

**Trio Rachmawati. 2015. Efek Penggunaan *Allogenic Freeze Dried Platelet- Rich Plasma* Terhadap Respon Immunologis Kelinci. TESIS, dibawah bimbingan Dr. Sri Puji Astuti W.,M.Si dan Dr. Purwati, dr, SpPD. FINASIM., Departemen Biologi Fakultas Sains dan Teknologi. Universitas Airlangga, Surabaya.**

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## ABSTRAK

Penelitian ini bertujuan untuk menganalisis efek penggunaan *allogenic freeze dried platelet-rich plasma* terhadap respon imunologis kelinci. Rancang penelitian *one group pretest post test* dilakukan untuk mengetahui pengaruh *freeze drying* terhadap kadar TGF- $\beta$ 1 PRP dan *post test only control group design* untuk mengetahui efek penggunaan *allogenic freeze dried* PRP. Sembilan sampel PRP yang diperiksa kadar TGF- $\beta$ 1 sebelum dan sesudah *freeze drying* diperoleh dari sentrifugasi darah tiga ekor kelinci. Sembilan sampel PRP ini digunakan sebagai donor *allogenic freeze dried* PRP yang diinjeksikan intramuskular pada sembilan ekor kelinci kelompok perlakuan. Kelompok kontrol menggunakan sembilan ekor kelinci yang diinjeksi intramuskular menggunakan *autologous* PRP. Kedua kelompok diamati reaksi peradangan dan peningkatan kadar IgM. Pengukuran kadar TGF- $\beta$ 1 sebelum dan sesudah *freeze drying* dilakukan uji statistik dengan uji T *dependent*. Data respon peradangan dan peningkatan kadar IgM masing – masing dilakukan uji statistik dengan uji T *independent*. Hasilnya menunjukkan tidak ada pengaruh proses *freeze drying* terhadap kadar TGF- $\beta$ 1. Penggunaan *allogenic freeze dried* PRP tidak menimbulkan respon peradangan dan tidak meningkatkan kadar IgM.

Kata kunci : *autologous, allogenic, freeze dried platelet rich plasma, transforming growth factor - $\beta$ 1* dan IgM

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## ABSTRACT

This study aims to analyze the effects of allogenic freeze dried platelet-rich plasma in rabbit immunological response. The designs of this study are one group pretest posttest conducted to determine the effect of freeze drying on levels of TGF- $\beta$ 1 PRP and post test only control group design conducted to determine the effect of allogenic freeze dried PRP. Nine samples of PRP which examined levels of TGF- $\beta$ 1 before and after freeze drying were obtained from blood centrifugation of three rabbits. These nine samples were used as allogenic donor which injected intramuscularly in nine rabbits for the treatment groups. The control group used nine rabbits which was injected intramuscularly using autologous PRP. Both groups were observed inflammatory response and increased levels of IgM. Measurement of TGF- $\beta$ 1 levels before and after freeze drying were tested statistically using T- test dependent. Data inflammatory response and increased levels of IgM were tested statistically using T test independent. The results showed that no effect of freeze drying process on levels of TGF- $\beta$ 1. Allogenic freeze dried PRP did not cause an inflammatory response and not increase levels of IgM.

Keywords: autologous, allogenic, freeze dried platelet rich plasma, transforming growth factor - $\beta$ 1 and IgM