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## Mitochondrial complex as an essential driver of tumor growth and metastasis potentially common to all breast cancer types

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**Background:** Despite advances in clinical therapy, metastasis is still the leading cause of death in breast cancer patients. Tumor cells also generate high levels of reduced forms of NAD<sup>+</sup>, NADH and NADPH as important cofactors and redox components.

**Aim:** Aim of our present study is the markers are potentially common to all breast cancer types metabolism as an essential driver of tumor growth and metastasis.

**Materials & Methods:** We examined 210 breast cancer patients; among them 147 patients were with metastatic breast cancer (MBC), 63 patients were with non-metastatic breast cancer (NMBC). Serum proteins phosphorescence and the oxidation protein modification were studied by the intensity of serum phosphorescence in 159 patients with breast cancer. Diagnosis was confirmed by clinical and histo-morphological methods; Native fluorescence emission of tissue tryptophan (340 nm), collagen (380 nm), NAD<sup>+</sup>/NADH (460 nm) and flavins (525 nm).

**Results & Discussion:** Total protein was increased is 14.8% and 9.3% in patients NMBC and MBC. Research has found disorders of protein and fat metabolism in patients with breast cancer at which it should be considered that catabolic processes predominate over anabolic. Serum phosphorescence intensity in patients at activation with monochromatic light of 290 nm wavelength raised by 1.2 and 1.93 times accordingly in NMBC and metastatic breast cancer in comparison with a group of conditionally healthy people. At activation with wavelength of 400 nm serum phosphorescence in patients increased by 3.5 times, at 380 nm by 3.1 times in comparison with a group of conditionally healthy people.

### Biography

Gramatik Svitlana has completed her PhD from Grigoriev Institute from the National Academy of Sciences of Ukraine. She has a Master's degree in Infectious Diseases. She is the Assistant Director of Grigoriev Institute for Medical Radiology Hospital, Kharkov, Ukraine also the Head Department of Laboratory Diagnostic and Heads of research Projects summary. She has published more than 30 papers in reputed journals and serving as an Editorial Board Member of repute. She has published more than 10 training manuals for students and bachelors.

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