



Official Journal of TESMA

# Regenerative Research

www.regres.tesma.org.my  
E-ISSN 2232-0822

Tissue Engineering  
and Regenerative  
Medicine Society of  
Malaysia

Regenerative Research 7(1) 2018 135

## THE EFFECT OF ALLOGENIC FREEZE-DRIED PLATELET-RICH PLASMA IN IMMUNOLOGICAL RESPONSES OF RABBITS

**Trio Rachmawati\*, Sri Puji Astuti, Purwati**

Department of Biology, Faculty of Science and Technology, Airlangga University Surabaya, Jawa Timur, Indonesia

---

### ARTICLE INFO

---

Published: 26<sup>th</sup> August 2018

\*Corresponding author:

Trio Rachmawati

Email:

Trio\_rahma@yahoo.com

---

### KEYWORDS

---

Autologous  
Allogenic;  
Freeze dried platelet rich  
plasma  
Transforming growth  
factor-  $\beta$ 1;  
IgM

---

### SUMMARY

---

This study aims to analyze the effects of allogenic freeze-dried platelet-rich plasma (PRP) in immunological responses of rabbits. This study employed a design of conducting one pre-post test group to determine the effect of freeze drying on levels of TGF- $\beta$ 1 PRP and the post test design was only for control group conducted to determine the effect of allogenic freeze-dried PRP. Levels of TGF- $\beta$ 1 before and after freeze drying from nine samples of PRP were examined which were obtained from blood centrifugation of three rabbits. These nine samples were used as allogenic donor injected intramuscularly in nine rabbits for the treatment groups. The control group used nine rabbits injected intramuscularly using autologous PRP. Inflammatory response and increasing levels of IgM were observed from both groups resulted in data which were then tested statistically using independent T-test. Measurement of TGF- $\beta$ 1 levels before and after freeze drying were tested statistically using T- test dependent. The results showed that freeze drying process did not affect levels of TGF- $\beta$ 1. Allogenic freeze-dried PRP did not cause an inflammatory response in addition to not increasing levels of IgM.