Date: 15th September-2025

UNICELLULAR PARASITES AND THEIR TYPES

Khakberdiyeva Shoira Tursunaliyevna
Doctor of Philosophy in Pedagogical Sciences (PhD)
Termez State Pedagogical Institute
Senior Lecturer, Department of "Chemistry and Biology"
E-mail: xakberdiyevashoira81@gmail.com
Turopova Mukhlisa Barot's daughter
PhD student at Termez State University of Engineering and Agrotechnology
E-mail:turopovamuxlisa223@gmail.com
Raimova Feruza Jumanazar's daughter
Teacher at school 33 in Muzrabot district of Surkhandaryo region.
E-mail:feruzaraimova19950227@gmail.888com

Annotation: The body of animals belonging to the unicellular subkingdom consists of a single cell or a group of similar cells. Although unicellular organisms are similar to multicellular organisms in many ways, they differ sharply from them physiologically. Because unicellular organisms are independent living organisms, they have the ability to exchange substances, move, react, reproduce, and all other properties characteristic of living organisms. Such functions are performed by special organoids (organelles) in the cell. The organoids of unicellular organisms differ from the organs of multicellular organisms in that they are part of the cell. Unicellular organisms move with the help of pseudopods, special cilia, and cilia; they breathe through the surface of the body. Their need for oxygen is not the same. Animals that live in the depths of the water and in the mud require less oxygen.

Keywords. Protozoa, sarcomastigophora, sporozoans, ectoparasites, endoparasites, pseudopodia, malaria, toxoplasma, leishmaniasis, Giardia.

Introduction. There are more than 70,000 species of protozoa, which are divided into the phylum Sarcomastigophora, Sporalia, Myxosporidia, Microsporidia, and Infusoria. Protozoology is the science of unicellular pathogenic protozoa (Protozoa) and the diseases they cause. Veterinary protozoology studies diseases caused by unicellular parasites in animal organisms due to their free feeding. The main tasks of the science of veterinary protozoology include the study of the morphological structure and biology of parasites, the identification of the types of pathogens, and the identification of the routes of transmission of pathogens to animals. At the same time, the science of protozoology teaches methods for diagnosing the pathogenic effect of disease-causing unicellular protozoa on the host organism, methods of special (specific) and pathogenetic treatment, and measures for the prevention of these diseases.

The main part. There is a whole invisible world of microorganisms, which are called by the general term "protozoa". The most famous unicellular ciliate from school

days is the slipper ciliate. However, scientists have now described more than 70 thousand protozoa. About 50 of them can enter the human body and cause serious harm. Diseases caused by protozoa are called protozoal infections. Their course can be chronic or acute. Some are fatal.

Protozoa are one of the oldest life forms on our planet. Therefore, they are very flexible and adapt well to any environmental conditions. Let's look at the most common symptoms.

Malaria is also called swamp fever. The most dangerous protozoal infection. Its causative agent is plasmodium, which is transmitted by Anopheles mosquitoes. Cases of transmission through reusable syringes, blood transfusions and from mother to fetus are known. Currently, there is no vaccine against malaria. Symptoms: high fever, chills, anemia, tachycardia, convulsions, profuse sweating. The disease has a chronic relapsing course. Amoebiasis. Parasitic amoebae enter the body through the fecal-oral route - with water or unwashed food.

Symptoms: diarrhea, abdominal pain, blood in the stool, general weakness.

Giardiasis (giardiasis, giardiasis). Giardia - parasites that multiply in the small intestine - is present in every third inhabitant of our planet. In most cases, this coexistence is peaceful. However, immunity to protozoa is not developed. Symptoms: diarrhea, acute abdominal pain, flatulence, nausea, weight loss

Toxoplasmosis . Caused by Toxoplasma Gondii. The definitive host is the cat family. Most cases of acute toxoplasmosis are asymptomatic, and stable lifelong immunity is formed. However, for people with severe immunodeficiency, toxoplasmosis is fatal. In addition, when a pregnant woman is initially infected, the fetus is also infected.

Malaria is also called swamp fever. The most dangerous protozoal infection. Its causative agent is plasmodium, which is transmitted by Anopheles mosquitoes. Cases of transmission through reusable syringes, blood transfusions and from mother to fetus are known. Currently, there is no vaccine against malaria. Symptoms: high fever, chills, anemia, tachycardia, convulsions, profuse sweating.

The disease has a chronic relapsing course.

Amoebiasis. Parasitic amoebae enter the body through the fecal-oral route - with water or unwashed food.

Symptoms: diarrhea, abdominal pain, blood in the stool, general weakness.

Giardiasis (giardiasis, giardiasis). Giardia - parasites that multiply in the small intestine - is present in every third inhabitant of our planet. In most cases, this coexistence is peaceful. However, immunity to protozoa is not developed. Symptoms: diarrhea, acute abdominal pain, flatulence, nausea, weight loss

Toxoplasmosis. Caused by Toxoplasma Gondii. The definitive host is the cat family. Most cases of acute toxoplasmosis are asymptomatic, and stable lifelong immunity is formed.

However, for people with severe immunodeficiency, toxoplasmosis is fatal.

In addition, when a pregnant woman is initially infected, the fetus is also infected.

‘

Conclusion: Parasitic organisms parasitize various organisms and pose a serious problem for the national economy, and scientists are studying ways to combat them. To combat them, it is necessary to use various chemical drugs and follow proper nutrition and hygiene rules. Failure to combat parasites in a timely manner has a negative impact on the growth and development of organisms.

REFERENCES:

1. Mavlonov O., Saparov K., Toshmanov N. ZOOLOGIYa (umurtqasiz hayvonlar). 5110400-biologiya o‘qitish metodikasi bakalavr ta’lim yo‘nalishi talabalari uchun darslik. Sano-standart nashriyoti. Toshkent-2018.
2. Mavlonov O., Xurramov Sh., Eshova X. Umurtqasizlar zoologiyasi. Oliy o‘quv yurtlari biologiya ixtisosligi bakalavr bosqichi talabalari uchun darslik. O‘zbekiston Milliy Ensiklopediyasi Davlat ilmiy nashriyoti. Toshkent 2006
4. Haqberdiyeva S. T. Improving the Teaching Methods of Biology in General Secondary Schools on the Basis of A Competency-based Approach //Academicia Globe. – 2022. – T. 3. – №. 03. – C. 132-136.
5. Turopova M. B., Raxmatova M. U., Bekmurodov A. S. Faunistic analysis of nematodes of wild medicinal plants in Surkhandarya region of Uzbekistan // The Bioscan. 2024. 19 (2): S.I (1), P. 681-683.
6. Tursunaliyevna H. S., Nozima A. Effectiveness of using innovative technologies in teaching the morphology of bacteria //Journal of Universal Science Research. – 2023. – T. 1. – №. 10. – C. 60-66.