Immunological Responses of Mice After Treatment with Ocimum Americanum Hexane and Bridelia Micrantha Water Plant Extracts

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Abstract

Background-The T helper 1 (TH1) and TH2 dichotomy was first shown in murine CD4+ lymphocytes clones and these cells could be differentiated in terms of the cytokines they secrete. The TH1 subsets produce interleukin 2 (IL-2,) interferon gamma (IFN-γ) and lymphotoxin, TH2 subsets produce IL-4, IL-5, IL-6 IL-10 and IL-13. An important function of the TH2 response during infection is to produce cytokines that can prevent or dampen the production or effector functions of potentially dangerous inflammatory mediators. Results the results obtained showed that Ocimum americanum hexane (OAH) and Bridelia micrantha (BMW) water extract had antischistosomal activity. This was indicated by low worm recovery, high worm reduction, and reduced gross pathology with histopathology showing no or few granulomas in the liver tissue, which was similar to Praziquantel (PZQ). The two extracts had both cellularand humoral responses as demonstrated by IFN -γ, IL-5 and IgG responses. OAH and BMW were significantly similar to PZQ; however BMW had higher IgG responses. BMW had higher IFN-γ responses for both spleen and lymph node cells.

Keywords: T helper cell, Cytokines, Interleukin, Interferon gamma, Humoral, Cell mediated.

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