# Article information:

Influence of Perinatal Factors on Gene Expression of IAPs Family and Main Factors of Pluripotency: OCT4 and SOX2 in Human Breast Milk Stem Cells-A Preliminary Report - PubMed  
<https://pubmed.ncbi.nlm.nih.gov/36768802/>

# Article summary:

1. The study aimed to evaluate the expression of eight genes from the IAP family and the gene regulating IAP-XAF1 in stem cells derived from human milk, using the qPCR method.

2. The research confirmed the expression of several genes in the tested material, including OCT4 and SOX2, and demonstrated dependencies of their expression on various perinatal factors such as maternal BMI, time since childbirth, number of pregnancies and deliveries, manner of delivery, and preterm labor.

3. Positive relationships were found between gene expression of BIRC7, BIRC8, and XAF1 and the main factors of pluripotency: SOX2 and OCT4. This work is the first to investigate the expression of genes from the IAPs family in mother's milk stem cells.

# Article rating:

Appears moderately imbalanced: The article provides some useful information, but is missing several important points or pieces of evidence that would be required to present the discussed topics in a balanced and reliable way. You are encouraged to seek a more balanced perspective on the presented issues by exploring the provided research topics and looking at different information sources.

# Article analysis:

The article titled "Influence of Perinatal Factors on Gene Expression of IAPs Family and Main Factors of Pluripotency: OCT4 and SOX2 in Human Breast Milk Stem Cells-A Preliminary Report" presents a study that aimed to evaluate the expression of eight genes from the IAP family and the gene regulating IAP-XAF1 in stem cells derived from human milk. The study also analyzed the relationships between the expression of genes under study and clinical data, such as maternal age, maternal BMI, week of pregnancy in which delivery took place, bodyweight of the newborn, number of pregnancies and deliveries, and time elapsed since delivery.

The article provides a detailed account of the research methodology used to conduct this study. It also presents the results obtained from the research, which confirmed the expression of several genes in the tested material. Moreover, it demonstrated several dependencies between gene expression and various perinatal factors.

However, there are some potential biases in this article that need to be considered. Firstly, the sample size used for this study is relatively small (42 patients), which may limit its generalizability. Secondly, there is no mention of any control group used for comparison purposes. This lack of a control group makes it difficult to determine whether any observed differences are due to perinatal factors or other confounding variables.

Additionally, while the article mentions positive relationships between gene expression and main factors of pluripotency (SOX2 and OCT4), it does not provide any evidence or explanation for these relationships. Furthermore, there is no discussion about potential risks associated with using stem cells derived from human milk for therapeutic purposes.

Overall, while this article provides valuable insights into gene expression in stem cells derived from human milk and their relationship with perinatal factors, it has some limitations that need to be considered when interpreting its findings. Further research with larger sample sizes and control groups is needed to confirm these results and explore potential risks associated with using stem cells derived from human milk for therapeutic purposes.

# Topics for further research:

* Risks associated with using stem cells derived from human milk for therapeutic purposes
* Control groups in stem cell research
* Relationship between gene expression and main factors of pluripotency
* Perinatal factors and gene expression in stem cells
* Generalizability of small sample sizes in stem cell research
* Stem cell therapy and breast milk stem cells

# Report location:

<https://www.fullpicture.app/item/a4cdbf7a35e6d8bfc327962d89447efc>