

XENOBIOTICS AND THEIR TYPES

Teshayev Mukhriddin

A Lecturer At Asia International University

Annotation: Correction of xenobiotics accumulated in the body of cattle living in man-made areas under the influence of chlorella and thereby increasing their productivity.

Key words: Metabolism, Xenobiotic, Toxic, Bioflavonoids, Correction, Synthetic compounds

In recent years, under the influence of adverse environmental factors, the natural resistance of the organism of agricultural animals has been decreasing. In particular, it is accumulated in the body of cattle in man-made areas

xenobiotics (poisons) to human and animal organisms

As a result of consiragen, mutagen, allergic and potagen effects on organs and systems important for life, the rate of morbidity increases and productivity decreases. The development of our time ensures that our factories and factories increase every year in the urban ecosystem.

General understanding of xenobiotics

More than 200,000 environmental chemicals are known to be xenobiotics, most of them are capable of metabolism, i.e. change, to eliminate them.

These transformations mainly occur in the liver. However, some xenobiotics may be excreted or eliminated unchanged.

Several factors can influence the metabolism of xenobiotics. These include age, sex, some genetic factors, and certain enzyme inductions caused by certain xenobiotics.

Methods of accumulation and correction of xenobiotics in the animal body learned. It is known that xenobiotics have a negative effect on the human body and animals and cause various pathological changes.

When xenobiotics enter the body through the respiratory tract or mouth, they are transported to the lungs and through the intestinal walls through the blood to various organs.

When poisoned by chemicals, the main target organs (liver and kidneys) are the first to suffer, as they are used to remove these substances from the body.

Bioflavonoids are herbal medicinal preparations. The increased interest in flavonoids is due to their biological effects, low toxicity and wide distribution in nature. Bioflavonoids stabilize cell membranes,

neutralize toxic free radicals and increase the ability of cells to recover, and are considered means of correcting the body from toxins.

Scientists observed that in the case of acute poisoning with zinc salts, metal accumulation was 175 times more than in control animals in the liver, 143 times in the intestines, 47 times in the lungs, 39 times in the liver lymph nodes, and in the neck. lymph nodes 34 times, mesenteric lymph nodes 26 times, heart 23 times, brain 20 times, kidneys 20 times, kidney lymph nodes 11 times. In acute poisoning with copper salts, the highest accumulation of metal was observed in the following sequence: in the liver, 275 times more than in control animals, in the intestines 179 times, in the lungs 92 times, in the liver lymph nodes bb times, in the kidneys 65 times; 37 times in the cervical lymph nodes, 36 times in the liver lymph nodes, 32 times in the heart, 29 times in the lymph nodes in the mesentery, 16 times in the brain

Against the background of nasal and cuff preparations, the content of xenobiotics in the studied organs significantly decreased, which indicates a positive protective effect of these preparations. The drug "Manzhetka" was shown to reduce and correct the concentration of metals in the organs due to the increased excretion of metal salts from the organs of experimental animals.

But these researches of scientists are aimed at chemical xenobiotics, they are not enough information on the correction of xenobiotics accumulated in the body of livestock in man-made areas.

The concept xenobiotic It is formed from two Greek words: xeno can be translated as "Strange") and bio (related to "Life"). In this way, the concept refers to compounds that have a chemical structure that does not exist in nature, but has been developed by man in a laboratory.

Therefore, xenobiotics are synthetic compounds. It can be said that the chemicals produced by them are human for various purposes: it can be treated from pesticides to medicinal drugs. In short, xenobiotics are chemical compounds that are not part of the natural composition of living organisms.

Xenobiotics can deteriorate through oxidation or sunlight. For example, its rare properties mean that in some cases they do not change for a very long time. Therefore, given the impossibility of biological degradation, xenobiotics are very polluting. It should be remembered that xenobiotics, in living beings, outside of different levels, have consequences that can reach the present day. Other interesting facts about xenobiotics: Generally, they appeared in our lifetime and were developed in the last century. They are called recalcitrant when they have the characteristic that they can remain unchanged over time. Such a feature of them is that they have a chemical structure of great stability. Usually, they have a non-polar structure.

- The most popular xenobiotics that are more present in our life and can be further developed in recent years are pesticides. These are, as the name suggests, compounds and substances intended to prevent, manage or control pests. In this way, they protect people, animals and the environment in general.

-At the health level, xenobiotics are drugs that are used to treat serious diseases such as cancer. We can also use these compounds that have taken over us as weapons. It could be the work of someone called sarin, for example. It is an organophosphorus-type compound similar to insecticides and pesticides, which has great toxicity and is distributed in the environment, through the air. It has its own characteristic, it has neither color nor smell. So much so that in some conflicts it was used as a chemical weapon. And the person who is in contact with it, visual disturbances, vomiting, tears, increased heart rate begin ...

Certain xenobiotics, such as veterinary drugs or pesticides, may appear in the production of certain foods. These are, in this case, pollutants that affect milk and other products and are often impossible to eliminate by industrial action. Therefore, it is common for states to establish regulations that limit the presence of residues in

food products and prevent commercialization when certain brands are exceeded. In addition, management is established in the initial stages of production.

Xenobiotics are chemical substances foreign to the human body, including drugs, food products, additives, pollutants, chemical carcinogens (foreign cells) and many substances that enter the body in various ways from the environment.

The word "xenobiotic" comes from the Greek "xenolar" which means foreign and "bios" which means life. These foreign compounds or substances that are not part of the chemical compounds that normally make up the human body can be of natural or synthetic origin.

Most xenobiotics are metabolized to be eliminated by the body, but there are some that cannot be eliminated or are eliminated so slowly that they can accumulate in the body and cause harm or toxicity.

- Xenobiotic metabolism
- Dietary source of toxic and carcinogenic xenobiotics
- Factors influencing the metabolism of xenobiotics
- Responses induced by xenobiotics

It is known that more than 200,000 environmental chemicals are xenobiotic substances, most of which are able to be metabolized, that is, changed, for destruction. These transformations mainly occur in the liver. However, some xenobiotics may be excreted or eliminated unchanged.

Several factors can influence the metabolism of xenobiotics. Among them are age, gender, some genetic factors and some enzyme inductions caused by some xenobiotics. In the case of a xenobiotic drug, its metabolism may involve its activation or reduce or terminate its action. The toxicity of some xenobiotics can be tested in several ways; for example, cyanide is very toxic at very low concentrations because it blocks the respiratory chain; others are cytotoxic because they covalently bind to DNA, RNA, or proteins. Some xenobiotics may cause antigenic reactions, may be carcinogenic, or may even be completely harmless (non-toxic).

Summary

Toxic substances and damaging factors that strongly affect the natural environment have caused many injuries to people, animals and plants. Xenobiotics can cause antigenic reactions, can be carcinogenic, mutagenic and embryotoxic.

References:

1. PRILOGENIE No. 1 of the Decree of the President of the Republic of Uzbekistan dated October 30, 2019 No. UP-5863
2. S.A. Ten, A.S. Ilyasov Sphinctery pryamoy kishki krysy - Tashkent, Fan; 2008 (monograph, 97 pages)
3. Yu.V. Novikov Ecology, environment and people. - M.: FAIR Press, 2003
4. V.V. Kraevskii, A.V. Khutorskoi "Osnovy obucheniya: didaktika i metodika". Fly away. posobie dlya VUZov.
5. G.V. Lisichkina and N.N. Chernova Chelovek i sreda ego obitaniya. Chrestomatia. M., Mir, 2003
6. T.V. Bagaeva, N.E. Ionova, G.V. Nadeeva Mikrobiologicheskaya rekomendation prirodnyx sistem ot tyajelyx metallov. Kazan 2013
7. Shchekin V.A., Livestock, T., 1968; Nosirov U., Karamolchilik, T., 2001.

8. Ilyasov A.S., Khitaev B. i dr. Vozdeystvie tyajyolyx metallov na organism cheloveka i jivotnyx v tekhnogennyx zonakh i sposoby ix biologicheskogo obezzarazhivaniya. Tashkent - 2018. Ecology Bulletin No. 5. Pages 34-36.
9. Internet resource Chervachilik.uz