

DOI: 10.56871/RBR.2023.83.49.013
UDC 929+351.854+611+616-094

NATALIA R. KARELINA IS AN OUTSTANDING SOVIET AND RUSSIAN ANATOMIST

© Linard Yu. Artyukh¹, Irina N. Sokolova¹, Olga Yu. Smirnova¹, Aida R. Hisamutdinova¹,
Elena V. Toropkova², Irina I. Mogileva¹, Alexander A. Mironov³, Andrey G. Vasiliev¹

¹ Saint Petersburg State Pediatric Medical University. Lithuania 2, Saint Petersburg, Russian Federation, 194100

² Military Medical Academy named after S.M. Kirov. Akademichan Lebedev st., 6, Saint Petersburg, Russian Federation, 194044

³ Institute of Molecular Oncology, Electron Microscopy Lab, 16 Via Adamello, Milano, 20139, Italy

Contact information: Linard Yu. Artyukh — Assistant of the Department of Human Anatomy SPbSPMU. E-mail: l-artyukh@mail.ru
ORCID ID: 0000-0001-6306-2661 SPIN: 9489-1060

For citation: Artyukh LYu, Sokolova IN, Smirnova OYu, Hisamutdinova AR, Toropkova EV, Mogileva II, Mironov AA, Vasiliev AG. Natalia R. Karelina is an outstanding Soviet and Russian anatomist // Russian biomedical research (St. Petersburg). 2023;8(4):116-127. DOI: <https://doi.org/10.56871/RBR.2023.83.49.013>

Received: 28.09.2023

Revised: 06.11.2023

Accepted: 20.12.2023

Abstract. In November 2023, Natalia R. Karelina, Doctor of Medical Sciences, Professor, Head of the Department of Human Anatomy of the St. Petersburg State Pediatric Medical University of the Ministry of Health of Russia, member of the Board of the Scientific Medical Society of Anatomists, Histologists and Embryologists of Russia, turned 80. Natalia Rafailovna is a graduate of the Leningrad Pediatric Medical University. Since 1967 he has been working as a pediatrician, and since 1970 as an assistant at the Department of Human Anatomy. In 1980 successfully defends his dissertation for the degree of Candidate of Sciences, and in 1994, Doctor of Sciences. From 1995 to 2000 Natalia Rafailovna holds the position of Professor of the Department of Morphology of the Institute of Medical Education at the Novgorod University Yaroslav the Wise, from 2000 to 2003 in charge of it. The activity of Professor Karelina at that time was not limited to the department: from 1995 to 1997. She is the vice-rector for Science, and from 1997 to 2000 — Dean of the Medical and Dental Faculties. In 2003 She was elected to the position of Head of the Department of Human Anatomy of the St. Petersburg Pediatric Medical Academy. In the period 2013–2014 he holds the post of Dean of the Faculty of Additional and Vocational Education. N.R. Karelina is the supervisor of nine PhD dissertations, scientific consultant of two doctoral dissertations. N.R. Karelina is the scientific supervisor of nine PhD theses, scientific consultant of two doctoral theses, author of more than 300 scientific publications. The founder and president of the St. Petersburg Symposium on Morphology, Biochemistry, Normal and pathological Physiology of the child, whose goals are to popularize medical science. The University Administration, the Academic Council, the St. Petersburg Branch of the Scientific Medical Society of Anatomists, Histologists and Embryologists, the Editorial Board of the journal “Russian Biomedical Research”, the staff of the Department of Human Anatomy and students cordially congratulate Natalia Rafailovna, wish her good health, inexhaustible energy and creative success for the benefit of her beloved science and her native university.

Key words: Natalia Rafailovna Karelina; Professor N.R. Karelina; St. Petersburg State Pediatric Medical University; human anatomy; morphology.

КАРЕЛИНА НАТАЛЬЯ РАФАИЛОВНА — ВЫДАЮЩИЙСЯ СОВЕТСКИЙ И РОССИЙСКИЙ УЧЕНЫЙ-АНАТОМ

© Линард Юрьевич Артюх¹, Ирина Николаевна Соколова¹, Ольга Юрьевна Смирнова¹,
Аида Равильевна Хисамутдинова¹, Елена Вениаминовна Торопкова²,
Ирина Ивановна Могилева¹, Александр Александрович Миронов³,
Андрей Глебович Васильев¹



¹ Санкт-Петербургский государственный педиатрический медицинский университет. 194100, Российская Федерация, г. Санкт-Петербург, ул. Литовская, 2

² Военно-медицинская академия им. С.М. Кирова. 194044, Российская Федерация, г. Санкт-Петербург, ул. Академика Лебедева, 6

³ Институт молекулярной онкологии, лаборатория электронной микроскопии. Италия, 20139, Милан, Виа Адамелло, д. 16

Контактная информация: Линард Юрьевич Артюх — ассистент кафедры анатомии человека СПбГПМУ. E-mail: l-artyukh@mail.ru
ORCID ID: 0000-0001-6306-2661 SPIN: 9489-1060

Для цитирования: Артюх Л.Ю., Соколова И.Н., Смирнова О.Ю., Хисамутдинова А.Р., Торопкова Е.В., Могилева И.И., Миронов А.А., Васильев А.Г. Карелина Наталья Рафаиловна — выдающийся советский и российский ученый-анатом // Российские биомедицинские исследования. 2023. Т. 8. № 4. С. 116–127. DOI: <https://doi.org/10.56871/RBR.2023.83.49.013>

Поступила: 28.09.2023

Одобрена: 06.11.2023

Принята к печати: 20.12.2023

Резюме. В ноябре 2023 г. исполнилось 80 лет Наталье Рафаиловне Карелиной — доктору медицинских наук, профессору, заведующей кафедрой анатомии человека ФГБОУ ВО «Санкт-Петербургский государственный педиатрический медицинский университет» Минздрава России, члену правления Научного медицинского общества анатомов, гистологов и эмбриологов России. Наталья Рафаиловна — выпускница Ленинградского педиатрического медицинского университета. С 1967 г. работает врачом-педиатром, а с 1970 г. — ассистентом кафедры анатомии человека. В 1980 г. успешно защищает диссертацию на соискание ученой степени кандидата наук, а в 1994 г. — доктора наук. С 1995 по 2000 г. Наталья Рафаиловна занимает должность профессора кафедры морфологии Института медицинского образования в составе Новгородского университета им. Ярослава Мудрого, с 2000 по 2003 гг. заведует ею. Деятельность профессора Карелиной на тот период не ограничивается кафедрой: с 1995 по 1997 г. она является проректором по науке, а с 1997 по 2000 г. — деканом лечебного и стоматологического факультетов. В 2003 г. избрана на должность заведующей кафедрой анатомии человека Санкт-Петербургской педиатрической медицинской академии. В период 2013–2014 гг. занимает пост декана факультета дополнительного и профессионального образования. Н.Р. Карелина является научным руководителем девяти кандидатских диссертаций, научным консультантом двух докторских диссертаций, автором более 300 научных публикаций. Создатель и президент Санкт-Петербургского симпозиума по морфологии, биохимии, нормальной и патологической физиологии ребенка, в цели которого заложена популяризация медицинской науки. Администрация Университета, Ученый совет, Санкт-Петербургское отделение Научного медицинского общества анатомов, гистологов и эмбриологов, редакция журнала «Российские биомедицинские исследования», сотрудники кафедры анатомии человека и студенты сердечно поздравляют Наталью Рафаиловну, желают ей крепкого здоровья, неиссякаемой энергии и творческих успехов на благо любимой науки и родного университета.

Ключевые слова: Наталья Рафаиловна Карелина; профессор Н.Р. Карелина; Санкт-Петербургский государственный педиатрический медицинский университет; анатомия человека; морфология.

Tho' much is taken, much abides; and tho'
We are not now that strength which in old days
Moved earth and heaven, that which we are, we are,-
One equal temper of heroic hearts,
Made weak by time and fate, but strong in will
To strive, to seek, to find and not to yield.
Alfred Lord Tennysson

In November 2023 Natalia Rafailovna Karelina, Doctor of Medical Sciences, Professor, Head of the Department of Human Anatomy of the St. Petersburg State Pediatric Medical University of the Ministry of Health of Russia, member

of the Board of the Scientific Medical Society of Anatomists, Histologists and Embryologists of Russia, turns 80.

Natalia Rafailovna is an outstanding Soviet and Russian scientist-anatomist, beloved teacher of many generations of graduates of our university (Fig. 1).

Career of Professor N.R.Karelina began from her student days in Leningrad Pediatric Medical Institute (LPMI), which she entered after finishing secondary school in 1961 (Fig. 2).

After the very first classes at the Anatomy Department Natalia Rafailovna fell in love with the subject once and for all. And she could not help falling in love with anatomy being

taught by brilliant Grigory Ivanovich Korchanov (Fig. 3). He was a radiologist, surgeon, excellent lecturer, expert in teaching methodology, very well educated and intelligent. His high culture, amazing modesty and kindness earned him love and respect of the staff of the Department and students. Grigory Ivanovich gave classes on radiology and headed the study group on dissection where Natalia got her first skills on how to use a scalpel and forceps. She still cherishes the memory of her first teacher reminiscing him frequently.

After graduation in 1967, Natalia Rafailovna left her native Leningrad for Belarus for a career assignment, where she worked as a pediatrician for 3 years. In 1970 there was a turning point in the life of the future professor Karelina — she returned to Leningrad. And she faced the difficult choice of her future specialty — Shall she choose pharmacology (Head of the Department was professor I.V. Markova) or anatomy? Answering the call of her heart and her fate Natalia Rafailovna chose anatomy, where the young lecturer had enjoyed love and care of the same people who had supported her during her student years (Fig. 3): L.N. Korobkova, E.N. Dolgoplova, Z.V. Galtsova, V.N. Verbitskaya, and, of course, G.I. Korchanov. The Department of Anatomy of LPMI was headed by professor Georgy Filippovich Vsevolodov at that time (from 1964 to 1977). G.F. Vsevolodov received the classical anatomical education at academician V.N. Tonkov' school. As a lecturer and methodologist Vsevolodov was a unique person, his methods of presenting the subject were specified by his distinctive personality and



Fig. 2. N.R. Karelina — a student, together with her classmates at the cleaning of the territory (first on the right)

Рис. 2. Н.Р. Карелина — студентка, вместе с однокурсницами на уборке территории (первая справа)



Fig. 1. Professor Karelina Natalia Rafailovna, 2023

Рис. 1. Профессор Карелина Наталья Рафаиловна, 2023 г.



Fig. 3. Grigory I. Korchanov (in the center) in class with students, 1963

Рис. 3. Григорий Иванович Корчанов (в центре) на занятиях со студентами, 1963 г.



Fig. 4. N.R. Karelina is a young teacher with students at the Alma mater, in the center at the table

Рис. 4. Н.Р. Карелина — молодой преподаватель со студентами в Alma mater, в центре за столом



Fig. 5. Georgy F. Vsevolodov, staff of the Department of Human Anatomy and students of the FPC, 1971

Рис. 5. Георгий Филиппович Всеволодов, сотрудники кафедры анатомии человека и слушатели ФПК, 1971 г.

artistry. Bright lecturing temperament, pitch of his voice, diction, perfect knowledge of the lecture subject attracted listeners. This formed the young lecturer Karelina's future style (Fig. 4).

Soon Georgy Filippovich Vsevolodov suggested Natalia Rafailovna a theme for her thesis within the framework of the Department's research "Vascular System in Age-Related aspect" and referred her to the Faculty of Advanced Training of the Department of Anatomy of the Second Medical

Institute named after N.I. Pirogov to Academician Vassiliy Vassilyevich Kupriyanov (Fig. 5, 6).

At the laboratory of microcirculation and electron microscopy under the supervision of experienced staff and academician Kupriyanov himself Karelina acquired new techniques on how to produce preparations for research (Fig. 7).

In 1977 G.F. Vsevolodov retired having worked for LPMI for more than 20 years. From this moment, Margarita



Fig. 6. Academician V.V. Kupriyanov congratulates N.R. Karelina on being awarded the degree of Candidate of Medical Sciences

Рис. 6. Академик В.В. Куприянов поздравляет Н.Р. Карелину с присуждением ученой степени кандидата медицинских наук



Fig. 7. Students of Professor V.V. Kupriyanov at the IX Congress of Anatomists, Histologists and Embryologists (from left to right: V.V. Kulikov, V.N. Levin, N.R. Karelina, V.V. Banin)

Рис. 7. Ученики профессора В.В. Куприянова на IX съезде анатомов, гистологов и эмбриологов (слева направо: В.В. Куликов, В.Н. Левин, Н.Р. Карелина, В.В. Банин)

Alexandrovna Dolgova headed the Department (Fig. 8). Owing to Margarita Alexandrovna Natalia Rafailovna continued her study within her thesis work "Intra-organ small intestine blood stream in the early post-natal ontogenesis". The research was completed in 1979 and in 1980 N.R. Karelina successfully defended it in front of the Dissertation Committee at the Yaroslavl Medical Institute (Fig. 6).

Having won a Candidate degree Natalia Rafailovna did not rest: her scientific work gradually grew to a doctorate thesis on which Margarita Alexandrovna insisted. Thus, by M.A. Dolgova's idea and on academician V.V. Kupriyanov's proposal an agreement on scientific cooperation was concluded between the Department of Human Anatomy of the Leningrad Pediatric Medical Institute and the Department of Microcirculation and Electron Microscopy of the II Moscow Medical Institute. Natalia Rafailovna was attached to the department as a senior staff scientist at the Department of Microcirculation and Electron Microscopy in order to complete her doctorate research.

In 1993 N.R. Karelina was chosen for the position of a senior lecturer of the Department of Human Anatomy of the Leningrad Pediatric Medical Institute.

One year later, in 1994 Natalia Rafailovna successfully defended a doctorate thesis on "Morphogenesis, microscopic anatomy and ultrastructure of the small intestine villi (experimental-morphological study)" in the Dissertation Committee of the Russian State Medical University named after N.I. Pirogov [11, 12]. The thesis advisors were academician of RAMS, Doctor of Medical Sciences, Professor V.V. Kupriyanov and corresponding member of RAMS, Doctor of Medical Sciences, Professor A.A. Mironov.

Having got a Doctorate degree, in 1995 Natalia Rafailovna accepted the position of Professor of the Depart-



Fig. 8. From left to right: Assistant of the department N.R. Karelina and head of the department, Professor M.A. Dolgova discussing the topics of student works of the scientific circle of the department, 1980

Рис. 8. Слева направо: ассистент кафедры Н.Р. Карелина и заведующая кафедрой, профессор М.А. Долгова обсуждают темы студенческих работ научного кружка кафедры, 1980 г.

ment of Morphology of the Institute of Medical Education at the Novgorod University named after Yaroslav the Wise and moved to Veliki (the Great) Novgorod.

At the institute, created almost from scratch, there was a lack of highly qualified academic and teaching staff.

Academician Mikhail Romanovich Sapin recommended Natalia Rafailovna to the University management as a highly qualified, intelligent, active and smart employee. Actively working staff is being formed at the department with



Fig. 9. The staff of the Department of Human Anatomy together with the Vice-rector for Academic Affairs, professor V.I. Orel, 2021
Рис. 9. Коллектив кафедры анатомии человека совместно с проректором по учебной работе, профессором В.И. Орлом, 2021 г.



Fig. 10. At the meeting of the St. Petersburg branch of the NMOAGE, 2023. From left to right: Associate Professor M.V. Tvardovskaya, Professor N.R. Karelina, Associate Professor E.V. Toropkova
Рис. 10. На заседании Санкт-Петербургского отделения НМОАГЭ, 2023 г. Слева направо: доцент М.В. Твардовская, профессор Н.Р. Карелина, доцент Е.В. Торопкова

intensive interaction of academician M.R. Sapin and professor L.E. Etingen: professor G.L. Bilich, professor N.R. Karelina, professor G.S. Katinas, associate professors L.R. Sapozhnikova, O.M. Semyonova, V.G. Kozhukhar and young employees — anatomists, histologists and operative surgeons.

In 1997 Natalia Rafailovna was awarded academic degree of Professor, and from 2000 she headed the Department of Morphology of the Institute of Medical Education.

Natalia Rafailovna devoted a lot of time and energy to creation of the Department of Anatomy museum together with associate professor Oksana Mikhailovna Semyonova. She carried out active methodological work and gave lectures at all faculties of IMO.

The activity of Professor Karelina at that time was not limited to the department: from 1995 to 1997 she is the vice-rector for Science, and from 1997 to 2000 — Dean of the Medical and Dental Faculties.

At that time N.R.Karelina cooperated actively with LPMI departments' staff involving them to deliver lectures and practicals.

In May 2003 she was elected to the position of Head of the Department of Human Anatomy of the St. Petersburg State Pediatric Medical Academics (SPbGPMA) and has headed it successfully for more than 20 years (Fig. 9). Without doubt, all these achievements would have been impossible without the greatest anatomical school that N.R.Karelina went through. She is a successor to anatomical schools of academician M.P. Sapin, V.V. Kupriyanov, and professors G.F. Vsevolodov and M.A. Dolgova. Natalia Rafailovna has a lot of experience in scientific, pedagogical, organizational and methodological work, which definitely helped her in her professional way.

Under N.R. Karelina's leadership, substantial tutorial alterations and additions were made in a lecture course, practicals and examination programme in accordance with new



Fig. 11. II St. Petersburg Symposium on Child Morphology, 2021

Рис. 11. II Санкт-Петербургский симпозиум по морфологии ребенка, 2021 г.



Fig. 12. From left to right: Professor Radik M. Khairullin, professor Natalia R. Karelina, professor Ivan V. Gayvoronsky with 1st year students, 2022

Рис. 12. Слева направо: профессор Радик Магзинурович Хайруллин, профессор Наталья Рафаиловна Карелина, профессор Иван Васильевич Гайворонский со студентами 1-го курса, 2022 г.

anatomical terms. Reorganization of educational process was performed.

Since 2005 studies on the complex theme "Morphological traits of human and experimental animal organism systems in ontogenesis, normal state, experiment and pathology" have been carried out on the department led by Natalia Rafailovna.

For more than 10 years Natalia Rafailovna was Scientific Secretary of the Dissertation Committee on specialties like "Human Anatomy" and "Cellular biology, cytology, histology", one of the most respected morphological committees of Russia. Dozens of theses from different regions passed through her hands, which should be carefully reviewed in order to decide whether to admit a thesis

to defense or to make serious corrections and improvements.

In 2013 Natalia Rafailovna was appointed Dean of the Faculty of Postgraduate and Additional Professional Education of SPbGPMU. During her work as dean N.R. Karelina carried out significant reorganization of the dean's office changing approaches and methods of its work.

N.R. Karelina is the scientific consultant of two doctoral theses [6, 21] and the scientific supervisor of six candidate (PhD) theses [2–4, 17, 28, 32]. Professor N.R. Karelina is the author of more than 300 scientific works [5, 7–9, 13, 14, 18–20, 22–27, 30, 31, 33, 36–44] including 8 patents for invention, 12 methodical recommendations, 36 tutorial guides [1, 16, 29], 5 textbooks [10, 15, 34, 35] and 3 dictio-



Fig. 13. N.R. Karelina is a young lecturer at the Department of Human Anatomy, 1972

Рис. 13. Н.Р. Карелина — молодой преподаватель кафедры анатомии человека, 1972 г.

naries [1]. She reviewed articles, dissertations, often is an opponent in candidate and doctoral thesis defense, active participant in the activity of the St. Petersburg Branch of the Scientific Medical Society of Anatomists, Histologists and Embryologists (Fig. 10).

Natalia Rafailovna Karelina is deputy editor-in-chief of the journal "Russian Biomedical Research" and a member of editorial board of journals "Morphology", "Pediatrician", "Periodontology", "Forcipe".

In 2020 N.R. Karelina together with professor R.M. Khayrullin founded and subsequently became president of the St. Petersburg Symposium on Morphology, Biochemistry, Normal and Pathological Physiology of the child, whose goals are to popularize medical science (Fig. 11).

Natalia Rafailovna pays much attention to rising a medical generation, willingly works with students within the framework of a Student Scientific Society, a dissection circle and the "Student-Teacher" project (Fig. 12). It is worth noting that N.R. Karelina headed the Student Scientific Society of the University for a long time. Nowadays as well as in times past she shares her experience, knowledge and wisdom with pleasure and eagerness. At present almost all young lecturers at the department are direct students of professor Karelina.

One cannot help noting Natalia Rafailovna's refined artistic taste, and it is not without reason, because she was

grown up in the family of artists. Apart from this, N.R. Karelina is marked with outstanding willpower, unyieldingness and brilliant organizational abilities, which she owes to her grandfather, Major General Ivan Ivanovich Chezlov. In 1939 he did a 400-kilometer march on the frozen Amur river to the construction site of the city of Komsomolsk-on-Amur without any loss among the soldiers which is a reason for proud in the whole family.

Natalia Rafailovna is a person of everburning energy, optimism and faith in the best, sometimes she can be emotional, strict, but at the same time she is always a very kind and fair, creative, beautiful and charismatic woman (Fig. 13). Whatever happens, she always knows how to help, what to say and what to do. Natalia Rafailovna inspires everybody with her sunny smile and helps to look into the future under new, not always visible angle.

Natalia Rafailovna has got a big and loving family. She is a grandmother, she has got three grandchildren and two great grandchildren, and dozens of devoted disciples for whom she is more than a teacher, who love and appreciate her.

The staff of the Department of Human Anatomy, The University Administration, the Academic Council, the St. Petersburg Branch of the Scientific Medical Society of Anatomists, Histologists and Embryologists, the Editorial Board of the journal "Russian Biomedical Research", and students cordially congratulate Natalia Rafailovna, wish her good health, inexhaustible energy and creative success for the benefit of her beloved science and her native university.

REFERENCES

1. Karelina N.R., Sokolova I.N., Pugach P.V. i dr. Anatomiya cheloveka v testovykh zadaniyakh. [Human anatomy in test tasks]. Uchebnoye posobiye dlya ispol'zovaniya v uchebnom protsesse obrazovatel'nykh organizatsiy, realizuyushchikh programmy vysshego obrazovaniya po spetsial'nostyam 31.05.01 «Lechebnoye delo», 31.05.02 «Pediatriya», 32.05.01 «Mediko-profilakticheskoye delo», 31.05.03 «Stomatologiya». 3-ye izdaniye, ispravlennoye i dopolnennoye. Moskva: GEOTAR-Media Publ.; 2017. EDN YOVRBR. (in Russian).
2. Andreyev I.A. Individual'no-tipologicheskiye osobennosti parametrov zheludochkovoy sistemy golovnog mozga cheloveka. [Individual typological features of the parameters of the ventricular system of the human brain]. Spetsial'nost' 14.03.01 «Anatomiya cheloveka». Dis. ... kand. med. nauk. Sankt-Peterburg; 2008. EDN YGBJHH. (in Russian).
3. Bobkov P.S. Stroyeniye venulyarnogo otdela mikrotsirkulyatornogo rusla i sinusoidov pecheni v norme i pri dlitel'noy alkogol'noy intoksikatsii. [The structure of the venular microvasculature and liver sinusoids in normal conditions and during long-term alcohol intoxication].

- ication]. Spetsial'nost' 14.03.01 «Anatomiya cheloveka». Dis. ... kand. med. nauk. Sankt-Peterburg; 2012. EDN QFMNXZ. (in Russian).
4. Breusenko D.V. Izmeneniye morfologii timusa kry's pri vozdeystvii etanola i immunokorreksii (eksperimental'no-morfologicheskoye issledovaniye). [Changes in the morphology of the rat thymus under the influence of ethanol and immunocorrection (experimental morphological study)]. Spetsial'nost' 14.03.01 «Anatomiya cheloveka». Dis. ... kand. med. nauk. 2019. EDN JMVCA. (in Russian).
 5. Droblenkov A.V., Karelina N.R., Shabanov P.D. Diagnostika alkogol'noy intoksikatsii po mikromorfologicheskim izmeneniyam neyronov i neyroglii mezoakumbotsingulyarnoy dofaminergicheskoy sistemy v eksperimente. [Diagnosis of alcohol intoxication by micromorphological changes in neurons and neuroglia of the meso-accumbingular dopaminergic system in an experiment]. Sudebno-meditinskaya ekspertiza. 2009; 52(6): 25–8. EDN YKEVRX. (in Russian).
 6. Droblenkov A.V. Morfologicheskoye izmeneniya neyronov i makroglitsitov osnovnykh otdelov mezokortikolimbicheskoy dofaminergicheskoy sistemy pri vozdeystvii etanola. [Morphological changes in neurons and macroglial cells of the main sections of the mesocorticolimbic dopaminergic system when exposed to ethanol]. Spetsial'nost' 14.03.01 «Anatomiya cheloveka». Dis. ... dok. med. nauk. Sankt-Peterburg; 2010. EDN QEWYAN. (in Russian).
 7. Droblenkov A.V., Bobkov P.S., Karelina N.R. Razlichiya reaktivnykh izmeneniy adventitsial'nykh obolochek mel'chayshikh venoznykh sosudov pecheni pri alkogol'nom povrezhdenii. [Differences in reactive changes in the adventitial membranes of the smallest venous vessels of the liver during alcohol damage]. Angiologiya i sosudistaya khirurgiya. 2012; 18(S). EDN VUIKGJ. (in Russian).
 8. Droblenkov A.V., Karelina N.R. Usileniye zaprogramirovannoy gibeli i degenerativnyye izmeneniya neyronov mezokortiko-limbicheskoy dofaminergicheskoy sistemy kak vozmozhnaya prichina vrozhdennoy alkogol'noy zavisimosti. [Increased programmed death and degenerative changes in neurons of the mesocorticolimbic dopaminergic system as a possible cause of congenital alcohol dependence]. Morfologiya. 2012; 141(1): 16–22. EDN OPTYYN. (in Russian).
 9. Pugach P.V., Kruglov S.V., Denisova G.N., Karelina N.R. Izmeneniya v timuse novorozhdennykh kry's posle antenatal'noy etanolovoy intoksikatsii. [Changes in the thymus of newborn rats after antenatal ethanol intoxication]. Morfologiya. 2019; 155(2): 236–7. EDN VCI-BRP. (in Russian).
 10. Karelina N.R., Sokolova I.N., Khisamutdinova A.R. Anatomiya cheloveka v grafologicheskikh strukturakh. [Human anatomy in graphological structures]. Uchebnik. Moskva: GEOTAR-Media Publ.; 2018. EDN ZRRKPF. (in Russian).
 11. Karelina N.R. Morfogenez, mikroskopicheskaya anatomiya i ul'tra-struktura vorsinok toshchey kishki (eksperimental'no-morfologicheskoye issledovaniye). [Morphogenesis, microscopic anatomy and ultrastructure of jejunal villi (experimental morphological study)]. Spetsial'nost' 14.03.01 «Anatomiya cheloveka». Dis. ... dok. med. nauk. Sankt-Peterburg; 1994. EDN YFJAFV. (in Russian).
 12. Karelina N.R. Morfogenez, mikroskopicheskaya anatomiya i ul'tra-struktura vorsinok toshchey kishki (eksperimental'no-morfologicheskoye issledovaniye). [Morphogenesis, microscopic anatomy and ultrastructure of jejunal villi (experimental morphological study)]. Spetsial'nost' 14.03.01 «Anatomiya cheloveka». Avtoref. dis. ... dok. med. nauk. Moskva; 1994. EDN YFJAFV. (in Russian).
 13. Karelina N.R. Lecheniye furunkulov litsa metodom gipotermii. [Treatment of facial boils using hypothermia]. Stomatologiya. 1977; 56(1): 71–2. EDN YGYIGB. (in Russian).
 14. Karelina N.R., Kruglov S.V., Pugach P.V. Morfologicheskoye obosnovaniye pokazateley smertnosti potomstva kry's posle etanolovoy intoksikatsii. [Morphological substantiation of mortality rates of rat offspring after ethanol intoxication]. Morfologiya. 2014; 145(3): 87–87a. EDN ZHSWMF. (in Russian).
 15. Karelina N.R. Slovar' anatomicheskikh terminov (russko-latinsko-angliyskiy). [Dictionary of anatomical terms (Russian-Latin-English)]. Sankt-Peterburg: Sankt-Peterburgskiy gosudarstvennyy pediatricheskiy meditsinskiy universitet; 2020. EDN JRMIWR. (in Russian).
 16. Karelina N.R., Artyukh L.Yu. Stroyeniye zuba. [The structure of the tooth]. Uchebnoye posobiye. Sankt-Peterburg: Sankt-Peterburgskiy gosudarstvennyy pediatricheskiy meditsinskiy universitet. 2023. EDN CWPAML. (in Russian).
 17. Kuz'makov E.G. Osobennosti stroyeniya i krovosnabzheniya peredney zubchatoy myshtsy kak autotransplantata. [Features of the structure and blood supply of the serratus anterior muscle as an autograft]. Spetsial'nost' 14.00.02. Dis. ... kand. med. nauk. Sankt-Peterburg; 2008. EDN NQLNZV. (in Russian).
 18. Kamysheva V.V., Mironov V.A., Mironov A.A., Karelina N.R. Morfofunktsional'nyye osobennosti razlichnykh otdelov krovenosnogo mikrotsirkulyatornogo rusla vorsinki toshchey kishki beloy kry'sy. [Morphofunctional features of various parts of the circulatory microvasculature of the white rat jejunal villi]. Arkhiv anatomii, gistologii i embriologii. 1985; 88(5): 44–50. EDN SXMYTX. (in Russian).
 19. Oppedizano M.D.L., Artyukh L.Yu., Karelina N.R. Klassifikatsii vrozhdennykh porokov razvitiya verkhney konechnosti: vzglyad skvoz' prizmu vremeni. [Classifications of congenital malformations of the upper limb: a view through the prism of time]. Ortopediya, travmatologiya i vosstanovitel'naya khirurgiya detskogo vozrasta. 2022; 10(4): 481–90. EDN PZGVKY. (in Russian).
 20. Pugach P.V., Kruglov S.V., Karelina N.R., Lukina N.N. Osobennosti stroyeniya bryzheyechnykh limfaticheskikh uzlov novorozhdennykh kry's, razvivavshikhsya v usloviyakh prenatal'noy etanolovoy intoksikatsii. [Features of the structure of the mesenteric lymph nodes of newborn rats that developed under conditions of prenatal ethanol intoxication]. Morfologiya. 2012; 141(3). EDN VUOATF. (in Russian).
 21. Pugach P.V. Vliyaniye dlitel'nosti etanolovoy intoksikatsii na kry's i immunnye organy ikh potomstva (eksperimental'no-morfologicheskoye issledovaniye). [The influence of the duration of ethanol intoxication on rats and their immune organs of their offspring (experimental morphological study)]. Spetsial'nost' 14.03.01 «Anatomiya cheloveka». Dis. ... dok. med. nauk. Sankt-Peterburg; 1994. EDN YFJAFV. (in Russian).

- eskoye issledovaniye). [The influence of the duration of ethanol intoxication on rats and the immune organs of their offspring (experimental morphological study)]. Spetsial'nost' 14.03.01 «Anatomiya cheloveka». Dis. ... dok. med. nauk. Sankt-Peterburg; 2012. EDN YIGMH. (in Russian).
22. Pugach P.V., Kruglov S.V., Karelina N.R. Osobennosti stroeniya timusa novorozhdennykh krysh, razvivavshikhsya v usloviyakh prenatal'noy etanolovoy intoksikatsii. [Features of the structure of the thymus of newborn rats that developed under conditions of prenatal ethanol intoxication]. Morfologiya. 2012; 141(3): EDN SXOQZX. (in Russian).
23. Pugach P.V., Kruglov S.V., Karelina N.R. Osobennosti stroeniya timusa i kranial'nykh bryzheyeknykh limfaticheskikh uzlov u novorozhdonnykh krysh posle prenatal'nogo vozdeystviya etanola. [Features of the structure of the thymus and cranial mesenteric lymph nodes in newborn rats after prenatal exposure to ethanol]. Morfologiya. 2013; 144(4): 030–5. EDN RCEFGZ. (in Russian).
24. Pugach P.V., Kruglov S.V., Karelina N.R. Osobennosti timusa novorozhdennykh krysh posle prenatal'nogo vozdeystviya etanola. [Features of the thymus of newborn rats after prenatal exposure to ethanol]. Profilakticheskaya i klinicheskaya meditsina. 2011; 1(38). EDN XYHOAV. (in Russian).
25. Pugach P.V., Karelina N.R., Kruglov S.V. Stroyeniye limfoidnykh blyashek tonkoy kishki u krysh v rannem postnatal'nom ontogeneze posle vozdeystviya etanola v sisteme «mat'-plod». [The structure of lymphoid plaques of the small intestine in rats in early postnatal ontogenesis after exposure to ethanol in the "mother-fetus" system]. Morfologiya. 2008; 133(4). EDN XYHNGB. (in Russian).
26. Bobkov P.S., Droblenkov A.V., Val'kovich E.I., Karelina N.R. Razlichiya reaktivnykh izmeneniy adventitsial'nykh obolochek mel'chayshikh venoznykh sosudov pecheni pri alkogol'nom povrezhdenii. [Differences in reactive changes in the adventitial membranes of the smallest venous vessels of the liver during alcohol damage]. Angiologiya i sosudistaya khirurgiya. 2012; 18(S). EDN VUIKHD. (in Russian).
27. Pugach P.V., Karelina N.R., Kruglov S.V., Chuykov S.A. Reaktsiya limfoidnykh blyashek tonkoy kishki krysh na prenatal'noye vozdeystviye alkogolya. [Response of rat small intestinal lymphoid plaques to prenatal alcohol exposure]. Morfologiya. 2008; 133(2). EDN JUT-VHX. (in Russian).
28. Svirin S.V. Stroyeniye bryzheyeknykh limfaticheskikh uzlov u novorozhdonnykh krysh pri vozdeystvii alkogolya na sistemu «mat'-plod» (eksperimental'no-morfologicheskoye issledovaniye). [The structure of mesenteric lymph nodes in newborn rats under the influence of alcohol on the "mother-fetus" system (experimental morphological study)]. Spetsial'nost' 14.03.01 «Anatomiya cheloveka». Dis. ... kand. med. nauk. Sankt-Peterburg; 2010. EDN YGBCBF. (in Russian).
29. Sovremennyye metody elektronno-mikroskopicheskogo issledovaniya v morfologii. [Modern methods of electron microscopic research in morphology]. Uchebno-metodicheskoye posobiye. Leningrad: Sankt-Peterburgskiy gosudarstvennyy pediatricheskiy meditsinskiy universitet; 1986. EDN XSJCYX. (in Russian).
30. Breusenko D.V., Dimov I.D., Klimenko Ye.S., Karelina N.R. Sovremennyye predstavleniya o morfologii timusa. [Modern ideas about the morphology of the thymus]. Pediatr. 2017; 8(5): 91–5. DOI 10.17816/PED8591-95. EDN ZVPVVV. (in Russian).
31. Pugach P.V., Kruglov S.V., Karelina N.R. i dr. Stroyeniye timusa i bryzheyeknykh limfaticheskikh uzlov novorozhdennykh krysh v rezul'tate antenatal'nogo vliyaniya etanola. [The structure of the thymus and mesenteric lymph nodes of newborn rats as a result of the antenatal influence of ethanol]. Pediatr. 2015; 6(4): 51–5. DOI 10.17816/PED6451-55. EDN VLGBCN. (in Russian).
32. Sysoyeva N.N. Stroyeniye bryzheyeknykh limfaticheskikh uzlov krysh v rannem postnatal'nom ontogeneze pri vozdeystvii etanola (eksperimental'no-morfologicheskoye issledovaniye). [The structure of the mesenteric lymph nodes of rats in early postnatal ontogenesis under the influence of ethanol (experimental morphological study)]. Spetsial'nost' 14.03.01 «Anatomiya cheloveka». Dis. ... kand. med. nauk. Sankt-Peterburg; 2012. EDN VWGQHW. (in Russian).
33. Karelina N.R., Sesorova I.S., Beznusenko G.V. i dr. Ul'trastrukturnyye osnovy protsessa obrazovaniya limfy. [Ultrastructural foundations of the process of lymph formation]. Morfologiya. 2017; 151(2): 7–19. EDN YPEEWZ. (in Russian).
34. Vasiliyev A.G., Khaytsev N.V., Trashkov A.P. i dr. Fiziologiya s osnovami anatomii. [Physiology with basic anatomy]. Uchebnik. Vyssheye obrazovaniye. Spetsialitet. Moskva: Infra-M Publ.; 2016. EDN VWTJFX. (in Russian).
35. Natochin Yu.V., Narkevich I.A., Yakovlev V.N. i dr. Fiziologiya s osnovami anatomii. [Physiology with basic anatomy]. Uchebnik pod red. A.I. Tyukavina, V.A. Chereshneva, V.N. Yakovleva, I.V. Gayvoronskogo. Moskva: Infra-M Publ.; 2016. EDN YAQXRZ. (in Russian).
36. Sesorova I.S., Kashin A.D., Sesorov V.V. et al. Cellular and sub-cellular mechanisms of lipid transport from gut to lymph. Tissue and Cell. 2021; 72. DOI 10.1016/j.tice.2021.101529. EDN LWJXMJ.
37. Droblenkov A.V., Karelina N.R., Shabanov P.D. Changes in neurons and gliocytes in the mesoaccumbocingulate system on perinatal exposure to morphine in rats. Neuroscience and Behavioral Physiology. 2010; 40(8): 848–51. DOI 10.1007/s11055-010-9334-0. EDN OHNVZT.
38. Droblenkov A.V., Karelina N.R. Increases in programmed death and degenerative changes to neurons in the mesocorticolimbic dopaminergic system as a possible cause of congenital alcohol dependence. Neuroscience and Behavioral Physiology. 2013; 43(1): 10–6. DOI 10.1007/s11055-012-9684-x. EDN REYNIX.
39. Nikonova M.A., Sesorova I.S., Dimov I.D. et al. Effect of the First Feeding on Enterocytes of Newborn Rats. International Journal of Molecular Sciences. 2022; 23(22): 14179. DOI 10.3390/ijms232214179. EDN LJERRH.
40. Mironov A.A., Beznoussenko G.V., Sesorova I.S. et al. Intracellular transports and atherogenesis. Frontiers in Bioscience. 2020; 25(7): 1230–58. DOI 10.2741/4854. EDN LAPYNL.

41. Karelina N.R., Droblenkov A.V. Structural characteristics of neurons and macrogliaocytes in interconnected regions of the mesoaccumbenscingulate dopaminergic system in Rats. *Neuroscience and Behavioral Physiology*. 2010; 40(7): 761–6. DOI 10.1007/s11055-010-9323-3. EDN MXJLVX.
42. Oppedisano M.G., Artyukh L.Y., Karelina N.R. The Father of Heart Transplantation Vladimir P. Demikhov. *Medicina Historica*. 2021; 5(1): 1–11. EDN EIGLEL.
43. Denisova G.N., Dimov I.D., Zaitseva A.V. et al. Overloading of differentiated Caco-2 cells during lipid transcytosis induces glycosylation mistakes in the Golgi complex. *Biocell*. 2021; 45(3): 773–83. DOI 10.32604/BIOCELL.2021.014233. EDN GINNMB.
44. Sesorova I.S., Kazakova T.E., Zdorikova M.A. et al. Structure of the enterocyte transcytosis compartments during lipid absorption. *Histochemistry and Cell Biology*. 2020; 153(6): 413–29. DOI 10.1007/s00418-020-01851-3. EDN EPQBUU.
8. Дробленков А.В., Карелина Н.Р. Усиление запрограммированной гибели и дегенеративные изменения нейронов мезокортико-лимбической дофаминергической системы как возможная причина врожденной алкогольной зависимости. *Морфология*. 2012; 141(1): 16–22. EDN OPTYYN.
9. Пугач П.В., Круглов С.В., Денисова Г.Н., Карелина Н.Р. Изменения в тимусе новорожденных крыс после антенатальной этаноловой интоксикации. *Морфология*. 2019; 155(2): 236–7. EDN VCIBRP.
10. Карелина Н.Р., Соколова И.Н., Хисамутдинова А.Р. *Анатомия человека в графологических структурах*. Учебник. М.: ГЭОТАР-Медиа; 2018. EDN ZRRKPF.
11. Карелина Н.Р. Морфогенез, микроскопическая анатомия и ультраструктура ворсинок тощей кишки (экспериментально-морфологическое исследование). Специальность 14.03.01 «Анатомия человека». Дис. ... док. мед. наук. СПб.; 1994. EDN YFJAFV.

ЛИТЕРАТУРА

1. Карелина Н.Р., Соколова И.Н., Пугач П.В. и др. *Анатомия человека в тестовых заданиях*. Учебное пособие для использования в учебном процессе образовательных организаций, реализующих программы высшего образования по специальностям 31.05.01 «Лечебное дело», 31.05.02 «Педиатрия», 32.05.01 «Медико-профилактическое дело», 31.05.03 «Стоматология». 3-е издание, исправленное и дополненное. М.: ГЭОТАР-Медиа; 2017. EDN YOVRBR.
2. Андреев И.А. Индивидуально-типологические особенности параметров желудочковой системы головного мозга человека. Специальность 14.03.01 «Анатомия человека». Дис. ... канд. мед. наук. СПб.; 2008. EDN YGBJNH.
3. Бобков П.С. Строение веноулярного отдела микроциркуляторного русла и синусоидов печени в норме и при длительной алкогольной интоксикации. Специальность 14.03.01 «Анатомия человека». Дис. ... канд. мед. наук. СПб.; 2012. EDN QFMNXZ.
4. Бреусенко Д.В. Изменение морфологии тимуса крыс при воздействии этанола и иммунокоррекции (экспериментально-морфологическое исследование). Специальность 14.03.01 «Анатомия человека». Дис. ... канд. мед. наук. 2019. EDN JMVCSJA.
5. Дробленков А.В., Карелина Н.Р., Шабанов П.Д. Диагностика алкогольной интоксикации по микроморфологическим изменениям нейронов и нейроглии мезоаккумуляционной дофаминергической системы в эксперименте. Судебно-медицинская экспертиза. 2009; 52(6): 25–8. EDN YKEVRX.
6. Дробленков А.В. Морфологические изменения нейронов и макроглиоцитов основных отделов мезокортиколимбической дофаминергической системы при воздействия этанола. Специальность 14.03.01 «Анатомия человека». Дис. ... док. мед. наук. СПб.; 2010. EDN QEWWAN.
7. Дробленков А.В., Бобков П.С., Карелина Н.Р. Различия реактивных изменений адвентициальных оболочек мельчайших венозных сосудов печени при алкогольном повреждении. *Ангиология и сосудистая хирургия*. 2012; 18(S). EDN VUIKGJ.
12. Карелина Н.Р. Морфогенез, микроскопическая анатомия и ультраструктура ворсинок тощей кишки (экспериментально-морфологическое исследование). Специальность 14.03.01 «Анатомия человека». Автореф. дис. ... док. мед. наук. М.; 1994. EDN YFJAFL.
13. Карелина Н.Р. Лечение фурункулов лица методом гипотермии. *Стоматология*. 1977; 56(1): 71–2. EDN YGYIGB.
14. Карелина Н.Р., Круглов С.В., Пугач П.В. Морфологическое обоснование показателей смертности потомства крыс после этаноловой интоксикации. *Морфология*. 2014; 145(3): 87–87а. EDN ZHSWMF.
15. Карелина Н.Р. *Словарь анатомических терминов (русско-латинско-английский)*. СПб.: Санкт-Петербургский государственный педиатрический медицинский университет; 2020. EDN JRMWIR.
16. Карелина Н.Р., Артюх Л.Ю. *Строение зуба*. Учебное пособие. СПб.: Санкт-Петербургский государственный педиатрический медицинский университет. 2023. EDN CWPAML.
17. Кузьмаков Э.Г. Особенности строения и кровоснабжения передней зубчатой мышцы как аутоотрансплантата. Специальность 14.00.02. Дис. ... канд. мед. наук. СПб.; 2008. EDN NQLNZV.
18. Камышова В.В., Миронов В.А., Миронов А.А., Карелина Н.Р. Морфофункциональные особенности различных отделов кровеносного микроциркуляторного русла ворсинки тощей кишки белой крысы. *Архив анатомии, гистологии и эмбриологии*. 1985; 88(5): 44–50. EDN SXMYTX.
19. Оппедизано М.Д.Л., Артюх Л.Ю., Карелина Н.Р. Классификации врожденных пороков развития верхней конечности: взгляд сквозь призму времени. *Ортопедия, травматология и восстановительная хирургия детского возраста*. 2022; 10(4): 481–90. EDN PZGVKY.
20. Пугач П.В., Круглов С.В., Карелина Н.Р., Лукина Н.Н. Особенности строения брыжеечных лимфатических узлов новорожден-



- ных крыс, развивавшихся в условиях пренатальной этаноловой интоксикации. Морфология. 2012; 141(3). EDN VUOATF.
21. Пугач П.В. Влияние длительности этаноловой интоксикации на крыс и иммунные органы их потомства (экспериментально-морфологическое исследование). Специальность 14.03.01 «Анатомия человека». Дис. ... док. мед. наук. СПб.; 2012. EDN YIGMHN.
22. Пугач П.В., Круглов С.В., Карелина Н.Р. Особенности строения тимуса новорожденных крыс, развивавшихся в условиях пренатальной этаноловой интоксикации. Морфология. 2012; 141(3): EDN SXOQZX.
23. Пугач П.В., Круглов С.В., Карелина Н.Р. Особенности строения тимуса и краниальных брыжеечных лимфатических узлов у новорождённых крыс после пренатального воздействия этанола. Морфология. 2013; 144(4): 030–5. EDN RCEFGZ.
24. Пугач П.В., Круглов С.В., Карелина Н.Р. Особенности тимуса новорожденных крыс после пренатального воздействия этанола. Профилактическая и клиническая медицина. 2011; 1(38). EDN XYHOAV.
25. Пугач П.В., Карелина Н.Р., Круглов С.В. Строение лимфоидных бляшек тонкой кишки у крыс в раннем постнатальном онтогенезе после воздействия этанола в системе «мать-плод». Морфология. 2008; 133(4). EDN XYHNGB.
26. Бобков П.С., Дробленков А.В., Валькович Э.И., Карелина Н.Р. Различия реактивных изменений адвентициальных оболочек мельчайших венозных сосудов печени при алкогольном повреждении. Ангиология и сосудистая хирургия. 2012; 18(S). EDN VUIKHD.
27. Пугач П.В., Карелина Н.Р., Круглов С.В., Чуйков С.А. Реакция лимфоидных бляшек тонкой кишки крыс на пренатальное воздействие алкоголя. Морфология. 2008; 133(2). EDN JUTVHX.
28. Свириной С.В. Строение брыжеечных лимфатических узлов у новорождённых крыс при воздействии алкоголя на систему «мать-плод» (экспериментально-морфологическое исследование). Специальность 14.03.01 «Анатомия человека». Дис. ... канд. мед. наук. СПб.; 2010. EDN YGBCBF.
29. Современные методы электронно-микроскопического исследования в морфологии. Учебно-методическое пособие. Ленинград: Санкт-Петербургский государственный педиатрический медицинский университет; 1986. EDN XSJCYX.
30. Бреусенко Д.В., Димов И.Д., Клименко Е.С., Карелина Н.Р. Современные представления о морфологии тимуса. Педиатр. 2017; 8(5): 91–5. DOI 10.17816/PED8591-95. EDN ZVPVVV.
31. Пугач П.В., Круглов С.В., Карелина Н.Р. и др. Строение тимуса и брыжеечных лимфатических узлов новорожденных крыс в результате антенатального влияния этанола. Педиатр. 2015; 6(4): 51–5. DOI 10.17816/PED6451-55. EDN VLGBCN.
32. Сысоева Н.Н. Строение брыжеечных лимфатических узлов крыс в раннем постнатальном онтогенезе при воздействии этанола (экспериментально-морфологическое исследование). Специальность 14.03.01 «Анатомия человека». Дис. ... канд. мед. наук. СПб.; 2012. EDN VWGQHW.
33. Карелина Н.Р., Сесорова И.С., Безнусенко Г.В. и др. Ультроструктурные основы процесса образования лимфы. Морфология. 2017; 151(2): 7–19. EDN YPEEWZ.
34. Васильев А.Г., Хайцев Н.В., Трашков А.П. и др. Физиология с основами анатомии. Учебник. Высшее образование. Специалитет. М.: Инфра-М; 2016. EDN VWTJFX.
35. Наточин Ю.В., Наркевич И.А., Яковлев В.Н. и др. Физиология с основами анатомии. Учебник под ред. А.И. Тюкавина, В.А. Черешнева, В.Н. Яковлева, И.В. Гайворонского. М.: Инфра-М; 2016. EDN YAQXRZ.
36. Sesorova I.S., Kashin A.D., Sesorov V.V. et al. Cellular and sub-cellular mechanisms of lipid transport from gut to lymph. Tissue and Cell. 2021; 72. DOI 10.1016/j.tice.2021.101529. EDN LWJXMJ.
37. Drobленkov A.V., Karelina N.R., Shabanov P.D. Changes in neurons and gliocytes in the mesoaccumbocingulate system on perinatal exposure to morphine in rats. Neuroscience and Behavioral Physiology. 2010; 40(8): 848–51. DOI 10.1007/s11055-010-9334-0. EDN OHNVZT.
38. Drobленkov A.V., Karelina N.R. Increases in programmed death and degenerative changes to neurons in the mesocorticolimbic dopaminergic system as a possible cause of congenital alcohol dependence. Neuroscience and Behavioral Physiology. 2013; 43(1): 10–6. DOI 10.1007/s11055-012-9684-x. EDN REYNIX.
39. Nikonova M.A., Sesorova I.S., Dimov I.D. et al. Effect of the First Feeding on Enterocytes of Newborn Rats. International Journal of Molecular Sciences. 2022; 23(22): 14179. DOI 10.3390/ijms232214179. EDN LJERRH.
40. Mironov A.A., Beznoussenko G.V., Sesorova I.S. et al. Intracellular transports and atherogenesis. Frontiers in Bioscience. 2020; 25(7): 1230–58. DOI 10.2741/4854. EDN LAPYNL.
41. Karelina N.R., Drobленkov A.V. Structural characteristics of neurons and macrogliocytes in interconnected regions of the mesoaccumbocingulate dopaminergic system in Rats. Neuroscience and Behavioral Physiology. 2010; 40(7): 761–6. DOI 10.1007/s11055-010-9323-3. EDN MXJLVX.
42. Oppedisano M.G., Artyukh L.Y., Karelina N.R. The Father of Heart Transplantation Vladimir P. Demikhov. Medicina Historica. 2021; 5(1): 1–11. EDN EIGLEL.
43. Denisova G.N., Dimov I.D., Zaitseva A.V. et al. Overloading of differentiated Caco-2 cells during lipid transcytosis induces glycosylation mistakes in the Golgi complex. Biocell. 2021; 45(3): 773–83. DOI 10.32604/BIOCELL.2021.014233. EDN GINMB.
44. Sesorova I.S., Kazakova T.E., Zdorikova M.A. et al. Structure of the enterocyte transcytosis compartments during lipid absorption. Histochemistry and Cell Biology. 2020; 153(6): 413–29. DOI 10.1007/s00418-020-01851-3. EDN EPQBUU.