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ҚАЗАҚТЫҢ ЕТТІ-ЖҮНДІ АҚСЕҢГЕРЛІК ТИПТІ ҚОЙЛАРЫНЫҢ ШАРУАШЫЛЫҚҚА ПАЙДАЛЫ БЕЛГІЛЕРІНІҢ ТҰҚЫМҚУАЛАУШЫЛЫҒЫ

Мақалада қазақтың етті-жүнді ақсеңгір тұқымаралық типті қойларының шаруашылыққа пайдалы белгілерінің тұқым қуалаушылық ерекшеліктері көрсетілген.

Кілт сөздер: іріктеу, тұқымқуалау, өзгергіштік, селекция, корреляциялық байланыс, тірі салмағы, жүннің ұзындығы және жіңішкелігі.

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HERITABILITY OF ECONOMICALLY-USEFUL SIGNS OF AKSENGERSKY AN INTRABREED TYPE SHEEPS OF KAZAKH MEAT-WOOL BREED

The article presents the results of research on determination of heritability, economically-useful signs of aksengersky type sheeps kazakh meat-wool breed in the conditions of the foothill area of Almaty region.

Key words: selection, heritability, variability, selection, correlation, live weight, length and fineness of wool.

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SEPTIC WOUNDS HEALING WITH “VETSCUNGITE” OINTMENT

Abstract

There are many different ways to treat wounds. Promising research and development for the local application of laser radiation, new medicinal and herbal preparations, cell cultures, regulators.

In this context it was interesting to find efficient, cost-effective, technically simple ways of combined treatment with simultaneous exposure to the local inflammatory response and animal immune system clean of stimulants.

One of the natural remedies with wellness and medical action was shungite.

The aim of our work was the development of ointments for the treatment of purulent wounds.

To achieve this goal, the following objectives: to develop the technology of producing materials on the basis of shungit.

Key words: ointment, septic wounds, treatment, shungit

Ointment base has a large effect on the pharmacological properties of ointment and its stability during storage. Ointment bases provide high-quality and long-lasting validity of ointments.

One of the most important properties of ointment bases is their biological indifference. Ointment bases should not irritate or provide sensitizing actions. Ability to preserve pH skin original is very essential.

An important requirement and great practical importance of modern ointment base is its easy removing from the skin surface, especially from hairy sites, as well as the lack of a "greasy" luster in application sites.

Effect of ointment pharmacological action depends on the right choice of ointment base and its properties. It is an active carrier of treatment result starting. Using different ointment base, you can adjust the speed and level of resorption (absorption, penetration) of medicinal substances into the skin and into the body tissues.

Skin structure also influences on mechanism of medicinal substances absorption from ointment.

Amount of drug absorbed through the skin depends on ointment application area and skin thickness.

An important indicator of ointment quality is ability of ointment bases to release medicinal substance with certain rate. In accordance with in vitro studies results, ointment bases can be arranged in the following order according to their drug release rate: Vaseline, animal and vegetable oils, water-soluble emulsions and bases (from lowest to highest) [1].

Drugs with high fat solubility have the highest skin diffusion from Vaseline. Polyethylene-glycolic ointment bases provided relatively high substances concentration on skin surface, but their absorption was reduced to a minimum [2].

Lately surface-active substances (SAS) are widely used. They provide good distribution of used medicines, act as wetting agents and solubilizers, decrease surface tension between skin (mucous membrane) and ointment base. As a result, drug diffusion through keratoid level is better and it increases the therapeutic effects [3].

This is the most generally used group of bases, applied at commercial production. The followings are widely used as ointment base: hydrocarbons (white and yellow Vaseline, soft and liquid paraffin, petrolatum, artificial Vaseline, ceresin wax, deresined ozokerite, naphthalan oil ointment, Jelene, Plastibase and so on), fats (animal fat, sperm oil) and silicones

Ointments based on hydrocarbons and silicones are stored for a long time, but they have no high therapeutic activities. They release drugs slowly and are characterized as surface activity ointments.

Artificial Vaseline is made with different combination of liquid hydrocarbons and paraffin (common and isoparaffin), ceresin wax, ozocerite, petrolatum [4].

Fats (adepts, beef fat) are mixtures of compound glycerin ethers with monobasic fat acids (palmitic, stearin, olein, linoleic and so on).

Fresh adepts is easily absorbed by skin, easily releases drugs, does not irritate skin, is easily spread and washed with soap with some amount of water (up to 20%).

Fats are easily spoiled and get acid reaction, smell badly and get irritation activity (free fatty acids, aldehydes and so on) if they are under influence of light, warmth, air and water.

Vegetable oils are characterized with high content of non-limiting acid glycerides and are liquid products. They are used in composition of compound face ointments/ creams. As for chemical resistance, vegetable oils are equal to adepts [5].

The most convenient method of wounds local healing is ointment application and it has advantages over other different soft drug products. It is possible to add different hydrophilic agents into ointments, to control release and drugs bioavailability, control effectiveness and drug safety. A large amount of ointment bases allow to create combined formula, useful for wound healing, taking into consideration its stage and condition. This formula has the ability of constant improving both drugs and methods of treatment.

Besides pharmacological activity origin of new drugs is also of great importance. Nowadays preference is given to drugs of natural origin, environmentally safe, possessing immune stimulating and antiseptic characteristics, non- allergic and without side effects.

Natural mineral schungite is one of them. Schungite is a mineral, containing carbon which gives a high capacity to absorb different substances. Over sorbent surface there is a free force field, attracting atoms, molecules and ions from outside. Substance's absorption also depends on adsorbent surface (the most abilities belong to finely porous and powder-like substances). Schungite has adsorptive, anti-inflammatory and bacteriostatic activities

The decision was made to use adeps and cod-liver oil as ointment base when ointment on schungite basis was being worked out.

Cod-liver oil contains Vitamins A and E. Retinol has multilateral biological importance: it is the compound part of cell biologic membranes. All this provides normal mitosis. If there is retinol defect, intracellular biosynthetic processes in tissues are sharply broken, some keratinization processes with mitosis termination occur. Cod-liver oil influences on ARA in blood plasma and its content in cell membranes. It influences on producing inflammatory prostaglandins in animal's body, which provides reducing of inflammation and itch. Linoleic acids are sources of irreplaceable fatty acids, which are normally especially needed for skin hairy coating and provide general organism resistance. Epidermis impregnation with fat reduces exteroceptors' squeezing, improves blood supply, reduces tension and normalizes elasticity, heat exchange, water cycling, interchange of gases and skin protective function, makes anti-inflammatory effect conditional[6]

“Vetschungite” ointment preparation technology

New ointment based on schungine was named by us as “Vetschungite”

“Vetschungite” ointment contains natural mineral schungite and fat base (adeps and additional cod-liver oil) with the following components ratio:

Natural mineral schungite	1 part
Adeps	2 part
Cod-liver oil	1 part

Ointment is prepared the following way: 2 parts of adeps are to be melted in enameled pot, then 1 part of schungite is added and stirred carefully with a glass stick till homogeneous condition. After the formula is cooled down, 1 part of cod-liver oil is to be added. The ready formula was stirred till thick consistence. The ready formula was put into 100,0 sm³sterile brown glass jars, then each jar was corked and labeled.

Before usage of “Vetschungite” ointment, it is necessary to wash a wound carefully, dry and then spread thin film of ointment onto the whole wounded area.

Dose and duration of ointment usage depends on wound process condition, exudates amount and pus presence. After ointment is spread on the wound, the latter should be covered with tissue and it should be fixed with gauze bandage. Bandaging is to be carried out each 2-3 days. Frequent bandaging can influence on healing process negatively.

“Vetschungite” ointment is of thick consistence, black in color, with specific smell. For external use only. Keep in a jar in cool and dark place.

Summary. In the process of work carrying out, a new ointment was created on natural mineral schungite basis. The ointment influences positively on wound healing process. Usage of “Vetschungite” ointment on animal septic wounds reduces inflammatory edema, wounds are cleaned from pus faster and wounded cavity is filled with granulation tissue, wounded area

epithelization is accelerated also. A pre-patent №18504 “Vetschungite” ointment for healing septic wounds” was taken out by the following authors A. A. Abdulla, A. M. Nametov, B. K. Iyasov. Patent application date 03.05. 2006, registered 03.04.2007.

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ІРІНДІ ЖАРАНЫ «ВЕТШУНГИТ» МАЙЫМЕН ЕМДЕУ

Жараны емдеудің көптеген әдістері белгілі. Болашағы бар зерттеулердің бірі лазермен сәулелендіру, дәрілік және өсімдік препараттары, торшалық культуралар, реттеуіштер.

Соған орай, бір жағынан жергілікті қабыну процестеріне және иммунды жүйеге әсер ететін экологиялық таза қуаттандырғыштарды және экономикалық, техникалық қолдану жағынан тиімді кешенді ем іздеуге қызушылық туғызады

Емдік және шипалы әсер ететін табиғи заттардың бірі шунгит болып табылады.

Біздің жұмысымыздың мақсаты ірінді жараны емдейтін майды дайындау. Ол мақсатқа жету үшін келесі міндеттер қойылды. Шунгит негізінде майды дайындау технологиясын жетілдіру.

Кілт сөздер: майлар, емдеу, ірінді жара, шунгит.

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МАЗЬ ДЛЯ ЛЕЧЕНИЯ ГНОЙНЫХ РАН «ВЕТШУНГИТ»

Известно много различных способов лечения ран. Перспективны разработки и исследования по локальному применению лазерного излучения, новых лекарственных и растительных препаратов, клеточных культур, регуляторов.

В этой связи вызывает интерес поиск эффективных, экономически выгодных, технически простых способов комплексного лечения с одновременным воздействием на местный воспалительный процесс и на иммунную систему организма животных экологически чистых стимуляторов.

Одним из природных средств, обладающих оздоровительным и лечебным действием, является шунгит.

Целью нашей работы явилось разработка мази для лечения гнойных ран.

Для достижения указанной цели на решение поставлены следующие задачи:

Разработать технологию изготовления мази на основе действующего начала шунгита.
Ключевые слова: мазь, лечения, гнойные раны, шунгит.

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С.Ш. Нурабаев

РГП "НИИ проблем биологической безопасности" КН МОН Республики Казахстан

ПОДБОР И СИНТЕЗ СПЕЦИФИЧЕСКИХ ПРАЙМЕРОВ ДЛЯ ПЦР ПРИ ЧУМЕ МЕЛКИХ ЖВАЧНЫХ ЖИВОТНЫХ

Аннотация. В результате проведенных работ по отбору нуклеотидных последовательностей генома или отдельных фрагментов РНК вируса из международных баз данных показало огромное количество последовательностей для вируса чумы МЖЖ, хранящиеся в банках генов и ежедневно пополняющиеся новыми данными.

Конструирование праймеров с соблюдением необходимых параметров проводится с помощью различных компьютерных программ, основными из которых являются Primer 3, Oligo 6, Oligo Software и другие.

Сконструированные праймеры затем синтезировали на синтезаторе олигонуклеотидов Expedite 8909, согласно инструкции прилагаемой к прибору.

В результате проведенных опытов нами были подобраны и синтезированы специфические праймеры PCR_PPRV_f3 и PCR_PPRV_r3 для постановки ПЦР при чуме мелких жвачных животных.

Ключевые слова: праймер, синтез, РНК, вирус чумы мелких жвачных животных.

Введение

Праймер (англ. primer) - это короткий фрагмент нуклеиновой кислоты, который служит стартовой точкой при репликации ДНК. Праймеры необходимы ДНК-полимеразам, так как ДНК-полимеразы могут только наращивать существующую цепь. Полимеразы начинают репликацию с 3'-конца праймера, и создают копию другой цепи [1, 2].

В большинстве случаев естественной репликации ДНК, праймером для синтеза ДНК является короткий фрагмент РНК (создаваемый заново). Такой рибонуклеотидный праймер создается ферментом праймазой, и впоследствии заменяется дезоксирибонуклеотидами полимеразой, выполняющей в норме функции репарации [2].

Многие лабораторные методы в биохимии и молекулярной биологии, которые предполагают использование ДНК-полимеразы, такие, как секвенирование или полимеразная цепная реакция, требуют наличие праймеров. Такие праймеры обычно короткие, химически синтезированные олигонуклеотиды, длиной порядка двадцати оснований. Они гибридизуются с ДНК-мишенью, которая затем копируется полимеразой [3].

Важно отметить, что не совсем удачный выбор праймера может привести к появлению неспецифического продукта амплификации из-за образования "праймерного димера". Этот побочный продукт амплификации представляет собой двунитевой фрагмент, возникающий за счет отжига праймеров с их последующей достройкой Taq-полимеразой [4, 5]. Праймеры должны быть специфичны. Если их специфичность недостаточна, то вероятней всего в пробирке с реакционной смесью будут происходить нежелательные процессы, а именно синтез неспецифической ДНК. При электрофорезе