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To investigate brain growth factors important in cerebral development in children with autism, we measured 8 neuropeptides or neurotrophins in archived neonatal blood, drawn on average one day after birth, from infants with a later diagnosis of autism and from control infants.* We observed selective overexpression of certain of these neuroactive substances in children with later autism or mental retardation, as compared with children with cerebral palsy or unaffected controls. One of the substances present in higher concentration in the blood of infants with later autism was vasoactive intestinal peptide (VIP). Differences from controls were observed in later-autistic infants with and without a history of regression.

VIP, related to secretin, is involved in circadian sleep-wake cycling and in gut function. To assess the plausibility of our observations, we sought information about whether children with autism more often than unaffected children have disorders of sleep or of gastrointestinal function. From the literature and from clinical experience, it is clear that sleep disturbances are relatively frequent in children with autism. For gastrointestinal symptoms, however, the evidence is far less clear. We found no full publication comparing the frequency of symptoms of bowel disorder in a representative population of children with autism with children of similar age who were not autistic. An abstract [Melmed et al, *J Paed Gastroenterol Nutrit* 2000; suppl 2:A116] indicates a 46% rate of GI symptoms in children with autism, considerably higher than in related or unrelated controls; the source of these children (i.e., whether they were a representative sample of children with autism) was not stated. Two other as-yet-unpublished estimates from population-based studies of children with autism observed GI symptoms in 16 and 17%, but are without controls.

***NEUROPEPTIDES AND NEUROTROPHINS IN NEONATAL BLOOD OF CHILDREN WITH AUTISM OR MENTAL RETARDATION.** Karin B Nelson MD, Judith K Grether PhD, Lisa A Croen PhD, James M Dambrosia PhD, Benjamin F Dickens PhD, Laura L Jelliffe PhD, Robin L Hansen MD, Terry M Phillips PhD Dsc. Contributors and support: NINDS/NIH; MOD/CA Birth Defects Monitoring Program; M.I.N.D. Institute/UC Davis. *Annals of Neurology*, April, 2001

Conclusions:

1. Infants with a later diagnosis of autism differed from control infants in the earliest days of life with respect to blood concentrations of certain brain growth factors. These differences were observed whether or not there was a history of regression and before exposure to MMR immunization.
2. No clear evidence was identified as to whether gastrointestinal disorders are more frequent in children with autism, with or without regression, than in children without autism.