

# Table of Contents “Problems of Cryobiology” Volume 20 (2010)

## Contents of Issue 1/2010

Journal Problems of Cryobiology has 25 Year Anniversary.....	3
--	---

### **Theoretical and Experimental Cryobiology**

<i>Rudenko S.V., Said M.K., Volovelskaya Ye.L.</i> Influence of Some $\beta$ -Blockers on Erythrocyte Hypotonic Hemolysis.....	7
<i>Gulevskiy A.K., Relina L.I.</i> Ice-Nucleating Proteins of Bacterial Origin. Report I. General Characterization and Classification....	18
<i>Shilo A.V., Ventskovska O.A., Babiychuk G.A.</i> Changes of Sleep Structure in Rats after Artificial Hypometabolic State.....	25
<i>Linnik T.P., Dyubko T.S., Martynyuk I.N., Tereschenko A.V.</i> Interactions of Cryoprotectants with Liposomes from Total Lipids of the Fowl Spermatozoa .....	34
<i>Ramazanov V.V., Bondarenko V.A.</i> Osmotic Properties of Erythrocytes Frozen in Media Containing Non-Penetrating and Penetrating Cryoprotectants.....	47
<i>Sakun O.V.</i> Cryoinjury Mechanisms in the Yeast Fungi <i>Saccharomyces cerevisiae</i> During Freezing in Dimethyl Sulfoxide Aqueous Solution at a Constant Rate in Cylindrical Containers .....	59
<i>Goltsev A.N., Volina V.V., Ostankov M.V., Goltsev K.A., Sokol L.V., Brovko Ye.V., Chernyshenko L.G., Kozhina O.Yu.</i> Effect of Cryopreservation on Functional Properties of Human Cord Blood Leukoconcentrate Nucleated Cells.....	66
<i>Gerodes A.G., Gorobchenko O.A., Nardid O.A., Nikolov O.T., Rozanova E.D.</i> Biochemical and Dielectric Characteristics of Follicular Fluid from Human Ovary after Freezing-Thawing.....	73
<i>Chernobay N.A., Kovalenko I.F., Bozhok G.A., Kovalenko S.Ye., Pakhomov A.V., Rozanov L.F.</i> Osmotic Behavior of Testes Interstitium Cells in Hypertonic Solutions of NaCl and PEO-400.....	83
<i>Gordienko Ye.A., Todrin A.F., Ossetsky A.I., Popivnenko L.I.</i> Determination of Shear Modulus of Erythrocyte Membranes in Suspension.....	88

### **Cryomedicine, Clinical and Experimental Transplantology**

<i>Onasenko Ye.S., Brovko Ye.V., Volina V.V., Ponomareva V.L.</i> Infection of Animals With the Influenza Virus After a Preliminary Administration of the Preparation “Cryocell-Haemocord”. Report I. Investigation of Functional Activity of Murine Immunocompetent Organs.....	99
--	----

Instructions to the Authors .....	106
-----------------------------------	-----

## Contents of Issue 2/2010

### **Theoretical and Experimental Cryobiology**

<i>Linnik T.P., Martynyuk I.N.</i> Approaches to Creation of Cryoprotective Media for Cryopreservation of Avian Sperm .....	109
<i>Gulevsky A.K., Relina L.I.</i> Ice-Nucleating Proteins of Bacterial Origin. Report II. Structure of Proteins and Their Genes.....	123
<i>Goltsev A.N., Matsevitaya I.Yu., Lutsenko Ye. D., Ostankov M.V., Dubrava T.G., Goltsev K.A., Yampolskaya Ye. Ye.</i> On the Modification of Immunoreactivity of Myelotransplant after Cryopreservation.....	135
<i>Trufanova N.A., Petrenko Yu.A., Petrenko A.Yu.</i> Effect of Cryopreservation on Viability, Immunophenotype and Differentiation Properties of Mesenchymal Stromal Cells of Early Organogenetic Stage.....	145
<i>Chernobay N.A., Pakhomov A.V., Kovalenko I.F., Bozhok G.A., Kovalenko S.Ye., Rozanov L.F.</i> Temperature Dependence of Testes Interstitium Cell Membrane Permeability for Cryoprotectant Molecules.....	153

### **Cryomedicine, Clinical and Experimental Transplantology**

<i>Volina V.V., Brovko Ye.V., Onasenko Ye.S., Ponomareva V.L.</i> Infection of Animals With the Influenza Virus After a Preliminary Administration of the Preparation “Cryocell-Haemocord”. Report II. Investigation of Morpho-Functional State of Murine Immunocompetent Organs .....	159
--	-----

Abstracts of the Conference of Young Scientists "Cold in Biology and Medicine 2010" .....	170
Instructions to the Authors .....	221

## Contents of Issue 3/2010

### **Theoretical and Experimental Cryobiology**

Gulevsky A.K., Relina L.I. Ice-Nucleating Proteins of Bacterial Origin. Report III. Activity Regulation and Significance in Nature and Biotechnology.....	225
Pravdyuk A.I., Petrenko Yu.A., Kholodnyy V.S., Grischuk V.P., Petrenko A.Yu. Cryosensitivity of Mesenchymal Stromal Cells Encapsulated in Alginate Microbeads.....	235
Gorbunov L.V. Increase in Reproducibility of Research Results of Bioobject Cryopreservation.....	246
Sosimchyk I.A., Cherkashina D.V., Somov A.Yu., Petrenko A.Yu. Respiratory Activity and Pro-Oxidant/Antioxidant Balance of Rat Liver after Hypothermic Storage in the Presence of Bencyclane Fumarate.....	255
Todrin A.F., Popivnenko L.I., Kovalenko S.Ye. Thermophysical Properties of Cryoprotectants. II. Dynamic Viscosity of Some Cryoprotectants, Their Solutions and Mixtures.....	266
Yurchuk T.A., Chernobay N.A., Bozhok G.A., Kovalenko I.F., Bondarenko T.P., Rozanova L.F. Effect of Incubation in NaCl Hypertonic Solutions on Changes of Adrenocorticoctyes' Volume and Arrangement of Lipid Droplets.....	282
Rozanova S.L., Naumenko E.I., Rozanova E.D., Nardid O.A. Change of Antioxidative Properties of Human Placental Extracts after Freezing.....	288
Stribul T.F., Lysak Yu.S., Kompaniets A.M. Change in Fluorescence Intensity of Grape Meristem Cells Under Effect of Some Cryoprotective Agents.....	297

### **Cryopreservation of Biological Systems**

Goltsev A.N., Volina V.V., Sokol L.V., Ostankov M.V., Goltsev K.A., Chernousova S.S., Kozhina O.Yu. Effect of Hypothermic Storage and Cryopreservation on Human Cord Blood Leucoconcentrate Cells.....	303
Goncharuk E.I., Volkova N.A., Grischenko V.I. Cryopreservation Effect on Proliferation Characteristics and Differentiation Potential of Cultured Chorion Cells.....	309

### **Cryomedicine, Clinical and Experimental Transplantology**

Goltsev A.N., Volina V.V., Onasenko E.S., Goltsev K.A., Kozhina O.Yu., Ponomareva V.L. Infection of Animals with the Influenza Virus After Preliminary Administration of "Cryocell-Haemocord" Preparation. Report III. Study of Morphofunctional State of Mice Lungs.....	318
Grischenko N.G., Grischenko V.I., Smolyaninova Ye.I., Chernyshenko L.G., Volkova N.A. Effect of Placental Cryoextract on Superovulation Induction in Mice with Chronic Ovary Inflammation.....	327
Lebedinets D.V., Ovsyannikov S.Ye., Lebedinets V.V., Ostankov M.V., Goltsev A.N. Therapy with Fetal Neuronal Cells in Acute Period of Experimental Ischemic Stroke (Antioxidative Effect).....	338

Instructions to the Authors .....	348
-----------------------------------	-----

## Contents of Issue 4/2010

Valentin Grischenko. <i>In Memoriam</i> .....	351
---	-----

### **Theoretical and Experimental Cryobiology**

Gulevsky A.K., Relina L.I. Nucleating Agents of Vertebrates and Invertebrates.....	354
Ventskovska O.A., Shylo O.V., Babiychuk G.O. Thermoregulation, Sleep and Temperature Influences.....	363

Dudetskaya G.V., Bozhok G.A., Bondarenko T.P. Effect of Cooling Rate on Integrity of Zone-Differentiated Adrenal Cell Populations of Rats .....	379
Pisarenko N.A., Shpakova N.M. Effect of Amphiphiles on Hypertonic Hemolysis of Erythrocytes, Modified with Temperature of 49°C .....	388
Gorbunov L.V. Providing of Condition to Compare Animal Sperm Cryopreservation Results .....	396
Kavok N.S., Borovoy I.A., Malyukina M.Yu. Effect of Different DMSO Concentrations on Dynamics of Hormone-Stimulated Changes in Transmembrane Potentials of Isolated Rat Hepatocytes During Assessment with Fluorescent Probes .....	407
Todrin A.F., Popivnenko L.I. Thermophysical Properties of Cryoprotective Agents. III. Density, Kinematic Viscosity and Surface Tension of Some Cryoprotective Agents, Their Solutions and Mixtures .....	416

### **Cryopreservation of Biological Systems**

Petrenko A.Yu., Skorobogatova N.G., Volkova N.A., Petrenko Yu.A. Characterization of Immunophenotype and Differentiation Potential of Human Bone Marrow Mesenchymal Stromal Cells after Cryopreservation .....	436
Bogdanchikova O.A., Kireev V.A., Khod'ko A.T., Kompaniets A.M. Platelet Cryopreservation. 2. Efficiency of Cryopreservatives Based on Cryoprotectant Combinations Under Different Freezing Regimens .....	443

Key Word Index. Volume 20.....	455
--------------------------------	-----

Table of Contents. Volume 20.....	461
-----------------------------------	-----

Instructions to the Authors .....	464
-----------------------------------	-----