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BROWN: Twenty-five percent of children who develop autism were one-time neonatal intensive care unit babies.

IBR research finds earlier autism clues

Promise of more timely intervention in the cases of even very young infants

By **STEPHANIE SLEPIAN**
STATEN ISLAND ADVANCE

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Certain behaviors seen in infants as young as 1 month old may be predictors of autism spectrum disorders, according to new research by scientists at the Institute for Basic Research and Developmental Disabilities, Willowbrook.

IBR Director Dr. W. Ted Brown said the findings — published Monday in the online journal *Pediatrics* and set to appear in next month's print issue — could lead to earlier diagnosis and intervention.

"Some of these clues will help us understand the causes of ASD and help identify children who may need earlier intervention," he said. "The earlier the intervention, the better, is what we always say."

The study tracked 2,196

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neonatal intensive care unit graduates from Richmond University Medical Center, West Brighton, over an 11-year period. Twenty-eight of those children who were later diagnosed with ASD were matched with 112 NICU graduates who did not develop ASD.

At 1 month, children with the ASD diagnosis were more likely to have asymmetrical visual tracking and arm tone deficits. By 4 months, they were more attracted to higher levels of visual stimulation, much like younger infants. Between 7 and 10 months, the children

with ASD showed major declines in mental and motor performance.

Testing detected additional deficits through age 2.

The study's authors said the behaviors are consistent with those associated with ASD in older children, "leading us to speculate that they may be precursors to ASD."

Dr. Brown said 25 percent of children who develop autism were one-time NICU babies. Children who develop ASD are four times more likely to be male and two weeks premature.

The study was led by Dr. Bernard Z. Karmel, head of

IBR's Neurophysiological Department Laboratory, and was conducted by scientists in IBR's Department of Infant Development and Pathology, in collaboration with physicians from the Department of Pediatrics at RUMC.

The hospital and IBR — the research arm of the state Office for People With Developmental Disabilities — have a longstanding relationship to monitor the progress of NICU babies who are seen at 1 month, 3 months and six months after discharge, and then every six months until the age of 3. Testing contin-

ues once a year until they are about 8 years old.

Still, Dr. Brown said more research is needed to determine early predictors of ASD. He is seeking to expand the study to other NICUs in the New York area.

"There's often no tracking until the disability develops at around 3 years or so," he said. "There is a need for some expansion of tracking after babies leave the NICU so we can pick it up and begin early intervention."

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