

Contents

Vol. 49, No. 4, 2004

Simultaneous English language translation of the journal is available from MAIK "Nauka/Interperiodica" (Russia).
Biophysics ISSN 0006-3509.

Molecular Biophysics

Dinitrosyl Iron Complexes are Endogenous Signaling Agents in Animal and Human Cells and Tissues (A Hypothesis) <i>A. F. Vanin</i>	539
Stochastic Model for NMR Analysis of Heteroassociation of Biologically Active Aromatic Molecules <i>A. N. Veselkov, M. P. Evstigneev, O. V. Rogova, A. S. Chubarov, and D. B. Davies</i>	545
Mobility of the Side Chains of His57 and Other Amino Acid Residues in the Active Site of Chymotrypsin <i>P. V. Kostetsky</i>	552
Spin Diffusion in Globular Proteins: α -Lactalbumin <i>V. P. Kutyshenko, D. A. Prokhorov, and V. S. Khristoforov</i>	557
Natural Polymers according to NMR Data: Cross Relaxation in Collagen Macromolecules from Two Samples of Connective Tissue <i>V. V. Rodin, L. Foucat, and J.-P. Renou</i>	563
Thermal Denaturation of Oligomeric Proteins: Structural and Functional Alterations and the Succession of Stages <i>V. G. Artyukhov, O. V. Basharina, G. A. Vashanov, M. A. Nakvasina, and O. V. Putintseva</i>	572
Interaction of Two Charged Rods in an Electrolyte Solution <i>S. V. Semenov and Yu. M. Yevdokimov</i>	582
Mixed Monolayers Prepared from Diynoic Acids and Amphiphilically Modified Nucleobases: I. Phase States at the Air-Water Interface and in Langmuir-Blodgett Films <i>S. N. Staritsyn, V. V. Mamashin, V. V. Zakharychev, I. V. Yaminsky, E. V. Dubrovin, A. M. Lomonosov, V. A. Tverdislov, and S. A. Yakovenko</i>	586
Photovoltaic Properties of Chlorophyll a and β -Carotene in Langmuir Films <i>I. A. Nagovitsyn, G. K. Chudinova, V. V. Savranskii, and G. G. Komissarov</i>	596

Cell Biophysics

Disagreement of Theoretical and Experimental Data on Energy Migration from B800 to B850 in the LH2 Antenna Complexes of Purple Bacteria <i>A. Yu. Borisov and A. A. Nikulova</i>	602
Interaction of Ferritin and Myoglobin as Lipid Peroxidation Inducers: Role of Reactive Oxygen and Nitrogen Species <i>I. V. Zabbarova, K. B. Shumaev, A. F. Vanin, A. A. Gubkin, N. E. Petrova, and E. K. Ruuge</i>	607
Structural Changes in Lipid Membranes and Collagen Exposed to UV Light and the Protective Effect of Plant Extracts <i>V. O. Yurin, Yu. A. Kim, and E. N. Muzafarov</i>	614
Rifampicin Inclusion into Multilamellar and Unilamellar Vesicles (Liposomes) of Different Phospholipid Composition <i>A. S. Minina, G. M. Sorokoumova, A. A. Selishcheva, N. M. Malikova, T. Yu. Kalashnikova, and V. I. Shvets</i>	621

Nonspecific Effect of Morphine on Erythrocyte Membranes <i>P. E. Kuznetsov, V. A. Zlobin, G. V. Nazarov, N. B. Kuznetsova, S. M. Rogacheva, and A. A. Gracheva</i>	627
Change in the Lipid Asymmetry and the Glutathione Conjugate Transport in Human Erythrocytes under the Action of Calcium Ions <i>D. G. Kostin, N. M. Kozlova, and E. I. Slobozhanina</i>	631
Effect of Cadmium on the Excitation Energy Absorption and Transfer in the Cyanobacterium <i>Nostoc muscorum</i> <i>O. D. Bekasova and A. A. Brekhovskikh</i>	638
High-yield Production of <i>Chlamydomonas reinhardtii</i> Transformants by Electroporation <i>V. G. Ladygin</i>	646
Computer-aided Assessment of Protozoan Motility Parameters from Video Data <i>V. N. Bingi, A. A. Zarutskii, S. V. Kapranov, Yu. M. Kovalev, V. A. Milyaev, and N. A. Tereshchenko</i>	650
Cryopreserved Snail Neurons Are Capable of Morphological Differentiation <i>In Vitro</i> <i>N. A. Ivlicheva, E. V. Dmitrieva, M. A. Kostenko[†], and E. N. Gakhova</i>	654

Complex Systems Biophysics

On the Significance of Correlation between Fish Electric Activity and the Electrotelluric Field <i>A. V. Deshcherevskii and A. Ya. Sidorin</i>	658
Horizontal Sound Localization Abilities of the Northern Fur Seal in Air and Water <i>E. S. Babushina and M. A. Polyakov</i>	666
EHF Dielectrometry in Assessing the Structural Organization of Salt Solutions and the Liquids of Healthy and Scar Tissue <i>A. N. Kuznetsov, I. I. Turkovskii, B. A. Paramonov, V. N. Kharin, N. V. Kuznetsova, and I. A. Volkova</i>	670
Biophysical Concept of a Human Self-Diagnostic System <i>D. S. Chernavskii, V. P. Karp, and I. V. Rodshtat</i>	674
Wavelet Analysis in Studying Heliobiotropic Relationships <i>Yu. Ya. Varakin, V. G. Ionova, E. A. Sazanova, and N. P. Sergeenko</i>	684
Rhythmic Bioelectric Activity of the Cerebral Cortex Analyzed with Allowance for the Dependence of the Postsynaptic Potential on the Membrane Potential <i>B. V. Bakharev and M. N. Zhadin</i>	688
A Model Neuron Network Using Eye Micromovements to Discern Image Contrasts <i>D. G. Lebedev and A. K. Lovetskii</i>	697

Letters to the Editor

The Expected Length of the Human Genome Must Be about Halved <i>A. N. Luchnik</i>	703
--	-----