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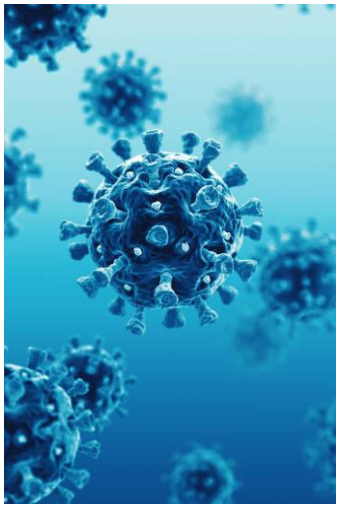
Trends in Immunotherapy

Advances in Understanding the Role of Inflammation in Cancer Pathogenesis



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The risk factor for tumor development has been attributed to inflammation, which is characterized by the release of various pro-inflammatory cytokines, increased blood vessel permeability, growth factors, and leukocyte migration. Studies have shown that chronic inflammation is a risk factor for various types of cancer, including colon, lung, liver, and stomach cancer. Inflammation can promote tumor growth and progression by creating an environment that is conducive to the survival and proliferation of cancer cells. One of the ways in which inflammation promotes tumor growth is by creating an environment that is rich in growth factors and cytokines stimulating the proliferation of cancer cells. Inflammatory cells can also promote angiogenesis, or the formation of new blood vessels, which provides a source of nutrients and oxygen to cancer cells. Additionally, inflammatory cells can cause DNA damage and mutations, which can lead to the development of cancer.

Another way in which inflammation promotes tumor growth is by inhibiting surveillance by the immune cells aimed to detect and eliminate cancer cells. Chronic inflammation can lead to the accumulation of immune-suppressive cells and cytokines, which can inhibit the function of immune cells that target cancer cells. This immune suppression can allow cancer cells to evade detection and continue to proliferate.

In addition to the role of inflammation in the development of tumors, inflammation also plays a role in the progression and metastasis of tumors. Inflammatory cells can promote the invasion of cancer cells into surrounding tissues and can also

stimulate the formation of new blood vessels in distant sites, which allows cancer cells to metastasize.

We invite to submit the original research papers, case reports, clinical trials, and review articles with the following potential list of topics:

1. Role of inflammation in cancer pathogenesis;
2. Molecular regulation of inflammation in malignancy;
3. Molecular mechanisms of therapeutic approaches for cancer treatment targeting inflammation;
4. Role of PAMPs, DAMPs and PRRs in immune response to cancer;
5. Bioinformatics approach to identify novel targets for cancer treatment;
6. Molecular modeling approach to study cancer pathogenesis, efficacy of treatment and prevention;
7. Role of hormones in pathogenesis of cancer promoting inflammation.

Keywords: Cancer; malignancy; inflammation; treatment; bioinformatics; pathogenesis; hormones; cytokines; signaling pathways; epigenetics proteomics