

## ҚҰҚЫҚ СЕРИЯСЫ/ LAW SERIES/ СЕРИЯ ПРАВО

# Азаматтық құқық. Азаматтық процесс / Civil law. Civil process / Гражданское право. Гражданский процесс

IRSTI 10.31.91 Scientific article

https://doi.org/10.32523/2616-6844-2025-152-3-105-120

Comparative legal analysis of international experience in corporate dispute resolution: institutional approaches and possibilities of adaptation to the legislation of Kazakhstan

Sh.T. Baikenzhina\*<sup>10</sup>, G.A. Ilyassova<sup>20</sup>

<sup>1,2</sup>Karaganda Buketov University, Karaganda, Kazakhstan

(e-mail: baikenzhina89@mail.ru<sup>1</sup>, g.iliasova@mail.r<sup>2</sup>)

**Abstract:** The article is devoted to the comparative legal analysis of institutional approaches to corporate dispute resolution in leading foreign jurisdictions and the possibilities of their adaptation to the legislation of the Republic of Kazakhstan. The purpose of the study is to identify key elements through the prism of global legal practice that ensure the effectiveness of corporate dispute resolution - the availability of specialized courts, a well-developed system of arbitration and mediation, protection of minority shareholders' rights and flexibility of procedures. To achieve this goal, analyzed the effectiveness of foreign approaches in terms of the speed of dispute resolution and transparency of procedures, and explored best practices and legal instruments potentially applicable in the legal field, considering the specifics of national legislation, judicial practice and institutional infrastructure. The scientific and practical significance of the work lies in the systematization of international experience and the definition of directions for the reform of national legislation. The methodological part uses comparative law, formal law and the method of legal modeling. As a result, institutional and procedural mechanisms have been identified to ensure the effectiveness of corporate dispute resolution in different legal systems, and the conditions for their possible integration into the Kazakh legal system have been analyzed. The work contributes to the development of legal institutions in corporate law and suggests ways to improve law enforcement practice in the Republic of Kazakhstan. The practical significance lies in the formulation of recommendations for participants in the corporate process and iudicial authorities.

**Key words:** corporate dispute; arbitration; mediation; court; implementation; corporate relations.

Received: 09.06.2025. Accepted: 17.09.2025. Available online: 30.09.2025

<sup>1\*</sup>corresponding author

#### Introduction

In the context of transnationalization, globalization and the increasing complexity of corporate structures, the relevance of effective legal regulation of corporate disputes is increasing. Such conflicts that arise between participants in corporate relations – shareholders, the board of directors, the management of companies, as well as third parties - can significantly affect not only the stability of the business, but also the investment attractiveness of the country and the general state of the business environment. Different legal systems and countries, based on historically developed cultural and economic characteristics and legislation, offer their own approaches to resolving corporate disputes. These approaches reflect the peculiarities of national legislation, traditions of corporate governance and judicial practice. Scientific and practical study of foreign experience makes it possible to identify both effective mechanisms that promote rapid and fair conflict resolution, as well as potential risks and limitations in existing regulatory models.

The purpose of this study is to conduct a comparative analysis of the legal regulation of corporate disputes in a number of foreign jurisdictions. This will make it possible to identify the most effective tools of practice for considering the possibility of their implementation in the legal system of Kazakhstan. The study will examine the experience of countries such as Germany, the United States, the Russian Federation, the United Kingdom, Singapore, China and the United Arab Emirates, which have different legal systems and developed judicial practice in the field of corporate law. Such an analysis is especially important for Kazakhstan, where in recent years there has been an active reform of corporate legislation, the development of financial institutions and an increase in the number of corporate disputes, including with foreign elements and the participation of multinational companies. The identification and implementation of the best foreign practices can help to increase the effectiveness of the national mechanism for resolving corporate disputes, strengthen the business climate, increase investment attractiveness and protect the rights of participants in corporate relations.

To achieve this goal, the research aims to identify institutional and procedural mechanisms for resolving corporate disputes, evaluate the effectiveness of foreign approaches in terms of the speed of dispute resolution and transparency of procedures, as well as identify best practices and legal instruments potentially applicable in the legal field, taking into account the specifics of national legislation, judicial practice and institutional infrastructure..

The terms "corporate dispute" and "business dispute" will be used in the same way in the article, since the conceptual framework of these phrases is identical in the legislation of some countries.

#### Materials and methods

The comparative legal analysis is based on a study of regulations, official methodological documents and scientific publications related to the jurisdictions of Germany, the United States, the Russian Federation, the United Kingdom, Singapore, China and the United Arab Emirates, as well as ratified international conventions. The information base of the study includes the legislative bases of the countries, official websites of courts and arbitration centers, as well as highly rated scientific journals on the topic under study. The regulatory research includes the study of such acts as the German Arbitration Law, The UNCITRAL Model Law on International

Commercial Arbitration, The Federal Arbitration Act (USA), The Arbitration Procedure Code of the Russian Federation, Companies Act of the UK, the Insolence Act of the UK, Civil Procedure Rules of the UK, Partnership Act of the UK, United Nations Convention on the Recognition and Enforcement of Foreign Arbitration Awards, The Singapore Convention on Mediation, Company Law of the People's Republic of China, Civil Code of the People's Republic of China, Civil Procedure Law of the People's Republic of China.

The logical method of this research is the comparative legal method aimed at identifying differences and common aspects in the institutional mechanisms for resolving corporate disputes in various jurisdictions, as well as comparing them with the current legal system of the Republic of Kazakhstan. In addition to the comparative legal method, the study used the formal legal method, which allowed for a detailed analysis in various jurisdictions. The method of legal modeling was applied to assess the possibility of adapting and integrating certain effective foreign legal mechanisms into the national legal system of Kazakhstan. The use of these methods together provided a comprehensive and objective analysis, making it possible to identify both formal differences in legislative structures and practical aspects of the application of norms, which is especially important in the context of legal transplantation and the reform of national legislation.

#### Results and discussions

A comparative study by Alan K. Koh (2022) of the Anglo-German approaches to corporate dispute regulation demonstrates significant differences in the legal regulation of corporate disputes in these jurisdictions. While in Germany small and medium-sized enterprises (closelyheld) are registered in the organizational and legal form of closed corporations (GmbH), in the UK such enterprises operate in the organizational form of a private limited company [1; 197-228]. The German corporate sector is experiencing a particular increase in high-profile corporate disputes, which are of an investment and cross-border nature. Weghmann V. and Hall D. (2021) emphasize that reputable German corporations threaten to file lawsuits or actually file them in order to prevent the adoption of certain laws by the state that are unprofitable for business. This phenomenon is called regulatory chill. Examples of corporate disputes with both investment and cross-border elements include:

Veolia v. Egypt, a lawsuit over an increase in the minimum wage.

Vattenfal v. Germany – a claim for compensation for abandoning nuclear energy.

Philip Morris v. Australia is a dispute over tobacco packaging legislation.

Bechtel/Abengoa v. Bolivia – a lawsuit after the "water war" in Kochakomb.

Biwater v. Tanzania – a conflict over the failed privatization of water supply [2; 480-496].

These disputes were regulated within the framework of the Investor-State Dispute Settlement Mechanisms, international arbitration. German arbitrations are not an exception to the collision of such pressing issues as determining the applicable law in conflict of laws rules, the impact of insolvency on the award, the enforcement of the award and arbitration insolvency [3]. However, German corporate law has experience in recognizing the unacceptable arbitration legislation between investors and the state within the European Union. This is confirmed by the decision of the Court of Justice of the European Union (CJEU), which in 2018 recognized the arbitration clauses of bilateral investment treaties within the European Union as incompatible with the legislation of the European Union [4].

The German Arbitration Law [5] is synchronized with the UNCITRAL Model Law [6], which allows us to conclude that the legislation on corporate dispute resolution in Germany is in harmony with pan-European legislation. German corporate law is characterized by high flexibility in terms of corporate regulation, especially in relation to BMX. The most trusted arbitration institutions in the corporate environment are the International Chamber of Commerce (ICC) [7] and the Deutsche Institution für Schiedsgerichtsbarkeit (DIS) [8].

In the legal sphere of the United States, the more applicable term is business dispute, which more clearly emphasizes the nature of such disputes. The regulation of business disputes in the USA, including the use of alternative instruments, was considered by us in a separate study [9]. Examining the experience of legal regulation of corporate disputes in the United States, the legislative consolidation of the application of the Public Resources Act, which obliges US companies to use alternative dispute resolution methods before filing a lawsuit, is particularly noted. According to C.C. Ojimba (2024), the resolution of corporate disputes by alternative methods is the fastest, cheapest and most effective way of regulation [10]. The most famous and reputable arbitration organization in the United States is the American Arbitration Association (AAA), which was founded in 1926 and has a separate division for international arbitration. A year earlier, in 1925, the basic law of the Federal Arbitration Act was adopted in the USA, which regulates the activities of arbitrations to this day [11]. The statistics of reviewed cases posted on the official AAA website is impressive in number, according to which, since the establishment of this organization, that is, since 1926, it has reviewed 8,645,897 cases. The number of cases reviewed in 2025 (from January 1 to April 13) amounted to 148,454 cases [12]. These statistics demonstrate a high level of trust in AAA and the transparency of its activities.

Speaking about the regulation of corporate disputes in the United States, we would like to note the Online Dispute Resolution (ODR), an increasingly popular corporate dispute resolution tool. It is important to note that the United States is the country with the largest number of ODR platforms, with over 60. It was the United States that recognized ODR as an alternative dispute resolution method [13].

In Russian legislation, civil procedure and arbitration are independent codified institutions. The regulation of corporate disputes is enshrined in the arbitration procedural legislation – the Arbitration Procedural Code of the Russian Federation, which was adopted by the State Duma in 2002 [14]. The consideration of cases on corporate disputes is fixed in Chapter 28.1 of the Arbitration Procedure Code, which regulates the procedure for the consideration of cases on corporate disputes, requirements for a statement of claim on corporate disputes, ensuring access to information about a corporate dispute and the right to participate in the case, reconciliation of the parties to a corporate dispute, interim measures of the arbitration court on corporate disputes and other issues, related to the subject of a corporate dispute. Vyalykh E.I. (2018) suggests that the broad qualification of corporate disputes is artificial in nature and suggests that certain categories of corporate disputes should be legally excluded, since such relations are not included in the subject of corporate relations [15]. We fundamentally disagree with the opinion of E.I. Vyalykh on the following grounds. Firstly, corporate relations in the modern economy are extremely complex and multilevel. They include not only formal interactions between participants and management bodies of a legal entity, but also aspects such as the conclusion of corporate contracts, the exercise of information rights, the protection of minority shareholders, as well as disputes arising from changes in ownership structure

108

or abuse of control. The artificial narrowing of these categories negates the very purpose of comprehensive judicial protection of the rights of participants in corporate relations. Secondly, the broad qualification of corporate disputes is not an artificial, but a forced legal reaction to the development of business practice. By expanding the list of corporate disputes, the legislator responds to the real requests of participants in corporate legal relations and strives to ensure a specialized and consistent approach to resolving such cases. Otherwise, disputes of a similar nature would be subject to different procedural frameworks, which would undermine the uniformity of judicial practice. In addition, the exclusion of certain categories of disputes from corporate litigation may lead to a deterioration in the legal protection of participants, especially minority investors. Thus, a broad legislative interpretation of the concept of a corporate dispute is justified both from the point of view of legal logic and the practical need to ensure effective judicial protection of participants in corporate relations.

Corporate dispute has no legal definition in the legislation of the United Kingdom. However, the UK case law regulates the activities of companies in the Companies Act quite widely [16]. In addition to the Companies Act, corporate disputes in the UK are regulated by the Insolvency Act 1986 (disputes related to the actions of directors and the distribution of assets, including bankruptcy disputes) [17], Civil Procedure Rules (establishes procedural rules for dispute resolution, including corporate, in particular, Part 19 contains provisions on derivative claims of the company) [18] and Partnership Act 1890 (applied if corporate relations are formalized as a partnership) [19]. Of course, judicial precedents are of particular and main importance in resolving corporate disputes in the UK, especially in matters of fiduciary duties of directors, abuse of majority rights, criteria for "unfair prejudice" and conditions for the admissibility of derivative claims.

If we turn to academic researchers of corporate law in the United Kingdom, we can find diverse topical issues that require the attention of both the business community and the government. DiLeonardo M. (2024) emphasizes that the modern debate in the British corporate sector revolves around the primacy of shareholders [20]. Villiers C. (2023) looks at corporate relations through the prism of human rights violations by corporations and the problem of corporate power in the context of international law [21]. According to Braun B. (2022), macroeconomic changes and financial innovations have directed the corporate behavior of shareholders to strengthen control [22].

Singapore is the leading Asian hub of international arbitration and mediation. If New York is a household name for the 1958 arbitration convention [23], Singapore became the main initiator of the idea of an international convention on mediation within the United Nations, which was adopted in Singapore in 2018 [24]. The object of regulation of this convention is international commercial agreements concluded through mediation. Agreements may be submitted to the competent authorities of the ratifying countries for recognition and enforcement on an equal basis with a judicial or arbitral award. It should be noted that the Convention was officially named "The Singapore Convention" not only because of the place of signing, but also as recognition of Singapore's contribution to promoting mediation as a universal, civilized and effective instrument for resolving international disputes. Josephine Hage Chahine et al. (2021) rightly point out that before the Convention, there was no effective mechanism in the international legal and corporate community for the execution of mediation agreements between parties from different countries, and this hindered the development of mediation as the preferred method of dispute resolution [25]. The Republic of Kazakhstan, in accordance with the Law "On

Ratification of the United Nations Convention on International Settlement Agreements Reached as a Result of Mediation", ratified this convention in 2022 with two reservations [26]. The first clause excludes from the operation of the Convention amicable agreements in which the Republic of Kazakhstan participates; state bodies, as well as representatives acting on behalf of these bodies. According to this clause, if a government agency enters into an international mediation agreement, the Singapore Convention will not be applied for its recognition and enforcement abroad through this mechanism. This reduces legal risks for the State and preserves sovereignty in disputes related to public interests. The second reservation is that Kazakhstan will apply the Convention only in cases where the parties have explicitly indicated in the agreement that they agree to its application. This means that the Convention does not apply automatically, and to use the enforcement mechanism, the parties must include a clause in the mediation agreement stating that they want to use the Singapore Convention.

Singapore has such international organizations dealing with the regulation of transnational disputes as the Singapore International Mediation Centre, Singapore International Arbitration Centre and Singapore International Commercial Court. Corporate disputes in Singapore are governed by a combination of legislation, judicial precedents, as well as arbitration and mediation. Man Yip (2021), considering Singapore as a center of hybrid procedures, highlights multi-tier corporate dispute resolution mechanisms, where mediation-arbitration or arbitration-mediation-arbitration models are popular. Such mechanisms, according to Man Yip, make it possible to avoid escalation of the conflict, save financial and labor resources, and also help maintain business relations between the parties [27].

The number of corporate disputes is also growing rapidly in China. To improve the judicial environment through the deep integration of judicial reform, a project to create digital courts has been experimentally launched in China. Wen Li & Qing Peng (2023) investigated the impact of the judicial system on corporate relations and corporate investments [28]. As part of this pilot project, it was recommended to introduce mobile mini-courts in some provinces of China. Further research by Wen Li & Qing Peng has shown that improving the judicial environment contributes to corporate investment and sustainable development. Arbitration institutions known all over the world, such as the China International Economic and Trade Arbitration Commission (CIETAC) [29] and the China International Commercial Court (CICC) [30], deserve special attention in Chinese corporate law. We have analyzed in detail the activities of these arbitration courts in the context of resolving corporate and investment disputes. Based on the results of the analysis, the following key aspects have been identified. CIETAC is flexible, business-oriented, confidential, and more convenient for international disputes with the ability to enforce decisions abroad. CICC is a judicial body focused on international disputes within the Chinese jurisdiction, with a high degree of transparency, but less flexibility and limited enforcement territory. Based on these judgments, the following conclusions can be drawn about these Chinese arbitrations. CIETAC is preferred for companies looking for neutral and flexible arbitration with the possibility of international enforcement of decisions. CICC, in turn, is a strategic state mechanism embedded in the Chinese judicial system and aimed at supporting the Belt and Road initiative, as well as strengthening the judicial attractiveness of Chinese jurisdiction for multinational investors.

Corporate relations in China are regulated by the Company Law of the PRC [31], the Civil Code, which has been in force since 2021 [32], the Civil Procedure Law [33], as well as the

explanations of the Supreme People's Court. The main feature of corporate law in China is the high level of state control, especially in companies with state participation. In this regard, not all corporate disputes are allowed to be considered by arbitration. Corporate disputes in China are a complex area that combines elements of the continental system, a strong government role, and an evolving dispute resolution infrastructure.

The United Arab Emirates (UAE) is the most legally flexible country for resolving corporate disputes. Due to the specifics of the UAE's legal system and the diversity of jurisdictions (federal, free economic zones, international courts), corporate disputes in this country have their own specifics. Federal courts on the UAE mainland apply Sharia law and civil law when resolving corporate disputes. Jurisdiction is determined by the place of company registration, and Arabic is the mandatory language of legal proceedings. International commercial courts such as the Dubai International Financial Centre (DIFC) Court and the Abu Dhabi Global Market (ADGM) Court are guided by the rules of English common law when resolving corporate disputes, and the language of legal proceedings is English. Such commercial courts are characterized by transparency and fast procedures, which is why they are often chosen by foreign investors in the UAE.

When regulating corporate relations in the UAE, special attention is paid to the sustainable development of companies. Emad El Din Ahmed Abdul Hai et al. (2025), when researching UAE legislation on commercial companies, note the particular importance of the rights of shareholders and creditors. In their opinion, the key elements of the sustainable development of the corporate environment are legal responsibility and guarantees that protect the rights of shareholders and creditors. One of the main problems, according to a study by Med Elden Ahmed Abdul Haq et al. This is an uncertain responsibility of the company's board of directors, which can lead to potential risks [34]. Analytical studies of the UAE arbitration law conducted by Kayman K. Masada & Ahmed Al (2024) showed the importance of competence and separation in dispute resolution by arbitration [35]. It should be noted that arbitration and arbitration clauses are often used in transnational disputes and transnational corporate relations.

Until now, the legal community of Kazakhstan has been discussing the possibility of adapting and implementing the norms of foreign countries into domestic legislation. Corporate law, being a relatively new field in civil law, has taken over the platform for conducting this discussion. The possibility of adapting foreign institutional approaches to corporate dispute resolution into Kazakh legislation is not just a matter of borrowing models, but a challenge to the legal, institutional and business culture [36].

Institutional mechanisms for resolving corporate disputes in various jurisdictions demonstrate both universal trends and specific legal regulations in each of the countries studied above. As noted by E.A. Borisova (2019), there is a steady trend in global practice towards the institutionalization of alternative methods of resolving corporate disputes [37]. Arbitration and mediation are becoming the preferred forms of settlement in a multinational business environment. This is confirmed by the successful models of Singapore, where, according to Man Yip (2021), the introduction of mandatory pre-trial settlement and hybrid procedures has significantly reduced the burden on the judicial system [27]. A comparison of the German and British models of corporate dispute resolution, according to N.V. Sukhova (2014), demonstrates differences in legal paradigms: in Germany, a normative and codified approach based on the norms of the European Union prevails, while the United Kingdom adheres to flexible precedent

regulation [37]. Kammerhofer (2021) points out that it is the precedent that allows English arbitration institutions to remain leaders in international corporate disputes [38].

In this study, we are not trying to show the legal superiority of a particular legal system, but rather to identify the strongest points in terms of effective resolution of corporate disputes. This approach is especially relevant for Kazakhstan, where its own model of corporate justice is being formed, which, although it is in the continental legal tradition, has certain elements of successful implementation from the Anglo-Saxon legal tradition.

In the context of growing foreign investment and economic integration (especially within the framework of the Eurasian Economic Union and relations with China, the EU, and the Persian Gulf countries), Kazakhstan faces the need to ensure:

- effective, predictable and independent resolution of corporate disputes.
- protection of minority shareholders' rights.
- an attractive investment environment.
- effective practice of corporate governance and corporate compliance.

What foreign institutional approaches could be adapted to resolve corporate disputes in Kazakhstan? We propose to consider the following advanced institutions.

Table 1.

The possibilities of adapting some foreign institutions to the legislation of Kazakhstan.

Model	What can be adapted?	What needs to be considered?
Singapore (AMA Protocol)	Arb-Med-Arb as a standard clause in the charters of LLP, JSC	Legal recognition of mediation results and the flexibility of arbitration are needed.
China (CICC) – State Courts for Transnational Corporate Disputes	Creation of special chambers/ committees on corporate disputes	Highly qualified and independent judges are required.
UAE, DIFC/ADGM Courts	Integration of English-language commercial arbitration into AIFC activities	It is already being implemented; it is important to spread the practice throughout Kazakhstan.
USA, UK – Derivative actions, class actions	The possibility of filing a claim in the interests of the company by a minority shareholder	Requires legislative changes

#### Conclusion

The adaptation of foreign institutional approaches to corporate dispute resolution in Kazakhstan is possible and desirable, but requires a step-by-step, thoughtful and contextual implementation. The success of such a reform depends on a combination of legal reform, institutional support and legal awareness of the business environment. In this study, we have only touched upon the main aspects of the possibility of adapting the best practices of global corporate dispute resolution. Comprehensively, the innovations proposed above form the basis for the need to train judges and arbitrators in international corporate practice, consolidate corporate dispute resolution in legislation exclusively after Arb-Med-Arb, develop model arbitration clauses before applying to court, etc.

Of course, it is impossible to simply mechanically copy a particular rule from a foreign jurisdiction. Adaptation without considering local specifics may lead to a parallelism of norms or conflict with the current Civil and Business Code of the Republic of Kazakhstan. Until now, the business community of Kazakhstan has preferred courts, fearing "incomprehensible" arbitration or a lack of control over the procedure. In this regard, the adaptation of already proven mechanisms of developed countries in the context of globalization is a time requirement for sustainable development.

To effectively adapt foreign institutional approaches to corporate dispute resolution in Kazakhstan, it seems advisable to implement the following measures:

- 1. As a pilot project, include the standard Med-Arb-Med clause in the charters of business partnerships.
- 2. By analogy with the Chinese International Commercial Court (CICC), it is proposed to create specialized chambers for corporate disputes within the economic courts of Kazakhstan. This will make it possible to concentrate expertise in the field of corporate law in the hands of highly specialized judges.
- 3. Based on the practice of the USA and Great Britain, it is proposed to study the issue of introducing derivative actions and class actions as a tool for protecting the rights of minority shareholders and participants in business partnerships.

The implementation of the best foreign institutional approaches does not require automatic copying, but thoughtful adaptation based on an analysis of the legal and economic specifics of Kazakhstan. International experience shows that the effectiveness of corporate dispute resolution depends not only on formal rules but also on the depth of institutional support and the maturity of the legal environment. Thus, Kazakhstan should follow the path of flexible implementation of the best international practices, combining them with the national legal tradition and economic realities. Only in this case can we talk about the formation of a competitive, modern and attractive jurisdiction for resolving corporate disputes in the Eurasian space.

### The contribution of the authors

The authors, **Baikenzhina Sh.T.** and **Ilyasova G.A.**, made an equally proportional contribution to writing this article and conducting research on the international experience in resolving corporate disputes. **Baikenzhina Sh.T.** studied and prepared institutional approaches of foreign countries to resolve corporate disputes. **Ilyasova G.A.** explored the possibilities of adapting the best international practices in corporate dispute resolution into the legislation of the Republic of Kazakhstan.

#### References

- 1. Koh A.K. (2022) Shareholder withdrawal in close corporations: an Anglo-German comparative analysis. Journal of Corporate Law Studies. T. 22.  $N^\circ$ . 1. P. 197-228. Access mode https://doi.org/10.1080/14735970.2021.2012883
- 2. Weghmann V., Hall D. (2021) The unsustainable political economy of investor–state dispute settlement mechanisms1 //International Review of Administrative Sciences. T. 87. №. 3. C. 480-496. Access mode https://journals.sagepub.com/doi/full/10.1177/00208523211007898 https://doi.org/10.1177/00208523211007898 (accessed: 01.05.2025)

- 3. Van den Ven F. (2023) Insolvency in Commercial Arbitration: A German and International Perspective. Access mode https://www.torrossa.com/it/resources/an/5628991.
- 4. Wettstein E. M., Schöttmer L. (2024) German Federal Supreme Court Declares Intra-EU Investor-State ICSID Arbitration Inadmissible //European Investment Law and Arbitration Review. T. 9. − № 1. Access mode https://kluwerlawonline.com/journalarticle/European+Investment+Law+and+Arbitration+Review/9.1/EILA2024030 https://doi.org/10.54648/eila2024030. (accessed 01.05.2025)
- 5. German Arbitration Law 98. Access mode https://www.disarb.org/fileadmin/user\_upload/Wissen/Deutsches\_Schiedsverfahrensrecht\_98\_-\_Englisch.pdf. (accessed: 01.05.2025)
- 6. UNCITRAL Model Law on International Commercial Arbitration (1985), with amendments as adopted in 2006. Access mode https://uncitral.un.org/en/texts/arbitration/modellaw/commercial\_arbitration.
  - 7. Official website of International Chamber of Commerce (ICC). Access mode https://iccwbo.org.
- $8.\ Official\ website\ of\ Deutsche\ Institution\ f\"{u}r\ Schiedsgerichtsbarkeit.} -- Access\ mode\ https://www.\ disarb.org\ .$
- 9. Baikenzhina Sh.T., Juchnevicius E. (2024) Alternative ways to resolving corporate disputes in the Republic of Kazakhstan and in the USA. Comparative analysis. Bulletin of the Karagandy University. Law Series. 2024. Volume 29. Issue 4(116). P. 113-122. Access mode https://law-vestnik.buketov.edu.kz/index.php/law/issue/view/62/73 https://doi.org/10.31489/2024L4/113-122 (accessed 01.05.2025)
- 10. Ojimba C. C. (2024) Comparative analysis between the united states of america (usa) and nigeria in resolution of corporate dispute //UNIZIK Journal of Educational Research and Policy Studies. T. 18. №. 3. Access mode https://www.unijerps.org/index.php/unijerps/article/view/854 (accessed: 01.05.2025)
- 11. The Federal Arbitration Act (USA). Access mode https://www.acerislaw.com/wp-content/uploads/2023/03/US-Federal-Arbitration-Act.pdf (accessed 01.05.2025)
  - 12. Official website of American Arbitration Association (AAA). Access mode https://www.adr.org
- 13. Haryanto I., Sakti M. (2024) Implementation Of Online Dispute Resolution (Odr) In Indonesia's E-Commerce Disputes (Comparative Study With Usa) //JHK: Jurnal Hukum dan Keadilan. T. 1. № 3. C. 1-12. [Electronic resource]. Access mode https://jurnalhafasy.com/index.php/jhk/article/view/121 https://doi.org/10.61942/jhk.v1i3.121 (accessed 01.05.2025)
- 14. Арбитражный процессуальный кодекс Российской Федерации от 24 июля 2002 года № 95-Ф3. Режим доступа: https://online.zakon.kz/Document/?doc\_id=30407276 (дата обращения: 01.05.2025)
- 15. Вялых Е.И. Вялых Е.И. (2018) Процессуальные особенности рассмотрения корпоративных споров в Российской Федерации // Автореферат Диссертации на соискание ученой степени кандидата юридических наук. Воронеж. Т. 234. Режим доступа: https://www.usla.ru/science/dissovet/file/base/1/428/autoabstract\_dl.pdf (дата обращения: 01.05.2025)
- 16. Companies Act 2006 of the UK. Access mode https://www.legislation.gov.uk/ukpga/2006/46/contents
- 17. Insolvency Act 1986 of the UK— Access mode https://www.legislation.gov.uk/ukpga/1986/45/contents
- 18. Civil Procedure Rules of the UK— Access mode https://www.justice.gov.uk/courts/procedure-rules/civil
- 19. Partnership Act 1890 of the UK. Access mode https://www.legislation.gov.uk/ukpga/Vict/53-54/39/contents

- 20. DiLeonardo M. (2024) From mercantilism to monopoly: The evolution of modern corporations through the English East India Company and US Steel possible implications from the history of corporate law for contemporary corporate governance //BU Int'l LJ. T. 42. P. 373.— Access mode https://heinonline.org/HOL/LandingPage?handle=hein.journals/builj42&div=14&id=&page=
- 21. Villiers C. (2023) A game of cat and mouse: Human rights protection and the problem of corporate law and power //Leiden Journal of International Law. T. 36.  $N^{\circ}$ . 2. P. 415-438.— Access mode https://www.cambridge.org/core/journals/leiden-journal-of-international-law/article/game-of-cat-and-mouse-human-rights-protection-and-the-problem-of-corporate-law-and-power/9457C9B3D91BA10D E00B77AE29602A45 https://doi.org/10.1017/S0922156522000632
- 22. Braun B. (2022) Exit, control, and politics: Structural power and corporate governance under asset manager capitalism //Politics & Society. T. 50.  $N^{\circ}$ . 4. P. 630-654. Access mode https://journals.sagepub.com/doi/abs/10.1177/00323292221126262 https://doi.org/10.1177/00323292221126262
- 23. United Nations Convention on the Recognition and Enforcement of Foreign Arbitral Awards (New York, 10 June 1958)— Access mode https://www.newyorkconvention.org/english.
- 24. The Singapore Convention on Mediation. Access mode https://www.singaporeconvention.org/convention/text
- 25. Joséphine Hage Chahine, Ettore M. Lombardi, David Lutran and Catherine Peulvé. (2021) The acceleration of the development of international business mediation after the Singapore convention // European Business Law Review. T. 32. − № 4. −Access mode https://kluwerlawonline.com/journalarticle/ European+Business+Law+Review/32.4/EULR2021027 https://doi.org/10.54648/eulr2021027
- 26. Закон Республики Казахстан от 25 апреля 2022 года № 116-VII «О ратификации Конвенции Организации Объединенных Наций о международных мировых соглашениях, достигнутых в результате медиации». Опубликован: «Казахстанская правда» от 26 апреля 2022 г. № 78 (29705); ИС «Эталонный контрольный банк НПА РК в электронном виде» 27 апреля 2022 г.; «Ведомости Парламента Республики Казахстан» № 7-8 (2850-2851), 2022 год. Режим доступа: https://online.zakon.kz/Document/?doc\_id=37675814&pos=4;-106#pos=4;-106
- 27. Yip M. (2021) Combinations of mediation and arbitration: The Singapore perspective. P. 182-202. Access mode https://doi.org/10.1017/9781108854306.008 https://ink.library.smu.edu.sg/sol\_research/3911/
- 28. Li W., Peng Q. (2023) Digital courts and corporate investment in sustainability: Evidence from China //International Review of Financial Analysis. Volume 88. P. 102682. Access mode https://doi.org/10.1016/j.irfa.2023.102682
- 29. Official website of the China International Economic and Trade Arbitration Comission (CIETAC) Access mode https://www.cietac.org/en
- $30. \ Official \ website \ of the \ China \ international \ commercial \ court \ (CICC) \ . \ -- \ Access \ mode \ https://cicc. \ court.gov.cn/html/1/219/index.html$
- 31. Company Law of the People's Republic of China— Access mode http://www.npc.gov.cn/zgrdw/englishnpc/Law/2007-12/12/content\_1383787.htm
- 32. Civil Code of the People's Republic of China. Access mode https://www.trans-lex.org/601705/\_/civil-code-of-the-peoples-republic-of-china-/
- 33. Civivl Procedure Law of the People's Republic of China. Access mode http://www.npc.gov.cn/zgrdw/englishnpc/Law/2007-12/12/content\_1383880.htm
- 34. Hay I. E. D. A. A. (2025) Corporate Sustainability: Legal Responsibilities and Opportunities // Legal Frameworks and Educational Strategies for Sustainable Development. IGI Global, P. 29-44. DOI:

- 10.4018/979-8-3693-2987-0.ch003. Access mode https://www.igi-global.com/chapter/corporatesustainability/356527
- 35. Masadeh A. K., Alozn A. (2024) Contemporary Issues of Arbitration under UAE Law //Arab Law Quarterly. T. 1. – №. Aop. – P. 1-17. — Access mode DOI: https://doi.org/10.1163/15730255-bja10175
- 36. Базарбаев А.А., Каратаева А.М. Вопросы урегулирования инвестиционных споров между Республикой Казахстан и физическими или юридическими лицами других государств // Вестник Евразийского национального университета имени Л.Н. Гумилева. Серия: Право. Vol:148 №3(2024). https://doi.org/10.32523/2616-6844-2024-148-3-75-88
- 37. Борисова Е.А. (2019) Альтернативное разрешение споров. Учебник. https://www.litres.ru/ book/elena-borisova-33228199/alternativnoe-razreshenie-sporov-71797963/chitat-onlayn/
- 38. Sukhova N.V. (2014) Problems of development of civil procedure law: trends and traditions. Вестник Омского университета. Серия «Право». No 3 (40). C. 154–162.
- 39. Kammerhofer J. (2021) Investment Precedents. International Investment Law and Legal Theory. Expropriation and the Fragmentation of Sources. pp. 43 - 67. DOI: https://doi. org/10.1017/9781108989428.004. Published online by Cambridge University Press:17 April 2021.

#### Ш.Т. Байкенжина<sup>1</sup>, Г. А. Ильясова<sup>1</sup>

Академик Е.А. Бөкетов атындағы Қарағанды университеті, Қарағанды, Қазақстан. (e-mail: baikenzhina89@mail.ru<sup>1</sup>, g.iliasova@mail.ru<sup>1</sup>)

# Корпоративтік дауларды шешудің халықаралық тәжірибесін салыстырмалықұқықтық талдау: институционалдық тәсілдер және Қазақстан заңнамасына бейімделу мүмкіндіктері

Аңдатпа: Мақала жетекші шетелдік юрисдикциялардағы корпоративтік дауларды шешудің институционалдық тәсілдерін салыстырмалы-құқықтық талдауға және оларды Қазақстан Республикасының заңнамасына бейімдеу мүмкіндіктеріне арналған. Зерттеудің мақсаты корпоративтік дауларды шешудің тиімділігін қамтамасыз ететін әлемдік құқықтық практика призмасы арқылы негізгі элементтерді анықтау болып табылады – мамандандырылған соттардың болуы, арбитраж және медиацияның дамыған жүйесі, миноритарийлердің құқықтарын қорғау және рәсімдердің икемділігі. Қойылған мақсатқа қол жеткізу үшін зерттеу шеңберінде корпоративтік дауларды шешудің институционалдық және процестік тетіктері анықталды, дауларды қарау жылдамдығы мен рәсімдердің ашықтығы тұрғысынан шетелдік тәсілдердің тиімділігіне талдау жасалды, сондай-ақ ұлттық заңнаманың, сот практикасының және институционалдық инфрақұрылымның ерекшеліктерін ескере отырып, құқықтық салада ықтимал қолданылатын үздік тәжірибелер мен құқықтық құралдар зерттелді. Жұмыстың ғылыми және практикалық маңыздылығы халықаралық тәжірибені жүйелеу және ұлттық заңнаманы реформалау бағыттарын анықтау болып табылады. Әдістемелік бөлімде салыстырмалы құқықтық, формальды-құқықтық және құқықтық модельдеу әдісі қолданылады. Нәтижесінде әртүрлі құқықтық жүйелердегі корпоративтік дауларды қараудың тиімділігін қамтамасыз ететін институционалдық және процестік тетіктер анықталды, сондайақ олардың қазақстандық құқықтық жүйеге ықтимал ықпалдасу шарттары талданды. Жұмыс корпоративтік құқықтағы құқықтық институттардың дамуына үлес қосады және Қазақстан

Nº3(152)/ 2025

Республикасында құқық қолдану практикасын жетілдіру жолдарын ұсынады. Практикалық маңыздылығы корпоративтік процеске қатысушылар мен сот органдарына арналған ұсыныстарды тұжырымдау болып табылады.

Түйін сөздер: корпоративтік дау, төрелік, медиация, сот, имплементация, корпоративтік қатынастар.

#### Ш.Т. Байкенжина<sup>1</sup>, Г.А. Ильясова<sup>1</sup>

Карагандинский университет имени академика Е.А. Букетова, Караганда, Казахстан (e-mail: baikenzhina89@mail.ru<sup>1</sup>, g.iliasova@mail.ru<sup>1</sup>)

# Сравнительно-правовой анализ международного опыта разрешения корпоративных споров: институциональные подходы и возможности адаптации в законодательство Казахстана

Аннотация: Статья посвящена сравнительно-правовому анализу институциональных подходов к разрешению корпоративных споров в ведущих зарубежных юрисдикциях и возможностям их адаптации в законодательство Республики Казахстан. Целью исследования является выявление ключевых элементов через призму мировой правовой практики, обеспечивающие эффективность разрешения корпоративных споров - наличие специализированных судов, развитая система арбитража и медиации, защита прав миноритариев и гибкость процедур. Для достижения поставленной цели в рамках исследования были выявлены институциональные и процессуальные механизмы разрешения корпоративных споров, сделан анализ эффективности зарубежных подходов с точки зрения скорости рассмотрения споров и прозрачности процедур, а также исследованы лучшие практики и правовые инструменты, потенциально применимые в правовом поле, с учетом специфики национального законодательства, судебной практики и институциональной инфраструктуры. Научная и практическая значимость работы заключается в систематизации международного опыта и определении направлений реформирования национального законодательства. В методологической части применены сравнительноправовой, формально-юридический и метод правового моделирования. В результате выявлены институциональные и процессуальные механизмы, обеспечивающие эффективность рассмотрения корпоративных споров в разных правовых системах, а также проанализированы условия их возможной интеграции в казахстанскую правовую систему. Работа вносит вклад в развитие правовых институтов в корпоративном праве и предлагает пути совершенствования правоприменительной практики в Республике Казахстан. Практическая значимость заключается в формулировке рекомендаций для участников корпоративного процесса и судебных органов.

Ключевые слова: корпоративный спор, арбитраж, медиация, суд, имплементация, корпоративные отношения.

#### References

1. Koh A. K. (2022) Shareholder withdrawal in close corporations: an Anglo-German comparative analysis, Journal of Corporate Law Studies. T. 22. No. 1. P. 197-228.— Access mode https://doi.org/10.1 080/14735970.2021.2012883

Л.Н. Гумилев атындағы Еуразия ұлттық университетінің ХАБАРШЫСЫ. Құқық сериясы

- 2. Weghmann V., Hall D. (2021) The unsustainable political economy of investor–state dispute settlement mechanisms, International Review of Administrative Sciences. T. 87.  $N^{\circ}$ . 3. P. 480-496.— Access mode https://journals.sagepub.com/doi/full/10.1177/00208523211007898 https://doi.org/10.1177/00208523211007898 (accessed: 01.05.2025)
- 3. Van den Ven F. (2023) Insolvency in Commercial Arbitration: A German and International Perspective— Access mode https://www.torrossa.com/it/resources/an/5628991 . (accessed 01.05.2025)
- 4. Wettstein E. M., Schöttmer L. (2024) German Federal Supreme Court Declares Intra-EU Investor-State ICSID Arbitration Inadmissible, European Investment Law and Arbitration Review. -. T. 9. №. 1. Access mode https://kluwerlawonline.com/journalarticle/European+Investment+Law+and+Arbitration+Review/9.1/EILA2024030 https://doi.org/10.54648/eila2024030. (accessed 01.05.2025)
- 5. German Arbitration Law 98. Access mode https://www.disarb.org/fileadmin/user\_upload/Wissen/Deutsches\_Schiedsverfahrensrecht\_98\_-\_Englisch.pdf. (accessed: 01.05.2025)
- 6. UNCITRAL Model Law on International Commercial Arbitration (1985), with amendments as adopted in 2006. Access mode https://uncitral.un.org/en/texts/arbitration/modellaw/commercial\_arbitration.
  - 7. Official website of International Chamber of Commerce (ICC). Access mode https://iccwbo.org.
- 8. Official website of Deutsche Institution für Schiedsgerichtsbarkeit— Access mode https://www.disarb.org.
- 9. Baikenzhina Sh.T., Juchnevicius E. (2024) Alternative ways to resolvingcorporate disputes in the Republic of Kazakhstan and in the USA. Comparative analysis. Bulletin of the Karagandy University. Law Series. Volume 29. Issue 4(116). P. 113-122. Access mode https://law-vestnik.buketov.edu.kz/index.php/law/issue/view/62/73 https://doi.org/10.31489/2024L4/113-122
- 10. Ojimba C. C. (2024) Comparative analysis between the united states of america (usa) and nigeria in resolution of corporate dispute, UNIZIK Journal of Educational Research and Policy Studies. − T. 18. − № 3.— Access mode https://www.unijerps.org/index.php/unijerps/article/view/854. (accessed: 01.05.2025)
- 11. The Federal Arbitration Act (USA). Access mode https://www.acerislaw.com/wp-content/uploads/2023/03/US-Federal-Arbitration-Act.pdf
  - 12. Official website of American Arbitration Association (AAA). Access mode https://www.adr.org
- 13. Haryanto I., Sakti M. (2024) Implementation Of Online Dispute Resolution (Odr) In Indonesia's E-Commerce Disputes (Comparative Study With Usa), JHK: Jurnal Hukum dan Keadilan. -- T. 1. № 3. C. 1-12. Access mode https://jurnalhafasy.com/index.php/jhk/article/view/121 https://doi.org/10.61942/jhk.v1i3.121
- 14. Arbitrazhnyj processual'nyj kodeks Rossijskoj Federacii ot 24 iyulya 2002 goda № 95-FZ. Access mode https://online.zakon.kz/Document/?doc\_id=30407276 [in Russian].
- 15. Vyalyh E.I. (2018) Processual'nye osobennosti rassmotreniya korporativnykh sporov v Rossijskoj Federacii // Avtoreferat Dissertacii na soiskanie uchenoj stepeni kandidata yuridicheskikh nauk. Voronezh. T. 234. Access mode https://www.usla.ru/science/dissovet/file/base/1/428/autoabstract\_dl.pdf [in Russian].
- 16. Companies Act 2006 of the UK. Access mode https://www.legislation.gov.uk/ukpga/2006/46/contents
- 17. Insolvency Act 1986 of the UK. Access mode https://www.legislation.gov.uk/ukpga/1986/45/contents

- 18. Civil Procedure Rules of the UK. Access mode https://www.justice.gov.uk/courts/procedure-rules/civil
- 19. Partnership Act 1890 of the UK. Access mode https://www.legislation.gov.uk/ukpga/Vict/53-54/39/contents
- 20. DiLeonardo M. (2024) From mercantilism to monopoly: The evolution of modern corporations through the English East India Company and US Steel possible implications from the history of corporate law for contemporary corporate governance //BU Int'l LJ. T. 42. P. 373. Access mode https://heinonline.org/HOL/LandingPage?handle=hein.journals/builj42&div=14&id=&page=
- 21. Villiers C. (2023) A game of cat and mouse: Human rights protection and the problem of corporate law and power //Leiden Journal of International Law. T. 36. − №. 2. − P. 415-438. Access mode https://www.cambridge.org/core/journals/leiden-journal-of-international-law/article/game-of-cat-and-mouse-human-rights-protection-and-the-problem-of-corporate-law-and-power/9457C9B3D91BA 10DE00B77AE29602A45 https://doi.org/10.1017/S0922156522000632
- 22. Braun B. (2022) Exit, control, and politics: Structural power and corporate governance under asset manager capitalism //Politics & Society. T. 50. № 4. P. 630-654. Access mode https://journals.sagepub.com/doi/abs/10.1177/00323292221126262 https://doi.org/10.1177/00323292221126262
- 23. United Nations Convention on the Recognition and Enforcement of Foreign Arbitral Awards (New York, 10 June 1958) Access mode https://www.newyorkconvention.org/english.
- 24. The Singapore Convention on Mediation. Access mode https://www.singaporeconvention.org/convention/text
- 25. Joséphine Hage Chahine, Ettore M. Lombardi, David Lutran and Catherine Peulvé. (2021) The acceleration of the development of international business mediation after the Singapore convention // European Business Law Review. T. 32. Nº. 4. Access mode https://kluwerlawonline.com/journalarticle/European+Business+Law+Review/32.4/EULR2021027 https://doi.org/10.54648/eulr2021027
- 26. Zakon Respubliki Kazakhstan ot 25 aprelya 2022 goda № 116-VII «O ratifikacii Konvencii Organizacii Ob"edinennykh Nacij o mezhdunarodnykh mirovykh soglasheniyakh, dostignutykh v rezul'tate mediaciI». Opublikovan: «Kazakhstanskaya pravdA» ot 26 aprelya 2022 g. № 78 (29705); IS «Ehtalonnyj kontrol'nyj bank NPA RK v ehlektronnom vidE» 27 aprelya 2022 g.; «Vedomosti Parlamenta Respubliki KazakhstaN» № 7-8 (2850-2851), 2022 god. Access mode https://online.zakon.kz/Document/?doc\_id=37675814&pos=4;-106#pos=4;-106 [in Russian].
- 27. Yip M. (2021) Combinations of mediation and arbitration: The Singapore perspective. 182-202.— Access mode https://doi.org/10.1017/9781108854306.008 https://ink.library.smu.edu.sg/sol\_research/3911/
- 28. Li W., Peng Q. (2023) Digital courts and corporate investment in sustainability: Evidence from China //International Review of Financial Analysis. Volume 88. C. 102682.— Access mode https://doi.org/10.1016/j.irfa.2023.102682
- 29. Official website of the China International Economic and Trade Arbitration Comission (CIETAC).

   Access mode https://www.cietac.org/en
- 30. Official website of the China international commercial court (CICC) [Electronic resource]. Access mode https://cicc.court.gov.cn/html/1/219/index.html
- 31. Company Law of the People's Republic of China –Access mode http://www.npc.gov.cn/zgrdw/englishnpc/Law/2007-12/12/content\_1383787.htm
- 32. Civil Code of the People's Republic of China.— Access mode https://www.trans-lex.org/601705/\_/civil-code-of-the-peoples-republic-of-china-/

құқық сериясы ISSN: 2616-6844. eISSN: 2663-1318

- 33. Civivl Procedure Law of the People's Republic of China.— Access mode http://www.npc.gov.cn/zgrdw/englishnpc/Law/2007-12/12/content\_1383880.htm
- 34. Hay I. E. D. A. A. (2025) Corporate Sustainability: Legal Responsibilities and Opportunities // Legal Frameworks and Educational Strategies for Sustainable Development. IGI Global, P. 29-44. DOI: 10.4018/979-8-3693-2987-0.ch003. Access mode https://www.igi-global.com/chapter/corporate-sustainability/356527
- 35. Masadeh A. K., Alozn A. (2024) Contemporary Issues of Arbitration under UAE Law //Arab Law Quarterly. T. 1. №. aop. P. 1-17. Access mode DOI: https://doi.org/10.1163/15730255-bja10175
- 36. Bazarbayev A.A., Karatayeva A.M. Voprosy uregulirovanija investicionnyh sporov mezhdu Respublikoj Kazahstan i fizicheskimi ili juridicheskimi licami drugih gosudarstv // Vestnik Evrazijskogo nacional'nogo universiteta imeni L.N. Gumileva. Serija: Pravo. Vol:148 №3(2024). https://doi. org/10.32523/2616-6844-2024-148-3-75-88
- 37. E.A. Borisova. (2019) Al'ternativnoe razreshenie sporov. Uchebnik. https://www.litres.ru/book/elena-borisova-33228199/alternativnoe-razreshenie-sporov-71797963/chitat-onlayn/
- 38. N.V. Sukhova. (2014) Problems of development of civil procedure law: trends and traditions. Vestnik Omskogo universiteta. Seriya «Pravo». No 3 (40). P. 154–162.
- 39. J. Kammerhofer. (2021) Investment Precedents. International Investment Law and Legal Theory. Expropriation and the Fragmentation of Sources. pp. 43 67. DOI: https://doi.org/10.1017/9781108989428.004. Published online by Cambridge University Press:17 April 2021.

#### Information about the authors:

Baikenzhina Sh. - Master of Juridical Sciences, PhD student, Department of Civil and Labor Law,
 Faculty of Law, Karaganda Buketov University, 28 Universitetskaya st., 100028, Karaganda, Kazakhstan.
 Ilyassova G. - Candidate of juridical sciences, Full professor, Research Professor, Department of Civil and Labor Law, Karaganda Buketov University, 28 Universitetskaya st., 100028, Karaganda, Kazakhstan.

**Байкенжина Ш.Т.** – магистр юридических наук, докторант кафедры гражданского и трудового права юридического факультета Карагандинского университета имени Е.А. Букетова, ул. Университетская, 28, 100028, Караганда, Казахстан.

**Ильясова Г.А.** – кандидат юридических наук, full профессор, профессор-исследователь кафедры гражданского и трудового права, Карагандинский университет им. Е.А. Букетова, ул. Университетская, 28, 100028, Караганда, Казахстан.

**Байкенжина Ш.Т.** – заң ғылымдарының магистрі, Е.А. Бөкетов атындағы Қарағанды университетінің Заң факультетінің Азаматтық және еңбек құқығы кафедрасының докторанты, Университетская көшесі, 28, 100028, Қарағанды, Қазақстан.

**Ильясова Г.А.** – заң ғылымдарының кандидаты, full профессор, азаматтық және еңбек құқығы кафедрасының зерттеуші профессоры, Қарағанды университеті. Е. А. Бөкетова, Университетская көшесі, 28, 100028, Қарағанды, Қазақстан.



Copyright: © 2025 by the authors. Submitted for possible open access publication under the terms and conditions of the Creative Commons Attribution (CC BY NC) license (https://creativecommons.org/licenses/by-nc/4.0/).