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<b>MENSHIKOV, I.</b>	<b><u>EVIDENCE IN FAVOR OF A ROLE OF IDIOTYPIC NETWORK IN AUTOIMMUNE HEMOLYTIC ANEMIA INDUCTION: THEORETICAL AND EXPERIMENTAL STUDIES</u></b>
<b>BEDULEVA, L.</b>	<b><u>IDIOTYPIC DYSREGULATION AS A CAUSE OF COLLAGEN-INDUCED ARTHRITIS. A NEW VIEWPOINT ON THE MECHANISM OF IMMUNOLOGICAL TOLERANCE LOSS</u></b>

**EVIDENCE IN FAVOR OF A ROLE OF IDIOTYPIC NETWORK IN AUTOIMMUNE HEMOLYTIC ANEMIA INDUCTION: THEORETICAL AND EXPERIMENTAL STUDIES****I. Menshikov, L.V. Beduleva***Udmurt State Universit, Department of Immunology, Izhevsk, Russian Federation*

Formation dynamics of antibodies to rat erythrocytes (REs) and auto-antibodies to mouse erythrocytes were studied in an experimental model of autoimmune hemolytic anemia (AHA) in mice. The experimental conditions of AHA were simulated in a mathematical model of an immune network. It was found that maximal production of auto-antibodies and antibodies to REs do not synchronize. Antiserum, obtained at the peak of auto-antibodies formation, competed with REs for bounding with antibodies. This represents proof that auto-antibodies to erythrocytes and antibodies to REs are an idiotype-anti-idiotypic pair. In the autoimmune reaction, the autoreactive clone, being anti-idiotypic, responded earlier than the clone reacting to the injected antigen. Comparison of autoimmune reaction kinetics in the mathematical model of an immune network with experimental dynamics of AHA shows them to be similar. So activation of the autoreactive clone to erythrocytes during experimental AHA in mice is mediated by idiotype-anti-idiotypic interactions with the clone reacting to REs.