov/news/releases/thin\\_bones\\_in\\_autism\\_012908.cfm?from=autism](http://www.nichd.nih.gov/news/releases/thin_bones_in_autism_012908.cfm?from=autism)

#### **Genetic alteration associated with autism linked to mothers**

A team of investigators at **Johns Hopkins University School of Medicine** have found that a common genetic alteration appears to be associated with autism only when passed down to sons from their mothers. The alteration, which occurs in a gene called CNTNAP2, is one of the strongest and most common known genetic links to autism susceptibility. The discovery will help guide future studies on understanding autism.

[http://www.hopkinsmedicine.org/press\\_releases/2008/01\\_22\\_08.html](http://www.hopkinsmedicine.org/press_releases/2008/01_22_08.html)

#### **Other recent NIH-funded discoveries from U.S. medical schools and teaching hospitals:**

##### **Potential cause of cell death found**

Three specific molecules all target and inhibit RIP1 kinase, a protein that can precipitate cell death, or necrosis, according to research from **Tufts University School of Medicine**. The findings establish RIP1 kinase as a new target for therapeutic drug development for human diseases involving necrotic tissue injury. Necrosis is particularly relevant in acute events, such as heart attacks or strokes.

<http://www.tufts.edu/med/news/newsitems/release41408.html>

##### **Mouth damage mirrors lung damage in smokers**

A study from **The University of Texas M. D. Anderson Cancer Center** found that cell damage in a smoker's mouth can parallel cell damage in a smoker's lungs. The study suggests that physicians could simply brush the inside of a patient's cheek to gauge cancer-inducing alterations in the lungs, potentially avoiding more invasive procedures.

<http://www.mdanderson.org/departments/newsroom/display.cfm?id=48AA840D-771F-4E1C89677EB7C0422ADD&method=displayFull&pn=00c8a30f-c468-11d4-80fb00508b603a14>

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