



# Effect of Pantoprazole and Paclitaxel Combination with Immune Cell Accompaniment on Triple Negative Breast Cancer Cell Line

**Tuba ZORCI**

0000-0002-4004-9437

**BURSA ULUDAĞ UNIVERSITY**  
**GRADUATE SCHOOL OF HEALTH SCIENCES**  
**IMMUNOLOGY DEPARTMENT**  
**MSc PROGRAM**  
**GRADUATION DATE: 23/07/2024**

## SUPERVISOR

Prof. Dr. Arzu YILMAZTEPE ORAL  
0000-0002-8962-9758  
BURSA ULUDAĞ UNIVERSITY  
GRADUATE SCHOOL OF HEALTH SCIENCES  
MEDICAL BIOCHEMISTRY DEPARTMENT  
BURSA – TÜRKİYE



## KEY WORDS

- ✓ Breast cancer
- ✓ Pantoprazole
- ✓ Paclitaxel
- ✓ Tumor acidity
- ✓ T cell

## CONTACT

E-MAIL:  
tzorci@gmail.com

## THESIS SUPERVISOR

TELEPHONE:  
0224 295 39 21

E-MAIL:  
arzuy@uludag.edu.tr

## THESIS ABSTRACT

Triple negative breast cancer (TNBC) can develop resistance to chemotherapy due to its aggressive nature. One of the underlying reasons for this is tumor microenvironment (TME) acidity. In order to overcome this obstacle, proton pump inhibitors (PPIs), which inhibit acid secretion pumps such as V-ATPase, were thought to be a more effective treatment option. In this thesis, paclitaxel (PTX), one of the most commonly used chemotherapy drugs in breast cancer, and pantoprazole (PPZ), a PPI, were applied to the co-culture of EMT6, a TNBC cell line, and splenocyte (SPL) cells. As a result of our study, it was observed that PPZ applied to EMT6 cells did not increase the toxic effect of PTX, but when applied to SPL cells, it caused proliferation. In addition, when PPZ and PTX were applied in combination to SPLs, it was determined that PPZ reduced the toxicity of PTX on SPLs.

## APPLICATION AREAS OF THE THESIS RESULTS

Pantoprazole reduced chemotherapy toxicity on splenocytes and promoted proliferation.

## ACADEMIC ACTIVITIES

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