



Notch pathway Gene Network in Colorectal Cancer Drug Treatment

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Abstract: Colorectal cancer (CRC) is the third most common type of cancer worldwide and this type of cancer leads to death. The best treatment is primary diagnosis, but the most patients are often diagnosed with an advanced stage of the disease, and sometimes there are distant metastases. Drug resistance may influence response and concur to recurrent disease [1]. Researches are conducted during 30 years has increased our understanding of the initiation and development mechanisms involved in colorectal cancer [2]. Also gene expression of many pathways affected in this cancer, including: Wnt, Hedgehog, Notch, AKt-mTOR signaling pathway. The current treatment of this cancer depends on surgery, chemotherapy, radiotherapy and targeted therapy and it'll be useful to get the best outcome if we use several treatments. Use of drugs can be useful for treatment cancer and one of drugs is ivermectin. This drug has anti-inflammatory feature and has currently been demonstrated that has anticancer activity for many cancers such as colorectal, ovarian, breast, melanoma and leukemia cancer [3]. In this study we have used microarray data [4] for investigating gene expression of Notch signaling pathway. Using gene network, we've showed communication between these genes and we've found some key genes affect on other gene expression in this pathway.

Keyword: Colorectal cancer (CRC); Drug resistance; Ivermectin.

References

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