

Biochemistry (Moscow) Supplement Series B: Biomedical Chemistry 2015 vol.9 N2, pages 151-158

---

## Biochemical and immunological markers of autoimmune thyroiditis

Biktagirova E., Sattarova L., Vagapova G., Skibo Y., Chuhlovina E., Kravtsova O., Abramova Z.  
*Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia*

---

### Abstract

© 2015, Pleiades Publishing, Ltd. Correlations between biochemical and immunological markers of programmed cell death (apoptosis), and the functional state of the thyroid gland (hyperthyroidism, euthyroidism, hypothyroidism) have been investigated in autoimmune thyroiditis (AT) (also known as chronic autoimmune thyroiditis). Annexin V, TRAIL and TNF $\alpha$ , as well as DNA-hydrolyzing antibodies were used as the main markers. Increased levels of TRAIL were found in the serum of AT patients (hyperthyroidism > hypothyroidism > euthyroidism) compared with healthy individuals. The highest frequency of antibodies to denatured DNA (Abs-dDNA) had the highest frequency in AT patients (97%) compared with healthy controls. Among these patients, 75% had hyperthyroidism, 85% had hypothyroidism, and 84.7% had euthyroidism. Abs hydrolyzing activity demonstrated correlation dependence with symptoms of the thyroid dysfunction.

<http://dx.doi.org/10.1134/S1990750815020031>

---

### Keywords

abzymes, antibodies to DNA, antibodies to thyroid tissue components, apoptosis, autoantibodies, autoimmune thyroiditis