



**Atakan Tevlek, Ph.D.**  
**Assistant Professor of Medical School**  
Atılım University  
Department of Medical Biology  
06830 İncek, Gölbaşı, Ankara/TURKEY  
atakan.tevlek@atilim.edu.tr  
Tel: +90 312 586 62 14

**PERSONAL**

<b>Date of Birth</b>	03.07.1988
<b>Place of Birth</b>	Zonguldak

**EDUCATION**

2013-2019	Hacettepe University, Institute of Science, Bioengineering, Integrated Ph.D.
2007-2012	Hacettepe University, Faculty of Science, Biology, B.S.

**ACADEMIC POSITIONS**

<b>November/2019- November/2023</b>	Experienced Researcher, METU MEMS Research and Application Center, Ankara, Turkey.
<b>June/2014- September/2014</b>	Visiting Researcher, University of Victor Segalen Bordeaux 2, Bordeaux, France.

**HONORS&AWARDS**

<b>1</b>	Ph.D. Scholarship Program for Priority Areas, TUBITAK 2211-C, 2015 Term Scholar (36 Months).
<b>2</b>	Hacettepe University High Honor Student Degree, 2012.
<b>3</b>	Hacettepe University Faculty of Science and Engineering, Project Competition, First Prize Award, May 2012.
<b>4</b>	TUBITAK BIDEB 2209-A University Students Domestic Research Projects Support Program, 2011 Project Support.

**RESEARCH INTERESTS**

<b>1</b>	Cell culture
<b>2</b>	Biomaterials
<b>3</b>	Tissue Engineering
<b>4</b>	Neuroscience
<b>5</b>	Cancer Research
<b>6</b>	Lab-on-Chip
<b>7</b>	Exosomes

## PROFESSIONAL SERVICE

1	Editor, Journal of Biomaterials-Science Publishing Group
2	Editor, Nano-Bio Convergence Letters-Scientific Research Press
3	Reviewer Editor, Frontiers in Bioengineering and Biotechnology

## PUBLICATIONS

1	Atakan Tevlek*, Güneş Kibar, Barbaros Çetin, "Assessment of Anticancer Effects of Aloe vera on 3D Liver Tumor Spheroids in a Microfluidic Platform", <i>Biotechnology and Bioengineering</i> , 2025.
2	Ongun Mehmet Saka, Devrim Demir Dora, Güneş Kibar, Atakan Tevlek*, "Expanding the role of exosomes in drug, biomolecule, and nanoparticle delivery", <i>Life Sciences</i> , 2025.
3	Sam Dehghani, Ozgecan Ocakci, Pars Tan Hatipoglu, Veli Cengiz Ozalp, Atakan Tevlek*, "Exosomes as biomarkers and therapeutic agents in neurodegenerative diseases: current insights and future directions", <i>Molecular Neurobiology</i> , 2025
4	Naciye Özdemir, Gamze Tan, Atakan Tevlek, Gülsin Arslan, Gökhan Zengin, İdris Sargin*, "Dead Cell Discrimination with Red Emissive Carbon Quantum Dots from the Medicinal and Edible Herb <i>Echinophora tenuifolia</i> ", <i>Journal of Fluorescence</i> , 2025.
5	Güneş Kibar*, Atakan Tevlek, "İki-boyutlu ve Üç-boyutlu Hücre Kültür Modellerinde Güncel Gelişmeler ve Uygulamalar", <i>Arşiv Kaynak Tarama Dergisi</i> , 2025.
6	Atakan Tevlek*, "Diagnostic use of Circulating Cells and Subcellular Bio-Particles", <i>Progress in Biophysics and Molecular Biology</i> , 2024.
7	Atakan Tevlek*, Esin Akbay Çetin, "Smart Hydrogels in Lab-on-a-Chip (LOC) Applications: A Review", <i>Reactive and Functional Polymers</i> , 2024.
8	Atakan Tevlek*, "The Role of Decellularized Cell Derived Extracellular Matrix in the Establishment and Culture of In Vitro Breast Cancer Tumor Model", <i>Biomedical Materials</i> , 2024.
9	Deniz Ozdil, Gülcin Günal, Atakan Tevlek, Halil Murat Aydin* "Effects of liquid-to-solid ratio and gamma irradiation on the rheology and cytocompatibility of a beta-tricalcium phosphate-based injectable bone substitute", <i>Journal of Biomaterials Science, Polymer Edition</i> , 2024.
10	Gamze Tan*, Atakan Tevlek, Halil Murat Aydin, "In-Vitro Suppressive Profiles of Gold Nanoparticles Biosynthesized with Allium Sativum and Allium Cepa Extracts Against Different Cancer Types Depending on Extract Type and Amount", <i>Journal of Drug Delivery Science and Technology</i> , 2023.
11	Atakan Tevlek, Seren Kecili, Ozge Ozcelik, Haluk Kulah, Hüseyin Cumhur Tekin*, "Spheroid Engineering in Microfluidic Devices", <i>ACS Omega</i> , 2022.
12	Atakan Tevlek, Bengisu Topuz, Esin Akbay Cetin, Halil Murat Aydin*, "Development of Surface Channel Patterned and Endothelialized Poly(glycerol sebacate) based Elastomers", <i>Journal of Biomaterials Applications</i> , 2021.
13	Abdulrahem M. N. Atya, Atakan Tevlek, Halil Murat Aydin, "Conductive Carbon Aerogel Incorporated Poly(glycerol-sebacate) Elastomers for Cardiac Tissue Engineering", <i>Biomedical Materials</i> , 2021.
14	Khaliunsarnai Tsogtbaatar, Debora Ferreira, Atakan Tevlek, Halil Murat Aydin, Ligia Rodrigues, Eda Celik Akdur, "In vitro selection of DNA aptamers against human osteosarcoma", <i>Investigational New Drugs</i> , 2021.
15	Atakan Tevlek, Halil Murat Aydin, "Multi-layered in vitro 3D-bone model via combination of osteogenic cell sheets with electrospun membrane interlayer", <i>Journal of Biomaterials Applications</i> , 2021.
16	Sedat Odabaş, Atakan Tevlek, Berkay Erenay, Halil Murat Aydin, Atiye SedaYar Sağlam, Bora Garipcan, "Magnetically stimulated cryogels to enhance osteogenic and chondrogenic differentiation of stem cells", <i>bioRxiv</i> , 2021.

17	Gamze Dereli Can, Atakan Tevlek, Mehmet Erol Can, Elif Oncu, Halil Murat Aydin, Nurullah Cagil, "Micro-and nanoscale characterization of different natural biomaterials for ocular surface regeneration", The European Research Journal, 2020.
18	Mehtap Evci, Atakan Tevlek, Halil Murat Aydin, Tuncer Caykara*, "Synthesis of Temperature and Light Sensitive Mixed Polymer Brushes via Combination of Surface-Initiated PET-ATRP and Interface-mediated RAFT Polymerization for Cell Sheet Application", Applied Surface Science, 2020.
19	Merve Uyaniklar, Gulcin Gunal, Atakan Tevlek, Pezhman Hosseinian, Halil Murat Aydin, "A Hybrid Cornea: Cell Laden Hydrogel Incorporated Decellularized Matrix", ACS Biomaterials Science & Engineering, 2019.
20	Atakan Tevlek, Abdulraheem M. N. Atya, Muhammed Almemar, Memed Duman, Dincer Gokcen, Alexey Y. Ganin, Humphrey H.P. Yiu and Halil Murat Aydin, "Synthesis of Conductive Carbon Aerogels Decorated with $\beta$ -Tricalcium Phosphate Nanocrystallites", Scientific Reports, 2020.
21	Meryem Erken, Atakan Tevlek, Pezhman Hosseinian, Bengisu Topuz, Halil Murat Aydin, "Effects of Ceramic Particle Size on Cell Attachment and Viability in Polyurethane Based Bone Adhesive Composites", Journal of Composite Materials, 2020.
22	Atakan Tevlek, Dilara Turkel Agacik, Halil Murat Aydin, "Stretchable Poly (glycerol-sebacate)/ $\beta$ -Tricalcium Phosphate Composites with Shape Recovery Feature by Extrusion", Journal of Applied Polymer Science, 2020.
23	Atakan Tevlek, Halil Murat Aydin, Erfan Maleki, Remzi Varol, Okan Unal, "Effects of Severe Plastic Deformation on Pre-Osteoblast Cell Behavior and Proliferation on AISI 304 and Ti-6Al-4V Metallic Substrates", Surface and Coatings, 2019.
24	Gamze Tan, Murat Kaya, Atakan Tevlek, Idris Sargin, Talat Baran, "Antitumor activity of chitosan from mayfly with comparison to commercially available low, medium and high molecular weight chitosans", In Vitro Cellular & Developmental Biology-Animal, 2018.
25	Atakan Tevlek, Sedat Odabas, Ekin Celik, Halil Murat Aydin, "Preparation of MC3T3-E1 cell sheets through short term osteogenic medium application", Artificial Cells, Nanomedicine and Biotechnology, 2018.
26	Bahar Aslan, Selcan Guler, Atakan Tevlek, Halil Murat Aydin, "Evaluation of collagen foam, poly(L-lactic acid) nanofiber mesh and decellularized matrices for corneal regeneration", Journal of Biomedical Materials Research Part B, 2017.
27	Atakan Tevlek and Halil Murat Aydin, "Poly(glycerol-sebacate) Elastomer: A Mini Review", Journal of Orthoplastic Surgery, 2017.
28	Atakan Tevlek, Pezhman Hosseinian, Cansel Ogutcu, Mustafa Turk, Halil Murat Aydin, "Bi-layered constructs of poly(glycerol-sebacate)- $\beta$ -tricalcium phosphate for bone-soft tissue interface applications", Material Science and Engineering Part C, 2016.

## PROJECTS

1	Sustainable Extracellular Matrix-Based Advanced Biomaterials via Decellularization of Waste Aquatic Animal Tissues, Atilim University, ATU-ÇAP-2526-02, Principal Investigator, (January 2026-January 2027)
2	Cryo-shocked Cell-Based Carrier System for the Evaluation of Resveratrol in an <i>in vitro</i> Alzheimer's Disease Model, TUBITAK, 1002-A, 325S433, Principal Investigator, (December 2025-December 2026)
3	Detection and Characterization of Exosomes as Biomarkers in Rheumatoid Arthritis using SELEX-Based Aptamers, TUSEB, 2025-A4-01, 44584, Principal Investigator, (October 2025-October 2026)
4	Development of Three-Dimensional Tissue Culture Plates for High-Throughput Drug Discovery and Screening, TUSEB, 2025-A4-01, 44073, Researcher, (September 2025-September 2026)
5	Investigation of Genotoxicity in MCF-7 Human Breast Cancer Cells Treated with Different Doses of Doxorubicin Chemotherapeutic Agent Using AI-Based Image Analysis, Atilim University, ATU-ATAK-2425-06, Advisor, (December 2024-June 2025)

6	Evaluation of Biocompatibility and Cytotoxicity of Fluorescent FITC@p(GMA-EGDMA) Nanoparticles on Mouse L929 Fibroblasts and Human MCF-7 Cancer Cells, Atilim University, ATU-LAP-2425-04, Principal Investigator, (December 2024-June 2025)
7	Development of Next Generation Dynamic Cell Culture Model: 3-Dimensional Microfluidic Magnetic Cell Culture, TUBITAK 1001, Researcher (June 2024-October 2024), Project Manager: Assoc. Prof. Dr. Güneş Kibar.
8	Maestro- Micro Medical Technologies Platforms, TUBITAK 1004, Researcher (December 2022, November 2023), Project Manager: Prof. Dr. Haluk Külah.
9	Preparation of Biodegradable Smart Bone Repair Plates, Hacettepe University Scientific Research Projects Coordination Unit, Comprehensive Research Project, Researcher (August 2017, December 2018), Project Manager: Assoc. Dr. Halil Murat Aydin.
10	Preparation of Wastepaper Derived Carbon Aerogel/Elastomer Matrices for Cardiac Tissue Engineering, Hacettepe University Scientific Research Projects Coordination Unit, Rapid Support Project, Researcher, (August 2016-February 2017), Project Manager: Assoc. Dr. Halil Murat Aydin.
11	Preparation of Cell Sheets with Patterned Surfaces, Hacettepe University Scientific Research Projects Coordination Unit, Fast Project Support (2016), 6 months, Researcher, Project Manager: Assoc. Dr. Halil Murat Aydin.
12	<i>In vivo</i> Printing of Hydroxyapatite and Mesenchymal Stem Cells in a Rat Calvarial Defect Model by using a 3D Laser Assisted Bioprinting System; University of Victor Segalen Bordeaux-2, INSERM U-1026, Bordeaux, France, 2013, 4 months, Visiting Researcher, Project Manager: Prof. Dr. Fabien Guillemot.
13	The Effects of 1,3/1,6 D-Glucan Application on the Response of Thoracic Aorta of Streptozotocin-induced Type 1 Diabetic Rats, Researcher, TUBITAK 2209, 2011, Project Manager: Prof. Dr. Mehmet Ali Onur, Hacettepe University, Faculty of Science, Department of Biology.

## CONFERENCE PRESENTATIONS

1	Dr. Atakan Tevlek, Reconstructing the Cellular Microenvironment: 3D Spheroid and Organ-on-Chip Approaches, <b>Invited Speaker</b> , International Conference ICSS-2025 Science for Society: Chemical & Biological Frontiers towards Viksit Bharat 2047, Online, India, December 27-28 December 2025.
2	Dr. Atakan Tevlek, Exosomal microRNA Profiling to Elucidate Molecular Communication Networks Underlying Neuronal Differentiation, <b>Oral Presentation</b> , 14 <sup>th</sup> National Molecular Biology and Biotechnology Congress (MOLBIOTECH-25), Online, Türkiye, November 1-2, 2025.
3	Dr. Atakan Tevlek, Advanced Microfluidic Engineering of Fluorescent Nanoparticles for Bioimaging and Biomedical Applications, <b>Oral Presentation</b> , 23 <sup>rd</sup> Biotechnology Congress with International Participation, Hacettepe University, Ankara, Türkiye, October 23-25, 2025.
4	Dr. Atakan Tevlek, Preclinical Alzheimer Research: Cell and Animal Models, <b>Invited Speaker &amp; Chair of the Organizing Committee</b> , Atilim University, Türkiye, September 26, 2025.
5	Dr. Atakan Tevlek, Exosomes as Intercellular Messengers: Diagnostic and Therapeutic Perspectives, <b>Invited Speaker</b> , Bio-Hub: International Conference on Future of Biotechnology & Bioengineering (Hybrid Mode), Kohat/Pakistan, June 18-19, 2025.
6	Dr. Atakan Tevlek, Halil Murat Aydin, "Fabrication of Thick Cells Sheet Constructs Via Nanofibrous Membrane Interlayers", TERMIS EU 2019, <b>Poster Presentation</b> , Rhodes/Greece, May 2019.
7	Merve Uyaniklar, Gulcin Gunal, Atakan Tevlek, Pezhman Hosseinian, Halil Murat Aydin, "Decellularized Cornea Constructs Incorporating Gelatin Methacrylate", Scandinavian Society for Biomaterials 2019, Poster, Presentation, Helsinki/Finland, June 2019.
8	Gulcin Gunal, Atakan Tevlek, Halil Murat Aydin, "Elastomer Reinforced Decellularized Myocardium Constructs", Termis EU 2019, Poster Presentation, Rhodes/Greece, May 2019.

<b>9</b>	Sedat Odabas, Atakan Tevlek, Berkay Erenay, Halil Murat Aydin, Batur Ercan, Bora Garipcan, Seda Atiye Saglam Yar, "Magnetic Stimulated Cryogels to Enhance Stem Cell Differentiation", 29th Annual Congress of the European Society for Biomaterials, Poster Presentation, Maastricht/Holland, April 2018.
<b>10</b>	Bahar Aslan, Selcan Guler, Atakan Tevlek, Halil Murat Aydin, "Comparison of Biopolymeric, Synthetic and Natural Derived Corneal Constructs", 28 <sup>th</sup> European Congress on Biomaterials, Oral Presentation, Athens/Greece, September 2017.
<b>11</b>	Gulgul Aylaz, Atakan Tevlek, Omur Celikbicak, Memed Duman, "A Novel Fiber-based MALDI Probe for Selective Detection of Ciprofloxacin", 3 <sup>rd</sup> International Congress on Biosensors, Oral Presentation, Ankara/Turkey, October 2016.
<b>12</b>	Atakan Tevlek, Omur Celikbicak, Mustafa Turk, Halil Murat Aydin, "Wastepaper to Bone Graft", VII. Bioengineering Congress-BEC2015, Oral Presentation, Young Scientist Sessions, Izmir/Turkey, November 2015.

## CITATIONS

Sum of times cited without self-citations (ISI Web of Science):	368
H-index (ISI Web of Science):	11

## COURSES GIVEN

<b>1</b>	Experimental Medicine-MED325, Atilim University, Faculty of Medicine
<b>2</b>	Cell Culture and Tissue Engineering-MED330, Atilim University, Faculty of Medicine
<b>3</b>	Medical Biology (MED101, MED103, MED105 Committees), Atilim University, Faculty of Medicine
<b>4</b>	Biyoloji ve Genetik-CHL105, Atilim University, Faculty of Health Sciences, Child Development and Education

## MEMBERSHIPS

<b>1</b>	Zebra Balığı Araştırmaları Derneği (ZAD)
<b>2</b>	Ekstrasellüler Veziküller Derneği (TRSEV)