The Study of the immunomodulatory effects of Origanum vulgare L. extract and its major constituents (Carvacrol and Thymol) on cytokine pattern of Th1, Th2 and M1,M2 macrophage activity in vitro

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The study aimed to investigate the immunomodulatory effects of Origanum vulgare L. extract and its major constituents (Carvacrol and Thymol) on cytokine pattern of Th1, Th2 and M1,M2 macrophage activity in vitro.

Key findings:

1. The extract and its constituents significantly altered the cytokine profile of Th1 and Th2 cells.
2. Carvacrol and Thymol demonstrated stronger immunomodulatory effects compared to the extract alone.

Conclusion:

The results suggest that Origanum vulgare L. extract and its major constituents have potential immunomodulatory effects, which may have therapeutic implications in various diseases.