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INVITED BY

[ERRMECE](#) LABORATORY

EXTRACELLULAR MATRIX-CELL INTERACTIONS
LABORATORY

Currently, she is Assistant of Professor. Her educational activities are related to the teaching of subjects "Cytology and Histology", "Physiology of blood", "Immunology". Her scientific activities are implemented in the field of cells physiology.

EDUCATION

- Ph. D. in Biology.

MAIN SCIENTIFIC INTERESTS

- Using of the methods light, atomic force and confocal laser microscopy in the evaluation of morphological and functional properties of the cells.**

Major publication made in direction:

- 1) Skorkina M.Yu., Chernyavskiy S.D., Fedorova M.Z., Zabinyakov N.A., Sladkova E.A. Evaluation of morphometric parameters of native blood cells by atomic force microscopy // Bulletin of Experimental Biology and Medicine. 2010. V. 150(2). P. 238-240.
- 2) Patent for the invention of the Russian Federation № 2398234 "Method study of native cells," application number 2009125268, priority date 01.07.2009. Authors: Fedorova M.Z., Skorkina M.Yu., Chernyavskaya S.D., Sladkova E.A., Zabinyakov N.A.
- 3) Patent for useful model of the Russian Federation № 98248 "Damp chamber for studying the native blood cells", the application number 2010105541, date of priority 16.02.2010. Authors: Skorkina M.Yu., Chernyavskaya S.D., Fedorova M.Z.

- Development of methods for evaluating the functional state of cell populations, for example the experimental realization of the tumor cell population.**

Major publication made in direction:

- 1) Skorkina M.Yu., Fedorova M.Z., Muravev A.V., Sladkova E.A. Using of nanomechanical sensor for study of morphofunction properties lymphocytes of healthy donors and patients with chronic lymphoblast leucosis // Cell Technologies in Biology and Medicine. 2012. No. 3. P. 172-175.
- 2) Skorkina M.Yu., Fedorova M.Z., Chernyavskiy S.D., Zabinyakov N.A., Sladkova E.A. Comparative estimation of morphofunction characteristics alive and fixed erythrocytes // Cytology. 2011. V.53 (1). P. 17-21.
- 3) Skorkina M. J., Fedorova M. Z., Sladkova. E. A. Nanotechnological approach to evaluation of mechanical properties of cell surfaces during stimulation and blockade of adrenoceptors // Cell Technologies in Biology and Medicine. 2010. No. 3. P. 153-155.

- Study the mechanisms of the interaction of nanoparticles with cellular systems.**

Major publication made in direction:

- 1) Skorkina M.Yu., Fedorova M.Z., Chernyavskiy S.D., Sladkova E.A., Derkachev R.V., Zabinyakov N.A., The effect of the iron nanoparticles on the blood oxygen capacity // Yaroslavl pedagogical bulletin. 2010. No. 2. P. 101-106.

- Investigate the peculiarities of the blood system in lower vertebrates (frogs) in comparison with higher vertebrates.**

Major publication made in direction:

- 1) Skorkina M.Yu., Derkachev R.V. Seasonal activity of frog erythrocytes by data of electrophoretic mobility // Journal of evolutionary biochemistry and physiology. 2010. V. 46 (2). P.134-137.
- 2) Skorkina M.Yu. Osmoregulatory reactions of frog erythrocytes under conditions of activation and blockade of Ca²⁺-channels // Journal of evolutionary biochemistry and physiology. 2012. V. 48 (2). P. 126-129.