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Effects of inactive parapoxvirus ovis on cytokine levels in rats

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Inactive parapoxvirus ovis (iPPOV) is a commercial product widely used in veterinary medicine as an immune stimulator and/ or non-specific para immune activator for protection against various infectious diseases. The aim of this study is to determine the effects of iPPOV on pro-inflammatory and anti-inflammatory cytokine levels in rats. A total of 56 rats were used in the present study. iPPOV (1 mL/rat) was administered intra peritoneal route to all rats, except for 7 rats (Control, 0 group). Serum samples were collected from 7 rats at the 1st, 2nd, 4th, 8th, 12th, 16th and 24th hours after treatments. Serum levels of Tumor Necrosis Factor-alpha (TNF- α), Interleukin (IL)-6, IL-12 and IL-10 were determined using commercially available Enzyme Linked Immunosorbent Assay kits. Administration of iPPOV stimulated TNF α (16th and 24th hours) and IL-6 (12th, 16th and 24th hours) synthesis and caused fluctuations in IL-10 and IL-12 concentrations. In conclusion, increased cytokine levels could be attributed to immunomodulatory activity of iPPOV, however, detailed studies are required to fully understand effects of iPPOV on immune system.

Biography

Irmak Dik is pursuing her PhD education from Selcuk University and will complete in next year. She works as a Research Assistant in Selcuk University Faculty of Veterinary Medicine. She has published more than 8 papers in reputed journals and has been working on some project.

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