Proceedings International
Platinum Open Access Journal (ISSN 2668-6384)

Proceedings, Abstract
Volume 3, Issue 1, 2021, 41
https://doi.org/10.33263/Proceedings31.041041

Targeting Soluble Factors Involved in Inflammatory Cancer Microenvironment †

M. Gayathri [1], Neesar Ahmed [1,*]

[1] School of Life Sciences, B S A Crescent Institute of Science and Technology, Vandalur, Chennai-600048, Tamil Nadu, India
* Correspondence: neesar.sls@crescent.education;
† Presented at Virtual symposium to observe World Antimicrobial Awareness week "Applications of biotechnology and microbiology with special emphasis on Antimicrobial resistance", 18-24 November 2020, Chennai, India
Received: 10.11.2020; Revised: 15.11.2020; Accepted: 17.11.2020; Published: 10.01.2021

Abstract: The immune system plays a major role in recognizing and eliminating any threat from infection to cancer. To maintain the physiological balance, the immune system has various mechanisms for both inflammation and its resolution. Cancer is a disease when undiagnosed leads to a poor outcome. In the early stages, the innate and adaptive cells infiltrate the microenvironment, which resembles an inflammatory state. These immune-killing cells eliminate abnormal cells. But the tumor cells use the immune mechanism for their growth and development. They tend to manipulate and make the microenvironment immunosuppressive. The tumor microenvironment not only aids in tumor development but also makes them treatment-resistant. By finding the expression of various immune cells and soluble factors involved at a particular time in TME, effective immunotherapy can be developed. The drawback of conventional chemotherapy is its adverse side effects, and by combining the conventional therapy with immune mediators, there is a high chance for successful treatment with fewer side effects. This paper reviews various immune cells and soluble factors involved in TME and previous studies on cytokine and MMP as targets.

Keywords: tumor microenvironment; immune cells; cytokines; matrix metalloproteinases; therapy.

Funding

This research received no external funding.

Acknowledgments

This research has no acknowledgment.

Conflicts of Interest

The authors declare no conflict of interest.