POSTER

INVOLVEMENT OF TELOCYTES IN CARDIAC INFLAMMATION CAUSED BY LPS IN MICE AND THE POTENTIAL ANTI-INFLAMMATORY ROLE OF *CANNABIS SATIVA* L.

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Telocytes have long, thin extensions called telopods, which present a beaded structure composed of thicker (podomes) and thinner (podomers) segments [1]. Telocytes are distributed throughout the myocardium [2] and are essential for intercellular communication, immune surveillance, and regenerative processes. Lipopolysaccharide (LPS) plays a key role in triggering a systemic inflammatory response, which can cause cardiac damage [3]. Cannabis sativa L. is an aromatic annual plant in the Cannabaceae family. Research has demonstrated that hemp possesses a wide range of pharmacological properties, including anti-inflammatory effects [4]. This study aims to characterize the involvement of telocytes in mice's cardiac inflammation caused by LPS and the potential anti-inflammatory role of Cannabis sativa L. Cardiac telocytes were characterized using CD34 and vimentin antibodies, whereas CD86 and IL-6 were used to identify macrophages [5]. In inflamed tissues, telocyte numbers appear to increase, likely as a response to inflammation, playing a key role in tissue repair and protective responses. Macrophages were significantly more abundant in inflamed tissues compared to both control samples and those treated with LPS and hemp aqueous extracts. Some telocytes showed co-expression of CD34 and CD86, suggesting their active involvement in immunomodulation. In conclusion, this study confirms the involvement of telocytes in cardiac inflammation and offers potential avenues for the development of therapeutic strategies based on natural compounds.

References

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