Variasi Lokasi Injeksi Vaksin BCG secara Subkutan dan Pemberian Ekstrak Pasak Bumi (Eurycoma longifolia Jack) terhadap Produksi IgG1 Dan IgG3 pada Mencit Galur Swiss = Variations of BCG Vaccine Subcutaneal Injection and Pasak Bumi (Eurycoma longifolia Jack) to the Production of IgG1 and IgG3 in Swiss Strain Mice

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Abstrak

[ABSTRAK
BCG telah digunakan sebagai upaya mencegah infeksi tuberculosis selama lebih dari 90 tahun. Penelitian ini dilakukan untuk melihat efek pemberian vaksin BCG melalui rute subkutan di area dorsal leher dan paha pada mencit galur Swiss sekaligus menguji potensi pasak bumi (PB) sebagai imunomodulator setelah imunisasi BCG dengan mengukur IgG1 dan IgG3 menggunakan metode ELISA. Penelitian ini merupakan bagian dari proyek penelitian mengkaji potensi ekstrak akar pasak bumi pada beberapa infeksi pathogen intraseluler. Hasilnya pemberian vaksin BCG melalui rute subkutan di area leher lebih efektif ($p<0.05$) meningkatkan kadar IgG1 (OD kelompok air 2.162±0.231; kelompok PB 2.138±0.214) dan IgG3 (OD kelompok air 2.564±0.286; kelompok PB 2.521±0.228) pada mencit dibandingkan kadar IgG1 (OD kelompok air 0.817±0.101; kelompok PB 0.796±0.207) dan IgG3 (OD kelompok air 1.290±0.104; kelompok PB 1.260±0.093) pada vaksinasi BCG secara subkutan di area paha. Sementara itu potensi ekstrak akar pasak bumi dalam memodulasi produksi IgG1 dan IgG3 paska injeksi BCG belum terlihat pada percobaan ini.
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ABSTRACT
BCG has been used as an effort to prevent tuberculosis for more than 90 years. The aim of this research were to investigate the effect of BCG vaccine administration trough subcutaneous route over the neck and on the thigh of mice of Swiss strain as well as to evaluate the potency of pasak bumi (PB) as immunomodulator in IgG1 and IgG3 productions after BCG vaccination. This research is part of a bigger project to analyse the potency of pasak bumi as an immunomodulator over intracellular pathogen infections. The result shows that BCG vaccination through subcutaneous over the neck was more effective ($p<0.05$) in generating IgG1 (OD group with water 2.162±0.231; group with PB 2.138±0.214) and IgG3 (OD group with water 2.564±0.286; group with PB 2.521±0.228) on mice compare to IgG1 level (OD group with water 0.817±0.101; group with PB 0.796±0.207) and IgG3 (OD group with water 1.290±0.104; group with PB 1.260±0.093) on subcutaneous vaccination on thigh area. The potency of pasak bumi root extract in modulating the production of IgG1 and IgG3 has not seen in this experiment.
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