

The Role of Microglia and T Lymphocyte Interactions in Breast Cancer Brain Metastasis

Elif ÖZALP

0000-0002-3324-7195

BURSA ULUDAĞ UNIVERSITY
GRADUATE SCHOOL OF HEALTH SCIENCES
IMMUNOLOGY DEPARTMENT
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SUPERVISOR

Dr. Öğr. Üyesi Diğdem YÖYEN ERMİŞ
0000-0001-5871-8769
BURSA ULUDAĞ UNIVERSITY
GRADUATE SCHOOL OF HEALTH SCIENCES
IMMUNOLOGY DEPARTMENT
BURSA – TURKEY



THESIS ABSTRACT

Macrophages in breast tumor-derived metastatic foci are heterogeneous cell populations that greatly contribute to tumor progression. As a result of factors secreted by tissue-resident macrophages and cell-cell interaction, differentiation or numerical increase in cancer-initiating cells is observed. Microglia have a direct or indirect effect on the formation of cancer-supporting cells by increasing the expression of co-inhibitory molecules and changing chemokine receptors. Different microglia cell lines and monocyte-derived macrophages modulate T cell responses through different co-stimulation molecules.

APPLICATION AREAS OF THE THESIS RESULTS

By determining the regulation of microglia-T cell interaction at the level of co-stimulator molecules in breast cancer brain metastasis, it is aimed to contribute to elucidating the role of the immune microenvironment in the metastatic process to the brain and to create new perspectives on various immunotherapy studies.

ACADEMIC ACTIVITIES

Ozalp E., Etgu O., Oral H.B., Yoyen-Ermis D. **Co-stimulatory Marker Changes and T Cell Responses Occurring as a Result of Microglia-T Cell Interaction.** 11. School of Neuroimmunology. 3-7 May 2023, Muğla/Türkiye

Ozalp E., Etgu O., Dundar F., Oral H.B., Yoyen-Ermis D. **Understanding Tissue-resident Macrophage Polarization in Basal-like Breast Cancer Metastasis.** 5th International Molecular Immunology and Immunogenetics Congress (MIMIC-V). 20-22 October 2022, Izmir/Turkey

Etgu O., Dundar F., Ozalp E., Oral H.B., Yoyen-Ermis D. **Monocyte/Macrophage Associated Immunomodulatory Function of CD44/CD24 Phenotype in Triple Negative Breast Cancer (TNBC) Subgroups on T Cell Responses.** 5th International Molecular Immunology and Immunogenetics Congress (MIMIC-V). 20-22 October 2022, Izmir/Turkey

Dundar F., Ozalp E., Etgu O., Oral H.B., Yoyen-Ermis D. **Tissue resident/infiltrated macrophages isolation and their artificial expansion in 3D cells culture.** 5th International Molecular Immunology and Immunogenetics Congress (MIMIC-V). 20-22 October 2022, Izmir/Turkey

Ozalp E., Etgu O., Vardar H., Zorci T., Oral H.B., Yoyen-Ermis D. **The Role of Macrophage/Microglia-T Cell Interactions in the Breast Cancer Brain Metastasis Process.** XXVI. National Immunology Congress. 11-13 November 2023, Ankara, Türkiye (Best Poster Presentation Award)

Dundar F., Etgu O., Esen C., Yagcioglu B., Ozalp E., Oral H.B., Yoyen-Ermis D. **Isolation of Tissue Resident/Infiltrated Macrophages and Growth in 3D Cell Culture Environment with Preservation of Organ Niches.** XXVI. National Immunology Congress. 11-13 November 2023, Ankara, Türkiye

Etgu O., Ozalp E., Dundar F., Yagcioglu B., Esen C., Oral H.B., Yoyen-Ermis D. **The Effect of TNBC Subgroups Differentiated as a Result of Monocyte/Macrophage-Related Immunomodulatory Effect on T Cell Responses in Triple Negative Breast Cancer (TNBC).** XXVI. National Immunology Congress. 11-13 November 2023, Ankara, Türkiye



KEY WORDS

- ✓ Breast Cancer
- ✓ Macrophages
- ✓ Microglia
- ✓ T cell
- ✓ Co-stimulation

CONTACT

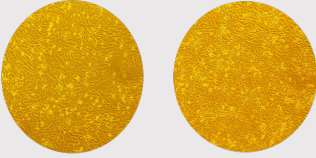
E-MAIL:
elifozaaalp@gmail.com

THESIS SUPERVISOR

TELEPHONE:
0224 295 41 18

E-MAIL:
dyoyenermis@uludag.edu.tr

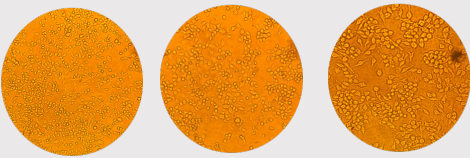
Kanser Hücre Hatları



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Miyeloid Hücre Hatları



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