

## عنوان مقاله:

Bioinformatics evaluation of hsa-miR-۴۴۹۶ related to a single nucleotide polymorphism (rs۱۰۳۱۳۰۵۳۳۰) of GSTP۱ gene in gastric cancer

## محل انتشار:

اولین همایش بین المللی و دهمین همایش ملی بیوانفورماتیک ایران (سال: ۱۴۰۰)

تعداد صفحات اصل مقاله: ۱

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## خلاصه مقاله:

**Introduction:** Gastric cancer remains one of the most common and deadly cancers worldwide. Helicobacter pylori infection is the major risk factor associated with the development of gastric cancer (GC). The transition from normal mucosa to non-atrophic gastritis, triggered primarily by H. pylori infection, initiates precancerous lesions which may then progress to atrophic gastritis and intestinal metaplasia. GSTP۱ gene is located on chromosome ۱۱q۱۳.۲. Different studies indicated that this gene is associated with gastric cancer. Based on accomplished studies, expression of this gene may be a prognostic indicator for several types of cancer. Single nucleotide polymorphisms (SNPs) are consisting genetic marker related to many of the genetic disease. microRNAs are counted as bio-markers with regulation and control of genes expression at level of mRNA. Given the importance of SNPs and microRNAs as cancer biomarkers that influence the expression of genes, this study aimed to investigate association between hsa-miR-۴۴۹۶ and a single nucleotide (rs۱۰۳۱۳۰۵۳۳۰) of GSTP۱ gene in patients suffering from gastric cancer. **Methods:** In the present study, databases such as NCBI, miRNA SNP-V۳, miRWalk, PhenomiR, miRBase and David were used for in silico data analyses. **Results:** Our bioinformatics analysis indicated that rs۱۰۳۱۳۰۵۳۳۰ is associated with the conversion of C to T allele in GSTP۱ gene, which may affect the performance and binding of miRNAs in this region. In this regard, results of this study also revealed that hsa-miR-۴۴۹۶ can bind to the ۳'-UTR transcript of the GSTP۱ gene. **Conclusion:** Altogether, this study identifies rs۱۰۳۱۳۰۵۳۳۰ and hsa-miR-۴۴۹۶ as important biomarkers that are associated with GSTP۱ gene and gastric cancer. Also, it suggests that the formation of the T allele in rs۱۰۳۱۳۰۵۳۳۰ affects the binding of hsa-miR-۴۴۹۶ to the GSTP۱ gene.

## کلمات کلیدی:

Single nucleotide polymorphism, rs۱۰۳۱۳۰۵۳۳۰, GSTP۱ gene, hsa-miR-۴۴۹۶, Gastric cancer

## لینک ثابت مقاله در پایگاه سیویلیکا:

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