

## RESHAPING NEUROLOGY: THE EMERGING ROLE OF AUTOANTIBODIES

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The increasing significance of autoantibodies in a number of neurological diseases has been recognized during the last decades. Pathogenetic role of antibodies in old diseases have been unexpectedly found, which has entirely changed previous concepts of diagnosis and treatment; new autoantibodies have been discovered in antibody-mediated disorders; and novel disease entities have been established based on association of autoantibodies and previously unrecognized syndromes.

The discovery of importance of autoantibodies in neurological diseases, which have been traditionally regarded as neurodegenerative disorders changed not only diagnostic thinking and treatment strategies, but also resulted in developing new diagnostic assay systems and created novel research interest. Highly sensitive and specific cell-based assays using single or multiple transfectants (biochip) became commercially available and revolutionized diagnosis in neuroimmunology. In vitro cultures and in vivo models using systemic, intrathecal or intracerebral transfer of isolated IgG along with human complement proved the pathogenic role of such autoantibodies. Such experiments and pathological studies also highlighted basic differences among antibody-mediated neuroimmunological diseases: complement activation or downregulation of antigens in the absence of inflammation result in severe residual symptoms or reversible, well-responding diseases if treated early, respectively.