

# Autism Research Review

I N T E R N A T I O N A L

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Reviewing biomedical and educational research in the field of autism and related disorders

## Secret CDC study: thimerosal an autism risk

An unreleased confidential report by Centers for Disease Control (CDC) scientists reveals that exposure to significant amounts of mercury during the first three months of life significantly increases a child's risk of developing autism, according to an attorney with the law firm of Waters & Kraus. The firm is part of a coalition of law firms, representing families in at least 25 states, that has filed lawsuits in an attempt to force drug companies to investigate the possible link between mercury-containing vaccines and developmental disorders.

Attorney Andy Waters says that the unreleased CDC report, obtained by the SAFEMINDS advocacy group, found a 2.48 times increased risk of autism in children exposed to more than 62.5 micrograms of mercury before they were three months of age. In a press release, Waters & Kraus notes that "In the United States, courts of law have generally held that a relative increased risk of 2.0 or higher is sufficient to substantiate that a given exposure causes disease." Waters says that in many of the cases his firm has evaluated, autistic children have received more than 62.5 micrograms of mercury through pediatric vaccines.

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A report made public by the CDC in the fall claimed that thimerosal, the mercury-containing preservative used in many vaccines, could not be linked to autism, while

calling on physicians to avoid thimerosal-containing vaccines when possible. However, according to Waters & Kraus, the confidential CDC report states: "As for the exposure evaluated at 3 months of age, we found increasing risks of 'neurological developmental disorders' with increasing cumulative exposure to thimerosal... within the group of 'developmental disorders'... for the sub-group called 'specific delays,' and within this sub-group for the specific disorder 'developmental speech disorder,' and for 'autism,' 'stuttering' and 'attention deficit disorder.'"

Waters says the report's contents, and the fact that it was kept secret, are "shocking, but unfortunately not surprising, given the political influence of pharmaceutical companies and the tremendous liability they face if they are forced to compensate thousands of families for the costs of care that these children require."

Press release, Waters & Kraus, October 2001.  
Address: Waters & Kraus, 3219 McKinney Avenue, Suite 3000, Dallas, TX 75204.

## Wakefield forced out for linking autism, MMR

Andrew Wakefield, the physician who first linked measles-mumps-rubella (MMR) vaccination to autism and bowel abnormalities (see ARRI 14/4, 12/1), has been forced out of his position at the Royal Free Hospital in London.

Parent Rosemary Kessick, whose autistic son was one of Wakefield's first subjects, expressed the outrage of parents, saying, "What people fail to realize is that Andrew Wakefield did not go looking for us. We parents went looking for him because we were convinced, and we were right, that our children had bowel problems and these were somehow related to their autism. He has stood by us and as a result he has been treated very

shabbily." Barbara Loe Fisher, President of the National Vaccine Information Center, agrees, saying that Wakefield "chose to do what was right instead of what was safe."

Wakefield himself says that while he regrets leaving his position, he does not regret his decision to come forward with his findings in the face of opposition from the medical establishment. "Losing a London hospital teaching job doesn't do much for my CV," he says, "but there are bigger issues at stake. What matters now most of all is what happens to these children."

Ironically, shortly after Wakefield's departure from the Royal Free Hospital staff,

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## Secretin's actions in amygdala, cerebellum may explain benefits

New research pointing to defects of the amygdala as a cause of autistic social problems may also explain why some autistic children's symptoms improve markedly when they receive injections of the gastrointestinal hormone secretin.

The amygdala, a complex of cells located in the brain's temporal lobes, plays a critical role in assigning emotional value to sensory cues (for instance, the sight of a sad or happy face) and forming an emotional response. It appears to be involved in joint attention—for instance, looking at a location to which another person is pointing—and "theory of mind," or the ability to understand that another person has thoughts and feelings.

Among the evidence linking autism to amygdala damage or dysfunction:

- Post-mortem studies of the amygdala reveal decreased neuron size, a significant loss of Purkinje cells, decreased cell complexity, and increased cell density in autistic subjects. Also, amygdala volume is smaller in autistic individuals than in non-disabled controls.

- High-functioning autistic individuals show neuropsychological profiles characteristic of individuals with amygdala damage. Particular impairment is seen in their ability to perceive eye-gaze direction, to recognize fearful facial expressions, and to remember faces.

- Rhesus monkeys with amygdala lesions exhibit some symptoms resembling autism.

- Previously non-disabled individuals who develop amygdala lesions show social impairments that have been compared to "acquired autism."

- Unlike non-disabled individuals, autistic individuals do not activate the amygdala when asked to interpret the mental states of others by viewing their eyes.

While researchers do not believe that amygdala defects alone can explain autism, they say evidence indicates that such defects may be an important component of the disorder.

In pre-clinical tests of synthetic human secretin, researchers discovered that admin-

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