

# Expression of a Neural Cell Adhesion Molecule Serum Fragment Is Depressed in Autism

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*The level of a neural cell adhesion molecule (NCAM) serum fragment in autism was determined by using an antiserum prepared with immunoaffinity purified mouse NCAM. Autistic patients (N=16) had statistically significantly decreased serum NCAM levels compared with age-matched controls ( $p < 0.0005$ ). This observation could not be attributed to a medication-induced effect. Depressed serum NCAM levels in autism are distinct from schizophrenia, in which serum NCAM levels are elevated.<sup>1</sup>*

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Autism is a syndrome characterized by social and communicative deficits of early onset, accompanied by abnormal behaviors. There are many different biomedical causes underlying autistic symptomatology, including genetic, metabolic, and infectious ones, as reviewed by Coleman and Gillberg 1985.<sup>2</sup> However, in the majority of autistic patients no clear etiology is ascertainable.

In the past, autism was considered to be a form of schizophrenia. Indeed, the term *autism* itself was coined by Bleuler<sup>3</sup> in 1911 to designate a category of thought disorder present in schizophrenia. In 1943, Kanner<sup>4</sup> described infantile autism as a distinct diagnostic entity, but still closely related to schizophrenia. Subsequently, diagnostic criteria for infantile autism have been developed that clearly distinguish it from schizophrenia and other psychoses.<sup>5-8</sup> However, accurate distinctions in disturbed young children are frequently difficult to make.

It has been suggested that schizophrenia comprises two potentially overlapping syndromes: type I and type II.<sup>9</sup> Type I schizophrenia is characterized by positive symptoms, which include delusions, hallucinations, and thought disorders. Type II schizophrenia is associated with negative features, such as loss or absence of affect, poverty of speech, and loss of volition; it is more closely associated with intellectual impairment and structural brain changes.<sup>10,11</sup>

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