



KEY WORDS

- ✓ Erythrocyte
- ✓ Exosome
- ✓ Microparticle
- ✓ Hemostasis
- ✓ Platelet aggregation

CONTACT

E-MAIL:
suedagunes62@gmail.com

THESIS SUPERVISOR

TELEPHONE:
+90 224 295 4045

E-MAIL:
esagdilek@uludag.edu.tr



EFFECTS OF EXTRACELLULAR VESICLES ISOLATED FROM ERYTHROCYTE SUSPENSIONS ON HEMOSTASIS

SUEDA ÖZKAYA

0009-0002-3483-7661

BURSA ULUDAG UNIVERSITY
GRADUATE SCHOOL OF HEALTH SCIENCES
PHYSIOLOGY DEPARTMENT
MSc PROGRAM

GRADUATION DATE: 04/02/2026

SUPERVISOR

ASSOC. PROF. DR. Engin SAĞDİLEK
0000-0001-8696-4035
BURSA ULUDAG UNIVERSITY
GRADUATE SCHOOL OF HEALTH SCIENCES
PHYSIOLOGY DEPARTMENT
BURSA – TÜRKİYE

DR. ASST. PROF. Salih Haldun BAL
0000-0002-6735-2305
BURSA ULUDAG UNIVERSITY
GRADUATE SCHOOL OF HEALTH SCIENCES
IMMUNOLOGY DEPARTMENT
BURSA – TÜRKİYE



THESIS ABSTRACT

In this study, the effects of extracellular vesicles (EVs) isolated from leukoreduced and non-leukoreduced erythrocyte suspensions at different storage times on hemostasis and platelet aggregation in autologous and allogeneic blood samples were investigated. EVs were isolated by ultracentrifugation and evaluated using optical aggregometer and thromboelastography. The findings showed no significant effect on platelet aggregation; however, a tendency to enhance hemostasis was observed, particularly under allogeneic experiments.

APPLICATION AREAS OF THE THESIS RESULTS

The findings of the study have potential applications in blood banking and transfusion medicine. Storage time-dependent changes in extracellular vesicles (EVs) are of clinical significance for storage strategies and safer transfusion planning.

ACADEMIC ACTIVITIES

- Özkaya, S., Özveri, İ., Vardar, H., Sağdılek, E., & Bal, S. H. (2025, November 14). Effects of extracellular vesicles isolated from erythrocyte suspensions on hemostasis [Poster presentation]. 50th National Physiology Congress, Antalya, Türkiye.
- Özkaya, S., Aliyev, E., Bingöl, İ., Sağdılek, E., & Özyener, F. (2025, September 3–6). Effects of menstrual cycle phases and calisthenic exercises performed during these phases on hemostasis in women (S25) [Oral presentation]. 7th International and 36th National Biophysics Congress, Bursa, Türkiye.