



## GENDER DETERMINATION METHOD USING BARR

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**ABSTRACT:** - Barr bodies have not yet been studied in depth by most scientists. There is not enough information about the effects of barr bodies on the body. Barr corpses are preserved from the zygotic period of the organism to the end of its life. A number of studies have been conducted in this regard. The use of barr bodies is very effective in determining the sex of organisms that show signs of both sexes. At present, barr bodies are not only used to determine the sex. descendants of hereditary diseases or symptoms We can also learn about how they appear, their effect on the body and the degree of occurrence of these conditions in the offspring.

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**KEYWORDS:** Inactivation, barr bodies, lionization, chromosome, embryonic period, hereditary diseases, transcription.

## INTRODUCTION

We know that medicine and science are highly developed today. With the help of several methods and many devices, it is possible to determine the sex of organisms, especially humans. However, despite the high level of development of medicine and science, it is still difficult to determine the sex of bisexuals, including intersexual, transsexual and homosexual. Such shortcomings can be clearly seen in forensic medicine. The simplest and easiest way to determine the sex of an organism is through a mechanism to determine the sex using these barr bodies. This begs the question: what are barr bodies and how do they appear? when and by whom they were first identified. Barr bodies: this is a genetic structure formed by the inactivation of 1 X chromosome of organisms of the XX genotype, which occurs only in females. Inactivation is when all parts of a chromosome are compacted and inactivated. All genes on an inactivated X chromosome become inactive and the genetic information stored by the genes becomes inactive. These signs are, of course, a pair of signs relative to the signs of inactivated chromosomes. The process of inactivation occurs during the embryonic development of the organism. in the zygote i There are two sex XX chromosomes. One of these X chromosomes is inactivated, and this process happens by chance. This chromosome condenses, shortens, and becomes inactive. and this phenomenon is now called lionization under the name of a scientist. Inactive bodies formed as a result of the lionization process were first identified in 1949 by Murray Barr and Bartram. For this reason, these cells are called Barr cells. This prevents women from

having more X chromosome genes than men, which means that the amount of X chromosome genes in men and women is relatively equal due to Barr cells. located in the part that gives the reverse mass to the nuclear membrane, i.e., next to the nucleus. Purpose of the study: We know that sex can be determined using barr bodies. The main purpose of this study is to determine the true sex of organisms that show signs of both sexes. It is impossible to determine the sex of some people based on their external and even internal structure. This process makes it difficult to determine their sex. In such cases, Barr bodies can be used to determine their sex. Even if their structure changes, their genetic karyotype remains the same, and bar bodies remain in female organisms. from the mucous layer of the trace t The study of isolated drugs makes this process easier and more accurate. The reason is that when barr bodies are removed from the mucous membrane of the mouth, no harm is done to the body. The mucous membrane of the mouth is constantly replaced by the organism, ie their genotype remains unchanged. In addition, the sex of the corpse can be determined using barr bodies. This plays an important role in the diagnosis of forensic medicine. In many cases, only certain parts of the corpse can be preserved, and the barr bodies are present in every cell of the body, allowing them to determine which sex the body part belongs to. The Y chromosome can also be used to determine the sex of these organisms, but the barr The advantages of cells over the Y chromosome are many. Considering these advantages: Barr cells are constantly inactive, concentrated in the body,

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so they can be easily stained using dye dyes. In addition, they are more resistant to changes in light and temperature than the Y chromosome to external environmental factors. Barr bodies do not only serve to determine the sex. The process of formation of bar bodies in women In many cases, the X chromosome, which carries the main pathological gene, is inactivated in women. However, how the body recognizes this chromosome has not yet been fully studied by scientists. As a result, the pathological gene until the end, it is inactive, which leads to a decrease in hereditary diseases in newborn girls. This increases the relevance of the study of barr bodies.

Materials and methods: The main goal of our research is to determine the sex of these organisms. In recent years, the determination of the sex of organisms, especially humans, has become an important part of practice. This laboratory work is very simple. The simplest way to use barr bodies to differentiate between males and females is to prepare a drug from the mucous membrane of the mouth. Before taking the samples, the patients' mouths were rinsed with a cleanser. The samples were scraped from the oral mucosa with a spatula. They were then applied to ice slides and held in 95% ethyl alcohol for 10 to 15 minutes. The slides were then washed in distilled water and stained with papinicoal stain and sealed. The next step is to observe the finished drug under a mixed microscope.

Results and conclusions of the research: Experiments show that the determination of sex using barr corpses can give positive results. In particular, in the experiment we saw, 91% of the positive results were obtained, ie 182 human genders were determined with a high degree of accuracy. The presence of this drug in the cell indicates that it belongs to a female organism. It is clear that the true sex of organisms that show

signs of bisexuality is much easier to determine using inactive chromosomes. Currently, the disease affects one in every 1,000 children born in the United States.

## CONCLUSION

1. Based on the above data, we have learned a lot about barr bodies. Now we know that barr bodies are formed in the early stages of embryonic development of the organism. , that is, we can determine the sex of the fetus. Unnecessary fluids are constantly secreted from the mother's body, which also contains fetal waste cells. We can determine the sex of the fetus depending on the presence or absence of barrel bodies in them. These events further increase the importance of barrel bodies.
2. All the genes in Barr's cells are concentrated and inactive for the rest of their lives, so they do not participate in the transcription process. This leads to a loss of their importance in protein synthesis. Due to this process, the phenomena of dominance and recession do not occur in this organism. These rules are no longer important for the organism.
3. Barr bodies are always one less than the sex X chromosomes of the body. In pathological cases, some women have an increase in the number of X chromosomes, but only one of these X chromosomes is active. All other X chromosomes are inactivated. For example, in men with Klein Felter's syndrome, bar cells may also form.

## REFERENCES

1. Benjamin Agbayemie Akpogomeh (A Comparative Study Ib the Incidence of Barr Bodies in Mammalian Blood and Some Factors Influencing it) Jorge J.Yunis. (Human chromosome methodology) Encyclopedia of Genetics - Britain 2008 2.

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2. Alberts B, Johnson A, Lewis J, Raff M, Roberts K and Walter P (2008) Molecular Biology of The Cell, 5th edition, New York: Garland Science
3. Hartl DL and Ruvolo M (2012) Genetics, Analysis of Genes and Genomes, 8th edition, USA: Jones and Bartlett
4. Alberts, B. Johnson, A. Lewis, J. Raff, M. Roberts, K and Walter, P. (2008) Molecular Biology of The Cell 5th Edition, New York: Garland Science. ( page 473)
5. X -inactivation. Khan Academy. <https://www.khanacademy.org/science/high-school-biology/hs-classical-genetics/hs-sex-linkage/a/x-inactivation>
6. Penny, GD, et al. Requirement for Xist in X chromosome inactivation. Nature 379, 131–137 (1996) doi : 10.1038 / 379131a0
7. Harikrishnan , Prasad, et al. "Comparison\_of\_Davidson\_Bodies\_with\_Barr\_Bodies." International Journal of Current Research, May 2018,
8. R Amirthaa Priyadharscini, TR Sabarinath. "Barr Bodies In Sex Determination". Pubmed Central (PMC), 2020,