CURRICULUM VITAE AND PUBLICATIONS LIST

CURRICULUM VITAE

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Neurobiology

Degree	Department/Program	University	Year
Doctorate	MOLEKÜLER BİYOLOJİ VE GENETİK (DR)	İstanbul University	2023
Master's Degree	MOLEKÜLER BİYOLOJİ VE GENETİK (YL) (TEZLİ)	İstanbul University	2016
Bachelor's Degree	MOLEKÜLER BİYOLOJİ VE GENETİK BÖLÜMÜ	İstanbul University	2014

Position Title	Workplace	Year
Assistant Professor	Biruni University	2026-Continues

Awards:

1. X. Multidisciplinary Cancer Research Congress Sözlü Sunum Ödülleri, “Natural Products & Cancer” alanında sözlü sunum ödülü (2025)

2. Prof. Dr. Nazmi Özer Bilim Ödülleri (2024)

PUBLICATIONS

A. Articles published in international peer-reviewed journals:

A1. Aksüt Y., Aksoy N. B., Şengelen A., Yıldırım E., Yemişken E., Pekmez M., "*In vitro* anticancer effects of a marine-derived glycosaminoglycancontaining extract from *Dicentrarchus labrax* scales on human glioblastoma cells", *TRAKYA UNIVERSITY JOURNAL OF NATURAL SCIENCES*, vol. 27, no. 2, pp. 128-137, 2026.

A2. Erkalp K., Şengelen A., Demirgan S., Aksüt Y., Önay Uçar E., Yelmen N., "Crystalloid-Dependent Modulation of Aquaporins and Molecular Stress Pathways During Acute Normovolemic Hemodilution in Rat Heart and Aorta", *International Journal of Molecular Sciences*, vol. 27, no. 21, pp. 9498, 2026.

A3. Selcan A., Demirgan S., Şengelen A., Oran D. S., Aksüt Y., Yüzbaşıoğlu-öztürk G., Öztürk-gürgen H., Kargı-gemici E., Gülçubuk A., "Prolonged sevoflurane exposure induces exaggerated and persistent cognitive decline in old rats with pre-existing impairment by increasing hippocampal mitochondrial dysfunction and apoptosis", *NeuroToxicology*, vol. 116, 2026.

A4. Demirgan S., Şengelen A., Aksüt Y., Öğütcü İ., Oran D. S., Solak-kumaş S., Paşaoğlu H. E., Akyol O., Erkalp K., Önay-uçar E., "Intranasal rosmarinic acid reduces cognitive and hippocampal damage from repeated neonatal isoflurane exposure by regulating apoptotic/oxidative/inflammatory responses, and heat-shock and 14–3-3 proteins", *NeuroToxicology*, vol. 114, 2026.

A5. Ozan G., Sar Sancakli H., Batu S., Gurbuz Yurtsever A., Erdal M., Şengelen A., Onay Ucar E., Ozel Yildiz S., Bicak B., Kecel Gunduz S., "Efficacy of theaflavin-based dental varnishes against erosive demineralizatıon and matrix metalloproteinase expression", *Odontology*, vol. 114, no. 2, pp. 924-938, 2026.

A6. Duman R., Eroğlu E., Aksüt Y., Şengelen A., Arda E. Ş. N., "Royal Jelly Exhibits *in vitro* Gastric Ulcer-Healing Activity by Sodium Taurocholate-Induced", *EUROPEAN JOURNAL OF BIOLOGY*, vol. 85, no. 2, pp. 102-111, 2026.

A7. Suna G., Erdemir E., Hamur B., Aksüt Y., Şengelen A., Pekmez M., Eğlence-bakır S., Şahin M., Karakuş E., "Integrated fluorescent sensing of hypochlorite using a carbazole platform: cellular imaging, environmental monitoring, and smartphone analysis", *Microchemical Journal*, vol. 219, 2025.

A8. Göksoy M. A., Aksüt Y., Şengelen A., Arda N., "Water-based propolis enhances 5-fluorouracil drug efficiency in gastric and colorectal cancer cells through cell stress response, anti-migratory, and apoptotic effects regardless of p53 status", *Medical Oncology*, vol. 42, no. 10, 2025.

A9. Erkalp K., Demirgan S., Şengelen A., Oran D. S., Öğütcü İ., Gencel-güler C., Erkalp S., Demirgan E. B., Kumaş-solak S., Yelmen N. vd., "Acute Normovolemic Hemodilution Changes the Aquaporin Expression Profile in Specific Tissues and Induces Apoptotic and Inflammatory Processes in a Rat Model", *Medicina (Lithuania)*, vol. 61, no. 9, 2025.

A10. Yıldırım E., Şengelen A., Yücel O., Aksüt Y., Öğütcü İ., Bayrakçı A., Gencel-güler C., Güneş U., İldeş C., Pekmez M. vd., "Methotrexate-loaded Sr-BDC metal-organic frameworks attenuate glioblastoma and cervical-carcinoma cells and spheroids' growth and motility by reducing the inflammation-EMT axis and inducing apoptosis", *Journal of Drug Delivery Science and Technology*, vol. 111, 2025.

A11. Yılmazer M., Şengelen A., Aksüt Y., Palabıyık B., Önay-uçar E., Karaer Uzuner S., "Glucose starvation induces tau phosphorylation leading to cellular stress response in fission yeast", *Archives of Microbiology*, vol. 207, no. 7, 2025.

A12. Pekmez M., Mete Ş. B., Aksüt Y., Öğütcü İ., Baştürk F. N., Gerçek Y. C., Şengelen A., "Fatty acid synthase inhibitor cerulenin attenuates glioblastoma progression by reducing EMT and stemness phenotypes, inducing oxidative and ER stress response, and targeting PI3K/AKT/NF-κB axis", *Medical Oncology*, vol. 42, no. 5, 2025.

A13. Okutan E., Güleç İ., Şengelen A., Karagöz-güzey F., Eren B., Tufan A., Özcan T. B., Önay-uçar E., "Aloperine treatment attenuates acute spinal cord injury by reducing oxidative, inflammatory, and apoptotic responses via PI3K/AKT/NF-κB signaling in a rat contusion model", *Neuroscience Letters*, vol. 854, 2025.

A14. Sağlam-çifci E., Güleç İ., Şengelen A., Karagöz-güzey F., Eren B., Paşaoğlu H. E., Önay-uçar E., "The H4R antagonist, JNJ-7777120 treatments ameliorate mild traumatic brain injury by reducing oxidative damage, inflammatory and apoptotic responses through blockage of the ERK1/2/NF-κB pathway in a rat model", *Experimental Neurology*, vol. 385, 2025.

A15. Aksüt Y., Şengelen A., Gürsoy D. M., Öğütcü İ., Kuvet Ö., Pekmez M., "Chrysin sensitizes glioblastoma cells and spheroids to temozolomide treatment by reducing EMT and stemness phenotypes, as well as targeting multidrug resistance proteins", *Frontiers in Pharmacology*, vol. 16, 2025.

A16. Bostancı F., Şengelen A., Aksüt Y., Yıldırım E., Öğütcü İ., Yücel O., Emik S., Gürdağ G., Pekmez M., "Indomethacin-encapsulated PLGA nanoparticles improve therapeutic efficacy by increasing apoptosis and reducing motility in glioblastoma cells", *Pharmaceutical Development and Technology*, vol. 30, no. 1, pp. 25-36, 2025.

A17. Şengelen A., Önay-uçar E., "Rosmarinic acid attenuates glioblastoma cells and spheroids' growth and EMT/stem-like state by PTEN/PI3K/AKT downregulation and ERK-induced apoptosis", *Phytomedicine*, vol. 135, 2024.

A18. Kargı-gemici E., Şengelen A., Aksüt Y., Akyol O., Şengiz-erhan S., Bay M., Önay-uçar E., Selcan A., Demirgan S., "Cerium oxide nanoparticles (nanoceria) pretreatment attenuates cell death in the hippocampus and cognitive dysfunction due to repeated isoflurane anesthesia in newborn rats", *NeuroToxicology*, vol. 105, pp. 82-93, 2024.

A19. Yücel O., Aksüt Y., Şengelen A., Yıldırım E., Emik S., Arda N., Gürdağ G., "Folate receptor-targeted indomethacin-loaded gold nanoparticles enhance drug chemotherapeutic efficacy in glioblastoma cells and spheroids", *Journal of Drug Delivery Science and Technology*, vol. 100, 2024.

A20. Önay Uçar E., Şengelen A., Mertoğlu Kamalı E., "Hsp27, Hsp60, Hsp70, or Hsp90 depletion enhances the antitumor effects of resveratrol via oxidative and ER stress response in human glioblastoma cells", *Biochemical Pharmacology*, vol. 208, 2023.

A21. Yılmaz H., Şengelen A., Demirgan S., Paşaoğlu H. E., Çağatay M., Erman İ. E., Bay M., Güneyli H. C., Önay-uçar E., "Acutely increased aquaporin-4 exhibits more potent protective effects in the cortex against single and repeated isoflurane-induced neurotoxicity in the developing rat brain", *Toxicology Mechanisms and Methods*, vol. 33, no. 4, pp. 279-292, 2023.

A22. Yayla-tunçer E., Şengelen A., Tan-recep B. Z., Şavluk Ö. F., Yilmaz A. A., Ceyran H., Önay-uçar E., "Acute Changes in Myocardial Expression of Heat Shock Proteins and Apoptotic Response Following Blood, delNido, or Custodiol Cardioplegia in Infants Undergoing Open-Heart Surgery", *Pediatric Cardiology*, vol. 43, no. 3, pp. 567-579, 2022.

A23. Akyol O., Demirgan S., Şengelen A., Güneyli H. C., Oran D. S., Yıldırım F., Haktanır D., Sevdi M. S., Erkalp K., Selcan A., "Mild Hypothermia via External Cooling Improves Lung Function and Alleviates Pulmonary Inflammatory Response and Damage in Two-Hit Rabbit Model of Acute Lung Injury", *Journal of Investigative Surgery*, vol. 35, no. 7, pp. 1472-1483, 2022.

A24. Güleç İ., Şengelen A., Karagöz-güzey F., Önay-uçar E., Eren B., Vahabova G., Karacan M., Özcan T. B., "The calcimimetic R-568 attenuates subarachnoid hemorrhage-induced vasospasm through PI3K/Akt/eNOS signaling pathway in the rat model", *Brain Research*, vol. 1765, 2021.

A25. Demirgan S., Akyol O., Temel Z., Şengelen A., Pekmez M., Ulaş O., Sevdi M. S., Erkalp K., Selcan A., "Intranasal levosimendan prevents cognitive dysfunction and apoptotic response induced by repeated isoflurane exposure in newborn rats", *Naunyn-Schmiedeberg's Archives of Pharmacology*, vol. 394, no. 7, pp. 1553-1567, 2021.

A26. Yücel O., Şengelen A., Emik S., Önay-uçar E., Arda N., Gürdağ G., "Folic acid-modified methotrexate-conjugated gold nanoparticles as nano-sized trojans for drug delivery to folate receptor-positive cancer cells", *Nanotechnology*, vol. 31, no. 35, 2020.

A27. Kıyga E., Şengelen A., Adıgüzel Z., Önay Uçar E., "Investigation of the role of quercetin as a heat shock protein inhibitor on apoptosis in human breast cancer cells", *Molecular Biology Reports*, vol. 47, no. 7, pp. 4957-4967, 2020.

A28. Önay Uçar E., Şengelen A., "Resveratrol and siRNA in combination reduces Hsp27 expression and induces caspase-3 activity in human glioblastoma cells", *Cell Stress and Chaperones*, vol. 24, no. 4, pp. 763-775, 2019.

A29. Demirgan S., Akyol O., Temel Z., Şengelen A., Pekmez M., Demirgan R., Sevdi M. S., Erkalp K., Selcan A., "Isoflurane exposure in infant rats acutely increase aquaporin 4 and does not cause neurocognitive impairment", *Bosnian Journal of Basic Medical Sciences*, vol. 19, no. 3, pp. 257-264, 2019.

A30. Şengelen A., Önay-uçar E., "Rosmarinic acid and siRNA combined therapy represses Hsp27 (HSPB1) expression and induces apoptosis in human glioma cells", *Cell Stress and Chaperones*, vol. 23, no. 5, pp. 885-896, 2018.

B. Papers presented at international scientific meetings and published in proceedings:

B1. Şengelen A., Targeting the HSF1/SIRT1/FOXO1 signaling axis attenuates glioblastoma cells and spheroids' growth and temozolomide drug resistance,, In: *The 9th FEBS Congress, Istanbul Lütfi Kırdar International Convention and Exhibition Center*, İstanbul, Turkey, 2025.

B2. Göksoy M. A., Aksüt Y., Şengelen A., Arda E. Ş. N., Water-Based Propolis Enhances the Anticancer Activity of 5-Fluorouracil, a Chemotherapy Drug, In: *3rd International Propolis Conference*, Turkey, 2023.

B3. Ozan G., Şar Sancaklı H., Batu Ş., Erdal M. S., Gürbüz Yurtsever A., Şengelen A., Önay Uçar E., Özel Yıldız S., Effect of experimental theaflavin varnishes on dentin erosion, In: *CED/NOF IADR Oral Health Research Congress*, Greece, 2023.

B4. Şengelen A., Önay Uçar E., Silencing of HSF1 increases the apoptosis induction in human glioblastoma cells upon rosmarinic acid treatment, In: *7th International Congress of the Molecular Biology Association of Türkiye (MolBiyoKon19)*, Turkey, 2019.

B5. Önay Uçar E., Şengelen A., Suppression of Hsp60 and Hsp70 increases the anti-tumor effects of resveratrol in human glioblastoma cells, In: *7th International Congress of the Molecular Biology Association of Türkiye (MolBiyoKon19)*, Turkey, 2019.

B6. Kıyga E., Şengelen A., Adıgüzel Z., Önay Uçar E., Quercetin-induced heat shock proteins inhibition and cell death in human breast cancer cells, In: *7th International Congress of the Molecular Biology Association of Türkiye (MolBiyoKon19)*, Turkey, 2019.

B7. Milat N. S., Şengelen A., Pekmez M., Investigation of Thymoquinone Usability on Wound Healing,, In: *7th International Congress of the Molecular Biology Association of Türkiye (MolBiyoKon19)*, Turkey, 2019.

B8. Demirgan S., Akyol O., Temel Başer Z., Şengelen A., Pekmez M., Demirgan R., Sevdi M. S., Erkalp K., Selcan A., Neonatal Isoflurane Exposure Acutely Increases Aquaporin-4 and Does Not Cause Long-Term Neurocognitive Impairment, In: *International Conference on Science and Technology (ICONST 2018)*, Turkey, 2018.

B9. Şengelen A., Önay Uçar E., Effects of Rosmarinic Acid and siRNA Combined Therapy on Heat Shock Protein 27 Expression in Human Glioma Cells, In: *2nd EACR-AACR-SIC Special Conference (EAS2017)*, Italy, 2017.

B10. Önay Uçar E., Şengelen A., Resveratrol Represses Hsp27 Expression in Human Glioma Cells, In: *2nd EACR-AACR-SIC Special Conference (EAS2017)*, Italy, 2017.

C. National/international books written or chapters in books:

C2. Chapters in national/international books written:

C2.1. Şengelen A., "HOW IS ARTIFICIAL INTELLIGENCE USED IN SCIENTIFIC RESEARCH?", *THE ROLE OF ARTIFICIAL INTELLIGENCE IN PERIOPERATIVE CARE*, Türkiye Klinikleri, 2025.

C2.2. Şengelen A., Aksüt Y., "CRISPR and Beyond: The Power of Gene Editing.", *The Future of Life: Agriculture, Medicine, and Biotechnology*, Gaziantep Üniversitesi Yayınları, 2025.

C2.3. Şengelen A., Mertoğlu Kamalı E., Tibatan M. A., Çalışkan A., Anaç Ö., Önay Uçar E., "Fundamentals of siRNA Therapeutics and Their Efficacy in HSP-targeted Cancer Treatment", *Heat Shock Proteins (HSP) in Molecular and Cellular Biology of Human Diseases*, Scientific Scholar LLC, 2023.

C2.4. Önay Uçar E., Mertoğlu Kamalı E., Kıyga E., Şengelen A., Pekmez M., Arda E. Ş. N., "Exosomal Heat Shock Proteins in Cancer", *Heat Shock Proteins (HSP) in Cellular Communication and Signaling*, Scientific Scholar LLC, 2023.

C2.5. Şengelen A., Demirgan S., Aksüt Y., Pekmez M., Arda E. Ş. N., Önay Uçar E., "What We Know About the Role of Heat Shock Proteins in Coronavirus Infection: A Remarkable Prognostic Factor or a Therapeutic Strategy?", *Heat Shock Proteins (HSP) and Coronavirus*, Scientific Scholar, 2022.

C2.6. Önay-uçar E., Şengelen A., Güngör E., Mertoğlu-kamalı E., Pekmez M., Arda N., "Can Hsp Targeted Gene Therapy Be a New Hope for Gliomas?", *Heat Shock Proteins in Neuroscience*, Springer, 2019.

C2.7. Mertoğlu Kamalı E., Şengelen A., Kıyga E., Önay Uçar E., "Therapeutic Drugs and Natural Products: The Effect of Suppressing Heat Shock Proteins (Hsp) in Brain Tumors", *Heat Shock Proteins in Neuroscience*, Springer, 2019.

C2.8. Önay Uçar E., Şengelen A., Mertoğlu Kamalı E., Pekmez M., Arda E. Ş. N., "Suppression of HSP70 Expression by Quercetin and Its Therapeutic Potential Against Cancer", *HSP70 in Human Diseases and Disorders*, Springer, 2018.

E. Papers presented at national scientific meetings and published in proceedings:

E1. Aksüt Y., Şengelen A., Öğütcü İ., Adıgüzel Z., Arda E. Ş. N., Exosome-Based Thymoquinone Therapy Targets Chemoresistant Colorectal Cancer Spheroids, In: *XI. Multidisciplinary Cancer Research Congress*, Turkey, 2026.

E2. Aksüt Y., Şengelen A., Öğütcü İ., Adıgüzel Z., Arda E. Ş. N., Exosome-Delivered Thymoquinone Overcomes 5-Fluorouracil Resistance In Colorectal Cancer 3D Models, In: *2nd Extracellular Vesicles Conference (TURSEV-26)*, Turkey, 2026.

E3. Şengelen A., Önay Uçar E., Combating Temozolomide Resistance in Glioblastoma Cells and Cancer Stem Cell-Like Spheroids: Targeting HSF1 and Treating with Rosmarinic Acid, In: *X. Multidisciplinary Cancer Research Congress*, Turkey, 2025.

E4. Kargı Gemici E., Demirgan S., Şengelen A., Akyol O., Şengiz Erhan S., Bay M., Önay Uçar E., Selcan A., Seryum oksit nanopartikülleri, tekrarlayan izofluran anestezisine bağlı nöro-apoptoz ve kognitif disfonksiyonu engellemektedir, In: *Türk Anesteziyoloji ve Reanimasyon Derneği 56. Ulusal Kongresi (TARK2022)*, Turkey, 2022.

E5. Şengelen A., Önay Uçar E., Glioma Hücrelerinde Rosmarinik Asitin Hsp Anlatımı ve Apoptoz İndüksiyonu Üzerine Etkileri,, In: *3. Ulusal Proteomik Kongresi, TUPA*, Turkey, 2020.

E6. Demirgan S., Akyol O., Temel Başer Z., Şengelen A., Pekmez M., Ulaş O., Sevdi M. S., Erkalp K., Selcan A., Levosimendan, tekrarlayan izofluran anestezisine bağlı nöro-apoptoz ve kognitif disfonksiyonu engellemektedir, In: *Türk Anesteziyoloji ve Reanimasyon Derneği 53. Ulusal Kongresi (TARK2019)*, Turkey, 2019.

E7. Şengelen A., Önay Uçar E., Can RNAi-Mediated Hsp27 Knockdown In Combination With Rosmarinic Acid Be A Therapy For Glioma?, In: *1st International Symposium on Graduate Research in Science Focus on Entrepreneurship and Innovation (ISGRS 2018*, Turkey, 2018.

E8. Kıyga E., Şengelen A., Önay Uçar E., The Investigation Of Quercetin On Apoptosis And Expression Of Hsp27 And Hsp70 Proteins In Human Breast Cancer Cell, In: *1st International Symposium on Graduate Research in Science Focus on Entrepreneurship and Innovation (ISGRS 2018*, Turkey, 2018.

E9. Şengelen A., Önay Uçar E., Glioma Hücrelerinde Resveratrol ve Rosmarinik Asitin Hsp27 Anlatımı ve Apoptoz İndüksiyonu Üzerine Etkileri, In: *2. Ulusal Proteomik Kongresi, TUPA,*, Turkey, 2017.

E10. Kıyga E., Şengelen A., Önay Uçar E., MCF-7 İnsan Meme Kanseri Hücrelerinde Kersetinin Hsp27 ve Hsp70 Anlatımı ve Apoptoz İndüksiyonu Üzerine Etkileri, In: *2. Ulusal Proteomik Kongresi, TUPA*, Turkey, 2017.

E11. Demirgan S., Akyol O., Temel Başer Z., Şengelen A., Pekmez M., Demirgan R., Sevdi M. S., Erkalp K., Selcan A., Yenidoğan Ratlarda İzofluran Anestezisi Uygulamasının Aquaporin 4 Ekspresyonu ve Kognitif Fonksiyonlar Üzerine Etkisi, In: *Türk Anesteziyoloji ve Reanimasyon Derneği 51. Ulusal Kongresi (TARK2017)*, Turkey, 2017.

E12. Şengelen A., Önay Uçar E., Kersetin ve siRNA-Aracılı Susturmanın Glioma Hücrelerinde Hsp27 Anlatımına Etkileri, In: *VI. Ulusal Moleküler Biyoloji ve Biyoteknoloji Kongresi*, Turkey, 2017.