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WORK EXPERIENCE:

2006 - pres. Head of the Genetics Department, Southern Federal University
2006 - 2014 Director, Research Institute for Biology; Southern Federal University
2000 – pres. Professor, Genetics Department, Southern Federal University
1992-2000 Teacher, Assoc. Professor, Genetics Department, Southern Federal University
1985-1992 Head of the Genetics of Extreme State Laboratory, Southern Federal University
1977-1985 Laboratory assistant, Genetics Department, Southern Federal University

EDUCATION :

2000 Postdoctoral course, Institute of Medical-Biological Problems of Russian Academy of Sciences (Moscow) – Doctor of Science in Biology Degree
1986 Postgraduate course, Moscow State University, Candidate's Degree in Biology (Russian equivalent of PhD)
1977 Rostov State University, Biology Faculty, Diploma of Higher Education

PROFESSIONAL DEVELOPMENT COURSES:

2012 International Visitor Leadership Program «Development of University-Industry Partnerships for the Promotion of Innovation» United States Department of State Bureau of Educational and Cultural Affairs, USA
2010 Epigenetics, pregnancy and disease University of Saarland, Germany
2009 Advanced training «Genomics and disease» University of Cambridge, UK
2007 Advanced training «Management of modern University, University of Twente, Holland
2006 Advanced training «Open the door to Silicon Valley», Stanford University, CA, USA.
2004 Advanced training «Plant bioassay on the genotoxicity of contaminated water, air and soil» Western Illinois University, Makomb, USA

RESEARCH SUPORT

«Biochemical and molecular genetic studies of obesity and increased morbidity in adolescents, and reproductive health disorders in Rostov Region», the State task of the Ministry of Science and Higher Education of the Russian Federation, state contract № 0852-2020-0028, 2020-2022. (Principal Investigator).
«Investigation of the functional role of genetic polymorphisms and miRNAs in the human and animal genome», the State task of the Ministry of Education and Science of the Russian Federation, state contract № 6.6762.2017/БЧ, 2017-2019. (Principal Investigator).
«The study of the variability of mitochondrial DNA based on the analysis of the mitochondrial genome in atherosclerosis and associated diseases and conditions», Russian Science Foundation, state contract № 15-15-10022, 2015-2017. (Principal Investigator).
«Search for new targets for predictive diagnosis of diseases of the reproductive system», the State task of the Ministry of Education and Science of the Russian Federation, state contract № 6.703.2014/K, 2014-2016. (Principal Investigator).
«Development of technology for monitoring of the human reproductive function and embryo development using new genome and postgenome markers», Federal grant program «Studies and designs in the priority areas of Russian scientific-technological complex development in 2007-2012», state contract № 02.740.11.0501. (Principal Investigator).

«Creation of bioinformational technology for search of the interconnected scenario of the organization noncoding DNA and coding protein DNA in animal and human genomes», 2010-2012, within the bounds of the Federal target grant program «Studies and designs in the priority areas of Russian scientific-technological complex development in 2007-2012», state contract № 14.740.11.0006. (Principal Investigator).

«Creation and testing of new FIAV method for fast identification of the allelic genes variants», 2009-2010, within the bounds of the Federal target grant program «Studies and designs in the priority areas of Russian scientific-technological complex development in 2007-2012», state contract № 02.740.11.5015 (Principal Investigator).

«Development of the system based on molecular-genetic and biochemical markers for the monitoring of pupils, students and teachers health in Rostov region», Program of the Russian Ministry of education «Development of the higher school scientific potential 2009-2010» (Principal Investigator).

"Reproductive health of men at puberty," The grant of the Government of the Rostov region (Principal Investigator).

RESEARCH AREAS: Biomedicine, Genomics, Bioinformatics, Non-coding genome

PUBLICATIONS: More than 300 publications, one course book “Basics of Human Genetics” for undergraduate and graduate students approved by the Russian Ministry of Education (1997)

COURSES TAUGHT: Genetics, Genes & Genomes, Human Genetics, Philosophical Aspects of Natural Science, Databases in Bioinformatics

AWARDS AND SCHOLARSHIPS:

Sergey Korolev Award from Russian Space Exploration Agency, 2009

Distinguished Educator of Russian Higher School,

Award from Russian Ministry of Education, 2007

Received a grant from the Government of the Rostov region, 2002

Received George Soros Grant, 1996

PROFESSIONAL AND ACADEMIC ASSOCIATIONS:

- Chairperson of the annual international conference “ Current Issues in Biology, Nanotechnology & Medicine” (Rostov-on-Don)
- Consulting editor of “ Nauchnaya Mysl’ Kavkaza” journal
- Editor-in-chief of “Living Systems & Earth sciences” journal
- Member of the Russian Society of Geneticists and Selectionists named after NI Vavilov
- Member of the Russian Society of Biotechnology named after Y Ovchinnikov
- Member of the European Environmental Mutagen Society

LIST OF PUBLICATIONS

- **Book:**
Prikhodchenko N.N., **Shkurat T.P.** Basics of Human Genetics
Rostov-on-Don: Phoenix, 1997. – 366p.
- **Research publications in refereed journals:**
- **2020**
- Semernik O.E. The role of mutations in metalloproteinases and the epithelial growth factor receptor genes in the pathogenesis of children bronchial asthma / Semernik O.E., Lebedenko A.A., Shkurat T.P., Mashkina E.V., Dreyzina T.K. // Pulmonologiya. — 2020. — Vol. 30, № 1. URL: <http://DOI: 10.18093/0869-0189-2020-30-1-17-22>

- **2019**

- Romanov D.E. Genome distance between growth-regulating genes and telomeres is correlated with morpho-physiological traits in mammals / Romanov D.E., Butenko E.V., Shkurat T.P. // Gene Reports. — 2019. — № 14. URL: <https://doi.org/10.1016/j.genrep.2018.12.006>
- Romanov D.E. Genome distance between conserved elements in neighborhoods of growth-regulating genes is correlated with morpho-physiological traits in mammals / Romanov D.E., Butenko E.V., Bakhtadze G.B., Shkurat T.P. // Gene Reports. — 2019. — Vol. 17, URL: <https://doi.org/10.1016/j.genrep.2019.100508>
- Sazonova MA Creation of Cybrid Cultures Containing mtDNA Mutations m.12315G > A and m.1555G > A, Associated with Atherosclerosis / Sazonova MA, Sinyov VV, Ryzhkova AI, Sazonova MD, Khasanova ZB, Shkurat T.P., Karagodin VP, Orekhov AN, Sobenin IA // BIOMOLECULES. — 2019. — Vol. 9, № 9. URL: <http://DOI: 10.3390/biom9090499>
- Bordaeva OY Association of IL-10 and F2 and F5 Blood Clotting Factors Genes Polymorphisms with Pre-Eclampsia Risk / Bordaeva OY, Umanskiy MN, Derevyanchuk E.G., Shkurat T.P. // Online Journal of Health and Allied Sciences. — 2019. — Vol. 18, № 2. URL: <https://www.ojhas.org/issue70/2019-2-5.html>

- **2018**

- Sazonova M.A. Mitochondrial Genome Mutations Associated with Myocardial Infarction / Sazonova M.A., Ryzhkova A.I., Sinyov V.V., Galitsyna E.V., Melnichenko A.A., Demakova N.A., Sobenin I.A., Shkurat T.P., Orekhov A.N. // Disease Markers. — 2018. — URL: <https://www.hindawi.com/journals/dm/2018/9749457/abs/>
- Lebedenko AA Transforming Growth Factor B: Clinical Significance and Peculiarities of Inheritance in Children with Atopic Dermatitis / Lebedenko AA, Shkurat T.P., Mashkina E.V., Semernik OE, Dreyzina TK, Ivanova DN // Online Journal of Health and Allied Sciences. — 2018. — № 17 (1). URL: <https://www.ojhas.org/issue65/2018-1-5.html>
- Trang NT Application of Next Generation Sequencing Upon the Detection of Deafness Genes in Vietnamese Children with Non-syndromic Hearing Loss / Trang NT, Thanh CM, Hanh PVH, Nhan NT, Giang VT, Lyangasova O.V., Shkurat T.P. // Online Journal of Health and Allied Sciences. — 2018. — № 17 (1). URL: <https://www.ojhas.org/issue65/2018-1-6.html>
- Sobenin I.A. Response to: Comment on “Role of Mitochondrial Genome Mutations in Pathogenesis of Carotid Atherosclerosis” / Sobenin I.A., Sazonova M.A., Sinyov V.V., Ryzhkova A.I., Galitsyna E.V., Khasanova Z.B., Postnov A.Y., Yarygina E.I., Shkurat T.P., Orekhov A.N. // Oxidative Medicine and Cellular Longevity. — 2018. — URL: <https://www.hindawi.com/journals/omcl/2018/7620234/>
- Lebedenko A.A. An analysis of association between growth factor gene polymorphisms and a risk of bronchial asthma in children / Lebedenko A.A., Shkurat T.P., Mashkina E.V., Semernik O.E., Dreyzina T.K. // Pulmonologiya. — 2018. — Vol. 28, № 1. URL: <http://journal.pulmonology.ru/pulm/article/view/956>
- Lebedenko A.A. The study of arg25pro polymorphism gene of transforming growth factor beta1 in children with bronchial asthma / Lebedenko A.A., Shkurat T.P., Mashkina E.V., Semernik O.E., Dreyzina T.K. // Medical News of North Caucasus. — 2018. — Vol. 13, № 2. URL: <http://DOI: 10.14300/mnnc.2018.13050>
- Timofeeva S.V. Association of heteroplasmy level of mitochondrial mutation m.13513G> in GENE MT-ND5 with carotid atherosclerosis in Russian population / Timofeeva S.V., Butenko E.V., Derevyanchuk E.G., Shkurat T.P. // Atherosclerosis. — 2018. — № 275. URL: <https://doi.org/10.1016/j.atherosclerosis.2018.06.570>
- Ryzhkova AI Mitochondrial diseases caused by mtDNA mutations: a mini-review / Ryzhkova AI, Sazonova MA, Sinyov VV, Galitsyna EV, Chicheva MM, Melnichenko AA, Grechko AV, Postnov AY, Orekhov AN, Shkurat T.P. // THERAPEUTICS AND CLINICAL RISK MANAGEMENT. — 2018. — Vol. 14, URL: <http://DOI: 10.2147/TCRM.S154863>

- **2017**

- Mashkina E.V. The association analysis of immune system genes allelic variants with embryonic infection of newborns / Mashkina E.V., Dolgopolova AV, Hukazova SA, Dolgopolova OG, Derevyanchuk E.G., Belovolova RA, Shkurat T.P. // Online Journal of Health and Allied Sciences. — 2017. — № 16 (1). URL: <http://www.ojhas.org/issue61/2017-1-3.html>
- Shkurat T.P. Vascular Endothelial Growth Factor: Genetic Aspects in Children with Asthma in the Rostov Region / Shkurat T.P., Lebedenko A.A., Mashkina E.V., Semernik O.E., Dreyzina T.K. // Online Journal of Health and Allied Sciences. — 2017. — Vol. 15 (4), № 7. URL: <https://www.ojhas.org/issue60/2016-4-7.html>
- Timofeeva S.V. Oxidative stress and inflammation response genes in miRNA-mediated mitochondrial and nuclear genome crosstalk associated with cardio-vascular diseases / Timofeeva S.V., Butenko E.V., Romanov D.E., Shkurat T.P. // Atherosclerosis. — 2017. — Vol. 263. URL: <https://www.sciencedirect.com/science/article/pii/S0021915017309024?via%3Dihub>
- Galitsyna E.V. Association of mitochondrial genome mutations with chronic diseases of non-inflammatory genesis / Galitsyna E.V., Sazonova M.A., Sinyov V.V., Ryzhkova A.I., Melnichenko A.A., Demakova N.A., Sobenin I.A., Shkurat T.P., Orekhov A.N. // Atherosclerosis. — 2017. — № 263. URL: <https://www.sciencedirect.com/science/article/pii/S0021915017311346?via%3Dihub>
- Sazonova M.A. Ultrastructural analysis of mitochondrial cristae in leukocytes of patients with atherosclerosis / Sazonova M.A., Sinyov V.V., Ryzhkova A.I., Galitsyna E.V., Melnichenko A.A., Demakova N.A., Bobryshev Yu.V., Shkurat T.P., Orekhov A.N. // Atherosclerosis. — 2017. — № 263. URL: <https://www.sciencedirect.com/science/article/pii/S0021915017311553?via%3Dihub>
- Ryzhkova A.I. Mito-SNP in mitochondrial cytopathies / Ryzhkova A.I., Sazonova M.A., Sinyov V.V., Galitsyna E.V., Melnichenko A.A., Demakova N.A., Sobenin I.A., Shkurat T.P., Orekhov A.N. // Atherosclerosis. — 2017. — № 263. URL: <https://www.sciencedirect.com/science/article/pii/S002191501731153X?via%3Dihub>

- **2016**

- Galitsyna E.V. Mutations of mitochondrial DNA in chronic non-inflammatory diseases: target candidates for treatment / Galitsyna E.V., Sazonova M.A., Shkurat T.P., Demakova N.A., Melnichenko A.A., Sinyov V.V., Ryzhkova A.I., Mitrofanov K.Y., Zhelankin A.V., Sobenin I.A., Orekhov A.N. // Current Pharmaceutical Design. — 2016. URL: <https://www.ncbi.nlm.nih.gov/pubmed/27774907>
- Shkurat T.P. The Intensity of Free Radical Processes and the Testosterone and Estradiol Levels in Seminal Fluid of Men with Different Types of Pathospermia - Personalized Approach / Shkurat T.P., Lomteva S.V., Sagamonova K.Yu., Shestel A., Prokofyev V.N., Sherchkova T.A., Shimanskaya E.V., Derevyanchuk E.G., Aleksandrova A.A. // Online J Health Allied Scs. — 2016. — № 1. URL: <http://www.ojhas.org/issue57/2016-1-5.html>
- Mashkina E.V. Association of gene polymorphisms of matrix metalloproteinases with reproductive losses in the first trimester of pregnancy / Mashkina E.V., Kovalenko K.A., Marakhovskaya T.A., Saraev K.N., Belanova A.A., Shkurat T.P. // Russian journal of genetics. — 2016. — T. 52, № 8. — C. 853-859.
- Sazonova M. Creation of hybrid lines of monocyte origin with high heteroplasmy level for mitochondrial genome mutation m.1555G>A / Sazonova M., Sinyov V., Ryzhkova A., Shkurat T.P., Demakova N., Nikitina N., Sobenin I., Orekhov A. // Atherosclerosis. — 2016. URL: [http://www.atherosclerosis-journal.com/article/S0021-9150\(16\)30797-3/abstract](http://www.atherosclerosis-journal.com/article/S0021-9150(16)30797-3/abstract)
- Sazonova V.A. Cybrid models of pathological cell processes in different diseases / Sazonova V.A., Sinyov V.V., Ryzhkova A.I., Galitsyna E.V., Shkurat T.P., Melnichenko A.A., Demakova

- N.A., Postnov A.Y., Sobenin I.A., Orekhov A.N. // *Current Pharmaceutical Design*. — 2016. URL: <https://www.ncbi.nlm.nih.gov/pubmed/27855611>
- Sazonova M.A Mitochondrial Genome Sequencing in Atherosclerosis: What's Next? / Sazonova M.A, Shkurat T.P., Demakova N.A, Zhelankin A.V., Barinova V.A., Sobenin I.A., Orekhov A.N. // *Current Pharmaceutical Design*. — 2016. — T. 22, № 3. — C. 390-396.
 - Steinberg B. J. A package of fast tools for genomic sequence analysis / Steinberg B. J., Abu-Khalil J. M., Adigeyev M.G., Bout A. A., Kermanov A. V., Pshenichnyij E.A., Ramanchauskayte G.V., Kroshkina A. P., Gutnikov A.V., Ponomareva N.S., Panich A. E., Shkurat T.P. // *International Journal of Mathematical Models and Methods in Applied Sciences* ISSN: 1998-0140. — 2016. — T. 10 — C. 42-50.
 - Shkurat T.P. Vascular Endothelial Growth Factor: Genetic Aspects in Children with Asthma in the Rostov Region [Электронный ресурс] / Shkurat T.P., Lebedenko AA, Mashkina E.V., Semernik OE, Dreyzina TK. // *The Online Journal of Health and Allied Sciences*. — 2016. — № 15 (4). URL: <http://www.ojhas.org/issue60/2016-4-7.html>
- **2015**
- Shkurat T.P. Prevalence of miRNAs in Introns and Cis-Regulatory Regions of Genes of the Somatotropic Axis in Mammals / Shkurat T.P., Romanov D.E., Pshenichnyij E.A., Ponomareva N.S., Aleksandrova A.A., Bakhtadze G.B., Lomteva S.V. // *American Journal of Applied Sciences*. — 2015. — T. 1, № 12. — C. 1-7.
 - Aleksandrova A.A. GDF15 in the Physiological Human Pregnancy: Novel Data and A Systematic Review / Aleksandrova A.A., Zolotukhin P.V., Lebedeva Yu.A., Belanova A.A., Kuzminova O.N., Goncharova A.S., Gutnikova L.V., Mashkina E.V., Shestopalov A.V., Shkurat T.P. // *Online J Health Allied Scs*. — 2015. — № 3. URL: <http://www.ojhas.org/issue55/2015-3-2.html>
 - Mashkina E.V. Cell cycle control gene-gene interaction model in pregnancy loss / Mashkina E.V., Kovalenko K.A., Butenko E.V., Shkurat T.P. // *Online Journal of Health and Allied Sciences*. — 2015. — T. 14, № 4.
 - Neskubina O.M. The usefulness of high-resolution carotid ultrasonography for the detection of subclinical atherosclerosis / Neskubina O.M., Derevyanchuk E.G., Demakova, N.A., Shkurat T.P. // *Online Journal of Health and Allied Sciences*. — 2015. — T. 14, № 3.
- **2014**
- Zolotukhin P.V. Testing the Concept of the Interatomic Status of the NFE2L2/AP1 Pathway as a Systemic Biomarker for Examination Stress / Zolotukhin P.V., Dovzhik A. D., Lebedeva U. A., Kuzminova O. N., Mashkina E.V., Aleksandrova A.A., Shkurat T.P. // *Molecular Diagnosis and Therapy*. — 2014. URL: <http://link.springer.com/article/10.1007%2F978-94-007-40291-014-0088-1>
 - Derevyanchuk E.G. Association of Angiotensinogen Gene M235T and T174M Polymorphisms with Coronary Heart Disease in Rostov Population / Derevyanchuk E.G., Nguyen TT, Neskubina OM, Shkurat T.P. // *Online J Health Allied Scs*. — 2014. — T. 13(4), № 2.
 - Soldatkin V.A. The MAOA and COMT Gene Polymorphisms in Patients with Schizophrenia Committed Homicide / Soldatkin V.A., Shkurat T.P., Bobkov A.S., Mashkina E.V., Tretyakov A.V., Tretyakov A.Ya., Mrykhin V.V., Kovalev A.I., Bukhanovskaya O.A., Kryuchkova M.N. // *International Journal of BioMedicine*. — 2014. — № 4 (4). — C. 213-217.
- **2013**
- Shkurat T.P. Bioinformatic screening of the binding transcription sites in the regulatory regions of genes up-regulated in response to oxidative stress / Shkurat T.P., Ponomareva NS, Aleksandrova AA, Shkurat MA, Butenko AI, Panich AE // *Open Journal of Genetics*. — 2013. — № 2. URL: <http://www.scirp.org/journal/ojgen/> (дата обращения 21.02.2013).
 - Zolotukhin PV Oxidative status interactome map: towards novel approaches in experiment

planning, data analysis, diagnostics and therapy [Электронный ресурс] / Zolotukhin PV, Kozlova Y., Dovzhik A., Kovalenko KA, Kutsyn K., Aleksandrova AA, Shkurat T.P. // Molecular BioSystems. — 2013. URL: <http://www.ncbi.nlm.nih.gov/pubmed/23698602> (дата обращения 24.12.2013).

- Zolotukhin PV Oxidative status shifts in uterine cervical incompetence patients / Zolotukhin PV, Aleksandrova AA, Goncharova A.S., Shestopalov A., Rymashevskiy A., Shkurat T.P. // Systems Biology in Reproductive Medicine. — 2013.
- HybriQ collaboration Challenging uterine cervical incompetence molecular pathophysiology / HybriQ collaboration, Aleksandrova AA, Gutnikova LV, Goncharova A.S., Samsonov A.E., Keller O.V., Shkurat T.P. // Valeology. — 2013. — № 4.

- **2012**

- **Shkurat T.P.**, Adigeev M.G., Ponomareva N.S., Butenko A.I., Lomteva S.V., Panich A.E. Search for related scenarios in the organization of the coding and non-coding DNA in response to oxidative stress. Bioinformatics approach.- Modern problems of science and education. - 2012. - № 5 URL: www.science-education.ru/105-7284
- Saraev KN, Mashkina, EV, **Shkurat TP** Polymorphic gene variants detoxification system xenobiotics pathology of pregnancy.- Journal.Valeology.-. 2012 № 2, P.
- Vechkanov E.M. , **Shkurat TP.**, Sorokina IA. Modern concepts of the role of «junk DNA» // Journal.Valeo. 2012 № 3, P. – 133-137.
- Ge ras'kina I.V. , Mashkina E.V. , **Shkurat T.P.** Study of cytokine status in patients with atopic diseases// Journal.Valeo. 2012 № 3, P. – 128-133.
- Shestopalov A.V., Shulga A.S. , Aleksandrova A.A., Rymashevskiy A.N., **Shkurat T.P.** Adipokines and indicators of carbohydrate metabolism in pregnancy complicated by gestosis//Modern problems of science and education. - 2012.. – № 1; URL: www.science-education.ru/101-5393.
- Aslanian MM, **Shkurat TP.** Eugenics - the temptation is // Proceedings of the XX International Conference and Scientific Discussion Club New information technologies in medicine, biology, and ecology farmakologii, Ukraine, Crimea, Yalta Gurzuf, 5-15 June 2012. - S. 22-24.
- Miktadova AV, Kovalenko KA, Baronyan E.S., Mashkina E.V. , **Shkurat T.P.** Analysis of alleles frequencies of candidate genes in Rostov-on-Don//Modern problems of science and education. - 2012. - № 5; URL: www.science-education.ru/105-6999.
- Shestopalov A.V., Shulga A.S. , Aleksandrova A.A., Staviskiy I.M., Rymashevskiy A.N., **Shkurat T.P.** Metabolism indicators of collagen type I in the blood of women with different variants of pregnancy Фундаментальные исследования. – 2012. – № 2. – стр. 393-398; URL www.rae.ru/fs/article_id=7982103
- Rymashevskiy A.N. Butenko E.V., Shulga A.S., Shestopalov A.V., Aleksandrova A.A., **Shkurat T.P.** Changing levels of ghrelin, growth hormone, insulin-like growth factor 1, leptin, insulin, thyrotropin and thyroxine in pregnancy complicated by preeclampsia, and physiological // Journal of Obstetrics and gynecological disorders. – 2012. - №1. - P. 35-38.

- **2011**

- Lotnik V., Mashkina E., **Shkurat T.** The frequency of DNA-repair and cell cycle control polymorphisms and pregnancy // European Journal of Human Genetics. – 2011. – Vol. 19, Suppl. 2. – P. 167.
- Skulachev MV, Antonenko YN, **Shkurat TP**, Skulachev VP. Mitochondrial-Targeted Plastoquinone Derivatives. Effect on Senescence and Acute Age-Related Pathologies // Curr Drug Targets. – 2011. - Jan 26.
- Derevyanchuk E.G. , Mashkina E.V., Kovalenko K.A., Aleksandrova A.A., Shestopalov A.V. , Rymashevsky A.N., Keller O.V. , **Shkurat T.P.** Biochemical and genetic criteria of the

folate metabolism and human embryogenesis disorders Modern problems of science and education– 2011. – № 4; URL: www.science-education.ru/98-4738

- Butenko E.V., Shulga A.S., Shestopalov A.V., Aleksandrova A.A., Gutnikova L.V., Rymashevskiy A.N., **Shkurat T.P.** Changes in blood concentration of growth hormones and hormones of mobilization and deposition of energy substrates of women during normal pregnancy and threatened abortion in the second trimester Modern problems of science and education 2011. – № 4; URL: www.science-education.ru/98-4735
- Shestopalov A.V.¹, Shulga A.S., Aleksandrova A.A., Rymashevskiy A.N., **Shkurat T.P.** Hormone levels of metabolic balance in the blood serum of pregnant women // Journal of Obstetrics and gynecological disorders. - 2011. -Vol.LX. - № 2. - P.68-72.
- **Shkurat T.P.**, Shestopalov A.V., Guskov G.E., Prokofiev V.N., Butenko A.I., Belik T.V., Bibov M.Yu., Lyangasova O.V., Shkurat M.A., Mashkina E.V., Mandzhieva S.S., Butenko E.V., Sevastyanova I.N., Ryzhkov P., Vachkanov E.M. Exploration of novel mechanisms of preadaptation of animal brain to oxidative stress using the DNA array technology // Modern problems of science and education. – 2011. – № 5; URL: www.science-education.ru/99-4888
- Nguyen Thi Trang, N. Milutin, **TP Shkurat**, VN Prokofiev Structural state of erythrocyte membranes of patients with coronary heart disease of different ages // Valeology. 2011. Number 1. pp. 69-76
- **Shkurat TP**, Mashkina EV, Myrina EA Kovalenko KA Investigation of gene polymorphisms of folate cycle and blood coagulation factors in couples with infertility // Glavhi vrach - 2011. -, № 3 (26). - S. 17-20.
- Butenko A., **Shkurat TP** The study of the genetic polymorphism of endothelial NO-synthase and endothelin-1 in the Professional Footballers // Valeology. - 2011. - № 3. - S. 67-72.
- Derevyanchuk EG, Souren N, Lepikhov K., **Shkurat TP**. Comparative analysis of methylation levels ERVWE1 and ERVFRDE1 in placental tissues in early pregnancy // Herald of the Russian Peoples' Friendship University. Medicine Series. - 2011. - № 5. - P. 27-33.
- Mashkina E., Kovalenko K., Fomina N., Rimashevky A., **Shkurat T.** Polymorphism of genes and pregnancy loss // European Journal of Human Genetics. - 2011. – Vol. 2, Suppl. 2. – P. 173.
- Guskov E.P., Mashkina E.V., Belichenko N.I., Vardun T.V., Volosovtsova G.I., Pokudina I.O., Guskov G.E. and **Shkurat T.P.** Mutation processes in oxidative stress preadapted animals\ Russian Journal of Genetics: Applied Research Volume 1, Number 2 (2011), 112-118.
- **2010**
- **Shkurat TP** Forgotten molecule or new vitamin G // Nauchnaya misl Kavkaza (Rissian). - 2010. - № 3 (63). - S. 25.
- Nguyen Thi Trang, Amelina SS, Dyuzhikov AA, Kudryashov ES, **Shkurat TP.** Investigation of the association of polymorphic variants of several candidate genes with the development of coronary heart disease // Medical genetics. –Vol. 5.- 2010 - P. 125.
- Nguyen Thi Trang, **Shkurat TP** . Association study of gene M235T and T174M angiotensinogen with coronary heart disease in a population of Rostovt // Journal of Biomedical Medline.ru. 2010. T. 11. Number 1. From 63-77
- Kovalenko KA, Seina SO, Nguyen Thi Chang., Mashkina EV, **Shkurat TP.** Study the frequency of polymorphic alleles of angiotensinogen and integrin β -3 in three age groups of residents of Rostov-on-Don // Valeology. 2010. Number 3. pp. 49-54
- Kovalenko KA, Seine SO, Nguyen Thi Trang, Mashkina EV, **Shkurat TP.** The study of frequencies of polymorphic alleles of genes of angiotensinogen and integrin β -3 in the three age groups of inhabitants of Rostov-on-Don // Valeology. - 2010. -№ 3. - P. 49-54.
- Goncharova A. A. Alexandrov, P. Zolotukhin, Samsonov A., O. Keller, Trofimenko OV Shulga AS Shestopalov AV Rymashevsky AN **Shkurat TP** The study of oxidative status of

women in physiological pregnancy at different stages of gestation / Alexander Goncharov, // Valeology. - 2010. - № 4.

- Chistyakov, VA, Sazykina MA, Aleksandrov AA, Belichenko NI Mashkina EV Gutnikova LV, Zolotukhin PV, **Shkurat TP**. Antimutagenic activity derived plastoquinone addressed to the mitochondria // Biochemistry. - 2010. - T. 75, № 3. - S. 331-336.
- **2009**
- Shurygina IP, Milutin NP Pokudina IO, Prokofiev VN, Kussmaul AR **Shkurat TP** Effect of low-intensity infrared laser radiation on free-radical processes in various tissues of animals with circulatory cerebral hypoxia // Aerospace and Environmental Medicine. - 2009. - T. 43, № 4. - S. 63-68.
- Shurygina IP, Belichenko NI Mashkina EV Pavlov BN Bogacheva MA **Shkurat TP** Infrared low-intensity laser radiation as antimutagen // Aerospace and Environmental Medicine. - 2009. - T. 43, № 3. - S. 57-63.
- Nguyen Thi Trang, **Shkurat TP**. Association of apolipoprotein E gene with cardiovascular disease // Valeology. 2009. Number 4. pp. 5-14
- Chistyakov, VA, MA Sazykina Lysenko VA Varduni TV, Sevryukov AV, Prazdnova EV **Shkurat TP** Methods of evaluating the effectiveness of antimicrobial agents on biofilm bacteria according bioluminescence // Valeology. - 2009. - № 1. - S. 32-39.
- Bushtyрева IO, Laura N., Levchenko MV **Shkurat TP**, Aleksandrova AA Functional characterization of endometrial activity in physiological and pathological pregnancy in the 1st trimester // Problems of gynecology, obstetrics and perinatology. - 2009. - T. 8, № 5. - S. 45-48.
- Varduni TV, VA Chistyakov, Belichenko NI Chokheli VA, **Shkurat TP** Strategic approaches to the treatment of bacterial infections caused by bacterial biofilms // Valeology. - 2009. - № 4. - S. 14-20.
- Gutnikova LV, Alexandrov AA, Lomteva S., E. Danko, Mashkina EV **Shkurat TP** Study the effectiveness of prenatal screening in the first trimester of pregnancy // Valeology. - 2009. - № 3. - S. 28-34.
- **Shkurat TP**, Timolyanova E.K., Belik T.V., Ignatenko M.S Allelic variations gene of TBX1 in nonsyndromic congenital heart defects Genomic Variation in Health and Disease, Hinxton, 2009
- Mashkina EV Kovalenko, KA, Saraev, KN, Lysenko O.V., **Shkurat TP** Gene diagnostics of HPV infection among residents of Rostov region // Valeology. - 2009. - № 3. - S. 21-28.
- Guskov EP, Mashkina EV, Belichenko NI, Varduni TV, Volosovtsova GI, Pokudina IO, Guskov G.E., **Shkurat TP** Mutational processes in animals predadaptirovannyh to oxidative stress, // Ecological genetics. - 2009. - T. VII, № 1. - S. 40-47.
- **Shkurat TP**, Volosovtsova GI, Prokofiev VN Effect of pre-treatment of animals oxidative stress on the state of antioxidant systems in the offspring of the first generation // Valeology. - 2009. - № 1. - S. 76-82.
- **2008**
- **Shkurat TP**, Lomteva S., Alexandrova AA, Azarin KV, Chistyakov, VA Allantoin role in reproduction // Valeology. - 2008. - № 4. - S. 32-37.
- Shurygina IP, Milutin NP, Prokofiev VN, Shkurat TP Effect of low-intensity infrared laser radiation on metabolic status and spontaneous mutagenesis of various tissues of rats with experimental ischemic optic analyzer // Ophthalmic surgery. - 2008. - № 2. - S. 46-49.
- **2007**

- **Shkurat TP**, Kussmaul AR Bogacheva MA, Boris Pavlov Effect of respiratory fluids containing xenon and krypton, on clinical and biochemical parameters of animals // Aerospace and Environmental Medicine. - 2007. - № 2. - S. 30-37.
- **Shkurat TP**, Valkova TI, Aleksandrov AA Marfan Syndrome // Glavni vrach. - 2007. - № 6.

- **2006**
- **Shkurat TP**, Kussmaul AR Bogacheva MA, Pavlov BN Cytogenetic effects in the epithelial cells of the cornea of mice after their stay in the air argon // Aerospace and Environmental Medicine. - 2006. - № 5. - S. 42-44.
- Kucherenko OS, Chistyakov EI Gutnikova LV, Fadeeva TV, Kudinova EE, Sorokin . A. **Shkurat TP** Regional standards for levels of thyroid hormones in the blood serum of residents of the Rostov region // GLAVNI VRACH. - 2006. - № 4. - S. 27.

- **2005**
- **Shkurat TP**, Mashkina EV Amelina SS Timolyanova EK Lobkova MS Sazaeva DI, Gus'kov EP Huntington's chorea genealogical especially the residents of Rostov region // Valeology. - 2005. - № 2.
- **Shkurat TP**, Azarova A.A., Volosovtsova GI, Prokofiev VN, Milutin NP Free-radical processes in animals predadaptirovannyh to oxidative stress // ISVESTIA VISHIY SHKOLI. North-Caucasian region. - 2005. - № 3.

- **2004**
- Guskov EP, Prokofiev, Kletsk ME, Kornienko, IV, Gapurenko OA Olekhovich LP, VA Chistyakov, AV Shestopalov ., Sazykina MA Markeev AV **Shkurat TP**, Malhosyan SR, Zhdanov Yu. Allantoin as vitamin // Reports of the Academy of Sciences. Biochemistry and biophysics. - 2004. - T. 398, № 6. - S. 1-6.

- **2003**
- **Shkurat TP**, Amelin SS Lomteva SV Timolyanova EK, Aleksandrov AA, Belichenko NI Mashkina EV Shimanskaya E . I., Guskov EP Genetic causes of miscarriage // MEDICINA YGA RASSII. - 2003. - № 6. - S. 29-33.
- **Shkurat TP**, Amelina SS Lomteva S., A. Alexandrov, Shimanskaya EI Lobkova MS Guskov EP Features demonstration of Turner's syndrome in residents of Rostov region and the North Caucasus // MEDICINA YGA ROSSII. - 2003. - № 2. - S. 14-19.
- **Shkurat TP**, Amelina SS, Mashkina EV, Lobkova MS, Shimanskaya EI, Guskov EP Population features of display Huntington's chorea the residents of Rostov region // Medicine in southern Russia. - 2003. - T. 76, № 6. - S. 20-23.

- **2002**
- Guskov EP, Kletsky ME, Kornienko, IV, LP Olekhovich, Chistyakov, VA, **Shkurat TP**, Prokofiev, V., Zhdanov Yu. Allantoin as a inhibitor of free radicals / EP Guskov, // Reports of the Academy of Sciences. Biochemistry and biophysics. - 2002. - T. 383, № 3. - P. 105-107.

- **2001**
- Guskov EP, **Shkurat TP**, Timofeeva IV, Milutina NP, Prokofiev VN Mashkina EV Effect of allantoin on the activity of enzymes regulating ROS-dependent status of the organism / Reports of the Academy of Sciences. - 2001. - T. 379, № 3.

- Guskov EP, **Shkurat TP**, Amelina SS, Timolyanova EK, Lomteva SV. Clinical polymorphism Shershevsky-Turner syndrome in residents of Rostov region and the North Caucasus (1978-1998 gg.) // Genetics. - 2001. - T. 37, № 6. - P. 817-824.
- **2000**
- Guskov EP, **Shkurat TP**, Pokudina IO The role of iron-containing proteins in the mutation process of oxidative stress // Bulletin of hyperbaric medicine and biology. - 2000. - T. 8, № 3-4. - P. 3-11.
- **Shkurat TP**, Guskov EP., Varduni TV, Milutina NP, Mirzoyan A. The free-radical processes and the level of chromosomal aberrations in the leaves of woody plants as a test system for genotoxicity urban // Ecology. - 2000. - № 4.
- **1999**
- Guskov EP, **Shkurat TP**, Timofeeva IV, Milutina NP The specificity of biochemical reactions *Xenopus Laevis* to oxidative stress after prior exposure to hyperbaric oxygenation // Reports of the Academy of Sciences. - 1999. - T. 365, № 4.
- Guskov EP, **Shkurat TP**, Timofeeva IV, Milutina NP Effect of hyperbaric oxygen therapy on antioxidant status *Xenopus Laevis* after preliminary adaptation to oxygen // Ontogeny - 1999. - T. 30, № 2.
- **1998**
- Milutina N.P., **Shkurat TP**, Ananyan A.A., Zaitseva T.A., Guskov E.P. The activity of cytochrome P-450 and structural state of human lymphocyte membranes as test for assessment of environmental mutagens 28 Annual Meeting EEMS, Austria, 1998
- Gus'kov EP **Shkurat TP**, Timofeeva IV, Milutina NP, Shtelmakh SV Effect of hyperbaric oxygen therapy on the development of *Xenopus Laevis* // Ontogeny - 1998. - T. 28, № 5.
- **1997**
- Kazantseva N.V., **Shkurat TP**, Azarova A.E., Pogabalo A., Lurje B.L., Snegereva T.V. Effect of combination various doses of hyperbaric oxygenation and radio-activity on chromosomes aberration, humoral immunity and free radical processes in mice Undersea & Hyperbaric Medicine.- V.24.-№7.- 1997.-P. 60.
- **1996**
- **Shkurat TP** Mitochondrias evaluation in raise of mutagene effect in chemical compounds having clastogenic activity // 26 EEMS Ann. Meeting Chromosome instability and cell cycle control, Rome.
- **Shkurat TP.**, Belichenko N.I., Kazantzeva N The effect of a combined action of radiation and high pressure of oxygen on the testis 27 Annual meeting of the Eur. Soc. For Radiation Biology, France, 1996
- **1993**
- Gus'kov EP, **Shkurat TP**, Kenya, MV, Lucash A. The role of low molecular weight antioxidants in oxidative stress, // USPECHI SOVREMENNOI BIOLOGII (Advances in modern biology) . - 1993. - T. 113, № 5.
- Gus'kov EP, **Shkurat TP**, Kenya, MV, Lucas A. Changes in the level of uric acid in rat tissues as a systemic response to hyperoxia / Andrei EP, // Aerospace and Environmental Medicine. - 1993. - T. 27, № 3.

- Gus'kov EP, **Shkurat TP**. Effect of hyperbaric oxygenation on the inclusion of 3H-thymidine incorporation in human fibroblast cells with different ploidy // Cytology and Genetics. - 1993. - T. 27, № 2.
- **Shkurat TP**, Shimanskaya EI, Milutin NP, Timofeeva IV, Dashevsky BS Dynamics of lipid peroxidation and chromosome rearrangements in different tissues of mice after repeated hyperbaric // Journal of Physiology. - Kiev. - 1993. - T. 39, № 1.
- **1991**
- Gus'kov EP, **Shkurat TP**, GM Fedorenko, Timofeeva IV The reaction of the bone marrow of rats to oxidative stress // Cytology. - 1991. - T. 33, № 5.
Shkurat TP, Shimanskaya EI, Medvedev LG, TA Koshcheeva On the possible role of adaptive estimation of somatic mutagenesis // Cytology. - 1991. - T. 33, № 5.
Gus'kov EP, **Shkurat TP**, Shimanskaya EI, Medvedev LG Predicting how the genome of somatic cells divers hyperoxic environment // Journal of Physiology. - Kiev. - 1991. - T. 37, № 4.
- **1990**
- Guskov E.P., **Shkurat T.P.**, Shimanskaja E.I., Guskova S.I. Genetic effects of hyperbaric oxygen therapy// Mutation Research/Genetic Toxicology Volume 241, Issue 4, August 1990, Pages 341–347.
- Gus'kov EP **Shkurat TP**, Shimanskaya EI, SS Guskova Effect of hyperbaric oxygen therapy on somatic and generative cells of rats // Cytology and Genetics. - 1990. - T. 24, № 2.
Gus'kov EP, **Shkurat TP**, Shimanskaya EI, Yanushevich SV Cytogenetic effects oksigenobaroterapii // Space Biology and Aerospace Medicine. - 1990. - № 4.
- **1989**
- Gus'kov EP **Shkurat TP** Genomic instability human somatic cells as an adaptive adaptive response// Advances in modern biology. - 1989. - T. 108, № 2.
- **1985**
- Gus'kov EP **Shkurat TP**, GM Fedorenko Ultrastructure of meristematic cells of wheat in normal conditions and after high pressure oxygen // Cytology. - 1985. - T. 27, № 1.
Guskov EP, **Shkurat TP**, Kamynina MV. Cytogenetic effects of hyperbaric oxygenation after fractionated and prolonged treatment // Genetics. - 1985. - T. 21, № 10.
Gus'kov EP, **Shkurat TP** Cytogenetic effects of hyperbaric oxygen therapy in a number of cell cycles of human peripheral blood lymphocyte // Genetics. - 1985. - T. 21, № 8.

PATENTS

- Pat. 2611358 Russian Federation. A method for predicting a high risk of reproductive losses in the first trimester of pregnancy / Shkurat TP, Mashkina EV, Kovalenko KA, Volosovtsova GI; Applicants: Shkurat TP, Mashkina EV, Kovalenko KA, Volosovtsova GI. 03.02.2016
- Certificate of Registration 2015661830 Russian Federation. Expert system of decision support in assessing the risk of genetic infertility and spontaneous abortion / Shkurat TP, Mashkina EV, Ponomareva NS, Denisenko Yu.V., Lomteva SV, Panich AE. 15.09.2015.
- Certificate of Registration 2015619663 Russian Federation. Expert system of decision support in the risk assessment of gestosis development / Ponomareva NS, Shkurat TP. 20.07.2015.
- Shkurat TP, Ponomareva N. Butenko AI Ryzhkov PA, Denisenko YV RU2013619296, 20.12.2013 «Nucleotide sequence analysis of DNA using dot matrix homology».
- Shkurat TP, Varduni TV, TV Belik, A. Butenko "A method of detecting a predisposition to prolonged physical stress" Application number 2011137584. 12.09.2011

- Shkurat TP, Ryzhkov PA, Guskov GE, Bibov M. Method for the diagnosis of oxidative stress by measuring the expression of oxygen-sensitive genes Application for invention № 2012120734 Russian federation 05.18.2012
- Shkurat TP, Varduni TV, Belik T., A. Butenko Method of detection of predisposition to prolonged physical stress // Pat 2011137584 Russian federation 12.09.2011
- Shkurat TP, Rudenko VV, Malhosyan SR. The method of newborn screening for monogenic diseases and biochip creation for practical implementation of the developed method // Pat. 2402612 Russian Federation. 27/10/2010.
- Shkurat TP, Rudenko VV, Malhosyan SR. Method of screening for cardiovascular diseases and biochip creation for practical implementation of the developed method // Pat. 240277 Russian Federation. 27/10/2010.
- Shkurat TP, Rudenko VV, Malhosyan SR. MicroArray Creator (MAC). - 2007. - Certificate of official registration of computer programs № 2007611568.
- Shkurat TP, Rudenko VV, Malhosyan SR. Genes Mutations study for the diagnosis of monogenic diseases, - 2007. - Certificate of official registration database number 2007620179.

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