Immunome Res 2018, Volume 14
DOI: 10.4172/1745-7580-C1-015

9th Molecular Immunology & Immunogenetics Congress

March 08-09, 2018 | London, UK

Montivipera bornmuelleri venom has immunomodulatory effects mainly up-regulating some pro-inflammatory cytokines in the spleens of mice

Tania Yacoub[1], **Ziad Fajloun**[2], **Walid Hleihel**[3] and **Marc Karam**[1]
[1]University of Balamand, Lebanon
[2]Lebanese University, Lebanon
[3]Holy Spirit University of Kaslik (USEK), Lebanon

Beside their toxicity, snake venom components possess many pharmacological effects and have been used to design drugs. *Montivipera bornmuelleri* venom exhibits high cytotoxic effects on cancerous keratinocytes, antibacterial, vasorelaxant, pro- and anti-coagulant as well as inflammatory activities *in vitro*. However, the *in vivo* effects of this snake venom on the immune system of mice have not been established yet. Here, we investigate the immunomodulatory effects of *M. bornmuelleri* venom on the splenic levels of TNF-α, IFN-γ, IL-4, IL-10, IL-1ß and IL-17 at 6 and 24 hours post treatment. Different doses of venom (25 µg, 50 µg, 100 µg and 150 µg) were injected intraperitoneally in BALB/c mice. Using the logit method, LD50 of *M. bornmuelleri* was proved to be 47.9 µg/mice in our experimental conditions. Also, we show here that 25µg and 50µg of *M. bornmuelleri* venom are able to modulate the levels of cytokines in the spleen of mice, as assessed using ELISA. In general, this snake venom up-regulates TNF-α, IFN-γ, IL-1ß and IL-17 with a trend in decreasing IL-4 and IL-10. Therefore, by favoring Th1 and Th17 over Th2 and Treg responses, *M. bornmuelleri* venom might have important clinical implication especially in the field of cancer immunotherapy.

marc.karam@balamand.edu.lb