

## CURRICULUM VITAE AND LIST OF STUDIES

- Name and Surname:** Fatma Kübra Tombultürk
- Date / Place of Birth:** 17.06.1988 / Istanbul
- Title:** Assist. Prof.
- Address:** İstinye Üniversitesi Topkapı Kampüsü, Maltepe Mah., Edirne Çırpıcı Yolu, İstanbul, 34010
- Current Institution:** Istinye University / Vocational School of Health Services
- Educational Background:**



Degree	Department	University	Year
B.Sc.	Biology	Dumlupınar University / Faculty of Arts and Sciences	2006-2010
M.Sc.	Medical Biology	Istanbul University / Cerrahpaşa Faculty of Medicine	2012-2015
Ph.D.	Medical Biology	Istanbul University-Cerrahpaşa Cerrahpaşa Faculty of Medicine	2017-2021

**Master Thesis Title and Supervisor:** The Effects of *Lucilia sericata* larval secretions on the Expression Levels of NF-kB-related Genes in the Experimental Diabetic Rat Wound Model / Supervisor: Prof. Dr. Gönül Kanigur

**PhD Thesis Title and Supervisors:** Investigation of the Molecular Mechanism of the Effect of Metformin on Diabetic Wound Healing / Supervisors: Prof. Dr. Ali Nur Turgut Ulutin, Prof. Dr. Gönül Kanigur

### International Memberships

- COST Action - CA21108 / European Network for Skin Engineering and Modeling (NETSKINMODELS), WG2: Sophistication of cell-based models of skin diseases, wound (repair) and ageing
- COST Action - CA21108 / European Network for Skin Engineering and Modeling (NETSKINMODELS), WG3: Towards ethical and sustainable research in dermatology
- COST Action - CA21108 / European Network for Skin Engineering and Modeling (NETSKINMODELS), WG4: Validation of models, cell lines, delivery systems, composites and reagents

### 1. Publications

- Tombulturk, F. K.,** Soydas, T., & Kanigur-Sultuybek, G. (2024). Metformin as a Modulator of Autophagy and Hypoxia Responses in the Enhancement of Wound Healing in Diabetic Rats. *Inflammation*, 10.1007/s10753-024-02129-9. Advance online publication. <https://doi.org/10.1007/s10753-024-02129-9>
- Tombulturk, F. K.,** & Dedeakayogullari H. (2024). Investigation of the antioxidative role of metformin in diabetic wounds with increased oxidative stress. *The International Journal of Experimental Pathology*. (In peer review)
- Tombultürk, FK.** (2024). Effects of keratin6/16 heterodimer on diabetic wound healing treatment with topical metformin. *Frontiers in Life Sciences and Related Technologies*, 5(1), 65-73. <https://doi.org/10.51753/flsrt.1399275>
- Tombulturk, F. K.,** Soydas, T., & Kanigur-Sultuybek, G. (2023). Topical metformin accelerates wound healing by promoting collagen synthesis and inhibiting apoptosis in a diabetic wound model. *International*

- Seven, Z. G. T., **Tombulturk, F. K.**, Gokdemir, S., & Ozyazgan, S. (2022). The effects of the heat shock protein 90 inhibitor 17-allylamino-17-demethoxygeldanamycin, cannabinoid agonist WIN 55,212-2, and nitric oxide synthase inhibitor N $\omega$ -Nitro-L-arginine methyl ester hydrochloride on the serotonin and dry skin-induced itch. *International Archives of Allergy and Immunology*, 183(4), 443-452.
- **Tombulturk, F. K.**, Todurga-Seven, Z. G., Huseyinbas, O., Ozyazgan, S., Ulutin, T., & Kanigur-Sultuybek, G. (2022). Topical application of metformin accelerates cutaneous wound healing in streptozotocin-induced diabetic rats. *Molecular Biology Reports*, 49(1), 73-83.
- **Tombulturk, F. K.**, & Kanigur-Sultuybek, G. (2021). A molecular approach to maggot debridement therapy with *Lucilia sericata* and its excretions/secretions in wound healing. *Wound Repair and Regeneration*, 29(6), 1051-1061.
- **Tombulturk, F. K.**, Soydas, T., Sarac, E. Y., Tuncdemir, M., Coskunpinar, E., Polat, E., ... & Kanigur-Sultuybek, G. (2018). Regulation of MMP 2 and MMP 9 expressions modulated by AP-1 (c-jun) in wound healing: improving role of *Lucilia sericata* in diabetic rats. *Acta diabetologica*, 1-10.
- Tunçdemir, M., Yenmiş, G., **Tombultürk, K.**, Arkan, H., Soydaş, T., Tek, R. B., ... & Kanıgür-Sultuybek, G. (2018). NFKB1 rs28362491 and pre-miRNA-146a rs2910164 SNPs on E-Cadherin expression in case of idiopathic oligospermia: A case-control study. *International Journal of Reproductive Biomedicine*, 16(4), 247-254.
- **Tombulturk, F. K.**, Kasap, M., Tuncdemir, M., Polat, E., Sirekbasan, S., Kanli, A., & Kanigur-Sultuybek, G. (2018). Effects of *Lucilia sericata* on wound healing in streptozotocin-induced diabetic rats and analysis of its secretome at the proteome level. *Human & Experimental Toxicology*, 37(5), 508-520.
- Soydas, T., Karaman, O., Arkan, H., Yenmis, G., Ilhan, M. M., **Tombulturk, K.**, ... & Kanigur Sultuybek, G. (2016). The Correlation of Increased CRP Levels with NFKB 1 and TLR 2 Polymorphisms in the Case of Morbid Obesity. *Scandinavian journal of immunology*, 84(5), 278-283.
- Oner, T., Yenmis, G., **Tombulturk, K.**, Cam, C., Kucuk, O. S., Yakicier, M. C., ... & Sultuybek, G. K. (2015). Association of pre-miRNA-499 rs3746444 and pre-miRNA-146a rs2910164 polymorphisms and susceptibility to Behcet's disease. *Genetic testing and molecular biomarkers*, 19(8), 424-430.

### 1.1. Papers presented at international scientific meetings and published in the proceedings book

- **Fatma Kübra Tombultürk** (2024). The Effect of Topically Applied Metformin on E-cadherin Gene Expression in a Diabetic Rat Wound Model. COST Action CA21108 NETSKINMODELS Networking Meeting 4 (Poster presentation) – Belgrad, Srbistan.
- **Fatma Kübra Tombultürk** (2024). An in-vivo study on the potential of using metformin on wounds to lower blood glucose levels as an alternative to oral use. 7th International Health Science and Life Congress (IHSLC 2024) (Oral Presentation) – Burdur/Türkiye
- **Fatma Kübra Tombultürk** (2024). Wound healing mechanisms and current approaches. 8th International ICONTECH CONGRESS on Innovative Surveys in Positive Sciences (Oral Presentation) – Azerbaijan Cooperation University, Baku
- **Fatma Kübra Tombultürk** (2023). The effect of topical metformin use on keratin 17 in diabetic wound healing. 9th International Conference on Engineering and Natural Sciences (ICENS 2023) (Oral Presentation) – Sarajevo/Bosnia and Herzegovina
- **Fatma Kübra Tombultürk**, Tuba Soydaş, Elif Yaprak Saraç, Erdal Polat, Gönül Kanigür (2017). Wound healing effects of *Lucilia sericata* extract in diabetic rats involve in the modulation of MMP-2 and MMP-9 expression by AP-1. Tenth International Conference on Biotherapy: Bio-Medicine – Biodiagnosis and Biotherapy (Oral Presentation) - Istanbul

- Tuba Soydaş, **Fatma Kübra Tombultürk**, Elif Yaprak Saraç, Erdal Polat, Gönül Kanigür (2017). Wound healing effects of *Lucilia sericata* extract in diabetic rats involve in the modulation of MMP-2 and MMP-9 expression by NF-KB. Tenth International Conference on Biotherapy: Bio-Medicine – Biodiagnosis and Biotherapy (Oral Presentation) - Istanbul
- **Tombultürk Fatma Kübra**, Tunçdemir Matem, Kanigür Gönül (2017). Regulation of Collagen I by NFkB on diabetic rat cutaneous wound model. 15th International Congress of Histochemistry and Cytochemistry (IHC 2017) (Poster Presentation) – Antalya
- **Tombultürk Fatma Kübra**, Tunçdemir Matem, Polat Erdal, Sirekbasan Serhat, Kanigür Gönül (2017). Effects of *Lucilia sericata* on Rat Cutaneous Wounds Healing: Regulation of Collagen I And Collagen III by NF-kB (P65) on Diabetic Rats. Innovation Meetings in Medicine-III (Oral Presentation) - Gaziantep.

### 1.2. Written international books or chapters in books

- **Tombultürk FK**. Organelles IV. Yenmiş G (ed), Medical Biology and Genetics, Ankara Nobel Medical Bookstore, 2024 (In press).
- **Tombultürk FK**. Cytoskeleton. Hançer VS., Yıldız Y., (Eds), Goodman's Medical Cell Biology (Translation), Ankara Nobel Medical Bookstore, 2024 (In press).
- **Tombultürk FK**. Structure of Nucleic Acids. Ay EN (ed), Basic Biochemistry for Health Sciences, Ankara Nobel Medical Bookstore, 2020: 235-254.
- **Tombultürk FK**. Translation. Ay EN (ed), Basic Biochemistry for Health Sciences, Ankara Nobel Medical Bookstore, 2020: 273-289.

### 1.3. Papers presented at national scientific meetings and published in the proceedings book

- **Tombultürk, FK.**, Soydaş, T., Saraç, EY., Tuncdemir, M., Coşkunpınar, E., Polat, E., ... & Kanigür-Sultuybek, G. (2019). Regulation of MMP 2 and MMP 9 expressions modulated by AP-1 (c-jun) in wound healing: improving role of *Lucilia sericata* in diabetic rats. XVI. Medical Biology and Genetics Congress – With International Participation (Prof. Dr. Altan Günalp Poster presentation) – Bodrum.
- Tunçdemir M., Yenmiş G., **Tombultürk FK.**, Arkan H., Soydaş T., Özkara H., Kanigür G. (2019). Effect of NFKB1 rs28362491 variations on E-cadherin expression in idiopathic oligospermias. XVI. Medical Biology and Genetics Congress – With International Participation (Poster Presentation) – Bodrum.
- **Fatma Kübra Tombultürk**, Murat Kasap, Erdal Polat, Serhat Sirekbasan, Gönül Kanigür (2017). Analysis of excretion/secretion products of *Lucilia sericata* at the proteome level. XV. National Medical Biology and Genetics Congress (Poster Presentation) – Fethiye.
- Aydoğdu Pinar, **Tombultürk Fatma Kübra**, Özkara Hamdi, Kanigür Gönül (2013). Is NF kB1 94 ins del ATTG polymorphism a risk factor for male infertility. XIII. National Medical Biology and Genetics Congress (Poster Presentation) – Kuşadası.

## 2. National and International Projects

- In-vivo Investigation of Potential Anti-diabetic and Anti-inflammatory Effects of Cannabinoid 1/2 Receptor Agonist WIN 55,212-2 (TÜSEB, 2024-A1-01, Project coordinator), 2024
- Investigation of the Topical Effect of Metformin on Diabetic Wound Healing with the Molecular Mechanism of NF-kB and Related Genes (Istanbul University Cerrahpaşa – BAP, Researcher), 2020
- Investigation of the Effect of Metformin on Hypoxia and Autophagy Related Pathways in Diabetic Wound Healing (TÜBİTAK-1002, Project coordinator), 2020
- Investigation of the Molecular Mechanism of the Effect of Metformin on Diabetic Wound Healing (Istanbul University Cerrahpaşa – BAP, Researcher), 2019
- Investigation of the Antipruritic Activity of Heat Shock Protein 90 (Hsp90) in Mice with Acute and Chronic Itching (Istanbul University Cerrahpaşa – BAP, Researcher), 2018
- Effects of *Lucilia sericata* larval secretions on the expression levels of NF-kB-related genes in the experimental diabetic rat wound model (Istanbul University BAP, Project coordinator), 2013
- Development of alternative media for the detection of *E.coli* 0157:H7 in foods (TUBİTAK / R&D project), 2011

## 3. Certificates Received

- Advanced Good Clinical Practices-IKU (GCP), Clinical Research Association, September 2020.
- Basic Good Clinical Practices-IKU (GCP), Clinical Research Association, September 2020.
- Machine Learning Basics: Logistic Regression, LDA&KNN in R Studio, Start-Tech Academy, May 2020.
- XXII. Experimental Animals Use Certificate Course, Bezmialem Vakıf University, Istanbul, 09.03.2020-18.03.2020.
- Advanced Microscopy Techniques – ZEISS, ZEISS Microscopy, Cerrahpaşa Faculty of Medicine, January 14, 2020.
- BIO-RAD - V3 Western Workflow & Total Protein Normalization Practical Training”, Gen Era Diagnostic Company, İstinye University, May 2018
- Molecular Cancer Summit, Molecular Cancer Research Association (MOKAD), Istanbul, 25.03.2017-26.03.2017.
- Pedagogical Formation, Yıldız Technical University/Faculty of Education, 2016.
- LLP, Erasmus-Intensive Programme; Universitatea Transilvania din Braşov – Romania, Classic And Modern Methods For Molecular Diagnostic In Human Pathology – MDHP, 12.05.2013-26.05.2013.
- Prof. Dr. Asım Cenani Day Symposium GEN-ETHICS / IU Cerrahpaşa Faculty of Medicine, Medical Biology and Genetics Association, December 2012.
- 1st International Students' Stem Cell Congress of Turkey, IU, Çapa Faculty of Medicine, 13.05.12.
- Reasons for Erroneous Results Obtained in EQA Tests; Ministry of Food, Agriculture and Livestock, Istanbul Food Control Laboratory Directorate, 19.01.2012.
- ISO 22000 – HACCP Training Certificate, Genç Danışmanlık, Kütahya, April 2009.
- ISO 9001:2008 Training Certificate, Genç Danışmanlık, Kütahya, March 2009.

#### **4. Memberships in Scientific and Professional Organizations**

- Society of Medical Biology and Genetics (TBGD)
- Turkish Molecular Medicine Association
- Cell Death Research Association (HÖAD)
- Turkish Biologists Association