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Study of the assortment of medicinal products in the form of soft dosage forms for veterinary use

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Abstract. The design of new medications and dosage forms intended for the prevention and provision of qualified animal treatment is one of the most important tasks of veterinary medicine. The existing market for veterinary drugs is constantly expanding for a number of reasons, including due to active import substitution. A marketing study of the assortment of soft dosage forms for veterinary use in the pharmaceutical market of the Russian Federation was carried out by pharmacotherapeutic groups, the number of active substances, manufacturing countries, manufacturing companies, types of soft dosage forms, dispensing from pharmacies, groups of animals to which the investigational drugs are intended, places of concentration of production capacities of manufacturing companies. The conducted research, according to the authors, will ensure the awareness of subject matter specialists.

Keywords: marketing, veterinary medicine, pharmacotherapeutic groups, assortment structure, drug manufacturers

Contribution of the authors: Belousov E.A. — processing and structuring of the received information, content analysis of the studied data; Novikova E.O. — search and primary systematization of the studied data; Belousova O.V. — structural analysis of the studied data; Novikova M. Yu. — graphical analysis of the studied data; Krotova E.A. — linguistic design of the received material; Novikov O.O. — general management of scientific work. All authors reviewed the final version of the manuscript and approved it.

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Introduction

A small number of medications in the form of soft drug forms (SDF) for veterinary use are available in the form of pastes and gels, suppositories for intrauterine administration and creams for application to the skin surface [1–3]. Ointments, liniments and gels for external use are also widely used in veterinary practice for local therapy [4–7].

MDF for veterinary use is represented in many pharmacotherapeutic groups. They are easy to use and quite effective, especially in the treatment of open wounds and inflammatory processes of the skin and mucosa [8–13].

Veterinary drugs in the form of MDF for internal use are intended for sublingual (buccal) administration or administration per os. They consist of one or more pharmacologically active substances dissolved or distributed in a single- or multiphase basis from substances of various origins (natural, synthetic).

Preservatives, plasticizers, thickeners, emulsifiers, stabilizers, corrigents, etc. can also be introduced into the composition of veterinary drugs in the form of MDF for internal use as excipients.

These drugs are usually available in single- or multi-dose containers, allowing them to be accurately dosed according to the weight of the animal.

Russian State Register of Medicinal Products for Animals has 2,443 trade names (TN), of which the share of drugs in the form of MDF is 73 TN, which corresponds to 3%. This circumstance shows the lack of subject drugs in the general structure of the assortment [14, 15].

The aim of the study is to analyze the assortment of drugs presented on the pharmaceutical market of Russia in the form of MDF for veterinary use.

Materials and Methods

The study used the following sources: Russian State Register of Medicinal Products for Animals[1], the Vidal Handbook[2], other materials of published marketing research from printed and electronic publicly available sources of information, analytical materials of the studied profile market.

Methods used: structural analysis, content analysis, graphical analysis, analytical research [16].

[1] Russian State Register of Veterinary Medicinal Products (list of state-registered medicinal products). Rosselkhoznadzor: official website. URL: https://fsvps.gov.ru/files/gosudarstvennyj-reestr-lekarstvennyh-sredstv-dlja-veterinarnogo-primenenija-perechen-lekarstvennyh-preparatov-proshedshih-gosudarstvennuju-registraciju/ (date of access: 17.09.2025).

[2] Vidal. URL: https://www.vidal.ru/ (date of access: 17.09.2025).

Results and Discussion

During the study of the Russian register of drugs for veterinary use, an information array of MLF was formed, the structure of the assortment of which is determined by 33 manufacturing companies.

The study of the assortment of SDF by pharmacological affiliation revealed 23 pharmacotherapeutic groups (PTG) (Table, Fig. 1). The number of drugs in the form of SDF with antimicrobial action is 56 TN — 76.6%, which indicates the dominant demand.

Distribution of the range of SDF by pharmacotherapeutic groups

Pharmacotherapeutic groups	Number of TN units	Share of the total MDF assortment, %
Antiseptic drugs	25	34.2
Antiseptic and disinfectant combinations	9	12.3
Local irritants	1	1.4
Local irritants in combinations	1	1.4
Antibacterial agents	2	2.7
Combination antibacterial drugs	1	1.4
Tetracyclines	2	2.7
Amphenicols	2	2.7
Amphenicols in combinations	3	4.1
Sulfonamides	2	2.7
8-hydroxyquinoline derivatives	1	1.4
Other antibacterial combinations	2	2.7
Antifungal agents	1	1.4
Antiprazitical agents	1	1.4
Antiprazitical agents in combinations	1	1.4
Anthelmintics	1	1.4
Anthelmintics in combinations	1	1.4
Insectoacaricidal agents	5	6.8
Other non-narcotic analgesics, including non-steroidal and other anti-inflammatory drugs, in combinations	1	1.4
Dermatotropic agents	6	8.2
Immunomodulators	2	2.7
Immunosuppressants	1	1.4
Homeopathic remedies	2	2.7

Source: compiled by E.A. Belousov, E.A. Sladkova, E.O. Novikova, O.V. Belousova, M. Yu. Novikova, O.O. Novikov.

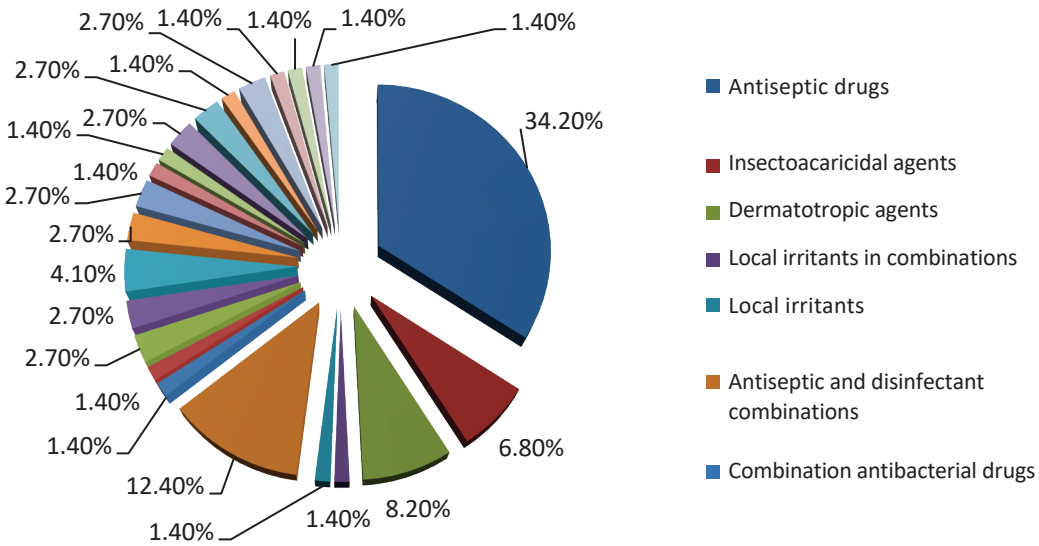

Fig. 1. Distribution of the range of medicinal products by pharmacotherapeutic group, %
Source: compiled by E.A. Belousov, E.A. Sladkova, E.O. Novikova, O.V. Belousova, M. Yu. Novikova, O.O. Novikov.

The structure of the assortment, depending on the number of active components in the drug, consists of monocomponent ones, which make up 55 TN, or 75.3%, and multicomponent ones containing two or more active substances — 18 TN (24.7%) (Fig. 2).

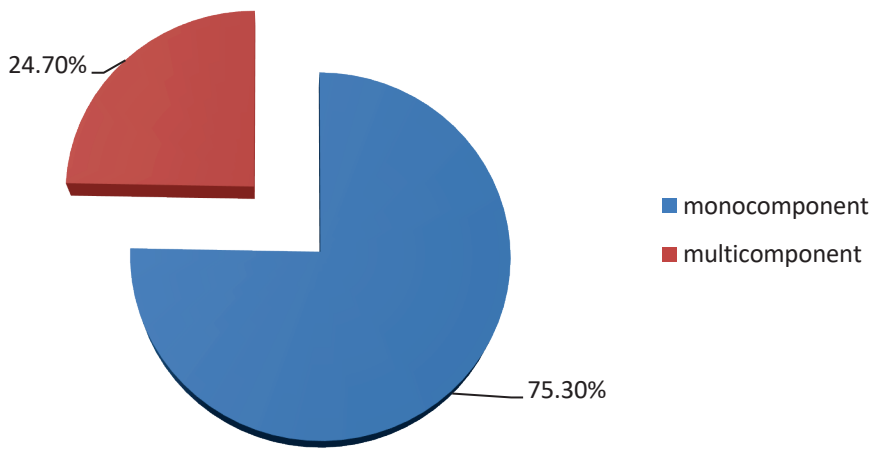

Fig. 2. Ranking of drugs based on the number of active ingredients, %
Source: compiled by E.A. Belousov, E.A. Sladkova, E.O. Novikova, O.V. Belousova, M. Yu. Novikova, O.O. Novikov.

By production affilations, the structure of the assortment is as follows: drugs produced in the Russian Federation are determined by 66 TN, or 90.4%; Spain — 1 TN (1.4%); France — 3 TN (4.0%); Belarus — 1 TN (1.4%); India — 1 TN (1.4%); Brazil — 1 TN (1.4%). Diagram (Fig. 3) shows that the number of Russian drugs in this market segment is 9 times higher than the pool of imported drugs in the form of MDF, which can indicate successful import substitution in this market segment.

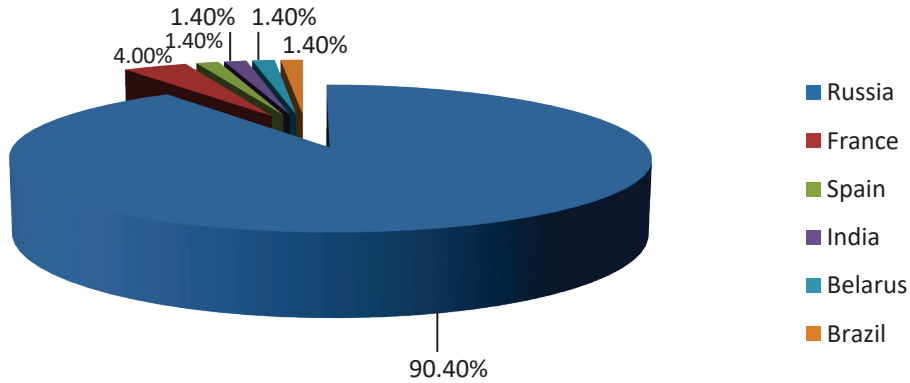

Fig. 3. Structuring the drug product range by country of origin, %
Source: compiled by E.A. Belousov, E.A. Sladkova, E.O. Novikova, O.V. Belousova, M. Yu. Novikova, O.O. Novikov.

At the next stage of the study, the ranking of drug manufacturers in the form of MDF was carried out. Thus, JSC Plant Veterinary medications (Veterinarnye preparaty) with 12 TN occupies a leading position, defining 16.3% of the target market. CJSC NPP PHARMAX with 7 TN — 9.5%, is in the second position. Pharmaceutical company NITA-PHARM LLC (5 TN, 6.8%) — 3rd place; SPAZ-PHARM LLC, NPO LIKOM LLC — 4 TN each (5.5%); BioPro CJSC, Rosvetpharm CJSC, Agrobioprom JSC — 3 TN each (4.1%); Pharmiomedservice LLC, BIAGRO Trading House, Apicenna, Agrofarm NPP, Vettorg, BioFarmGarant, ALEXANN LLC — 2 TN each (2.7%); Orenburgzoovesnab LLC, VETOQUINOL S.A., Thealaya Himal Drug Company, IUP VIK — Animal Health, TriRx Serge, FKP Armavir Biological Factory, MEDHIM JSC, Agroservis LLC, PJSC, PJSC Kolomensky, BioChemPharm LLC, MEDITER Research and Development Company LLC, Industrial Veterinaria, S.A. INVESA, Intervet Productions S.A., Scientific and Production Veterinary and Animal Breeding Center LLC, BIOGARD LLC, FOX i Co. Research and Production Center LLC, Boehringer Ingelheim Animal Health do Brasil Ltda, and Vivaton CJSC together accounts for 25.2% of the studied assortment (Fig. 4).

Among the types of MDF, the most popular ointments are 49 TN (67.1%); gels are in significant demand — 15 TN (20.6%); liniments and pastes — 3 TN each (4.1%); suppositories — 2 TN (2.7%); creams — 1 TN (1.4%) (Fig. 5).

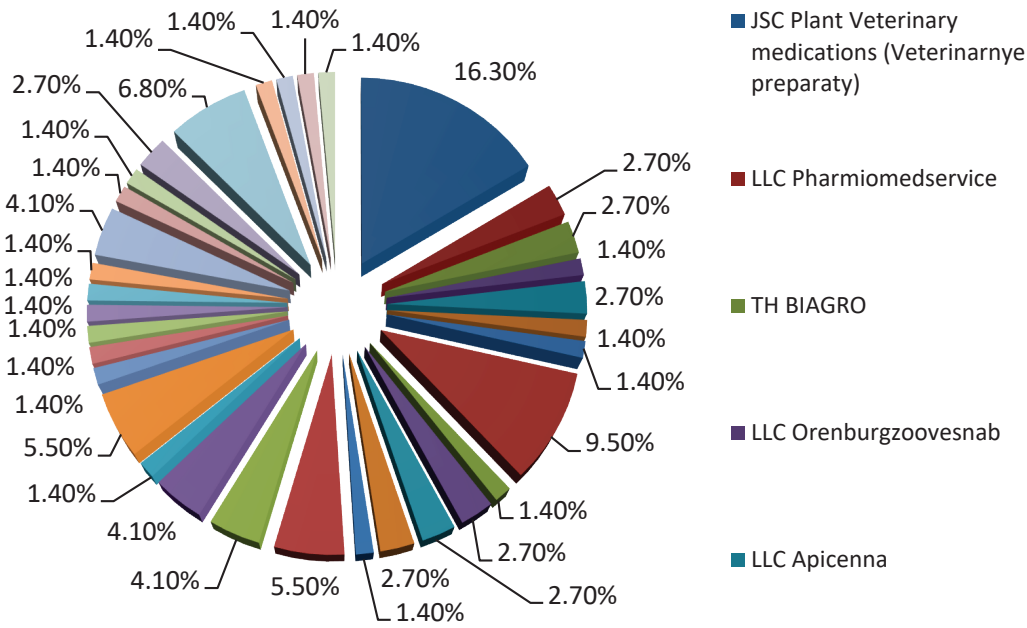

Fig. 4. Ranking of MLF manufacturers based on the number of TN provided, %

Source: compiled by E.A. Belousov, E.A. Sladkova, E.O. Novikova, O.V. Belousova, M. Yu. Novikova, O.O. Novikov.

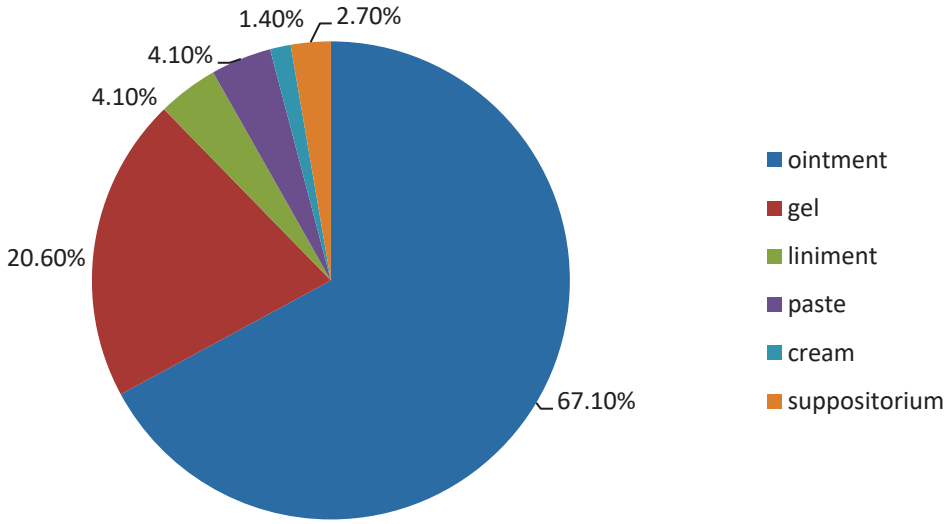

Fig. 5. Segmentation of the studied range of multifunctional dietary supplements by dosage form type, %

Source: compiled by E.A. Belousov, E.A. Sladkova, E.O. Novikova, O.V. Belousova, M. Yu. Novikova, O.O. Novikov.

At the next stage, the most popular and in-demand dosage form — ointments — was studied in more detail.

According to the State Pharmacopoeia of the Russian Federation XIV edition (OFS.1.4.1.0008.18[3]), the ointment is MDF, intended for application to the skin, wounds and mucous membranes. Ointment — MDF, consisting of a base and uniformly distributed active substances in it. By type, ointments are divided into external and local. In the veterinary register today, out of 49 TN, ointments for topical use are 35 TN (71.4%), for external use — 14 TN (28.6%). One drug, Optimmun® ointment, refers to ophthalmic dosage forms.

From pharmacy organizations, all drugs in the form of MDF presented in the register are sold without a prescription from a veterinarian.

We investigated the range of subject drugs for preferential use in certain groups of animals. Thus, external drugs used to maintain the permissible level of health of agricultural and domestic animals account for 39 TN, which corresponds to 53.4%; drugs used mainly for the treatment of domestic animals determine 8 TN, or 11.0% of the studied range; agricultural drugs — 16 TN (21.9%), and the number of drugs for the treatment of animals not included in the previous groups is 10 TN — 13.7% (Fig. 6).

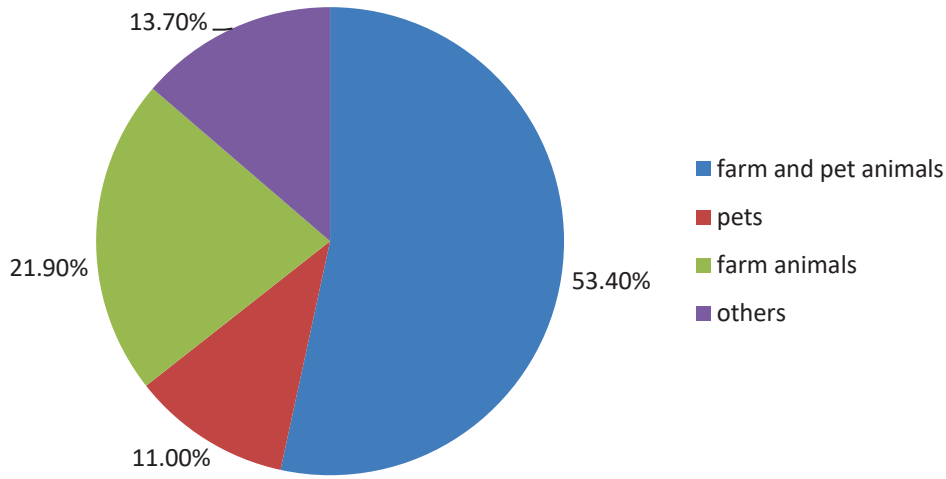

Fig. 6. Distribution of topical drugs by use in specific animal groups, %

Source: compiled by E.A. Belousov, E.A. Sladkova, E.O. Novikova, O.V. Belousova, M. Yu. Novikova, O.O. Novikov.

Further, we studied the distribution of manufacturers of subject drugs by geographical reference to the Federal Districts of the Russian Federation. The main production of drugs in the form of MDF is concentrated in the Central Federal District — 40 TN, or 55% of the studied assortment of MDF, 16 TN (22%) are produced in Moscow and

[3] Ointments GPG.1.4.1.0008.18. State Pharmacopoeia of the Russian Federation of the XIV edition. URL: https://pharmacopoeia.regmed.ru/pharmacopoeia/izdanie-14/1/1–4/1–4–1/mazi/ (date of access: 17.09.2025).

the Moscow Region, in the Vladimir Region — 17 TN (23.3%); at the enterprises of the Volga Federal District — 18 TN (24.6%), in the Kirov Region — 7 TN (9.6%), the Saratov Region — 9 TN (12.3%); in the Siberian Federal District — 6 TN (8.2%); the share of the Southern and North-Western Districts accounts for 1 TN each (1.4%) (Fig. 7).

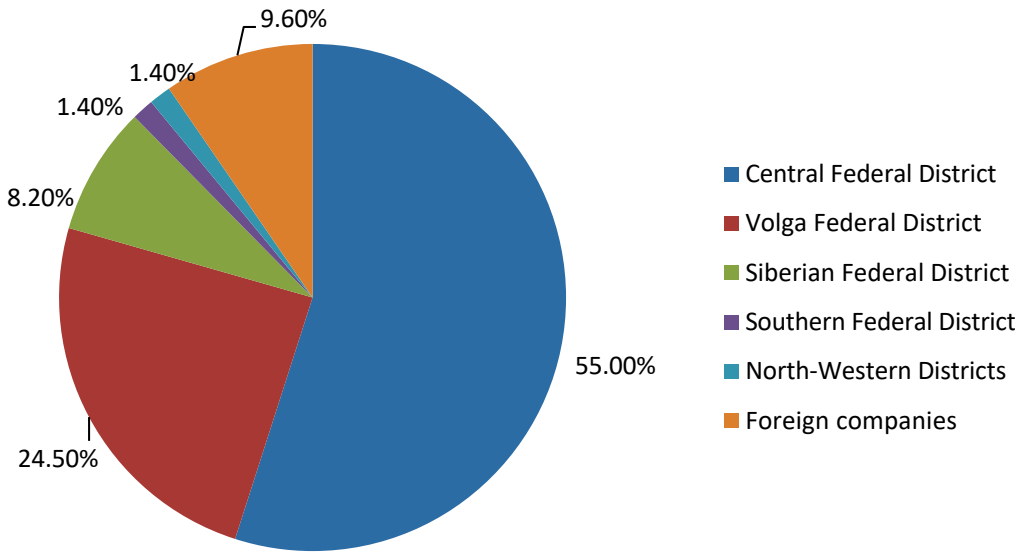

Fig. 7. Segmentation by geographic location of key pharmaceutical manufacturing companies, %

Source: compiled by E.A. Belousov, E.A. Sladkova, E.O. Novikova, O.V. Belousova, M. Yu. Novikova, O.O. Novikov.

Conclusion

Thus, the assortment of drugs in the form of MDF is 3% of the total registered therapeutic tools, which is not enough for the successful treatment of a group of a number of pathologies, for example, traumatic ones. This should determine the vector for the design of new drugs and MDF.

Despite the limited assortment of drugs in the form of MDF, the share of Russian drugs reached 90.4%, which indicates the success of the import substitution program.

The main capacities for the production of target drugs are located in the European part of the Russian Federation, and therefore there is a need to develop profile capacities in other federal districts of Russia.

In our opinion, the conducted marketing research will ensure that specialists in the subject area are informed.

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Исследование ассортимента лекарственных средств в виде мягких лекарственных форм для ветеринарного использования

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Аннотация. Создание новых лекарственных средств (ЛС) и лекарственных форм, предназначенных для профилактики и оказания квалифицированного лечения животных, — одна из важнейших задач ветеринарной медицины. Существующий рынок ветеринарных ЛС постоянно расширяется по ряду причин, в т.ч. из-за активного импортозамещения. Проведено маркетинговое исследование ассортимента мягких лекарственных форм для ветеринарного применения на фармацевтическом рынке РФ по фармакотерапевтическим группам, количеству действующих веществ, государствам-производителям, компаниям-производителям, видам мягких лекарственных форм, отпуску из аптек, группам животных которым предназначены исследуемые лекарственные средства, местам сосредоточения производственных мощностей компаний-производителей. Проведенное исследование, по мнению авторов, позволит обеспечить информированность профильных специалистов в предметной области.

Ключевые слова: маркетинг, ветеринария, фармакотерапевтические группы, структура ассортимента, производители лекарств

Вклад авторов: Белоусов Е.А. — переработка и структурирование полученной информации, контент-анализ исследуемых данных; Новикова Е.О. — поиск и первичная систематизация исследуемых данных; Белоусова О.В. — структурный анализ исследуемых данных; Новикова М.Ю. — графический анализ исследуемых данных; Кротова Е.А. — лингвистическое оформление полученного материала; Новиков О.О. — общее руководство научной работой. Все авторы ознакомились с окончательной версией рукописи и одобрили ее.

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