

**Appearance of Iron-Nitrosyl Complexes in Murine L5178Y Lymphoma as a Function of the Form of Growth and the Type of Host.**

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Murine L5178Y lymphoma growing in the form of intraperitoneal ascites, both in natural, syngeneic DBA/2, and in allogeneic Swiss hosts, is much more aggressive than solid tumors. The main aim of the present paper was to find out whether this difference can be correlated with the level and quality of paramagnetic complexes of iron II and nitric oxide (NO), which can be easily detected by EPR at X band and 77 K in both types of the materials. We found that the main type of Fe-NO complexes detectable in ascites is iron-heme nitrosyl complex of NO and hemoglobin. The signal of non-heme, dinitrosyl iron complexes (DNIC) can be observed only in white ascites revealing low substitution of erythrocytes (less than  $1 \times 10^8$  cells/ml). In Swiss hosts this signal appeared spontaneously in ca. 50% of white ascites, whereas in DBA/2 mice only the huge excess of exogenous NO (40 mM) induced this signal. DNIC signals are observed almost in every solid tumors growing in Swiss host, whereas in DBA/2 hosts ca. 40% of solid tumors are devoid of this signal, and in general, the intensities of all types of Fe-NO complex signals are lower in DBA/2 than in Swiss hosts. As distribution of blood hemoglobin in ascitic fluid is homogenous, while vascularization of solid tumor tissue is variable, we conclude that not only the host-dependent level of NO, but also the amount and distribution of blood in the L5178Y lymphoma are responsible for the level and quality of Fe-NO complexes detectable by EPR, depending strongly on the form of their growth as ascites or solid tumors.