THE EFFECTS OF EXTRACELLULAR VESİCLES ISOLATED FROM BUFFY-COAT SUSPENSION ON NEUTROPHIL FUNCTIONS

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- ✓ Neutrophil
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- ✓ Microparticle
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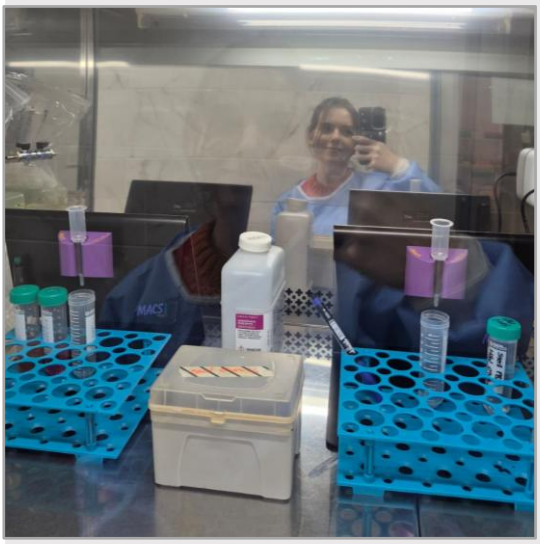

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THESIS ABSTRACT

In clinical settings, Buffy-Coat (BFC) transfusions may be administered to patients as a last resort when cases of refractory febrile neutropenia are observed. In this study, the effects of exosomes and microparticles in BFC on neutrophil function were evaluated in the context of the effects of gamma irradiation performed prior to BFC transfusion and increasing doses of exosomes and microparticles. The results of this thesis study revealed that BFC-derived exosomes cause mild stimulation of neutrophils, whereas microparticles activate neutrophils and induce NETosis. Furthermore, it was determined that the gamma irradiation process had no adverse effects on exosomes or microparticles.

APPLICATION AREAS OF THE THESIS RESULTS

The results of this study provide clinical data on the administration of microparticle transfusions as a cell-free treatment for patients with febrile neutropenia. Furthermore, it was determined that gamma irradiation applied to BFC suspensions prior to transfusion has no adverse effect on exosome/microparticle function; this finding also contributes to clinical practice by demonstrating the safety of the gamma irradiation process.

ACADEMIC ACTIVITIES

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