عنوان مقاله:

Bioinformatics evolution of an lncRNA signaling pathway and its related function in colorectal cancer

محل انتشار:

اولین همایش بین المللی و دهمین همایش ملی بیوانفورماتیک ایران (سال: 1400)

تعداد صفحات اصل مقاله: 1

نویسندگان:

Isa Alborzi - *Zist Fanavari Novin Biotechnology Department, State Technical and Vocational Training Organization, Isfahan, Iran*

Maryam Modrek - *Zist Fanavari Novin Biotechnology Department, State Technical and Vocational Training Organization, Isfahan, Iran*

Pegah Javid - *Zist Fanavari Novin Biotechnology Department, State Technical and Vocational Training Organization, Isfahan, Iran*

Mansoureh Azadeh - *Zist Fanavari Novin Biotechnology Department, State Technical and Vocational Training Organization, Isfahan, Iran*

خلاصه مقاله:

Genetic investigations have discovered long non-coding RNA (lncRNA) genes in the human genome that donot encode proteins. The non-coding genome, mutations, single nucleotide polymorphisms, copy-numbervariations, and epigenetic modifications enhance the possibility of altering lncRNA expression levels, whichcan lead to cell cycle dysregulation and possibly cancer. Our aim of this study was to investigate the role anLncRNA in colorectal cancer (CRC). Through this study, the NCBI obtain some information about colorectalcancer. LncRNAsnp۲ database helped to find lncRNA associated with CRC. The interactions betweenLncRNAs and selected LncRNA with other diseases were found from LncRNAdisease۲ database. Based onour research, MALAT-۱ (ID :NONHSAT۰۲۲۱۲۶.۲) was the potential lncRNA in CRC. Another lncRNAssuch as SCYL۱, LTBP۳, SSSCA۱, FAM۸۹B, KCNK۷, MAP۳K۱۱ are involved in the process of CRC aswell. MALAT-۱ plays role in other diseases such as gallbladder cancer, Pancreatic cancer, and hepatocellularcarcinoma too. It is inferred that overexpression of MALAT-۱ could promote cell proliferation and promotetumor growth and metastasis in CRC. The results reveal that one of the five pieces (۶۹۱۸ nt-۸۴۴۱ nt) at the۳' end of MALAT-۱ plays an essential role in biological processes such as cell migration, invasion, andproliferation. The underlying mechanism was associated with SFPQ gene as a tumour suppressor and PTBP۲as a proto-oncogene. MALAT-۱ should bind to SFPQ, freeing PTBP۲ and growing cell proliferation andmigration. It is concluded that lncRNAs manage numerous vital most cancers traits via their interplay withdifferent mobile macromolecules and satisfactory law of lncRNA transcription would possibly offerindicators of malignant transformation. Recent advances in expertise in the molecular mechanics of lncRNAshave given the capacity to functionally annotate cancer-associated .transcripts, making those moleculesattractive healing goals withinside the combat in opposition to cancer

کلمات کلیدی:

Long Non-coding RNA; MALAT-۱; Tumorigenesis; Databases