DOI: https://doi.org/10.17816/PTORS109502

Historical Article



H. Turner National Medical Research Center for Children's Orthopedics and Trauma Surgery is 90 years old

Sergei V. Vissarionov, Alexey G. Baindurashvili, Alla V. Ovechkina, Anna V. Zaletina

H. Turner National Medical Research Center for Children's Orthopedics and Trauma Surgery, Saint Petersburg, Russia

In 2022, H. Turner National Medical Research Center for Children's Orthopaedics and Trauma Surgery of the Ministry of Health of the Russian Federation celebrates its 90th Anniversary. It is a unique and the only specialized institution in the world that treats children with orthopedic pathologies. The Center is known not only for its medical achievements, innovations and developments, but also for the amazing atmosphere of care and attention to children. The result of the activities of H. Turner National Medical Research Center is thousands of children who regained their ability to move and enjoy their childhood.

Keywords: H. Turner National Medical Research Center for Children's Orthopedics and Trauma Surgery; anniversary; 90th anniversary.

To cite this article:

Vissarionov SV, Baindurashvili AG, Ovechkina AV, Zaletina AV. H. Turner National Medical Research Center for Children's Orthopedics and Trauma Surgery is 90 years old. *Pediatric Traumatology, Orthopaedics and Reconstructive Surgery.* 2022;10(3):331–338. DOI: https://doi.org/10.17816/PTORS109502

Received: 27.07.2022 Accepted: 04.08.2022 Published: 13.09.2022



УДК 617-001+617.3]-061.62«1932-2022» DOI: https://doi.org/10.17816/PTORS109502

Историческая статья

Национальному медицинскому исследовательскому центру детской травматологии и ортопедии имени Г.И. Турнера 90 лет

С.В. Виссарионов, А.Г. Баиндурашвили, А.В. Овечкина, А.В. Залетина

Национальный медицинский исследовательский центр детской травматологии и ортопедии им. Г.И. Турнера, Санкт-Петербург, Россия

В 2022 г. ФГБУ «Национальный медицинский исследовательский центр детской травматологии и ортопедии им. Г.И. Турнера» Министерства здравоохранения Российской Федерации отмечает свой 90-летний юбилей. НМИЦ детской травматологии и ортопедии им. Г.И. Турнера — уникальное и единственное в мире специализированное учреждение, занимающееся лечением детей с ортопедической патологией. Центр знаменит не только своими успехами в медицине, инновациями и разработками, но и удивительной атмосферой заботы и внимания к детям. Результат деятельности Национального медицинского исследовательского центра детской травматологии и ортопедии имени Генриха Ивановича Турнера — это тысячи детишек, которым возвращена способность двигаться и радоваться детству.

Ключевые слова: НМИЦ детской травматологии и ортопедии имени Г.И. Турнера; юбилей; 90 лет.

Как цитировать:

Виссарионов С.В., Баиндурашвили А.Г., Овечкина А.В., Залетина А.В. Национальному медицинскому исследовательскому центру детской травматологии и ортопедии имени Г.И. Турнера 90 лет // Ортопедия, травматология и восстановительная хирургия детского возраста. 2022. Т. 10. № 3. С. 331—338. DOI: https://doi.org/10.17816/PTORS109502



In 1932, by the order of the Leningrad Health Department No. 28, the "Research Institute for Rehabilitation of Physically Handicapped Children" was established, which was immediately named after Professor Henry Ivanovich Turner, one of the founders of pediatric orthopedics in Russia, in association with the fiftieth anniversary of his scientific activity. One year later, owing to the importance of the state of the scientific and organizational tasks performed, by the order of the People's Commissariat for Health of the Russian Soviet Federative Socialist Republic; the institute received the status of a republican institution. Thus, the idea of Henry Turner to make the institute the center of the fight against child disability in the Union of Soviet Socialist Republics, as well as the methodological center organizing this fight, was implemented [1].

The Turner Institute began in 1890, when an orphanage for children with disabilities and paralysis was established on the initiative of the Blue Cross Charitable Society and under the patronage of Grand Duchess Yelizaveta Mavrikievna (Fig. 1). Professor Henry Ivanovich Turner, the head of the Department of Traumatology and Orthopedics of the Military Medical Academy, became the consultant for the orphanage. These were the first steps toward the development of pediatric orthopedics and traumatology in Russia. Henry Turner believed that children with disabilities and musculoskeletal diseases should not only receive orthopedic treatment, restoring their ability to move and self-serve, but also be rehabilitated socially and trained in accessible professions [2]. With this understanding of the need for systematic and highly qualified medical care, Henry Turner was the first in the country to raise his voice in defense of a child with a disability and emphasized the need for a systematic struggle by the state against this problem [3].

Initially, the orphanage, designed for several dozen children with musculoskeletal defects and injuries, was located in a wooden two-story building (Fig. 1).

Subsequently, a six-story stone building was constructed nearby by the trustees of the orphanage and rented out to receive funds for the maintenance of the orphanage. In 1919, this building at 10 Lakhtinskaya Street was entirely given over to the orphanage, which became known as the Medical and Educational House. In this building, the Turner Research Institute for the Rehabilitation of Physically Handicapped Children, with 200 beds, was opened in 1932 (Fig. 2).

H.I. Turner dreamed of transferring the institute to a suburban area, where fresh air would have a beneficial effect on children during the rehabilitation period. Projects for the construction of the institute buildings were already developed and submitted in 1937 to the Moscow People's Commissariat for Health for approval, and a land plot of 17 hectares in the Peterhof area was allocated. However, in 1941, the war disrupted these plans.



Fig. 1. Orphanage for children with disabilities and paralysis



Fig. 2. Research Institute for the Rehabilitation of Physically Handicapped Children

In 1949, M.N. Goncharova became the head of the institute. With incredible efforts, she implemented the project of H.I. Turner about the transfer of the institute to the suburban area, but now to Pushkin, where in 1962, a new three-story building was erected, and the old historical building of the Tsarist hospital for military people with disabilities, which was almost destroyed during the war, was restored. In 1967, the institute was transferred to Pushkin with the preservation of the historical building on Lakhtinskaya Street; 400 beds were arranged in Pushkin for the treatment of children



Fig. 3. Pushkin, house of charity for soldiers with disability

with congenital and acquired musculoskeletal diseases, neuroorthopedic pathologies, and rheumatoid arthritis [4, 5] (Fig. 3).

H.I. Turner, who possessed outstanding professional knowledge and full of scientific and creative ideas, used all his knowledge and experience in the treatment of orthopedic pathology in the development of the institution. He directed the activities of his employees to the study of the musculoskeletal and nervous systems in children and invited his colleagues, professors, experienced doctors, and leading clinical practitioners as consultants and researchers. The patients in the orphanage underwent surgical interventions that allowed them to regain the lost functions of the upper and lower extremities, move independently, master professional skills, and lead a normal independent life. Thus, as they would say at present, children with musculoskeletal defects received comprehensive rehabilitation. These traditions, established by H.I. Turner, are still alive and constitute the cardinal direction of medical, clinical, and research work at the institute.

In the pre-war period, scientific research corresponded to the practical needs of public health. To combat childhood disability, employees developed systems for the treatment and prevention of congenital and acquired musculoskeletal diseases and injuries in children and formulated organizational recommendations for the healthcare of the Russian Federation. The list of musculoskeletal pathologies was very extensive and included congenital maldevelopment of the skeleton, consequences of cerebral palsy and poliomyelitis that were widespread at that time, contractures and deformities associated with bone tuberculosis, infectious diseases, rickets, and severe and crippling street injuries, which required not only treatment but also prosthetics.

The war disrupted the implementation of promising scientific plans. Many employees were enlisted in the army field forces, and Leningrad also became a front, around which the blockade closed on September 8, 1941. Some of the children hospitalized were evacuated to the Krasnodar Territory and Ufa. Many children were or became orphans and were transferred to orphan asylums. During the winter of 1941–1942, a children's hospital for the treatment of alimentary dystrophy was arranged at the institute. The remaining part of the institute staff performed their professional duties, and active scientific work was conducted [6]. After the blockade of Leningrad was lifted, N.I. Shnirman, who was the head of the institute at that time, achieved the return of the institute and its employees to Lakhtinskaya Street.

Immediately after the end of the war, the activity of the institute was restored with redoubled energy. Surgical work intensified, and the surgical treatment of children with scoliosis (Professor Z.A. Lyandres, M.V. Akatov, Professor L.K. Zakrevskiy, V.I. Nikolaev, L.N. Kazakova, and N.P. Kudryakova) and congenital hip dislocation (Professor

M.N. Goncharova, A.V. Godunova, Professor I.I. Mirzoeva, T.A. Brovkina, MD, PhD), including congenital clubfoot, ectromelia, etc., was started. An organization system for the early detection, treatment, and dispensary follow-up of children with congenital and acquired musculoskeletal diseases was developed and implemented.

After M.N. Goncharova (1949–1968), in different years, professors L.K. Zakrevsky, P.Ya. Fishchenko, V.M. Demyanov, N.A. Ovsyankin, V.L. Andrianov, E.S. Tikhonenkov, and Yu.I. Pozdnikin were directors of the institute [4]. Each of them contributed to the modernization of the institute, improvement of its structure, and further prospective development of scientific research.

In the post-war years and up to the present, scientific research has been conducted systematically according to the plans of the Ministry of Health, and in recent decades, according to the plans of the state assignment. Previous publications covered the results of scientific research, whose authors were employees of the institute who made an undeniable contribution to the activities and history of the institution [7].

At present, the level of research has become even higher. Works on urgent problems using Russian and international experience, development of import-substituting tools, and technologies. In the range of all relevant scientific areas, the achievements of individual teams should be emphasized.

The employees of the Department of Spine Pathology have expanded the list of issues to be resolved on any congenital and acquired pathologies of the spine. In the surgical treatment of patients, high-tech surgical interventions are used with the application of spinal systems, namely, third-generation segmental instrumentation, which is used to perform three-plane deformity correction and stabilization of the spine, restore trunk balance, and prevent further progression of the pathology. Computer technologies are widely used. Based on the work results, two certificates were obtained for the discovery of previously unknown anatomical patterns in the development of scoliotic deformity, and eight monographs and an enormous number of scientific articles were published.

The experience of the research team of the Department of Pathology of the Hip Joint, as well as global experience, provided the possibility of performing various options for hip arthroplasty in adolescents with the development of stage III–IV coxarthrosis, especially since by the age of 14–18 years, the development of the pelvic girdle bones is almost entirely completed, and the growth zones of the hip joint in patients terminated after the complicated surgical interventions. For the first time, the institute has developed a method for planning total hip arthroplasty based on three-dimensional modeling using a virtual catalog of implants and individual prototyping to select the most adequate and accurate implant. For the first time, a virtual

database of surgical hardware and a protocol for selecting individual templates have been created. A virtual catalog of endoprostheses has been formed.

In Russia, the development of international scientific cooperation led to the introduction of a progressive method of conservative treatment of children with congenital clubfoot, proposed by I. Ponseti, which is the gold standard worldwide. The method demonstrates high efficiency, meets the principle of minimal invasiveness, and leads to a significant reduction in the total period of time spent on plaster casts by children. More than 800 patients with high anatomical and functional results (>95%) were treated. Compliance with the developed optimal treatment protocol and wearing abduction splints leads to the consolidation of the result. The method is widely used due to training in numerous master classes.

Another unique division of the institute is the Arthrogryposis Center, which is the only one in Europe. A data bank for more than 500 children with various forms of arthrogryposis has been created there. A system of early diagnostics and early conservative (from the neonatal period) and surgical treatment methods has been developed. The efficiency of transcutaneous spinal cord stimulation in these patients has been proven. With its use, upper limb function can be activated to improve existing or acquire new motor skills. In 2012, for the success achieved, the team of employees received the "Prizvaniye" award for the best doctors in Russia.

These are just a few of the scientific achievements to be proud of.

Young researchers and graduate students defend 2–3 Ph.D. theses annually, and the level of requirements for which has increased significantly compared with previous decades.

The institute is proud of the research work conducted in 2017–2020 within the program of the Union State together with the Republic of Belarus "Development of new spinal systems using prototyping technologies in the surgical treatment of children with severe congenital deformities and

injuries of the spine." Such a significant event of international cooperation is so far the first and only one, but very valuable.

In 2005, the institute was headed by Academician of the Russian Academy of Sciences Alexei Georgievich Baindurashvili, Professor, MD, PhD. Through the efforts of the energetic and charming director, many benefactors, large companies, and philanthropists were ready to help sick children and improve the conditions for their treatment and hospital stay, which had become very outdated since they had been transferred. The institute has been transformed; centuries-old walls have been renovated; territory beautification has been performed; the equipment has been modernized; and the working conditions of orthopedic doctors have been improved.

In 2009, a new building with 200 beds (founded in 1988) opened its doors. It comprises nine operating rooms equipped with contemporary medical equipment, an X-ray department, and research laboratories, which expand the possibilities of diagnostics, treatment, and rehabilitation (Fig. 4).

The historical building of the institute, which can rightly be called the cradle of the Turner Children's Orthopedic Institute, has been preserved to this day, overhauled, and repaired. Since 2012, there has been a multidisciplinary consultative and diagnostic center with modern equipment, a day hospital in combination with an operating room for performing minimally invasive surgical interventions, and a rehabilitation department equipped with robotic simulators for the treatment of orthopedic pathology and complications of injuries (Fig. 5). The molecular genetic laboratory is also located there.

The institute is actively developing, and new methods of an integrated approach to the treatment of children are being introduced. Based on the accumulated extensive experience in treating patients, incomparable with other institutions, and scientific development in certain fields, the Federal Children's Center for Spinal Injuries and Spinal Cord Injuries, the Center for the Treatment of Children with the Consequences of Spina Bifida, the Arthrogryposis Center, and the Outpatient Center



Fig. 4. New building



Fig. 5. Consultative and diagnostic center

for the Treatment of Children with Rheumatoid Arthritis were established

In 2020, by the order of the Ministry of Health of the Russian Federation, the institute was named as the H.I. Turner National Medical Research Center for Children's Orthopedics and Trauma Surgery (Fig. 6).

In 2020, Sergey Valentinovich Vissarionov, Doctor of Medical Sciences, Professor, and Corresponding Member of the Russian Academy of Sciences, became the Director of the National Medical Research Center for Children's Orthopedics and Trauma Surgery.

In 2021, units such as the Federal Center for Pediatric Traumatology and the Outpatient Center for Conservative Treatment of Scoliosis began operations, which focused on the provision of care for this category of patients, the creation of a management protocol, and the development of clinical recommendations. In 2022, the Center for Experimental and Translational Medicine, as well as the Laboratory of Additive Technologies, were established. The G.I. Gaivoronsky Laboratory of Experimental Traumatology and Orthopedics, the Scientific-Morphological Laboratory, and the Molecular-Genetic Laboratory were also opened.

The activities of the national center vary extremely and include scientific research, joint interregional and international scientific projects, and inventive activities. Research work is conducted according to the State Assignment of the Ministry of Health of the Russian Federation in accordance with the priority fields in traumatology and orthopedics.

Since 2013, the scientific journal *Pediatric Traumatology, Orthopaedics, and Reconstructive Surgery*, established by the institute, has been published quarterly. Its editor-inchief is Academician of the Russian Academy of Sciences A.G. Baindurashvili. The journal is included in the list of the Higher Attestation Commission and the international database Scopus. At least 70–80 articles with the results of scientific research are published not only in the journal of the institute but also in other highly rated Russian and international journals included in the international databases of Web of Science and Scopus annually. More than 30 abstracts and articles are included in conference proceedings and journal supplements, and some of them are written in English. The center receives more than 10 patents for inventions and utility models annually.

Clinical activities include the provision of scheduled and emergency medical care; the introduction of information and telemedicine technologies; improvement of the quality of medical care; improvement of the instrumental base of the institution; development of new programs, services, and directions; and the creation of specialized centers using an integrated multidisciplinary approach in the treatment of musculoskeletal pathologies. In the center, medical services under programs of specialized and high-tech medical care are available to all residents of the Russian Federation. Nowadays, the clinic of the center has 420 beds for children with musculoskeletal diseases and injuries and has nine specialized surgical departments, a rehabilitation



Fig. 6. H.I. Turner National Medical Research Center for Children's Orthopedics and Trauma Surgery

Vol. 10 (3) 2022

department, a robotic rehabilitation department, an operating unit with an anesthesiology and resuscitation department, laboratory units, as well as related and support services. The center develops and applies innovative technologies for diagnostics, surgical treatment, and rehabilitation of children with congenital and acquired musculoskeletal pathologies, complications of injuries, and burns. More than 8,000 patients receive treatment at the center's clinic, and more than 6,000 surgeries are performed annually. More than 50,000 children receive consultations in the outpatient department of the center, mostly at the Consultation and Diagnostic Clinic on Lakhtinskaya Street.

H.I. Turner National Medical Research Center for Children's Orthopedics and Trauma Surgery performs extensive scientific, organizational, and educational activities within continuous medical education to improve orthopedic care for children in the regions of Russia. The annual All-Russian Scientific and Practical Conferences of Pediatric Traumatologists and Orthopedists ("Turner Readings"), with sections on the treatment of pediatric patients with musculoskeletal injuries and orthopedic diseases in the program of all-scientific events of the Association of Traumatologists and Orthopedists of Russia; one-day seminars and symposiums with the participation of leading Russian and international orthopedic scientists; training cycles on diagnostics, treatment, and rehabilitation of congenital and acquired diseases of the musculoskeletal system [8].

To provide medical care to children in the field of traumatology and orthopedics, H.I. Turner National Medical Research Center for Children's Orthopedics and Trauma Surgery conducts organizational, methodological, and analytical work with territorial, republican, regional, and district medical organizations in 85 entities of the Russian Federation [8].

The center organizes training for residents, graduate students, traumatologists, and orthopedists under extended medical education programs. The Accreditation and Simulation Center conducts accreditation and certification of specialists based on the latest simulation technologies.

Following the time-honored traditions of the institution, the center develops and implements various social programs to support children with disabilities, performs active educational activities on preventing musculoskeletal injuries

and pathologies in children, and provides first aid. Historical traditions are carefully preserved, and cultural ties with the leading institutions of the country are being developed.

The staff of the H.I. Turner National Medical Research Center for Children's Orthopedics and Trauma Surgery consists of highly qualified specialists in their field, with unique knowledge and experience, and has been awarded several prestigious awards, particularly the International Synergy Award. It became the winner of the national award to the best doctors of Russia "Priznaniye" three times (2008, 2012, and 2018). Several employees of the center received prizes from the Government of the Russian Federation (2018) and the Government of St. Petersburg (2020). In 2019, Academician of the Russian Academy of Sciences A.G. Baindurashvili, together with Doctor of Medicine Professor Franz Grill (Austria), was awarded the N.I. Pirogov Big Gold Medal of the Russian Academy of Sciences "For fundamental and applied research in the field of pediatric traumatology and orthopedics." In 2022, the team of the H.I. Turner National Medical Research Center for Children's Orthopedics and Trauma Surgery of the Ministry of Health of Russia became the winner of the First All-Russian Award "Orgzdrav: Industry Leaders" in the nomination "People's Recognition."

The H.I. Turner National Medical Research Center for Children's Orthopedics and Trauma Surgery, being loyal to the ideas of its founders, continues the noble work of caring for sick children.

ADDITIONAL INFORMATION

Funding. The study had no external funding.

Conflict of interest. The authors declare no conflict of interest. **Author contributions.** *S.V. Vissarionov* and *A.G. Baindurashvili* introduced ideological inspiration and performed stage editing of the text. *A.V. Ovechkina* and *A.V. Zaletina* analyzed literary sources and wrote the article text.

All authors made a significant contribution to the study and preparation of the article, read and approved the final version before its publication.

Acknowledgments. We thank the whole team of the H.I. Turner National Medical Research Center for Children's Orthopedics and Trauma Surgery of the Ministry of Health of Russia for their loyalty to the profession and care for children!

REFERENCES

- **1.** Baindurashvili AG, Solovyova KS, Zaletina AV. Henry Ivanovich Turner founder of pediatric orthopedics in Russia. *Pediatric Traumatology, Orthopaedics and Reconstructive Surgery.* 2016;4(2):73–77. (In Russ.). DOI: 10.17816/PTORS4273-77
- 2. Baindurashvili AG, editor. Letopis' Nauchno-issledovatel'skogo detskogo ortopedicheskogo instituta im. G.I. Turnera. 120 let. Sluzhenie detyam. Vospominaniya, dokumenty, pis'ma 1890-2012. Saint Petersburg: DITON; 2012. (In Russ.)
- **3.** Baindurashvili AG, Vysoschuk ID, Ovechkina AV, et al. The 160th anniversary of Henry Turner. *Pediatric Traumatology, Orthopaedics and Reconstructive Surgery.* 2018;6(4):110–116. (In Russ.). DOI: 10.17816/PTORS64110-116
- **4.** Istoriya FGBU "NMITS detskoy travmatologii i ortopedii im. G.I. Turnera" Minzdrava Rossii. [cited 2022 Aug 5]. Available from: https://www.rosturner.ru/istoria/istoriya-tsentra/ (In Russ.)

Tom 10. № 3. 2022

- **5.** Goncharova MN. Ot priyuta dlya detey-kalek do vosstanovitel'nogo tsentra. In: Proceedings of the 11th scientific session of the Leningrad Scientific and Research Children's Orthopedic Institute named after G.I. Turner; Leningrad, 1969. P. 3–15. (In Russ.)
- **6.** Vissarionov SV, Vilinskaya SV, Ovechkina AV. Gody velikogo truda vrachei instituta Turnera. 1941–1945. Saint Petersburg: H. Turner National Medical Research Center for Children's Orthopedics and Trauma Surgery, 2022. 184 p.
- 7. Baindurashvili AG, Ovechkina AV, Zaletina AV. Razvitiye detskoy ortopedii i travmatologii v institute imeni G.I. Turnera: dostizhe-

niya i perspektivy. In: Novye tekhnologii v travmatologii i ortopedii detskogo vozrasta. Sbornik nauchnykh statei, posvyashchennyi 125-letiyu Nauchno-issledovatel'skogo detskogo ortopedicheskogo instituta imeni G.I. Turnera. Saint Petersburg, 2017. P. 8–23. (In Russ.)

8. Vissarionov SV, Baindurashvili AG, Ovechkina AV, Zaletina AV. NMITS detskoy travmatologii i ortopedii imeni G.I. Turnera — lider v okazanii travmatologo-ortopedicheskoy pomoshchi detskomu naseleniyu Rossiyskoy Federatsii. *Opinion Leader*. 2021;7(48):60–66. (In Russ.)

СПИСОК ЛИТЕРАТУРЫ

- 1. Баиндурашвили А.Г., Соловьева К.С., Залетина А.В. Генрих Иванович Турнер основоположник детской ортопедии в России // Ортопедия, травматология и восстановительная хирургия детского возраста. 2016. Т. 4, № 2. С. 73–77. DOI: 10.17816/PTORS4273-77
- **2.** Летопись Научно-исследовательского детского ортопедического института им. Г.И. Турнера. 120 лет. Служение детям. Воспоминания, документы, письма 1890—2012 гг. / под ред. А.Г. Баиндурашвили. Санкт-Петербург: ДИТОН, 2012.
- **3.** Баиндурашвили А.Г., Высощук И.Д., Овечкина А.В. и др. К 160-летию Генриха Ивановича Турнера // Ортопедия, травматология и восстановительная хирургия детского возраста. 2018. Т. 6, № 4. С. 110–116. DOI: 10.17816/PTORS64110-116
- **4.** История ФГБУ «НМИЦ детской травматологии и ортопедии им. Г.И. Турнера» Минздрава России. [дата обращения: 05.08.2022]. Доступ по ссылке: https://www.rosturner.ru/istoria/istoriya-tsentra/
- **5.** Гончарова М.Н. От приюта для детей-калек до восстановительного центра // Материалы XI научной сессии Ленинградского

научно-исследовательского детского ортопедического института имени Г.И. Турнера. Ленинград, 1969. С. 3–15.

- **6.** Виссарионов С.В., Вилинская С.В., Овечкина А.В. Годы великого труда врачей института Турнера. 1941—1945. Санкт-Петербург: ФГБУ «НМИЦ детской травматологии и ортопедии имени Г.И. Турнера» Минздрава РФ, 2022. 184 с.
- 7. Баиндурашвили А.Г., Овечкина А.В., Залетина А.В. Развитие детской ортопедии и травматологии в институте имени Г.И. Турнера: достижения и перспективы // Новые технологии в травматологии и ортопедии детского возраста. Сборник научных статей, посвященный 125-летию Научно-исследовательского детского ортопедического института имени Г.И. Турнера. Санкт-Петербург, 2017. С. 8–23.
- **8.** Виссарионов С.В., Баиндурашвили А.Г., Овечкина А.В., Залетина А.В. НМИЦ детской травматологии и ортопедии имени Г.И. Турнера лидер в оказании травматолого-ортопедической помощи детскому населению Российской Федерации // Opinion Leader. 2021. № 7 (48). С. 60–66.

AUTHOR INFORMATION

Sergei V. Vissarionov, MD, PhD, Dr. Sci. (Med.), Professor, Corresponding Member of RAS; ORCID: https://orcid.org/0000-0003-4235-5048; eLibrary SPIN: 7125-4930; ResearcherID: P-8596-2015; Scopus Author ID: 6504128319; e-mail: vissarionovs@gmail.com

Alexey G. Baindurashvili, MD, PhD, Dr. Sci. (Med.), Professor, Member of RAS, Honored Doctor of the Russian Federation; ORCID: https://orcid.org/0000-0001-8123-6944; Scopus Author ID: 6603212551; eLibrary SPIN: 2153-9050; e-mail: turner011@mail.ru

Alla V. Ovechkina, MD, PhD, Cand. Sci. (Med.), Assistant Professor, Honored Doctor of the Russian Federation; ORCID: https://orcid.org/0000-0002-3172-0065; Scopus Author ID: 6507566283; eLibrary SPIN: 7049-6674;

* Anna V. Zaletina, MD, PhD, Cand. Sci. (Med.); address: 64-68 Parkovaya str., Pushkin, Saint Petersburg, 196603, Russia;

e-mail: ovechkina.spb@mail.ru

ORCID: https://orcid.org/0000-0002-9838-2777; Scopus Author ID: 57193254848: ResearcherID: H

Scopus Author ID: 57193254848; ResearcherID: H-2439-2013; eLibrary SPIN: 4955-1830; e-mail: omoturner@mail.ru

* Corresponding author / Автор, ответственный за переписку

ОБ АВТОРАХ

Сергей Валентинович Виссарионов, д-р мед. наук, профессор, чл.-корр. PAH; ORCID: https://orcid.org/0000-0003-4235-5048; eLibrary SPIN: 7125-4930; ResearcherID: P-8596-2015; Scopus Author ID: 6504128319; e-mail: vissarionovs@gmail.com

Алексей Георгиевич Баиндурашвили, д-р мед. наук, профессор, академик РАН, заслуженный врач РФ; ORCID: https://orcid.org/0000-0001-8123-6944; Scopus Author ID: 6603212551; eLibrary SPIN: 2153-9050; e-mail: turner011@mail.ru

Алла Владимировна Овечкина, канд. мед. наук, доцент, заслуженный врач РФ; ORCID: https://orcid.org/0000-0002-3172-0065; Scopus Author ID: 6507566283; eLibrary SPIN: 7049-6674; e-mail: ovechkina.spb@mail.ru

* Анна Владимировна Залетина, канд. мед. наук; адрес: Россия, 196603, Санкт-Петербург, Пушкин, ул. Парковая, д. 64–68; ORCID: https://orcid.org/0000-0002-9838-2777; Scopus Author ID: 57193254848; ResearcherID: H-2439-2013; eLibrary SPIN: 4955-1830; e-mail: omoturner@mail.ru