

piracetam is used by 28% of consumers, betahistine – 22%, risperidone – 18%, meldonium – 12%, ethyl methylhydroxypyridine succinate – 8%, phenibut – 3%, phenobarbital – 3%, hydazepam – 3%, doxylamine – 2%, others – 1%.

Thus, we conducted analysis of the medication market for vascular dystonia.

Prospects for studying the toxicity of various chemicals in cell cultures

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Cell culture studies are increasingly used in scientific research, practical and regenerative medicine, and modern biotechnology.

Due to its advantages, such as the ability to determine the effect of a compound on a particular type of cell or tissue, as well as to neutralize the effects of the nervous, endocrine and immune systems, the cell culture method is in demand and relevant for studying the direct effect of exogenous (factors outside the body) agents, including cellular toxins and drugs, on certain groups of cells.

To study the effect of various substances on the body, cultures that differ in origin depending on the degree of tissue specialization (cell cultures obtained from adult animals or embryos), physiological state (normal or tumor tissues), and organotypic cultures (cultures that reproduce the complex cellular environment of the tissue from which they originate) can be used.

Studies on cell cultures of different origins, depending on the type of source tissue, such as cultures of fibroblasts, nerve cells, hepatocytes, kidney cells, splenocytes, and bone marrow cells, have their own characteristics.

Fibroblasts grow well in culture, and these cells are well isolated from mouse and rat embryos by enzymatic and explant methods. Fibroblast cell lines are among the most commonly used cultures for in vitro toxicity testing.

Thus, the use of a fibroblast cell line to study the effects on the animal body of certain chemicals, the use of which is known in therapeutic practice but requires

further research to determine the mechanisms of their toxic effects to prevent or reduce them, is an important area and is modern and relevant. It is also important to study new synthesized substances that have theoretical potential as medicinal substances in order to study their effects on animal and human cells.

**Prospects for creation of suppositories based on medicinal plant raw materials
for use in proctology**

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The problem of diagnosing and treating proctological diseases does not lose its relevance today. In the structure of proctological morbidity, hemorrhoids rank first in both men and women. This disease not only causes physical suffering, but also affects the emotional state of patients, causing them various mental disorders. At all stages of hemorrhoidal disease, drugs are indicated for symptomatic treatment. These are steroidal and non-steroidal anti-inflammatory drugs, local anesthetics, astringents and emollients, both in monotherapy and in combination.

Local medications help the patient maintain personal hygiene, relieve itching and pain. More often in proctology, such forms of drugs as creams and ointments for the perianal and anal areas, for rectal administration, in the form of oral dosage forms (drops, capsules, tablets) are used, but the most Rectal suppositories remain rational and convenient. Today, the creation of products based on components of plant origin in the form of both single preparations and in combination with synthetic substances is becoming increasingly popular. Among the active pharmaceutical ingredients, we selected dry extracts of *Hamamelis virginiana* and *Chamaenerion angustifolium*, because the aroma has a venotonic, anti-inflammatory, blood-spinal effect. Also, for the stock of rectal suppositories, we introduced the local anesthetic anesthesin, which has high anesthetic power and low toxicity.